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Crash Investigation Sampling System
2018 Analytical User's Manual

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16. Abstract

The Crash Investigation Sampling System (CISS) provides a comprehensive national traffic crash database. Data collection is accomplished at 32 geographical sites, called Primary Sampling Units. This data is weighted to represent all police-reported motor vehicle crashes occurring in the United States during the year involving passenger cars, light trucks, and light vans that were towed.

This manual and the NHTSA Field Crash Investigation 2018 Coding and Editing Manual are part of the primary documentation supporting the 2018 CISS data file.

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SECTION 1

INTRODUCTION

The National Highway Traffic Safety Administration is releasing data from the recently modernized Crash Investigation Sampling System (CISS) – a replacement of the National Automotive Sampling System Crashworthiness Data System (NASS/CDS).

NHTSA had been collecting motor vehicle crash data through two nested probability sampling systems – the General Estimates System (GES) and the Crashworthiness Data System (CDS) until 2015. The GES collected general information of the traffic crashes from police crash reports only. The CDS collected detailed information from the crashes involving passenger vehicles to better understand the crashworthiness of vehicles and consequences to occupants in crashes. NHTSA had developed and implemented CDS in the 1980s.

However, over the past two decades, the general population, vehicles and highway safety measures have changed dramatically; as a result, crash characteristics and distributions have also changed. In addition, the research interest of the transportation community has expanded to topics such as driver performance, crash avoidance, and the effects of new technologies on crash mitigation.

NHTSA recognized the need to undertake a redesign of NASS to better support its own and stakeholders' data needs. Congress authorized NHTSA to undertake a significant effort to re-design and modernize its crash data collection system.

The redesign started in January 2012. Major improvements have been made to the sample design, the data collection technology, and the information technology infrastructure.

The CISS crash sample is a nationally representative probability sample. From the sampled crashes, data about the accident, events, vehicles, and occupants is collected. CISS began data collection in 2016; and 2017 is the first year that NHTSA published CISS data.

This document lists major changes from CDS to CISS (Section 2) and changes in 2018 (Section 4). It also provides a brief overview of CISS sample design, weighting procedure, and estimation method (Section 3). The main purpose of this document is to provide a detailed description of data element definitions and their attributes (Section 5).

CISS data users may also find the following related documents useful.

- Zhang, F., Noh, E. Y., Subramanian, R., & Chen, C.-L. (2019, September). *Crash Investigation Sampling System: Sample design and weighting* (Report No. DOT HS 812 804). National Highway Traffic Safety Administration. Available at

https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812804. This document provides detailed description on CISS sample design and weighting procedures.

- Zhang, F., Subramanian, R., Chen, C.-L., & Noh, E. Y. (2019, September). *Crash Investigation Sampling System: Design overview, analytic guidance, and FAQs* (Report No. DOT HS 812 801). National Highway Traffic Safety Administration. Available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812801. . This document gives an overview of CISS sample design and weighting procedures, explains basic concepts of complex survey data analysis, discusses issues related to CISS data analysis, and provides examples of analyzing CISS data in SAS and SUDAAN.

- Zhang, F., & Chen, C-L. (2013, July). *NASS-CDS: Sample design and weights*. (Report No. DOT HS 811 807). National Highway Traffic Safety Administration. Available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811807. This document describes CDS sample design and weighting process.

- Radja, G. A. (2016, September). *National Automotive Sampling System – Crashworthiness Data System, 2015 analytical user's manual* (Report No. DOT HS 812 321). National Highway Traffic Safety Administration. Available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812321. This document is the CDS counterpart of CISS Analytical User's Manual. A 2016 CDS manual was not created because of the data collection gap during the transition from CDS to CISS. More related documents can be found in Section 1 of the CDS Analytical User's Manual.

Comments on the CISS files and documentation are appreciated. Please address them to the National Center for Statistics and Analysis – NSA-0010, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590. Comments may also be e-mailed to NCSARequests@dot.gov.

SECTION 2

MAJOR CHANGES FROM CDS TO CISS

2.1 SAMPLE DESIGN CHANGES

- Target population: The target population for the CISS is all police-reported motor vehicle crashes on a traffic way involving a passenger vehicle[1] and in which a passenger vehicle is towed from the scene for any reason. This definition is slightly different from the CDS, which required that the vehicle be towed due to damage. This change was made because sometimes it is difficult to determine why the vehicles were towed.

- Independent samples: The CISS sample design is independent from any other NHTSA surveys, including NHTSA's new Crash Report Sampling System (CRSS) that replaces the NASS General Estimates System (GES). In comparison, the GES and the CDS samples were nested, i.e., the CDS used a subset of the GES data collection sites. The independent design allows NHTSA to optimize each system - CISS and CRSS.

- Different formation of Primary Sampling Units (PSUs): In both CISS and CDS, a PSU is either a county or a group of counties. In CISS, the nation was partitioned into 1,784 PSUs, while in CDS 1,195 PSUs were formed. CISS's average PSU size is smaller than CDS. This resulted in more operationally efficient PSUs in CISS. In addition, a new composite PSU measure of size variable using the various estimated crash counts by the new police crash report (PAR or PCR) domains was used in CISS.

- Scalable PSU sample: CISS has been designed in a way that the PSU sample size can be increased without changes to the existing PSU sample while the corresponding selection probabilities are still trackable. This enables NHTSA to accommodate potential budget fluctuations with minimum operational disruptions.

- Scalable police jurisdiction (PJ) sample: The Pareto sampling method was used to select the CISS PJ sample. The second stage sampling frame, the police jurisdictions in the selected PSUs, changes over time. Consequently, the PJ sample needs to be reselected occasionally to maintain adequate sample size or to cover the updated PJ frame. Pareto sampling reduces the changes to the existing PJ sample when a new PJ sample is reselected.

[1] "Passenger vehicles" are automobiles, automobile derivatives, SUVs, van-based light trucks, light conventional trucks (pickup-style cab), and other light trucks with gross vehicle weight ratings (GVWRs) less than or equal to 4,536 kilograms or 10,000 lbs.

- Alignment with data needs: PAR domains were revised based on data needs to oversample crashes involving killed or injured occupants. At the PAR sample selection stage, PAR domains are used to oversample crashes of high interest.

- Optimized sample allocation: The optimal CISS PSU, PJ, and PAR sample sizes were determined by minimizing the variance of a simplified variance estimator subject to fixed cost.

- Replacement cases: In the CISS, if the vehicle that defines the PAR domain is not available for investigation, a replacement case is selected and investigated. This new feature results in more useful cases for analysis.

- Weight adjustments: In the CISS, non-responding PJs and PARs are monitored and weight adjustments are applied to mitigate potential non-response bias. Additionally, large weights are truncated by the 10 PAR domains.

- Jackknife replicate weights for variance estimation: Adjusted Jackknife replicate weights are provided as part of the CISS analysis files for variance estimation. These adjusted Jackknife replicate weights capture the impact of the weight adjustments and therefore facilitate a much better representation of the total variance.

2.2 INJURY CODING CHANGES

Injury coding had one of the most significant change between NASS-CDS and CISS. Users should refer to the following white paper which describes the changes:

DOCUMENTING INJURIES IN NHTSA's CISS PROGRAM
https://www-esv.nhtsa.dot.gov/Proceedings/25/25ESV-000173.pdf

Please refer to Appendix E – MAPPING BETWEEN NASS-CDS AND CISS for more information.

SECTION 3

CISS SAMPLE DESIGN, WEIGHTING, AND ESTIMATION

3.1 CISS SAMPLE DESIGN

The CISS target population is all police reported motor vehicle crashes on a traffic way involving a passenger vehicle towed from the scene. This target population is different from the CDS target population that required the passenger vehicle be towed from the scene due to damage. While this change eases the operational burden in the field but it also increases the size of the target population. To optimize CISS, NHTSA has also decided that CISS be independent from other NHTSA surveys, including CDS and CRSS – the successor of NHTSA's GES.

As with the CDS, the CISS used a three-stage sampling method to select a nationally representative probability sample of police reported crashes involving a towed passenger vehicle. First, the Nation was partitioned into 1,784 PSUs. A CISS PSU is either a county or a group of counties. An initial scalable sample of 48 PSUs was selected from 24 strata using probability proportional to size (PPS) sampling method. In 2017, as CISS was being implemented, the PSU sample size was 24 PSUs selected from 12 strata. Four more PSUs were added to CISS data collection in early 2018. Starting from July 2018, CISS has 32 data collection PSUs. All 32 PSUs cooperated with NHTSA's data collection request.

Within each selected PSU, the secondary sampling units (SSU) are PJs. An SSU sample was selected from each cooperating PSU using the stratified Pareto sampling method. The Pareto sampling results in approximate PPS samples and minimizes the difference between the new sample and the original sample if PJ sample is reselected. In 2018 a total of 233 SSUs were selected from the 32 sampled PSUs and 225 SSUs cooperated.

The third stage sampling, the PAR sample selection, is conducted weekly. Every week, in each selected PSU, new PARs accumulated in the sampled PJs were grouped into 10 PAR domains (see Table 1 below). These PAR domains are different from those used in CDS and they were formed based on the results of NHTSA's assessment of internal and public data needs. These PAR domains were used to ensure enough cases are selected into the sample for the following sub-populations:

- Crashes involving at least one passenger vehicle occupant killed;
- Crashes involving occupant injured or possibly injured in a recent model year passenger vehicle (vehicle no more than 4 years old);
- Crashes involving an occupant severely injured in a passenger vehicle.

Then all new PARs in the same PSU were pooled together and a Pareto sample of PARs was selected. In 2018, a total of 2,992 PARs were selected from the 32 PSUs.

Table 1: CISS PAR Domains, Crash Sample Allocation, and Population Distribution

CISS Analysis Domains	Description	Target Percent of Sample	Percent of Sample	Estimated Percent of Population
1	At least one occupant of towed passenger vehicle is killed	5%	5.5%	0.53%
2	Crashes not in Stratum 1 involving: • A recent model year passenger vehicle in which at least one occupant is incapacitated	10%	10.6%	0.86%
3	Crashes not in Stratum 1 or 2 involving: • A recent model year passenger vehicle in which at least one occupant is non-incapacitated, possibly injured or injured but severity is unknown.	20%	18.9%	10.60%
4	Crashes not in Stratum 1-3 involving: • A recent model year passenger vehicle in which all occupants are not injured	15%	14.3%	19.55%
5	Crashes not in Stratum 1-4 involving: • A mid-model year passenger vehicle in which at least one occupant is incapacitated	6%	6.4%	0.67%
6	Crashes not in Stratum 1-5 involving: • A mid-model year passenger vehicle in which at least one occupant is non-incapacitated, possibly injured or injured but severity is unknown	12%	12..0%	7.3%
7	Crashes not in Stratum 1-6 involving: • A mid-model year passenger vehicle in which all occupants are not injured	10%	10.3%	16.45%
8	Crashes not in Stratum 1-7 involving: • An older model year passenger vehicle in which at least one occupant is incapacitated	6%	6.6%	2.03%
9	Crashes not in Stratum 1-8 involving: • An older model year passenger vehicle in which at least one occupant is non-incapacitated, possibly injured or injured but severity is unknown.	10%	9.9%	13.91%
10	Crashes not in Stratum 1-9 involving: • An older model year passenger vehicle in which all occupants are not injured	6%	5.6%	28.10%

Note 1: This table uses the following definitions:

- Recent model year (or late model year): vehicles that are <= 4 years old (i.e., any model year of 2014 to 2019 for 2018 CISS)
- Mid-model year: 5 to 9 year old vehicles (i.e. any model year of 2009 to 2013 for 2018 CISS)

- Older model year: vehicles that are 10 years old or older (i.e., any model year up to 2008 for 2018 CISS)

Note 2: Percent of sample and estimated percent of population are based on 2018 CISS

After the PAR sample is selected, if the vehicle that defines the selected PAR's domain is unavailable for data collection, the PAR sample size is augmented and the PAR sample is reselected using the Pareto sampling method to add a replacement PAR. Replacement cases increase useful sample size. In 2018 a total of 2,992 cases were selected – including 298 non-responding cases, 298 replacement cases, and 11 out-of-scope cases. The final CISS analysis file has 2,683 cases.

Table 2 shows the sample sizes of three stages for each sample year of CISS.

Table 2: Sample Sizes in CISS

Year	PSU	PJ		PAR				
	Sampled[1]	Sampled	Cooperated	Sampled	Non-responding	Replacement	Out-of-Scope	Coded
2017	24	182	169	2,331	288	288	8	2,035
2018	32	233	225	2,992	298	298	11	2,683

All sampled PSUs cooperated.

For each selected PAR, CISS technicians collect information about the crash, the vehicles which sustain a harmful event, and the occupants of towed in-transport CISS applicable vehicles. Different levels of in-depth information are collected for the vehicle according to vehicle type (i.e., CISS applicable vehicle or not), transport status, and towing status of the vehicle. It is highly recommended that analysts intending to use the CISS data familiarize themselves with the relationship between data files which are visualized in detail in Appendix F: Entity Relationship Diagram of CISS Datasets.

Trained crash technicians obtain data from crash sites, studying evidence such as skid marks, fluid spills, broken glass, and bent guard rails. They locate the vehicles involved, photograph them, measure the crash damage, and identify interior locations that were contacted by the occupants. The technicians also interview crash victims, if they are available and cooperative, and review their medical records to determine the nature and severity of injuries.

For more detailed information about the CISS sample design see "Crash Investigation Sampling System: Sample Design and Weighting" (Zhang, Noh, et al., 2019).

3.2 CISS WEIGHTING PROCEDURE

Because of the complex features used in the sample design, the CISS sample is not a simple random sample and users need to use proper weights to produce unbiased and robust estimates. The CISS weights were created in the following steps:

- Calculate the base weights (the inverse of selection probabilities) at all three stages.
- Adjust the base weights for PJ and PAR non-response[2] (There is no PSU-level non-response).
- Calibrate the PJ and the PAR weights using the urban or rural total PAR domain counts to correct potential non-response bias and coverage bias.
- Calibrate PSU weights using the U.S. resident population estimates to capture the effect of population shifts.
- Truncate the large weights. Weights larger than 3 percent of the PAR domain weight total are truncated to 3percent of the PAR domain weight total and the truncated weights are redistributed to other cases in the same PAR domain.
- The adjusted Jackknife replicate weights were created to capture the effects of weight adjustments on variance estimation.

The final weight variable for the CISS estimation is CASEWGT. For 2017 CISS, 24 sets of adjusted Jackknife replicate weights are JKWGT1 – JKWGT24. Starting from 2018, 32 sets of adjusted Jackknife replicate weights are JKWGT1 – JKWGT32. See "Crash Investigation Sampling System: Sample Design and Weighting" (Zhang, Noh, et al., 2019) for more detailed information on the CISS weighting procedure.

3.3 CISS ESTIMATION

The complex sample design features such as unequal selection probability, clustering, and stratification used in the CISS sample design must be taken into account while analyzing CISS data. Ignoring these sample design features may cause severe bias in both point estimates as well as the associated standard errors.

Estimation methods and computer software for complex survey data analysis are available. Specialized procedures for complex survey analysis, such as SAS SURVEY procedures and SUDAAN procedures, should be used for CISS data analysis along with proper design statements and weights.

Because of the small CISS PSU sampling fractions, the with-replacement design option can be used for CISS data analysis. The PSU stratification identification variable is PSUSTRAT. The PSU identification variable is PSU.

[2] Non-responding PARs are the replaced PARs. Non-responding PJs are PJs which refused to cooperate.

Different variance estimation methods (for example, the Jackknife variance estimation method and the Taylor series method) can be used to estimate the standard errors of CISS estimates. Every year, a set of adjusted Jackknife replicate weights, along with Jackknife coefficients, are also provided for variance estimation. The adjusted Jackknife replicate weights capture the gain in efficiency due to the weight adjustments so they may produce smaller variance estimates than the unadjusted Jackknife replicate weights or the Taylor series method. But the adjusted Jackknife replicate weights can be used only for single year data analysis.

The number of adjusted Jackknife replicate weights and Jackknife coefficients are different if the PSU sample size or the number of PSU strata changes. Table 3 shows the corresponding statements with Jackknife coefficient option to be used in SAS and SUDAAN by year. In 2017, 24 adjusted Jackknife replicate weights were created and they have the same Jackknife coefficient. Therefore, a single value is assigned as Jackknife coefficient in SAS or SUDAAN statement. Starting from 2018, 32 adjusted Jackknife replicate weights were created, and they have different Jackknife coefficients. In SAS, one option is to list all coefficients using comma or space. Another option is to assign a SAS file that has Jackknife coefficients. In SUDAAN, Jackknife coefficients are listed using a simplified form in the JACKMULT statement. Adjusted Jackknife replicate weights (SAS file: JKWGT) and Jackknife coefficients (SAS file: JKCOEFF) will be published every year.

Table 3: Jackknife Replicate Weights Statements in SAS and SUDAAN

Year	Software	Statements
2017	SAS	REPWEIGHTS JKWGT1-JKWGT24/JKCOEFS=0.5;
	SUDAAN	JACKWGTS JKWGT1-JKWGT24/ADJJACK=0.5;
2018	SAS	REPWEIGHTS JKWGT1-JKWGT32 /JKCOEFS=0.5, 0.5, 0.5, 0.5, 0.75, 0.75, 0.75, 0.75, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.75, 0.75, 0.75, 0.75, 0.5, 0.5, 0.5, 0.5, 0.75, 0.75, 0.75, 0.75; or REPWEIGHTS JKWGT1-JKWGT32 /JKCOEFS=JKCOEFF;
	SUDAAN	JACKWGTS JKWGT1-JKWGT32; JACKMULT 4*0.5 4*0.75 12* 0.5 4*0.75 4*0.5 4*0.75;

For more information about the CISS estimation, see “Crash Investigation Sampling System: Design Overview, Analytic Guidance and FAQs” (Zhang, Subramanian, et al., 2019). This document explains basic concept of complex survey data analysis and provides examples of the CISS data analysis using sample codes of SAS and SUDAAN.

SECTION 4

SAS FILE CHANGES IN 2018

AVOID (CRASH AVOIDANCE EQUIPMENT) DATASET

AVOIDANCE EQUIPMENT (SAS: EQUIP)
Attribute Changes:

Retired Attributes:
- FCW with Auto Braking (13)
- FCW without Auto Braking (14)
- LDW with Lane Keeping (15)
- LDW without Lane Keeping (16)

Added Attributes:
- Lane Keeping Support (1)
- Daytime Running Lamps (4)
- Rearview Video System (5)
- Dynamic Brake Support (6)
- Pedestrian Automatic Emergency Braking (7)
- Advanced Lighting (8)
- Adaptive Cruise Control (9)
- Lane Departure Warning (10)
- Crash Imminent Braking (11)
- Forward Collision Warning (12)

CHILDSEAT DATASET

CHILD SEAT MODEL (SAS: CHILDMODEL)
New Attributes:

SAS CODE	MANUFACTURER	MAKE	MODEL
1044	Baby Trend	Baby Trend	Secure Snap
2052	Graco	Graco	Sequel (65)
4014	Dorel Juvenile Group	Safety 1st	Everfit 3-in-1
5033	Dorel Juvenile Group	Cosco	Finale

CHILD SEAT DATE OF MANUFACTURE (SAS: CHILDDATEMAN)
Attribute Changes:

PREVIOUS VALUE	NEW VALUE	DESCRIPTION
99999999	9999999999	Unknown

CRASH DATASET

Retired Variables:

CRASH CONFIGURATION (SAS: CONFIG)

EDREVENT (EDR EVENT) DATASET

Added Variables:

RELATED CDC EVENT (SAS: CDCEVENT)

Attribute Changes:

IGNITION CYCLE – IGCYCRASH (SAS: IGCYCRASH)

PREVIOUS VALUE	NEW VALUE	DESCRIPTION
0 - 97547	0 - 120000	< ACTUAL VALUE >
99997	999997	Reported – Data Not Valid
99998	999998	Not reported

EDRSUMM (EDR SUMMARY) DATASET

Attribute Changes:

IGNITION CYCLE – IGCYCLE DOWNLOAD (SAS: IGCYCDOWN)

PREVIOUS VALUE	NEW VALUE	DESCRIPTION
0 - 97547	0 - 120000	< ACTUAL VALUE >
99997	999997	Reported – Data Not Valid
99998	999998	Not reported

GV (GENERAL VEHICLE) DATASET

Added Variables:

SHOULDER WIDTH (SAS: SHLDRWIDTH)
STRUCK OBJECT LENGTH (SAS: STRKLENGTH)
STRUCK OBJECT WIDTH (SAS: STRKWIDTH)
STRUCK OBJECT HEIGHT (SAS: STRKHEIGHT)
DISTANCE FROM EDGE OF ROADWAY X (SAS: EDGEDIST X)
DISTANCE FROM EDGE OF ROADWAY Y (SAS: EDGEDIST Y)
DISTANCE FROM EDGE OF ROADWAY Z (SAS: EDGEDIST Z)

EVENT NUMBER FOR HIGHEST DELTA V (SAS: DVEVENT)
Attribute Changes:
Retired Attributes:
Not Inspected (0)
Added Attributes:
Unknown Event (99)

ICS (INJURY CAUSATION SCENARIO) DATASET

SOURCE OF ENERGY (SAS: SOE)
Attribute Changes:
Retired Attributes:
Fire (400)

JKWGT (ADJUSTED JACKKNIFE REPLICATE WEIGHTS) DATASET

Column Changes:

The number of Jackknife replicate weights increased from 24 to 32. Therefore, the JKWGT dataset has additional data elements: JKWGT25-JKWGT32.

JKCOEFF (JACKKNIFE COEFFICIENTS) DATASET

New Dataset:

A new table JKCOEFF is added to the analysis files. Please see Section 5 for more information.

SECTION 5

DATA ELEMENTS, DEFINITIONS, and CODES

This section provides detailed information on the data elements, including definitions, column names, attribute codes and attribute labels. The 2016 (no 2017 manual was created) NHTSA Field Crash Investigations Crash Investigation Sampling System (CISS) Coding and Editing Manual contains a detailed description of each data element including coding instructions and attribute definitions. It is available at https://crashstats.nhtsa.dot.gov

The data elements are listed under the data file in which they are stored. Some data elements are provided in more than one data file to facilitate analyses.

Most of the data files contain the following common data elements.

Common Data Elements

CASE IDENTIFIER
Case ID is a unique number generated by the CISS data entry application. A case can be uniquely identified across ALL data years using this number.

COLUMN Name: CASEID

PSU
PSU (Primary Sampling Unit) refers to the sampling units in the first stage of the multi-stage sampling. In the CISS, PSU is a county or group of counties. Selected PSUs are data collection sites where crashes are sampled and investigated.

COLUMN Name: **PSU**

SEQUENTIAL CASE NUMBER
This is a 1 to 3-digit number that uniquely identifies a case within the PSU and Crash Year.

COLUMN Name: CASENO

CASE NUMBER
This variable is assigned by the system at case creation and cannot be changed. It is unique among all NHTSA crash investigation based programs, i.e. CISS, SCI, and CIREN. The variable is a combination of the Study ID (The Study ID for CISS is 1),

PSU, Crash Year, Sequential Case Number (CASENO), and Category separated by hyphens. No numbers are skipped. If a case must be dropped (and not included in the file), the number will not be reused.

COLUMN Name: CASENUMBER

CATEGORY

The Category identifies which CISS sampling domain the case is classified based upon the initial police crash report review and listing by the CISS technician. This is not a linking variable, however it is present in all the datasets.

COLUMN Name: CATEGORY

VEHICLE NUMBER

Vehicle numbers are consecutive beginning with "1," and normally follow the numbering found on the police crash report. All motor vehicles in the case/crash which sustain a harmful event are assigned a vehicle number, this is regardless of whether the motor vehicle was or was not in-transport.

COLUMN Name: VEHNO

VERSION NUMBER

The Version Number is a sequential numbering of data years beginning with "1," starting with the 2016 data year. The number will increase by one for each succeeding data year, e.g. the 2017 data year will have a Version Number of "2". This is not a linking variable, however it is present in all the datasets.

COLUMN Name: VERSION

CASE WEIGHT

CISS sampled cases are selected with unequal selection probabilities in the complex sample design. To produce unbiased estimates of data elements, case weight is calculated and assigned to each case. In addition, case weights are adjusted for non-response, calibrations, and truncation. This is not a linking variable, however it is present in all the datasets.

COLUMN Name: CASEWGT

PSU STRATA

In the CISS, PSU strata are groups of PSUs formed by Census regions, urban/rural, total highway/primary/secondary road miles, and total expected number of crashes. All the PSUs in the country are grouped into PSU strata, and then PSUs are selected

independently from the PSU strata to produce a balanced and efficient PSU sample. PSU strata should be used in the variance estimation of data elements. This is not a linking variable, however it is present in all the datasets.

COLUMN Name: PSUSTRAT

The CRASH Data Files

The Crash data files includes all crash level datasets. It contains the **Common Data Elements**, which are described in the beginning of the **Data Element Definitions and Codes** section. The Crash data files also contain the data elements on the following pages. CASEID is the unique case identifier for each record. The CASENUMBER, or PSU and CASENO, is also unique for each record.

CRASH Dataset

Key Identifiers: CASEID, or PSU and CASENO

The CRASH dataset is the base dataset for all other CISS datasets. It contains one row per case and contains basic crash level information. Figure 1 displays the list of all the data elements in the CRASH table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       CRASH                  Observations        2683
Member Type         DATA                   Variables           23
Engine              V9                     Indexes             0
Created             04/02/2020 14:34:01    Observation Length  1696
Last Modified       04/02/2020 14:34:01    Deleted Observations 0
Protection                                 Compressed          NO
Data Set Type                              Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 #  Variable    Type   Len   Format      Informat   Label

17  ALCINV      Num      3   YESNOUNK18F.  11.      ALCOHOL INVOLVEMENT
12  CAIS        Num      3   VAIS18F.      11.      MAXIMUM KNOWN AIS IN THIS CRASH
 1  CASEID      Num      5   11.           11.      SYSTEM CASE IDENTIFIER
 4  CASENO      Num      3   11.           11.      SEQUENTIAL CASE NUMBER
 5  CASENUMBER  Char    16   $20.          $20.     CASE NUMBER
21  CASEWGT     Num      8   26.20                  CASE WEIGHT
 6  CATEGORY    Num      3   11.           11.      CASE CATEGORY
15  CINJSEV     Num      3   11.           11.      NUMBER OF SERIOUSLY INJURED OCCUPANTS
14  CINJURED    Num      3   11.           11.      NUMBER OF INJURED OCCUPANTS
```

```
13  CISS        Num     3   ISS18F.      11.      MAXIMUM ISS SCORE IN THIS CASE
 7  CRASHMONTH  Num     3   MONTH18F.    11.      CRASH MONTH
 9  CRASHTIME   Char    5   $5.          $5.      CRASH TIME
 2  CRASHYEAR   Num     3   11.          11.      CRASH YEAR
16  CTREAT      Num     3   TREAT18F.    11.      MAXIMUM TREATMENT IN CRASH
 8  DAYOFWEEK   Num     3   DAYWEEK18F.  11.      DAY OF WEEK
18  DRGINV      Num     3   YESNOUNK18F. 11.      DRUG INVOLVEMENT
10  EVENTS      Num     3   11.          11.      NUMBER OF EVENTS
19  MANCOLL     Num     3   MANCOLL18F.  11.      MANNER OF COLLISION
 3  PSU         Num     3   11.          11.      PRIMARY SAMPLING UNIT
22  PSUSTRAT    Num     3   11.          11.      PSU STRATIFICATION
20  SUMMARY     Char 1601   $32767.      $32767.  CRASH SUMMARY
11  VEHICLES    Num     3   11.          11.      NUMBER OF IN-TRANSPORT VEHICLES
23  VERSION     Num     3   6.           6.       VERSION NUMBER


                Sort Information

            Sortedby      PSU CASENO
            Validated     YES
            Character Set  ANSI
```

Figure 1.

CRASH YEAR

Crash Year is the calendar year of the date of crash as documented from the police crash report in the CISS sampling software. This variable cannot be changed.

COLUMN Name: CRASHYEAR

CRASH MONTH

Crash Month is the calendar month of the date of crash as documented from the police crash report in the CISS sampling software. This variable cannot be changed.

COLUMN Name: CRASHMONTH

SAS Value	Value Text
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August

9	September
10	October
11	November
12	December

DAY OF WEEK

This variable is derived from the Crash Date and indicates the day of the week of the crash.

COLUMN Name: DAYOFWEEK

SAS Value	Value Text
1	Sunday
2	Monday
3	Tuesday
4	Wednesday
5	Thursday
6	Friday
7	Saturday

CRASH TIME

Crash Time is the time of the crash as documented on the police crash report and entered into the CISS sampling software.

COLUMN Name: CRASHTIME

ALCOHOL INVOLVEMENT

This variable is derived by scanning the POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER and ALCOHOL TEST RESULT FOR DRIVER variables on each general vehicle record in the crash. The ALCOHOL INVOLVEMENT codes are derived as follows:
(YES) 1 - If POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER equals 1 (YES- ALCOHOL PRESENT) or ALCOHOL TEST RESULT FOR DRIVER equals 01-49 (positive result).
(NO) 2 - If POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER equals 0 (NO ALCOHOL PRESENT) and ALCOHOL TEST RESULT FOR DRIVER equals 00 (NONE) or 96 (NONE GIVEN).
(UNKNOWN) 9 - If the variables shown above have any other combination of values.

COLUMN Name: ALCINV

SAS Value	Value Text
1	Yes
2	No
9	Unknown

CRASH SUMMARY

A basic description of the crash scenario as documented by the crash technician, supported by case coding. The Crash Summary may also include special circumstances not captured in the normal case coding.

COLUMN Name: SUMMARY

DRUG INVOLVEMENT

This variable is derived by scanning the POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER (GV15) and OTHER DRUG SPECIMEN TEST RESULT (GV16) variables on each general vehicle record in the crash. The DRUG INVOLVEMENT codes are derived as follows:
(YES) 1 - If POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER equals 1 (YES - OTHER DRUG PRESENT) or OTHER DRUG SPECIMEN TEST RESULT equals 2 (DRUG FOUND IN SPECIMEN).
(NO) 2 -If POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER equals 0 (NO OTHER DRUGS PRESENT) and OTHER DRUG SPECIMEN TEST RESULT equals 0 (NO SPECIMEN TEST GIVEN) or 1 (DRUG NOT FOUND IN SPECIMEN).
(UNKNOWN) 9 - If the variables shown above have any other combination of values.

COLUMN Name: DRGINV

SAS Value	Value Text
1	Yes
2	No
9	Unknown

MAXIMUM KNOWN AIS IN THIS CRASH

This single place numeric value indicates the single most severe injury level reported for any occupant of a towed in-transport CISS applicable vehicle in the crash based upon AIS SEVERITY codes, using the following order of codes.

COLUMN Name: CAIS

SAS Value	Value Text
0	Not Injured
1	Minor
2	Moderate
3	Serious
4	Severe
5	Critical
6	Maximum (Untreatable) Injury
9	Injury, Unknown Severity
99	Unknown if Injured

This variable is derived by scanning the AIS SEVERITY variable on each occupant injury record in the crash. If none of the occupants in the crash has an occupant injury record, then scan the INJURED STATUS variable on the occupant assessment record. Use the following order of codes: "if Injured, Details Unknown" then code 7; if "Unknown if Injured" then code 9; if "Not Injured" then code 0.

MAXIMUM ISS SCORE IN THIS CASE

This variable reports the maximum ISS score reported for any occupant in the case.

COLUMN Name: CISS

SAS Value	Value Text
0	Not Injured
1-75	[Actual Value]
97	Injury, Unknown Severity
99	Unknown if Injured

MANNER OF COLLISION

This variable is derived by scanning the OBJECT CONTACTED (SAS: OBJCONT) variable on the crash event record, the CRASH TYPE (SAS: CRASHTYPE) variable and the TRANSPORT STATUS (SAS: TRANSTAT) variables on the general vehicle record (SAS: GV), where VEHICLE NUMBER (SAS: EVENTS.VEHNO) equals VEHICLE NUMBER (SAS: GV.VEHNO). Note that vehicles not in-transport (TRANSTAT <> 1) are treated like objects and not vehicles. The MANNER OF COLLISION codes are derived as follows:

0 (NOT COLLISION WITH VEHICLE IN TRANSPORT) - If OBJECT CONTACTED equals 31-99 or CRASH TYPE = 01-16.
1 (REAR-END) - If OBJECT CONTACTED equals 01-30 and CRASH TYPE equals 20-43.
2 (HEAD-ON) - If OBJECT CONTACTED equals 01-30 and CRASH TYPE equals 50-63.
4 (ANGLE) - If OBJECT CONTACTED equals 01-30 and CRASH TYPE equals 68-91.
5 (SIDESWIPE, SAME DIRECTION) - If OBJECT CONTACTED equals 01-30 and CRASH TYPE equals 44-49.
6 (SIDESWIPE, OPPOSITE DIRECTION) - If OBJECT CONTACTED equals 01-30 and CRASH TYPE equals 64-67.
9 (UNKNOWN) - If OBJECT CONTACTED equals 01-30 and CRASH TYPE equals 92-99.

COLUMN Name: MANCOLL

SAS Value	Value Text
0	NOT COLLISION WITH VEHICLE IN TRANSPORT
1	REAR-END
2	HEAD-ON
4	ANGLE
5	SIDESWIPE, SAME DIRECTION
6	SIDESWIPE, OPPOSITE DIRECTION
9	UNKNOWN

MAXIMUM TREATMENT IN CRASH

This single place numeric value indicates the most intensive treatment OR mortality given to any occupant of a towed in-transport CISS applicable vehicle in the crash, using the following order of codes (NOTE position of Fatal - Ruled Disease, is ordered below most other codes):

COLUMN Name: CTREAT

SAS Value	Value Text
0	NO TREATMENT
1	FATAL
2	HOSPITALIZED
3	TRANSPORTED AND RELEASED

4	TREATMENT AT SCENE, NOT TRANSPORTED
5	TREATMENT-LATER
6	TREATMENT-OTHER
7	TRANSPORTED TO A MEDICAL FACILITY - UNK IF TREATED
8	FATAL - RULED DISEASE
9	UNKNOWN

NUMBER OF EVENTS

This field is derived by counting the number of events coded for this case in the EVENT table.

COLUMN Name: EVENTS

NUMBER OF INJURED OCCUPANTS

This two-place numeric value indicates the total number of injured occupants of towed CISS applicable vehicles involved in the crash. It is derived by totaling the number of occupant assessment records in which NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT has a value of 01-97 (includes Injured, Details Unknown). Zero (0) is used when all the occupants in the case have Injured Status equal to Unknown if injured or Not Injured.

COLUMN Name: CINJURED

NUMBER OF IN-TRANSPORT VEHICLES

This field is derived by counting the number of CISS in Transport vehicles in the GV dataset for this crash (GV.TRANSTAT=1).

COLUMN Name: VEHICLES

NUMBER OF SERIOUSLY INJURED OCCUPANTS

This two-place numeric value indicates the total number of injured occupants of towed CISS applicable vehicles involved in the crash. It is derived by totaling the number of occupant assessment records in which the AIS SEVERITY equals 3-6 for any occupant. Use 0 when none of the occupants have an AIS SEVERITY equal to 3-6.

COLUMN Name: CINJSEV

Key Identifiers: PSU, CASENO, EVENTNO

This dataset contains one row for each harmful event in the crash. Figure 2 displays the list of all the data elements in the Event table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name EVENT Observations 4891
Member Type DATA Variables 15
Engine V9 Indexes 0
Created 04/02/2020 14:34:02 Observation Length 64
Last Modified 04/02/2020 14:34:02 Deleted Observations 0
Protection Compressed NO
Data Set Type Sorted YES
Label
Data Representation WINDOWS_32
Encoding wlatin1 Western (Windows)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
13	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
8	CLASS1	Num	3	VEHCLASS18F.	11.	CLASS OF VEHICLE - FIRST VEHICLE
11	CLASS2	Num	3	VEHCLASS18F.	11.	CLASS OF VEHICLE - OTHER VEHICLE
6	EVENTNO	Num	3	6.	6.	CRASH EVENT SEQUENCE NUMBER
9	GAD1	Char	1	$GAD18F.	$50.	GENERAL AREA OF DAMAGE - FIRST VEHICLE
12	GAD2	Char	1	$GAD18F.	$50.	GENERAL AREA OF DAMAGE - OTHER VEHICLE
10	OBJCONT	Num	3	OBJCONT18F.	11.	OTHER VEHICLE NUMBER OR OBJECT CONTACTED
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
14	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
7	VEHNUM	Num	3	11.	11.	VEHICLE NUMBER
15	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO EVENTNO
Validated YES
Character Set ANSI

Figure 2.

CRASH EVENT SEQUENCE NUMBER

All events are numbered consecutively. Events are numbered chronologically and begin with “1.”

COLUMN Name: EVENTNO

VEHICLE NUMBER

The number of the first vehicle involved in an event as found in the GV dataset, VEHNO column. The listing of the vehicle does not imply the vehicle was the striking vehicle in the event.

COLUMN Name: VEHNO

CLASS OF VEHICLE – FIRST VEHICLE

COLUMN Name: CLASS1

SAS Value	Value Text
0	Not a motor vehicle
1	Subcompact/mini (wheelbase < 254 cm)
2	Compact (wheelbase 254 but < 265 cm)
3	Intermediate (wheelbase >=265 but < 278 cm)
4	Full size (wheelbase >=278 but < 291 cm)
5	Largest (wheelbase >=291 cm)
9	Unknown passenger car size
14	Compact utility vehicle
15	Large utility vehicle (<=4,536 kgs GVWR)
16	Utility station wagon (<=4,536 kgs GVWR)
19	Unknown utility type
20	Minivan (<=4,536 kgs GVWR)
21	Large van (<=4,536 kgs GVWR)
24	Van based school bus (<=4,536 kgs GVWR)
28	Other van type (<=4,536 kgs GVWR)
29	Unknown van type (<=4,536 kgs GVWR)
30	Compact pickup truck (<=4,536 kgs GVWR)
31	Large pickup truck (<=4,536 kgs GVWR)
38	Other pickup truck (<=4,536 kgs GVWR)
39	Unknown pickup truck type (<=4,536 kgs GVWR)
45	Other light truck (<=4,536 kgs GVWR)
48	Unknown light truck type (<=4,536 kgs GVWR)
49	Unknown light vehicle type

50	School bus (excludes van based) (> 4,536 kgs GVWR)
58	Other bus (> 4,536 kgs GVWR)
59	Unknown Bus Type
60	Truck (> 4,536 kgs GVWR)
67	Tractor without trailer
68	Tractor - trailer(s)
78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

GENERAL AREA OF DAMAGE – FIRST VEHICLE

This field reports the plane that was initially contacted during this event, for the first vehicle listed in the event.

COLUMN Name: GAD1

SAS Value	Value Text
0	Not a motor vehicle
B	Back/Truck Back
C	Rear of cab
D	Back (rear of tractor)
F	Front
L	Left Side
N	Noncollision
R	Right Side
T	Top
U	Undercarriage
V	Front of cargo area
9	Unknown

CLASS OF VEHICLE – OTHER VEHICLE

COLUMN Name: CLASS2

SAS Value	Value Text
0	Not a motor vehicle
1	Subcompact/mini (wheelbase < 254 cm)
2	Compact (wheelbase 254 but < 265 cm)
3	Intermediate (wheelbase >=265 but < 278 cm)
4	Full size (wheelbase >=278 but < 291 cm)
5	Largest (wheelbase >=291 cm)
9	Unknown passenger car size
14	Compact utility vehicle
15	Large utility vehicle (<=4,536 kgs GVWR)
16	Utility station wagon (<=4,536 kgs GVWR)
19	Unknown utility type
20	Minivan (<=4,536 kgs GVWR)
21	Large van (<=4,536 kgs GVWR)
24	Van based school bus (<=4,536 kgs GVWR)
28	Other van type (<=4,536 kgs GVWR)
29	Unknown van type (<=4,536 kgs GVWR)
30	Compact pickup truck (<=4,536 kgs GVWR)
31	Large pickup truck (<=4,536 kgs GVWR)
38	Other pickup truck (<=4,536 kgs GVWR)
39	Unknown pickup truck type (<=4,536 kgs GVWR)
45	Other light truck (<=4,536 kgs GVWR)
48	Unknown light truck type (<=4,536 kgs GVWR)
49	Unknown light vehicle type
50	School bus (excludes van based) (> 4,536 kgs GVWR)
58	Other bus (> 4,536 kgs GVWR)
59	Unknown Bus Type
60	Truck (> 4,536 kgs GVWR)
67	Tractor without trailer
68	Tractor - trailer(s)
78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

OTHER VEHICLE NUMBER OR OBJECT CONTACTED

COLUMN Name: OBJCONT

SAS Value	Value Text
1-30	Vehicle #1-30
31	Overturn - rollover (excludes end-over-end)
32	Rollover - end-over-end
33	Fire or explosion
34	Jackknife
35	Other intraunit damage (specify):
36	Noncollision injury
38	Other noncollision (specify):
39	Noncollision - details unknown
41	Tree (<= 10 cm in diameter)
42	Tree (> 10 cm in diameter)
43	Shrubbery or bush
44	Embankment
45	Breakaway pole or post (any diameter)
47	Cable barrier guardrail
48	Guardrail Face
49	Guardrail End
50	Nonbreakaway Pole or post (<= 10 cm in diameter)
51	Nonbreakaway Pole or post (> 10 cm but <= 30 cm in diameter)
52	Nonbreakaway Pole or post (> 30 cm in diameter)
53	Nonbreakaway Pole or post (diameter unknown)
54	Concrete traffic barrier
55	Impact attenuator
56	Other traffic barrier (specify):
57	Fence
58	Wall
59	Building
60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object (specify):

69	Unknown fixed object
72	Pedestrian
73	Cyclist or cycle
74	Other nonmotorist or conveyance (specify)
75	Vehicle occupant
76	Animal
77	Railway vehicle
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object (specify):
89	Unknown nonfixed object
98	Other event (specify):
99	Unknown event or object

GENERAL AREA OF DAMAGE – OTHER VEHICLE

This field reports the plane that was initially contacted during this event, for the second vehicle listed in the event. For impacts with objects, this field will be coded “0”.

COLUMN Name: GAD2

SAS Value	Value Text
0	Not a motor vehicle
B	Back/Truck Back
C	Rear of cab
D	Back (rear of tractor)
F	Front
L	Left Side
N	Noncollision
R	Right Side
T	Top
U	Undercarriage
V	Front of cargo area
9	Unknown

JKWGT Dataset

Key Identifier: CASEID

The JKWGT dataset is the dataset for adjusted Jackknife replicate weights. Each adjusted Jackknife replicate weight is created by deleting one PSU, recalculating design weight, and performing the same weight adjustment procedures used in the calculation of case weights. In 2017, 24 sets of adjusted Jackknife replicate weights were created because 2017 CISS had 24 PSUs. Starting in 2018, 32 sets of adjusted Jackknife replicate weights were created because CISS now has 32 PSUs. As described in Section 3.3, the adjusted Jackknife replicate weights can be used for the variance estimation of single year estimates. Statements with Jackknife coefficient option in Table 3 are used in SAS and SUDAAN. Figure 3 displays the list of all the data elements in the JKWGT table.

Data Set Name	JKWGT	Observations	2683
Member Type	DATA	Variables	40
Engine	V9	Indexes	0
Created	04/02/2020 14:34:04	Observation Length	304
Last Modified	04/02/2020 14:34:04	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER*
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
38	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
6	JKWGT1	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 1
7	JKWGT2	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 2
8	JKWGT3	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 3
9	JKWGT4	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 4
10	JKWGT5	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 5
11	JKWGT6	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 6
12	JKWGT7	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 7
13	JKWGT8	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 8
14	JKWGT9	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 9
15	JKWGT10	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 10
16	JKWGT11	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 11
17	JKWGT12	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 12
18	JKWGT13	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 13
19	JKWGT14	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 14
20	JKWGT15	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 15
21	JKWGT16	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 16
22	JKWGT17	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 17
23	JKWGT18	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 18
24	JKWGT19	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 19
25	JKWGT20	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 20
26	JKWGT21	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 21
27	JKWGT22	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 22
28	JKWGT23	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 23
29	JKWGT24	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 24
30	JKWGT25	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 25
31	JKWGT26	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 26
32	JKWGT27	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 27
33	JKWGT28	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 28
34	JKWGT29	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 29
35	JKWGT30	Num	8	26.20		ADJUSTED JACKKNIFE REPLICATE WEIGHT 30

```
36   JKWGT31     Num     8   26.20            ADJUSTED JACKKNIFE REPLICATE WEIGHT 31
37   JKWGT32     Num     8   26.20            ADJUSTED JACKKNIFE REPLICATE WEIGHT 32
 2   PSU         Num     3   11.     11.      PRIMARY SAMPLING UNIT
39   PSUSTRAT    Num     3   11.     11.      PSU STRATA
40   VERSION     Num     3   6.      6.       VERSION NUMBER


                    Sort Information

                  Sortedby      PSU CASENO
                  Validated     YES
                  Character Set  ANSI
```

Figure 3.

JKCOEFF Dataset

The JKCOEFF dataset is the dataset for Jackknife coefficients. When the adjusted Jackknife replicate weights are used for the variance estimation of single year estimates, Jackknife coefficients are assigned in the SAS statement. As described in Section 3.3, one option is to list all coefficients using comma or space. Another option is to assign the SAS file: JKCOEFF. Figure 4 displays the list of data elements in the JKCOEFF table.

Data Set Name	JKCOEFF	Observations	32
Member Type	DATA	Variables	2
Engine	V9	Indexes	0
Created	01/22/2020 08:49:36	Observation Length	16
Last Modified	01/22/2020 08:49:36	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
2	JKCoefficient	Num	8	Jackknife Coefficient
1	Replicate	Num	8	Replicate Number

Figure 4.

The GENERAL VEHICLE Data Files

The General Vehicle data files contain the **Common Data Elements** which are described in the beginning of the **Data Element Definitions and Codes** section. The General Vehicle data files also contain the data elements on the following pages. Per coding rules, not all vehicles in the crash will have data in all the tables, as noted in the individual table descriptions.

GV Dataset

Key Identifiers: PSU, CASENO, VEHNO

This table contains basic information regarding the vehicle, and will contain one row for each motor vehicle in the crash which sustained a harmful event. All data will be present for in-transport CISS applicable vehicles, but may be missing in some variables for other vehicles as detailed in the individual fields. Figure 4 displays the list of all the data elements in the GV table. Information about the type of each variable, its length, the format and the label are displayed.

```
Data Set Name       GV                    Observations        4848
Member Type         DATA                  Variables           104
Engine              V9                    Indexes             0
Created             04/02/2020 14:34:03   Observation Length  368
Last Modified       04/02/2020 14:34:03   Deleted Observations 0
Protection                                Compressed          NO
Data Set Type                             Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 #  Variable      Type  Len  Format        Informat  Label

 28 ALCTEST       Num    3  ALCTEST18F.    11.      ALCOHOL TEST PERFORMED
 29 ALCTESTRESULT Num    3  ALCRESULT18F.            ALCOHOL TEST RESULT
 30 ALCTESTSRC    Num    3  ALCSOURCE18F.  11.      ALCOHOL TEST RESULT SOURCE
 42 ALIGNMENT     Num    3  ALIGNMNT18F.   11.      ROADWAY ALIGNMENT
 13 BODYCAT       Num    3  BODYCAT18F.    11.      BODY TYPE CATEGORY
 12 BODYTYPE      Num    3  BODYTYPE18F.   11.      BODY TYPE
 22 CARGOSRC      Num    3  CARGOSRC18F.   11.      CARGO WEIGHT SOURCE
 21 CARGOWT       Num    4  CARGOWT18F.    11.      CARGO WEIGHT
  1 CASEID        Num    5  11.            11.      SYSTEM CASE IDENTIFIER
  3 CASENO        Num    3  11.            11.      SEQUENTIAL CASE NUMBER
  4 CASENUMBER    Char  16  $20.           $20.     CASE NUMBER
102 CASEWGT       Num    8  26.20                   CASE WEIGHT
  5 CATEGORY      Num    3  11.            11.      CASE CATEGORY
 60 CRASHCAT      Num    3  CATTYPE18F.    11.      CRASH TYPE CATEGORY
 61 CRASHCONF     Char   1  $CATCONF18F.   $50.     CRASH TYPE CONFIGURATION
 62 CRASHTYPE     Num    3  CRASHTYPE18F.  11.      CRASH TYPE
 55 CRITCAT       Num    3  PREEVCAT18F.   11.      PRE-CRASH CRITICAL EVENT CATEGORY
```

56	CRITEVENT	Num	3	PREEVENT18F.	11.	PRE-CRASH CRITICAL EVENT
20	CURBSRC	Num	3	CURBSRC18F.	11.	CURB WEIGHT SOURCE
19	CURBWT	Num	4	CURBWT18F.	11.	CURB WEIGHT
17	DAMPLANE	Char	1	$GAD18F.	$50.	MOST SEVERE DAMAGE PLANE
18	DAMSEV	Num	3	DAMSEV18F.	11.	MOST SEVERE DAMAGE SEVERITY
52	DISTRACT	Num	3	DRIVDIST18F.	11.	DRIVER DISTRACTION/INATTENTION
26	DRPRESENT	Num	3	DRPRES18F.	11.	DRIVER PRESENT IN VEHICLE
32	DRUGTEST	Num	3	SPECOTH18F.	11.	DRUG TEST RESULT
76	DVANGOTH	Num	3	ANGLE18F.	11.	HIGHEST DELTA V HDG ANGLE - OTHER VEH
75	DVANGTHIS	Num	3	ANGLE18F.	11.	HIGHEST DELTA V HDG ANGLE - THIS VEH
81	DVBASIS	Num	3	DVBASIS18F.	11.	BASIS FOR HIGHEST DELTA V
88	DVBES	Num	3	BAREQSP18F.	11.	HIGHEST DELTA V BARRIER EQUIVALENT SPEED
90	DVCONF	Num	3	DVCONFID18F.	11.	HIGHEST DELTA V CONFIDENCE LEVEL
85	DVENERGY	Num	5	ENERGY18F.	11.	HIGHEST DELTA V ENERGY
89	DVEST	Num	3	DVEST18F.	11.	HIGHEST DELTA V ESTIMATED
80	DVEVENT	Num	3	DVEVENT18F.	11.	EVENT NUMBER FOR HIGHEST DELTA V
84	DVLAT	Num	3	DVLONLAT18F.	11.	HIGHEST DELTA V LATERAL
83	DVLONG	Num	3	DVLONLAT18F.	11.	HIGHEST DELTA V LONGITUDINAL
87	DVMOMENT	Num	3	DVMOMENT18F.	11.	HIGHEST DELTA V MOMENT ARM
86	DVSPEED	Num	3	DVSPEED18F.	11.	HIGHEST DELTA V SPEED
82	DVTOTAL	Num	3	DVTOTAL18F.	11.	HIGHEST DELTA V TOTAL
99	EDGEDISTX	Num	8	ROADEDGE18F.	5.1	DISTANCE FROM EDGE OF ROADWAY X
100	EDGEDISTY	Num	8	ROADEDGE18F.	5.1	DISTANCE FROM EDGE OF ROADWAY Y
101	EDGEDISTZ	Num	8	ROADEDGE18F.	5.1	DISTANCE FROM EDGE OF ROADWAY Z
35	ETHNICITY	Num	3	ETHNICIT18F.	11.	DRIVER`S ETHNICITY
74	HEADANGLECAT	Num	3	HEADANGCAT18F.	11.	HEADING ANGLE CATEGORY
39	INITLANE	Num	3	LANESINIT18F.	11.	TRAVEL LANE FOR THIS VEHICLE
69	INITOBJCLASS	Num	3	OBJCLASS18F.	11.	INITIATING OBJECT CLASS
23	INSPTYPE	Num	3	INSPTYPE18F.	11.	INSPECTION TYPE
48	LIGHTCOND	Num	3	LGTCOND18F.	11.	LIGHTING CONDITIONS
45	LINELEFT	Num	3	LINETYPE18F.	11.	LINE TYPE LEFT
44	LINERIGHT	Num	3	LINETYPE18F.	11.	LINE TYPE RIGHT
9	MAKE	Num	3	MAKE18F.	11.	VEHICLE MAKE
57	MANEUVER	Num	3	MANEUVER18F.	11.	PRE-CRASH MANEUVER
10	MODEL	Num	3	11.	11.	VEHICLE MODEL
11	MODELYR	Num	4	MODYR18F.	11.	VEHICLE MODEL YEAR
27	PARALCOHOL	Num	3	DRINKING18F.	11.	PAR REPORTED ALCOHOL PRESENCE
31	PARDRUG	Num	3	DRUGS18F.	11.	PAR REPORTED OTHER DRUG PRESENCE
53	PREFHE	Num	3	PREFHE18F.	11.	PRE-FIRST HARMFUL EVENTS CODED
59	PRELOC	Num	3	PREILOC18F.	11.	PRE-CRASH LOCATION
54	PREMOVE	Num	3	PREMOVE18F.	11.	PRE-EVENT MOVEMENT
58	PRESTAB	Num	3	PREISTAB18F.	11.	PRE-CRASH STABILITY
43	PROFILE	Num	3	PROFILE18F.	11.	ROADWAY PROFILE
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
103	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
34	RACE	Num	3	DRRACE18F.	11.	DRIVER`S RACE
38	RDLANES	Num	3	LANESRD18F.	11.	TRAVEL LANES FOR ROADWAY
36	RELTOJUNCT	Num	3	RELINTER18F.	11.	RELATION TO INTERCHANGE OR JUNCTION
72	ROLLDIR	Num	3	ROLINDIR18F.	11.	ROLLOVER DIRECTION OF ROLL
73	ROLLDIST	Num	3	ROLLDIST18F.	11.	ROLLOVER ESTIMATED DISTANCE
67	ROLLINITYP	Num	3	ROLINTYP18F.	11.	ROLLOVER INITIATION TYPE
68	ROLLINLOC	Num	3	ROLINLOC18F.	11.	ROLLOVER INITIATION LOCATION
65	ROLLINTRPT	Num	3	INTEROLL18F.	11.	ROLLOVER INTERUPTED
70	ROLLOBJ	Num	3	ROLLOBJ18F.	11.	ROLLOVER INITIATION OBJECT
66	ROLLPREMAN	Num	3	PROLLMAN18F.	11.	ROLLOVER PRE-EVENT MANEUVER
71	ROLLTRIP	Num	3	TRIPLOC18F.	11.	ROLLOVER LOCATION OF TRIP FORCE
64	ROLLTURN	Num	3	ROLLTURNS18F.	11.	ROLLOVER QUARTER TURNS
63	ROLLTYPE	Num	3	ROLLOVER18F.	11.	ROLLOVER TYPE
46	RUMBINIT	Num	3	RUMBLE18F.	11.	RUMBLE STRIP INITIAL TRAVEL LANE
47	RUMBROAD	Num	3	RUMBLE18F.	11.	RUMBLE STRIP ROAD
95	SHLDRWIDTH	Num	8	SHLDRWIDTH18F.	4.1	SHOULDER WIDTH
15	SPECUSE	Num	3	VEHUSE18F.	11.	VEHICLE SPECIAL USE
25	SPEEDLIMIT	Num	3	SPLIMIT18F.	11.	SPEED LIMIT
98	STRKHEIGHT	Num	3	STRUCKOBJECT18F.	11.	STRUCK OBJECT HEIGHT
96	STRKLENGTH	Num	3	STRUCKOBJECT18F.	11.	STRUCK OBJECT LENGTH
97	STRKWIDTH	Num	3	STRUCKOBJECT18F.	11.	STRUCK OBJECT WIDTH

```
 41  SURFCOND      Num     3  SURCOND18F.     11.     ROADWAY SURFACE CONDITION
 40  SURFTYPE      Num     3  SURTYPE18F.     11.     ROADWAY SURFACE TYPE
 77  TOWHITCH      Num     3  TOWHITCH18F.     11.     TOWED TRAILING UNIT
 24  TOWSTAT       Num     3  TOWPAR18F.      11.     PAR REPORTED TOW STATUS
 50  TRAFDEV       Num     3  TRAFCONT18F.    11.     TRAFFIC CONTROL DEVICE
 37  TRAFFLOW      Num     3  TRAFFLOW18F.    11.     TRAFFICWAY FLOW
 51  TRAFFUNCT     Num     3  TRCTLFCT18F.    11.     TRAFFIC CONTROL DEVICE FUNCTIONING
 78  TRAJDOC       Num     3  TRAJDOC18F.     11.     DOCUMENTATION OF TRAJECTORY DATA
 16  TRANSTAT      Num     3  TRANS18F.       11.     TRANSPORT STATUS
 79  TREEPOLE      Num     3  CONDTREE18F.    11.     POST COLLISION CONDITION OF TREE OR POLE
 91  VAIS          Num     3  VAIS18F.        11.     MAXIMUM AIS SEVERITY FOR THIS VEHICLE
 14  VEHCLASS      Num     3  VEHCLASS18F.    11.     VEHICLE CLASS
  6  VEHNO         Num     3  11.            11.     VEHICLE NUMBER
104  VERSION       Num     3  6.             6.      VERSION NUMBER
  7  VIN           Char   12  $12.           $12.    VEHICLE IDENTIFICATION NUMBER
 93  VINJURED      Num     3  INJSEV18F.      11.     NUMBER OF INJURED OCCUPANTS THIS VEHICLE
  8  VINLENGTH     Num     3  11.            11.     VIN LENGTH
 92  VISS          Num     3  ISS18F.        11.     MAXIMUM ISS FOR THIS VEHICLE
 94  VTREAT        Num     3  VTREAT18F.      11.     MAXIMUM TREATMENT IN VEHICLE
 49  WEATHER       Num     3  WEATHER18F.     11.     WEATHER CONDITIONS
 33  ZIP           Char    5  $DRZIP18F.      $50.    DRIVER`S ZIP CODE


                    Sort Information

                Sortedby      PSU CASENO VEHNO
                Validated     YES
                Character Set  ANSI
```

Figure 5.

ALCOHOL TEST PERFORMED

Blood Alcohol Concentration (BAC) test is administered either by the police or at a treatment facility. This data is only collected for in-transport vehicles.

COLUMN Name: ALCTEST

SAS Value	Value Text
0	None Given
1	Test Performed
2	Test Refused
7	No Driver Present
8	BAC test performed, results unknown
9	Unknown if test given

ALCOHOL TEST RESULT

Blood Alcohol Concentration (BAC) measures, analytically, the mass of alcohol per unit volume of blood. The standard measure is expressed as the number of milligrams per deciliter (mg/dL). This data is only collected for in-transport vehicles.

COLUMN Name: ALCTESTRESULT

SAS Value	Value Text
0-450	[Actual Value]
887	No driver present
995	None Given
996	Test Refused
997	BAC Test Performed, Results Unknown
998	Unknown if test given
999	Unknown

ALCOHOL TEST RESULT SOURCE

The source of data used to code the Blood Alcohol Concentration (BAC). This data is only collected for in-transport vehicles.

COLUMN Name: ALCTESTSRC

SAS Value	Value Text
0	No alcohol test result
1	Police reported
2	Medical record
3	Autopsy
4	Lay coroner
6	No driver present
7	Other (specify)
8	Not Applicable

BASIS FOR HIGHEST DELTA V

This variable is used to indicate: (1) which WinSMASH routine was used to compute this vehicle's highest delta V or (2) the reason WinSMASH was not applied to the most severe impact. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVBASIS

SAS Value	Value Text
0	Not Inspected
1	SMASH - Damage only
2	SMASH - Damage and trajectory
3	SMASH - Missing vehicle
4	SMASH - Damage with CDC only

5	At least one vehicle is beyond the scope of SMASH
6	Rollover
7	Other non-horizontal forces
8	Sideswipe type damage
9	Severe override
10	Yielding object
11	Overlapping damage
12	Insufficient data (specify)
98	Other (specify)
99	Unknown

BODY TYPE

The body style of a vehicle refers to the shape and model of a particular automobile make.

COLUMN Name: BODYTYPE

SAS VALUE	VALUE TEXT
1	Convertible(excludes sun-roof,t-bar)
2	2-door sedan,hardtop,coupe
3	3-door/2-door hatchback
4	4-door sedan, hardtop
5	5-door/4-door hatchback
6	Station Wagon (excluding van and truck based)
7	Hatchback, number of doors unknown
8	Sedan/Hardtop, number of doors unknown
9	Other or Unknown automobile type
10	Auto-based pickup (includes E1 Camino, Caballero, Ranchero, SSR, G8-ST, Subaru Brat, Rabbit Pickup)
11	Auto-based panel (cargo station wagon, auto-based ambulance or hearse)
12	Large Limousine-more than four side doors or stretched chassis
13	Three-wheel automobile or automobile derivative
14	Compact Utility (Utility Vehicle Categories "Small" and "Midsize")
15	Large utility (ANSI D16.1 Utility Vehicle Categories and "Full Size" and "Large")
16	Utility station wagon (includes suburban limousines, Suburban, Travellall, Grand Wagoneer)
17	3-door coupe
19	Utility Vehicle, Unknown body type

20	Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Voyager, Honda-Odyssey, ...)
21	Large Van-Includes van-based buses (B150-B350, Sportsman, Royal Maxiwagon, Ram, Tradesman,...)
22	Step-van or walk-in van (<= 10,000 lbs. GVWR)
28	Other van type (Hi-Cube Van, Kary)
29	Unknown van type
32	Pickup with slide-in camper
33	Convertible pickup
34	Light Pickup
39	Unknown (pickup style) light conventional truck type
40	Cab Chassis Based (includes Rescue Vehicle, Light Stake, Dump, and Tow Truck)
41	Truck based panel
42	Light Truck Based Motorhome (Chassis Mounted)
45	Other light conventional truck type
48	Unknown light truck type
49	Unknown light vehicle type (automobile,utility vehicle, van, or light truck)
50	School Bus
51	Cross Country/Intercity Bus
52	Transit Bus (City Bus)
55	Van-Based Bus GVWR > 10,000 lbs.
58	Other Bus Type
59	Unknown Bus Type
60	Step van (>10,000 lbs. GVWR)
61	Single-unit straight truck or Cab-Chassis (10,000 lbs. < GVWR < or = 19,500 lbs.)
62	Single-unit straight truck or Cab-Chassis (19,500 lbs. < GVWR < or = 26,000 lbs.)
63	Single-unit straight truck or Cab-Chassis (GVWR > 26,000 lbs.)
64	Single-unit straight truck or Cab-Chassis (GVWR unknown)
65	Medium/heavy truck based motorhome
66	Truck-tractor (Cab only, or with any number of trailing unit; any weight)
67	Medium/heavy Pickup (>10,000 lbs. GVWR)
71	Unknown if single unit or combination unit Medium Truck (10,000 lbs. < GVWR < 26,000 lbs.)
72	Unknown if single unit or combination unit Heavy Truck (GVWR > 26,000 lbs.)
73	Camper or motorhome, unknown truck type
78	Unknown medium/heavy truck type
79	Unknown truck type (light/medium/heavy)
80	Two Wheel Motorcycle (excluding motor scooters)
81	Moped or motorized bicycle

82	Three-wheel Motorcycle (2 Rear Wheels)
83	Off-road Motorcycle
84	Motor Scooter
85	Unenclosed Three Wheel Motorcycle/Unenclosed Autocycle (1 Rear Wheel)
86	Enclosed Three Wheel Motorcycle/Enclosed Autocycle (1 Rear Wheel)
87	Unknown Three Wheel Motorcycle Type
88	Other motored cycle type (mini-bikes, pocket motorcycles "pocket bikes")
89	Unknown motored cycle type
90	ATV/ATC [All-Terrain Cycle]
91	Snowmobile
92	Farm equipment other than trucks
93	Construction equipment other than trucks (includes graders)
94	Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV)
95	Golf Cart
96	Recreational Off-Highway Vehicle
97	Other vehicle type (includes go-cart, fork-lift, city street sweeper dunes/swamp buggy)
98	Not Reported
99	Unknown body type

BODY TYPE CATEGORY

Vehicles categorized by means of the body style and the level of commonality in vehicle construction.

COLUMN Name: BODYCAT

SAS Value	Value Text
1	Automobiles
2	Automobile Derivatives
3	Utility Vehicles
4	Van Based Light Trucks
5	Light Conventional Trucks
6	Other Light Trucks
7	Buses (Excludes Van Based GVWR <= 4,536 kgs)
8	Medium/heavy Trucks
9	Motored Cycles
10	Other Vehicles

11	Motor Homes
99	Unknown Body Type

CURB WEIGHT

Curb weight is the total weight of a vehicle, expressed in kilograms (kgs), with standard equipment and hardpoints. This data is only collected for in-transport vehicles.

COLUMN Name: CURBWT

SAS Value	Value Text
450-4536	[Actual Value]
9999	Unknown

CURB WEIGHT SOURCE

This reports the source from which the curb weight was obtained. This data is only collected for in-transport vehicles.

COLUMN Name: CURBSRC

SAS Value	Value Text
1	AAMA
2	Automotive News
3	Branham Automobile Reference Book
5	Canadian Specifications
9	Curb weight unknown
4	Gasoline Truck, Import, Truck and Diesel Truck Index
6	Other (specify):

CARGO WEIGHT

The weight of cargo, not including occupants. This would include add-on equipment (roof racks, brush guards, etc.) as well as items brought into the vehicle. The value is expressed in kilograms (kgs). This data is only collected for in-transport vehicles.

COLUMN Name: CARGOWT

SAS Value	Value Text
0-4540	[Actual Value]

9999	Unknown

CARGO WEIGHT SOURCE

This reports the source from which the cargo weight was obtained. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: CARGOSRC

SAS Value	Value Text
1	Vehicle Inspection
2	Interview
3	PAR
4	Tow Yard Operator
5	Non-CISS Vehicle
6	Other (specify):
9	Cargo weight unknown

CRASH TYPE CATEGORY

Variables Crash Type (Category) and Crash Type (Configuration) are used for categorizing the collisions of drivers involved in crashes. This data is only collected for in-transport vehicles.

COLUMN Name: CRASHCAT

SAS Value	Value Text
1	Single Driver
2	Same Trafficway, Same Direction
3	Same Trafficway, Opposite Direction
4	Changing Trafficway, Vehicle Turning
5	Intersecting Paths (Vehicle Damage)
6	Miscellaneous

CRASH TYPE CONFIGURATION

Each Category is further defined by a Crash Configuration. This data is only collected for in-transport vehicles.

COLUMN Name: CRASHCONF

SAS Value	Value Text

A	Right Roadside Departure
B	Left Roadside Departure
C	Forward Impact
D	Rear-End
E	Forward Impact
F	Angle, Sideswipe
G	Head-On
H	Forward Impact
I	Angle, Sideswipe
J	Turn Across Path
K	Turn Into Path
L	Straight Paths
M	Backing, Etc.

CRASH TYPE

A numeric value used to classify the first harmful event in the crash. This data is only collected for in-transport vehicles.

COLUMN Name: CRASHTYPE*

*Please refer to the CISS Field Investigation Coding Manual for codes and code descriptions.

DISTANCE FROM EDGE OF ROADWAY X

This variable, entered in meters, measures the longitudinal distance along the roadway between where the vehicle departs the roadway and where the vehicle strikes a fixed object. This data is only collected when a vehicle departs a roadway and strikes a fixed object, otherwise the variable is coded “Not Applicable.”

COLUMN Name: EDGEDISTX

SAS Value	Value Text
0.0 – 98.9	[Actual Value]
99.0	>= 99 meters
99.8	Not Applicable
99.9	Unknown

DISTANCE FROM EDGE OF ROADWAY Y

This variable, entered in meters, measures the lateral distance between the roadway and the first struck fixed object. This data is only collected when a vehicle departs a roadway and strikes a fixed object, otherwise the variable is coded “Not Applicable.”

COLUMN Name: EDGEDISTY

SAS Value	Value Text
0.0 – 98.9	[Actual Value]
99.0	>= 99 meters
99.8	Not Applicable
99.9	Unknown

DISTANCE FROM EDGE OF ROADWAY Z

This variable, entered in meters, measures the straight-line distance between where the vehicle departs the roadway and where the vehicle strikes a fixed object. This data is only collected when a vehicle departs a roadway and strikes a fixed object, otherwise the variable is coded “Not Applicable.”

COLUMN Name: EDGEDISTZ

SAS Value	Value Text
0.0 – 98.9	[Actual Value]
99.0	>= 99 meters
99.8	Not Applicable
99.9	Unknown

DOCUMENTATION OF TRAJECTORY DATA

The purpose of this variable is to assess the availability of crash induced physical evidence for impact and final rest, including multiple impacts. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: TRAJDOC

SAS Value	Value Text
0	No
1	Yes

DRIVER`S ETHNICITY

This variable is a “self-identification” by the occupant. It is not always an “official record”. This data is only collected for in-transport vehicles.

COLUMN Name: ETHNICITY

SAS Value	Value Text
1	Hispanic or Latino
2	Not Hispanic or Latino
8	No Driver Present
9	Unknown

DRIVER DISTRACTION/INATTENTION

This field describes whether the driver is attentive, or not, to the driving task. The field also serves as a gateway variable to the DISTRACTION table, i.e. rows for this vehicle will exist in the DISTRACTION table when DISTRACT equals 3/"Inattentive or distracted." This data is only collected for in-transport vehicles.

COLUMN Name: DISTRACT

SAS Value	Value Text
0	No driver present
1	Attentive or not distracted
2	Looked but did not see
3	Inattentive or distracted
9	Unknown

DRIVER PRESENT IN VEHICLE

This variable serves as a flag to identify driverless motor vehicles in-transport. This data is only collected for in-transport vehicles.

COLUMN Name: DRPRESENT

SAS Value	Value Text
0	No Driver Present
1	Yes
8	Driver present, not coded
9	Unknown

DRIVER`S RACE

This variable is a "self-identification" by the driver of the vehicle. It is not always an "official record". This data is only collected for in-transport vehicles.

COLUMN Name: RACE

SAS Value	Value Text
1	White
2	Black or African American
3	Asian
4	Native Hawaiian or Other Pacific Islander
5	American Indian or Alaska Native
7	Other (specify):
8	No Driver present
9	Unknown

DRIVER`S ZIP CODE

The zip code of the driver's current residence. This data is only collected for in-transport vehicles.

COLUMN Name: ZIP

SAS Value	Value Text
1	Not a Resident of U.S. or Territories
00501 – 99950	[Actual Value]
99998	No driver present
99999	Unknown

DRUG TEST RESULT

If a medical, police report, or other official source says that a certain drug was "screened for" or that it was "not detected", then that a specimen test was used. In addition, the presence of a measured quantity of an "other drug(s)" means that a specimen test was given. The specimen used in the test that obtained the measurement could be blood, urine, or another specimen (*e.g.*, nasal swab, saliva). Some drugs are tested using a particular type of specimen; others can be tested in multiple ways. This data is only collected for in-transport vehicles.

COLUMN Name: DRUGTEST

SAS Value	Value Text
0	No specimen test given
1	Drug(s) not found in specimen
2	Drug(s) found in specimen, (specify)
3	Specimen test given, results unknown or not obtained
8	No driver present

9	Unknown if specimen test given

EVENT NUMBER FOR HIGHEST DELTA V

The Event Number that the Technician selects as the highest severity impact is rolled-up from the Vehicle Exterior Form/CDC. If there is no Vehicle Exterior Form the technician selects the Event Number for the highest severity impact. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVEVENT

SAS Value	Value Text
1-30	[Actual Event Number]
99	Unknown Event

HEADING ANGLE CATEGORY

The impact category describes this vehicle's most severe impact. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: HEADANGLECAT

SAS Value	Value Text
995	Impact with Vehicle
996	Non Horizontal Impact
997	Non Collision
998	Impact with Object
999	Unknown

HIGHEST DELTA V HDG ANGLE - THIS VEH

The Heading Angle at Impact for Highest Delta V - Angle - This Vehicle records the heading angle for this vehicle's highest delta V when this impact was with another vehicle. The angle is coded in five degree increments. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVANGTHIS

SAS Value	Value Text
0-355	[Actual Value]
888	Not a CISS Vehicle
996	Non-horizontal impact
997	Non-collision

998	Impact with object
999	Unknown

HIGHEST DELTA V HDG ANGLE - OTHER VEH

The Heading Angle at Impact for Highest Delta V--Angle - Other Vehicle records the heading angle for the other vehicle's highest delta V when this impact was with another vehicle. The angle is coded in five degree increments. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVANGOTH

SAS Value	Value Text
0-355	[Actual Value]
888	Not a CISS Vehicle
996	Non-horizontal impact
997	Non-collision
998	Impact with object
999	Unknown

HIGHEST DELTA V TOTAL

The Total Delta V for the highest severity impact generated by the WinSMASH application. The data is expressed in kilometers per hour (kmph). This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVTOTAL

SAS Value	Value Text
1-160	[Actual Value]
999	Unknown

HIGHEST DELTA V LONGITUDINAL

The Longitudinal Delta V for the highest severity impact generated by the WinSMASH application. The data is expressed in kilometers per hour (kmph). This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVLONG

SAS Value	Value Text
-160 – +160	[Actual Value]
999	Unknown

HIGHEST DELTA V LATERAL

The Lateral Delta V for the highest severity impact generated by the WinSMASH application. The data is expressed in kilometers per hour (kmph). This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVLAT

SAS Value	Value Text
-160 – +160	[Actual Value]
999	Unknown

HIGHEST DELTA V ENERGY

The Energy Absorption for the highest severity impact generated by the WinSMASH application. The data is expressed in joules. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVENERGY

SAS Value	Value Text
40 - 1000000	[Actual Value]
9999999	Unknown

HIGHEST DELTA V ESTIMATED

This variable reports a gross description of the damage to the vehicle for its most severe impact when WinSMASH is unable to be run. Depending on the impact type and/or the amount of information available, the data can be coded in a delta V range or as Minor, Moderate or Severe. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVEST

SAS Value	Value Text
0	Reconstruction Delta V coded
1	Less than 10 kmph
2	10 kmph < 25 kmph
3	25 kmph < 40 kmph
4	40 kmph < 55 kmph
5	>= 55 kmph
6	Minor
7	Moderate

8	Severe
9	Unknown

HIGHEST DELTA V SPEED

The Impact speed for the highest severity impact, automatically generated by the WinSMASH (Damage and Trajectory routine). The data is expressed in kilometers per hour (kmph). This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVSPEED

SAS Value	Value Text
0 – 160	[Actual Value]
998	Damage and Trajectory run not made
999	Unknown

HIGHEST DELTA V MOMENT ARM

The Moment Arm of Principal Force for the highest severity impact generated by the WinSMASH application. The data is expressed in centimeters. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVMOMENT

SAS Value	Value Text
-650 – 650	[Actual Value]
999	Unknown

HIGHEST DELTA V BARRIER EQUIVALENT SPEED

The Barrier Equivalent speed for the highest severity impact generated by the WinSMASH application. The data is expressed in kilometers per hour (kmph). This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVBES

SAS Value	Value Text
1 - 160	[Actual Value]
999	Unknown

HIGHEST DELTA V CONFIDENCE LEVEL

This variable captures the quality of this vehicle's WinSMASH application results for the highest severity impact by evaluating the results, and the data used to create those results, for this impact. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: DVCONF

SAS Value	Value Text
0	No reconstruction
1	Collision fits model - results appear reasonable
2	Collision fits model - results appear high
3	Collision fits model - results appear low
4	Borderline reconstruction

INSPECTION TYPE

This variable is designed to allow users to identify cases with complete documentation of required damage data (exterior and interior). This data is only collected for CISS applicable vehicles.

COLUMN Name: INSPTYPE

SAS Value	Value Text
0	No inspection
1	Complete inspection
2	Partial inspection-Non tow
3	Partial inspection-Partially repaired
4	Partial inspection-Photos only
5	Partial inspection-other (specify)
6	Vehicle fully repaired - no damage evident

LIGHTING CONDITIONS

The light condition best representing the precrash conditions at the time of the crash based on ambient and artificial sources. This data is only collected for in-transport vehicles.

COLUMN Name: LIGHTCOND

SAS Value	Value Text
1	Daylight

2	Dark
3	Dark,but lighted
4	Dawn
5	Dusk
9	Unknown

LINE TYPE LEFT

This element describes the travel lane line type during the pre-movement phase of the crash. This data is only collected for in-transport vehicles.

COLUMN Name: LINELEFT

SAS Value	Value Text
0	None
1	Solid White
2	Solid Yellow
3	Dotted/Dashed White
4	Dotted/Dashed Yellow
5	Raised Pavement Marker
9	Unknown

LINE TYPE RIGHT

This element describes the travel lane line type during the pre-movement phase of the crash. This data is only collected for in-transport vehicles.

COLUMN Name: LINERIGHT

SAS Value	Value Text
0	None
1	Solid White
2	Solid Yellow
3	Dotted/Dashed White
4	Dotted/Dashed Yellow
5	Raised Pavement Marker
9	Unknown

NUMBER OF INJURED OCCUPANTS IN THIS VEHICLE

This variable reports the number of injured occupants in this vehicle.

COLUMN Name: VINJURED

SAS Value	Value Text
0-6	[Actual Value]
7	Injury, details unknown
9	Unknown
95	Not a towed CISS applicable vehicle

MAXIMUM AIS SEVERITY FOR THIS VEHICLE

The most severe (*i.e.*, highest AIS) injury to a person in this vehicle. This data is only collected for towed in-transport CISS applicable vehicles.

COLUMN Name: VAIS

SAS Value	Value Text
0	Not injured
1	Minor injury
2	Moderate injury
3	Serious injury
4	Severe injury
5	Critical injury
6	Maximum (untreatable) injury
9	Injured, severity unknown
95	Not a towed CISS applicable vehicle
99	Unknown if injured

MAXIMUM ISS FOR THIS VEHICLE

This derived variable reports the highest Injury Severity Score (ISS) for any occupant in this vehicle. This data is only collected for towed in-transport CISS applicable vehicles.

COLUMN Name: VISS

SAS Value	Value Text
0	Not Injured
1-75	[Actual Value]
95	Not a towed CISS applicable vehicle
97	Injury, Unknown Severity
99	Unknown if Injured

MAXIMUM TREATMENT IN VEHICLE

This data is only collected for towed in-transport CISS applicable vehicles.

COLUMN Name: VTREAT

SAS Value	Value Text
0	NO TREATMENT
1	FATAL
2	HOSPITALIZED
3	TRANSPORTED AND RELEASED
4	TREATMENT AT SCENE, NOT TRANSPORTED
5	TREATMENT-LATER
6	TREATMENT-OTHER
7	TRANSPORTED TO A MEDICAL FACILITY - UNK IF TREATED
8	FATAL - RULED DISEASE
9	UNKNOWN
95	Not a towed CISS applicable vehicle

MOST SEVERE DAMAGE PLANE

This data is only collected for all vehicles.

COLUMN Name: DAMPLANE

SAS Value	Value Text
0	Not a motor vehicle
B	Back/Truck Back
C	Rear of cab
D	Back (rear of tractor)
F	Front
L	Left Side
N	Noncollision
R	Right Side
T	Top
U	Undercarriage
V	Front of cargo area
9	Unknown

MOST SEVERE DAMAGE SEVERITY

This data reports the severity of the vehicle's damage plane reported in

GV.DAMPLANE. This data is collected for all vehicles.

COLUMN Name: DAMSEV

SAS Value	Value Text
1	Light
2	Moderate
3	Severe
9	Unknown

PAR REPORTED ALCOHOL PRESENCE

The phrase "alcohol present" means that the police report indicates that the driver had consumed an alcoholic beverage. Presence is not an indication that alcohol was in any way a cause of the crash. This data is reported for all in-transport vehicles.

COLUMN Name: PARALCOHOL

SAS Value	Value Text
0	No alcohol Present
1	Yes- alcohol present
7	No Driver Present
8	Not Reported
9	Unknown

PAR REPORTED OTHER DRUG PRESENCE

The phrase "other drug present" includes all prescription, "over-the-counter" medications, as well as "illicit" substances (*e.g.*, in most cases, marijuana, cocaine, heroin). Also, "other drug present" means that the driver had ingested another drug prior to the crash, but it is not an indication that the drug usage was in any way the cause of the crash (or event), even though it may have been. This data is only collected for in-transport vehicles.

COLUMN Name: PARDRUG

SAS Value	Value Text
0	No other drug(s) present
1	Yes other drug(s) present
7	Not Reported
8	No Driver Present

9	Unknown

PAR REPORTED TOW STATUS

The tow status as reported on the police crash report. A "towed" vehicle is defined as a vehicle which is removed from the crash scene other than by means of its own power. Vehicles can be towed for reasons other than disabling damage. This data is only collected for in-transport vehicles.

COLUMN Name: TOWSTAT

SAS Value	Value Text
0	Not Towed
1	Towed
9	Unknown

POST COLLISION CONDITION OF TREE OR POLE

This variable records the condition of the struck Tree, Pole or Post for this vehicle's most severe impact. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: TREEPOLE

SAS Value	Value Text
0	Not collision (for Highest Delta V) with tree or pole
1	Not damaged
2	Cracked/Sheared
3	Tilted < 45 Degrees
4	Tilted >= 45 Degrees
5	Uprooted Tree
6	Separated pole from base
7	Pole replaced
8	Other (specify):
9	Unknown

PRE-CRASH CRITICAL EVENT CATEGORY

The critical factor leading to the collision for the vehicle. This data is only collected for in-transport vehicles.

COLUMN Name: CRITCAT

SAS Value	Value Text
1	This Vehicle Loss of Control
2	This Vehicle Traveling
3	Other Motor Vehicle in Lane
4	Other Motor Vehicle Encroaching Into Lane
5	Pedestrian or Pedacyclist, or Other Non-Motorist
6	Object or Animal
8	Other (Specify):
9	Unknown

PRE-CRASH CRITICAL EVENT

This variable identifies the critical event which made the crash imminent (*i.e.*, something occurred which made the collision possible). This data is only collected for in-transport vehicles.

COLUMN Name: CRITEVENT

SAS Value	Value Text
1	Blow out/flat tire
2	Stalled engine
3	Disabling vehicle failure (e.g., wheel fell off) (specify:)
4	Non-disabling vehicle problem (e.g., hood flew up) (specify):
5	Poor road conditions (puddle, ice, pothole, etc.) (specify):
6	Traveling too fast for conditions
8	Other cause of control loss (specify):
9	Unknown cause of control loss
10	Over the lane line on left side of travel lane
11	Over the lane line on right side of travel lane
12	Off the edge of the road on the left side
13	Off the edge of the road on the right side
14	End departure
15	Turning left
16	Turning right
17	Crossing over (passing through) intersection
18	This vehicle decelerating
19	Unknown travel direction
20	This vehicle backing
21	This vehicle making a u-turn
50	Other vehicle stopped

51	Traveling in same direction with lower steady speed
52	Traveling in same direction while decelerating
53	Traveling in same direction with higher speed
54	Traveling in opposite direction
55	In crossover
56	Backing
59	Unknown travel direction of the other motor vehicle in lane
60	From adjacent lane (same direction) over left lane line
61	From adjacent lane (same direction) over right lane line
62	From opposite direction over left lane line
63	From opposite direction over right lane line
64	From parking lane/shoulder
65	From crossing street, turning into same direction
66	From crossing street, across path
67	From crossing street, turning into opposite direction
68	From crossing street, intended path not known
70	From driveway, turning into same direction
71	From driveway, across path
72	From driveway, turning into opposite direction
73	From driveway, intended path not known
74	From entrance to limited access highway
78	Encroachment by other vehicle details unknown
80	Pedestrian in road
81	Pedestrian approaching road
82	Pedestrian unknown location
83	Pedalcyclist or other non-motorist in road (specify):
84	Pedalcyclist or other non-motorist approaching road (specify):
85	Pedalcyclist or other non-motorist unknown location (specify):
87	Animal in road
88	Animal approaching road
89	Animal - unknown location
90	Object in road
91	Object approaching road
92	Object unknown location
98	Other Critical Pre-Crash Event (specify):
99	Unknown

PRE-CRASH LOCATION

The location of the vehicle after the critical event, and immediately before the first impact. This data is only collected for in-transport vehicles.

COLUMN Name: PRELOC

SAS Value	Value Text
0	No driver present
1	Stayed in original travel lane
2	Stayed on roadway, but left original travel lane
3	Stayed on roadway, not known if left original travel lane
4	Departed roadway
5	Remained off roadway
6	Returned to roadway
7	Entered roadway
9	Unknown

PRE-CRASH MANEUVER

Attempted avoidance maneuvers are movement/actions taken by the driver in response to an impending critical pre-crash event. This data is only collected for in-transport vehicles.

COLUMN Name: MANEUVER

SAS Value	Value Text
0	No driver present
1	No Avoidance Maneuver
2	Braking
3	Braking and steering left
4	Braking and steering right
5	Braking and unknown steering direction
6	Releasing brakes
7	Steering left
8	Steering right
9	Accelerating
10	Accelerating and steering left
11	Accelerating and steering right
98	Other action (specify):
99	Unknown

PRE-CRASH STABILITY

The stability of the vehicle after the critical event, but before the impact. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: PRESTAB

SAS Value	Value Text
0	No driver present
1	Tracking
2	Skidding longitudinally rotation less than 30 degrees
3	Skidding laterally clockwise rotation
4	Skidding laterally counter-clockwise rotation
8	Other vehicle loss-of-control (specify):
9	Precrash stability unknown

PRE-EVENT MOVEMENT

Vehicle's activity prior to the driver's realization of an impending critical event or just prior to impact if the driver took no action or had no time to attempt any evasive maneuvers. This data is only collected for in-transport vehicles.

COLUMN Name: PREMOVE

SAS Value	Value Text
0	No Driver Present
1	Going straight
2	Decelerating in road
3	Accelerating in road
4	Starting in road
5	Stopped in road
6	Passing or overtaking another vehicle
7	Disabled or parked in travel lane
8	Leaving a parking position
9	Entering a parking position
10	Turning right
11	Turning left
12	Making a U-turn
13	Backing up (other than for parking position)
14	Negotiating a curve
15	Changing lanes
16	Merging

17	Successful avoidance maneuver to a previous critical event
98	Other (specify):
99	Unknown

PRE-FIRST HARMFUL EVENTS CODED

This variable describes whether the vehicle experienced any lateral movements along the vehicle's trajectory between the end of the pre-event movement phase and the first harmful event. This field serves as a gateway to the PRE_FHE dataset which further describes the vehicle's movement. This further data will only be found when PREFHE equals 1/Yes. This data is only collected for in-transport vehicles.

COLUMN Name: PREFHE

SAS Value	Value Text
0	No pre-first harmful events
1	Pre-first harmful events exist
8	No driver present

RELATION TO INTERCHANGE OR JUNCTION

The attribute selected is based on the characteristics of the roadway environment just prior to the critical pre-crash event for this vehicle. This data is only collected for in-transport vehicles.

COLUMN Name: RELTOJUNCT

SAS Value	Value Text
0	Non-interchange area and non-junction
1	Interchange area related
2	Intersection related/non-interchange
3	Driveway/alley access related/non-interchange
4	Other junction/non-interchange
5	Unknown type of junction/non-interchange
9	Unknown

ROADWAY SURFACE TYPE

The surface type of the lane the driver's vehicle was traveling on just prior to this vehicle's critical pre-crash event. This data is only collected for in-transport vehicles.

COLUMN Name: SURFTYPE

SAS Value	Value Text
1	Concrete
2	Bituminous (asphalt)
3	Brick or Block
4	Slag, gravel or stone
5	Dirt
8	Other, specify:
9	Unknown

ROADWAY SURFACE CONDITION

This variable refers to the surface condition of the roadway immediately prior to this vehicle's critical pre-crash event. This data is only collected for in-transport vehicles.

COLUMN Name: SURFCOND

SAS Value	Value Text
1	Dry
2	Wet
3	Snow
4	Slush
5	Ice/Frost
6	Water (Standing, Moving)
7	Sand
8	Mud, Dirt, Gravel
9	Oil
98	Other, (specify):
99	Unknown

ROADWAY ALIGNMENT

The descriptor that best represents the vehicle's environment just prior to this vehicle's critical pre-crash event. This data is only collected for in-transport vehicles.

COLUMN Name: ALIGNMENT

SAS Value	Value Text
1	Straight
2	Curve Right
3	Curve Left
9	Unknown

ROADWAY PROFILE

The vertical profile that best represents this vehicle's pre-crash environment. This data is only collected for in-transport vehicles.

COLUMN Name: PROFILE

SAS Value	Value Text
1	Level
2	Uphill grade (>2%)
3	Hillcrest
4	Downhill grade (>2%)
5	Sag
9	Unknown

ROLLOVER TYPE

This variable captures the number of quarter turns, i.e. 90 degree rotations, the vehicle experienced during the rollover. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLTYPE

SAS Value	Value Text
0	No rollover (no overturning)
1	Rollover -- Longitudinal axis
2	Rollover -- end-over-end (i.e., primarily about the lateral axis)
7	Not a CISS Vehicle
9	Overturn, details unknown

ROLLOVER DIRECTION OF ROLL

This variable shows the direction of the initial roll. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLDIR

SAS Value	Value Text
0	No rollover
1	Roll right-primarily about the longitudinal axis
2	Roll left-primarily about the longitudinal axis

8	End over end
9	Unknown roll direction

ROLLOVER QUARTER TURNS

A "quarter turn" is defined as a rotation of 90 degrees about the longitudinal axis of the vehicle; this does not include rotation about the vertical axis, commonly called yaw.

COLUMN Name: ROLLTURN

SAS Value	Value Text
0	No rollover
1-20	Number of quarter turns
98	End over end
99	Unknown

ROLLOVER ESTIMATED DISTANCE

This variable reports the distance the vehicle rolled between the trip point and final rest. The data is expressed in meters. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLDIST

SAS Value	Value Text
0	No rollover
1 – 499	[Actual Value]
500	500 meters or more
998	End over end
999	Unknown

ROLLOVER INTERUPTED

The purpose of this variable is to determine if the vehicle's rollover sequence was acted upon by another vehicle or object between the trip point and the final rest position. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLINTRPT

SAS Value	Value Text
0	No rollover
1	Yes

2	No
8	End over end
9	Unknown

ROLLOVER INITIATION TYPE

This variable captures the type of rollover the vehicle experienced. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLINITYP

SAS Value	Value Text
0	No rollover
1	Trip-over
2	Flip-over
3	Turn-over (specify):
4	Climb-over
5	Fall-over
6	Bounce-over
7	Collision with another vehicle
8	Other rollover initiation type (specify):
98	End over end
99	Unknown

ROLLOVER INITIATION LOCATION

This variable defines the location of the trip point or start of the vehicle's roll that was identified in the Rollover Initiation Type. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLINLOC

SAS Value	Value Text
0	No rollover
1	On roadway
2	On shoulder - paved
3	On shoulder - unpaved
4	On roadside or divided trafficway median
8	End over end
9	Unknown

ROLLOVER INITIATING OBJECT CLASS

This variable serves as a high level grouping of attributes for Rollover Initiating Object. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: INITOBJCLASS

SAS Value	Value Text
0	No rollover
1	Vehicle
2	Non-collision
3	Collision with fixed object
4	Collision with non-fixed object
7	Other event
8	Rollover end-over-end
9	Unknown Event or Object

ROLLOVER INITIATING OBJECT

This variable identifies the source of the force that acted upon the vehicle which precipitated the rollover. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLOBJ

SAS Value	Value Text
0	No rollover
1-30	Vehicle #1 thru 30
31	Turn-over — fall-over
32	Rollover end-over-end
34	Jackknife
41	Tree (<=10 centimeters in diameter)
42	Tree (> 10 centimeters in diameter)
43	Shrubbery or bush
44	Embankment
45	Breakaway pole or post (any diameter)
46	Metal guardrail
47	Cable barrier guardrail
48	Guardrail Face
49	Guardrail End
50	Pole or post (<=10 centimeters in diameter)
51	Pole or post (> 10 centimeters but <= 30 centimeters diameter)

52	Pole or post (> 30 centimeters in diameter)
53	Pole or post (diameter unknown)
54	Concrete traffic barrier
55	Impact attenuator
56	Other traffic barrier (specify)
57	Fence
58	Wall
59	Building
60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object (specify):
69	Unknown fixed object
74	Other nonmotorist or conveyance (specify)
76	Animal
77	Railway vehicle
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object (specify):
89	Unknown nonfixed object
98	Other event (specify)
99	Unknown event or object

ROLLOVER LOCATION OF TRIP FORCE

The purpose of this variable is to identify the point on the vehicle where the initiating rollover force was applied. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLTRIP

SAS Value	Value Text
0	No rollover
1	Wheels/tires
2	Side plane
3	End plane
4	Undercarriage
5	Other location on vehicle (specify):
6	Non-contact rollover forces (specify):
8	End over end

9	Unknown

ROLLOVER PRE-EVENT MANEUVER

The last controlled maneuver, relative to the roadway, prior to the initiation of the rollover. This data is only collected for in-transport CISS applicable vehicles.

COLUMN Name: ROLLPREMAN

SAS Value	Value Text
0	No rollover
1	Departing roadway (to paved surface)
2	Departed roadway (to non-paved surface)
3	Returning to roadway (from paved surface)
4	Returning to roadway (from non-paved surface)
5	On roadway maneuver
6	Off roadway maneuver
8	Rollover end-over-end
9	Unknown

RUMBLE STRIP INITIAL TRAVEL LANE

This variable captures the presence of rumble strips adjacent to the vehicle's initial travel lane along the direction of travel during this vehicle's pre-event movement phase of the crash. This data is only collected for in-transport vehicles.

COLUMN Name: RUMBINIT

SAS Value	Value Text
0	None
1	Left Rumble Strip Present
2	Right Rumble Strip Present
3	Left and Right Rumble Strips Present
9	Unknown

RUMBLE STRIP ROAD

This variable captures the presence of rumble strips in the vehicles road along the direction of travel during the pre-event movement phase of the crash. This data is only collected for in-transport vehicles.

COLUMN Name: RUMBROAD

SAS Value	Value Text
0	None
1	Left Rumble Strip Present
2	Right Rumble Strip Present
3	Left and Right Rumble Strips Present
9	Unknown

SHOULDER WIDTH

This variable, entered in meters, establishes the width of the stabilized shoulder available to this vehicle. This data is only collected when a vehicle departs a roadway and strikes a fixed object, otherwise the variable is coded “Not Applicable.”

COLUMN Name: SHLDRWIDTH

SAS Value	Value Text
0.0 – 9.6	[Actual Value]
9.7	>= 9.7 meters
9.8	Not Applicable
9.9	Unknown

SPEED LIMIT

The posted speed limit for this vehicle expressed in kilometers per hour (kmph). This data is only collected for in-transport motor vehicles.

COLUMN Name: SPEEDLIMIT

SAS Value	Value Text
0	No Statutory Limit
24-121	[Actual Value]
999	Unknown

STRUCK OBJECT HEIGHT

This variable, entered in centimeters, measures the height of the first object contacted after the vehicle departs the shoulder, or roadway if there is no shoulder. This data is only collected when a vehicle departs a roadway and strikes a fixed object, otherwise the variable is coded “Not Applicable.”

COLUMN Name: STRKHEIGHT

SAS Value	Value Text
-119 – +119	[Actual Value]
120	>= 120 cms
998	Not Applicable
999	Unknown

STRUCK OBJECT LENGTH

This variable, entered in centimeters, measures the length of the first object contacted after the vehicle departs the shoulder, or roadway if there is no shoulder. This data is only collected when a vehicle departs a roadway and strikes a fixed object, otherwise the variable is coded “Not Applicable.”

COLUMN Name: STRKLENGTH

SAS Value	Value Text
0 – 119	[Actual Value]
120	>= 120 cms
998	Not Applicable
999	Unknown

STRUCK OBJECT WIDTH

This variable, entered in centimeters, measures the width of the first object contacted after the vehicle departs the shoulder, or roadway if there is no shoulder. This data is only collected when a vehicle departs a roadway and strikes a fixed object, otherwise the variable is coded “Not Applicable.”

COLUMN Name: STRKWIDTH

SAS Value	Value Text
0 – 119	[Actual Value]
120	>= 120 cms
998	Not Applicable
999	Unknown

TRAFFIC CONTROL DEVICE

The device that best controls traffic in the vehicle's environment just prior to this vehicle's critical pre-crash event. This data is only collected for in-transport motor vehicles.

COLUMN Name: TRAFDEV

SAS Value	Value Text
0	No traffic control(s)
1	Traffic control signal (not RR crossing)
2	Stop Sign
3	Yield Sign
4	School zone sign
5	Other regulatory sign (specify):
6	Warning sign (not RR crossing)
7	Unknown Sign
8	Miscellaneous/other controls including RR controls (specify):
9	Unknown

TRAFFIC CONTROL DEVICE FUNCTIONING

The status of the traffic control device at the time of the crash. This data is only collected for in-transport motor vehicles.

COLUMN Name: TRAFFUNCT

SAS Value	Value Text
0	No traffic control(s)
1	Traffic control device not functioning (specify):
2	Traffic control device functioning properly
9	Unknown

TRAFFICWAY FLOW

This variable describes the flow of traffic for this vehicle. This data is collected for in-transport vehicles.

COLUMN Name: TRAFFLOW

SAS Value	Value Text
1	Divided trafficway-median strip without positive barrier
2	Divided trafficway-median strip with positive barrier
3	One-Way Traffic
4	Not physically divided (two way traffic)
5	Not physically divided with two way left turn lane
9	Unknown

TRAVEL LANES FOR ROADWAY

This variable captures the number of travel lanes which best describes this vehicle's pre-impact location. This data is collected for in-transport vehicles.

COLUMN Name: RDLANES

SAS Value	Value Text
1	One
2	Two
3	Three
4	Four
5	Five
6	Six
7	Seven or More
9	Unknown

TRAVEL LANE FOR THIS VEHICLE

This element assesses the location of the vehicle prior to the critical envelope. This data is collected for in-transport vehicles.

COLUMN Name: INITLANE

SAS Value	Value Text
1	One
2	Two
3	Three
4	Four
5	Five
6	Six
7	Seven
8	Eight
98	Other
99	Unknown

TOWED TRAILING UNIT

This variable captures whether this vehicle was towing any kind of trailer or other vehicle using a fixed linkage. This data is only captured for in-transport CISS applicable vehicles.

COLUMN Name: TOWHITCH

SAS Value	Value Text
0	No Trailing Units
1	Yes, Towed Trailing Unit
8	Not a CISS Vehicle
9	Unknown

TRANSPORT STATUS

This variable captures whether this vehicle was in-transport on a trafficway at the time of crash.

COLUMN Name: TRANSTAT

SAS Value	Value Text
1	In-Transport
2	Not in-Transport
3	Working Vehicle

VEHICLE IDENTIFICATION NUMBER

This variable captures the vehicle's unique vehicle identification number (VIN). Only the first 12 characters are included, the rest being truncated for privacy reasons.

COLUMN Name: VIN

SAS Value	Value Text
000000000000	No VIN
999999999999	Unknown

VIN LENGTH

This derived variable reports the number of characters in the vehicle's VIN.

COLUMN Name: VINLENGTH

VEHICLE MAKE

This variable reports the vehicle's make/manufacturer.

COLUMN Name: MAKE

SAS Value	Value Text

99	Unknown

VEHICLE MODEL

This variable reports the vehicle's model.

COLUMN Name: MODEL

SAS Value	Value Text
999	Unknown

VEHICLE MODEL YEAR

This variable reports the year the vehicle was built by the manufacturer. This number may not always coincide with the calendar year when it was manufacturer.

COLUMN Name: MODELYR

SAS Value	Value Text
1950-2018	[Actual Value]
9999	Unknown

VEHICLE CLASS

This variable reports the basic body size and classes per the Transportation Research Board's Passenger Car Classification Subcommittee report (1984).

COLUMN Name: VEHCLASS

SAS Value	Value Text
0	Not a motor vehicle
1	Subcompact/mini (wheelbase < 254 cm)
2	Compact (wheelbase 254 but < 265 cm)
3	Intermediate (wheelbase >=265 but < 278 cm)
4	Full size (wheelbase >=278 but < 291 cm)
5	Largest (wheelbase >=291 cm)
9	Unknown passenger car size
14	Compact utility vehicle
15	Large utility vehicle (<=4,536 kgs GVWR)
16	Utility station wagon (<=4,536 kgs GVWR)
19	Unknown utility type
20	Minivan (<=4,536 kgs GVWR)

21	Large van (<=4,536 kgs GVWR)
24	Van based school bus (<=4,536 kgs GVWR)
28	Other van type (<=4,536 kgs GVWR)
29	Unknown van type (<=4,536 kgs GVWR)
30	Compact pickup truck (<=4,536 kgs GVWR)
31	Large pickup truck (<=4,536 kgs GVWR)
38	Other pickup truck (<=4,536 kgs GVWR)
39	Unknown pickup truck type (<=4,536 kgs GVWR)
45	Other light truck (<=4,536 kgs GVWR)
48	Unknown light truck type (<=4,536 kgs GVWR)
49	Unknown light vehicle type
50	School bus (excludes van based) (> 4,536 kgs GVWR)
58	Other bus (> 4,536 kgs GVWR)
59	Unknown Bus Type
60	Truck (> 4,536 kgs GVWR)
67	Tractor without trailer
68	Tractor - trailer(s)
78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

VEHICLE SPECIAL USE

This variable reports whether this vehicle was functioning, for this trip, in some kind of special activity.

COLUMN Name: SPECUSE

SAS Value	Value Text
0	No Special Function
1	Taxi
2	Vehicle used as school bus
3	Vehicle used as other bus
4	Military
5	Police
6	Ambulance
7	Fire Truck
8	Non-transport Emergency Services Vehicle
9	Incident Response

99	Unknown

WEATHER CONDITIONS

The atmospheric condition just prior to the critical event that had the most effect on the visibility of the driver. This data is collected for all in-transport vehicles.

COLUMN Name: WEATHER

SAS Value	Value Text
1	Clear
2	Rain
3	Sleet or Hail
4	Snow
5	Fog, Smog, Smoke
6	Severe Crosswinds
7	Blowing Sand, Soil, Dirt
8	Cloudy
9	Blowing Snow
10	Freezing Rain or Freezing Drizzle
98	Other, (specify):
99	Unknown

DISTRACT Dataset

Key Identifiers: PSU, CASENO, VEHNO

The DISTRACT table stores information regarding the distractions recorded for this vehicle's driver. Data in this table is populated for all in-transport vehicles where GV.DISTRACT equals 3/"Inattentive or Distracted".

Figure 5 displays the list of all the data elements in the DISTRACT table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       DISTRACT              Observations        512
Member Type         DATA                  Variables           10
Engine              V9                    Indexes             0
Created             04/02/2020 14:34:01   Observation Length  56
Last Modified       04/02/2020 14:34:01   Deleted Observations 0
Protection                                Compressed          NO
Data Set Type                             Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)
```

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
8	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
7	DISTRACTN	Num	3	DISTTYPE18F.	11.	DISTRACTION
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
9	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
10	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO
Validated YES
Character Set ANSI

Figure 6.

DISTRACTION

The type of distraction or inattention by the drive prior to realization of impending danger or just prior to impact or impending critical event.

COLUMN Name: DISTRACTN

SAS Value	Value Text
1	Sleepy or fell asleep
2	Inattentive or lost in thought
3	Manually operating an electronic communication device (texting, typing, dialing, etc)
4	Talking on hands-free electronic device
5	Talking on hand-held electronic device
6	Other device brought into the vehicle (navigation, game, video, etc)
7	Device/Control integral to the vehicle
8	Passenger
9	Other inside the vehicle (eating, personal hygiene, smoking, etc)
10	Outside the vehicle (includes unspecified external distractions)
99	Distracted, unknown type

PRE_FHE Dataset

Key Identifiers: PSU, CASENO, VEHNO, SEQUENCE

Figure 6 displays the list of all the data elements in the PRE_FHE table. Information about the type of each variable, its length, the format and the label are displayed. Data for all in-transport vehicles will be found in this dataset when GV.PREFHE equals 1 (Yes).

Data Set Name	PRE_FHE	Observations	1919
Member Type	DATA	Variables	11
Engine	V9	Indexes	0
Created	04/02/2020 14:34:04	Observation Length	56
Last Modified	04/02/2020 14:34:04	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
9	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
8	PREEVENT	Num	3	PREFHETYPE18F.	11.	PRE-FIRST HARMFUL EVENT
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
10	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
7	SEQUENCE	Num	3	6.	6.	SEQUENCE NUMBER
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
11	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby	PSU CASENO VEHNO SEQUENCE
Validated	YES
Character Set	ANSI

Figure 7.

SEQUENCE NUMBER

This variable is a sequential number indicating the chronological sequence of a particular vehicle's movement before the first harmful event. This data is only collected for in-transport vehicles.

COLUMN Name: SEQUENCE

PRE-FIRST HARMFUL EVENT

This variable describes lateral vehicle movements along the vehicle's trajectory between the end of the pre-event movement phase and the first harmful event. This data is only collected for in-transport vehicles.

COLUMN Name: PREEVENT

SAS Value	Value Text
0	No driver present
1	No pre first harmful event sequence
2	Lane departure-left side
3	Lane return-left side
4	Lane departure-right side
5	Lane return-right side
6	Roadway departure-left side
7	Roadway return-left side
8	Roadway departure-right side
9	Roadway return-right side
98	Other (specify)
99	Unknown

VEHSPEC Dataset

Key Identifiers: PSU, CASENO, VEHNO

The VEHSPEC table primarily contains original vehicle specifications of the vehicle, as well as additional information regarding the state of the vehicle at the time of the crash. Figure 7 displays the list of all the data elements in the VEHSPEC table. Information about the type of each variable, its length, the format and the label are displayed. One row will be found for each CISS applicable vehicle (BODYTYPE between 1 and 49).

```
Data Set Name       VEHSPEC                 Observations        4647
Member Type         DATA                    Variables           23
Engine              V9                      Indexes             0
Created             04/02/2020 14:34:05     Observation Length  96
Last Modified       04/02/2020 14:34:05     Deleted Observations 0
Protection                                  Compressed          NO
Data Set Type                               Sorted              YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)
```

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
19	ALTVEH	Num	3	ALT18F.	11.	MULTI-STAGE OR ALTERED VEHICLE
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
21	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
10	CURBWT	Num	4	CURBWT18F.	11.	CURB WEIGHT
18	DRVWHEELS	Num	3	DRVWHEELS18F.	11.	DRIVE WHEELS
15	ENG_CYL	Num	3	SPECENG18F.	11.	ENGINE CYLINDERS
16	ENG_DISP	Num	8	SPECENG18F.	20.1	ENGINE DISPLACEMENT
9	MAXWIDTH	Num	3	SPEC18F.	11.	MAXIMUM WIDTH
8	OAL	Num	3	SPEC18F.	11.	OVERALL LENGTH
12	OVERHANG_FRT	Num	3	SPEC18F.	11.	FRONT OVERHANG
13	OVERHANG_REAR	Num	3	SPEC18F.	11.	REAR OVERHANG
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
22	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
20	SUSPMODS	Num	3	SUSPMODS18F.	11.	SUSPECTED POST MANUFACTURER MODIFICATIONS
11	TRACKWIDTH	Num	3	SPEC18F.	11.	TRACK WIDTH
17	TRANSMISSION	Num	3	TRANSMISSION18F.	11.	TRANSMISSION
14	UEW	Num	3	SPEC18F.	11.	UNDEFORMED END WIDTH
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
23	VERSION	Num	3	6.	6.	VERSION NUMBER
7	WHEELBASE	Num	3	SPEC18F.	11.	WHEELBASE

Sort Information

Sortedby	PSU CASENO VEHNO
Validated	YES
Character Set	ANSI

Figure 8.

CURB WEIGHT

This variable reports the weight of the vehicle not considering occupants, cargo, or add-on equipment. The data is expressed in kilograms (kg).

COLUMN Name: CURBWT

SAS Value	Value Text
450 – 4536	[Actual Value]
9999	Unknown

DRIVE WHEELS

This variable reports the type of drive wheels which power the vehicle.

COLUMN Name: DRVWHEELS

SAS Value	Value Text

1	Front Wheel Drive
2	Rear Wheel Drive
3	Four Wheel Drive
4	All Wheel Drive
9	Unknown

ENGINE CYLINDERS

This variable reports the number of cylinders of this vehicle's engine.

COLUMN Name: ENG_CYL

SAS Value	Value Text
2 – 10	[Actual Value]
98	Not Applicable
99	Unknown

ENGINE DISPLACEMENT

This variable reports the displacement of this vehicle's engine, expressed in liters to the nearest tenth.

COLUMN Name: ENG_DISP

SAS Value	Value Text
1.0 – 10.0	[Actual Value]
98	Not Applicable
99	Unknown

FRONT OVERHANG

This variable reports the original longitudinal distance between the vehicle's front axle and the maximum extent of the vehicle's front. The data is expressed in centimeters.

COLUMN Name: OVERHANG_FRT

SAS Value	Value Text
25 - 150	[Actual Value]
999	Unknown

MAXIMUM WIDTH

This variable reports the original lateral distance between the vehicle's side extents. The data is expressed in centimeters.

COLUMN Name: MAXWIDTH

SAS Value	Value Text
100 - 350	[Actual Value]
999	Unknown

MULTI-STAGE OR ALTERED VEHICLE

This variable reports whether the vehicle is a multi-stage or altered vehicle. A positive response for this variable should be supported by an image of the certification label that is required to be affixed to the vehicle.

COLUMN Name: ALTVEH

SAS Value	Value Text
0	No post manufacturer modifications
1	Yes-post manufacturer modifications (specify)
9	Unknown if vehicle is modified

OVERALL LENGTH

This variable reports the original longitudinal distance between the front and rear extents of the vehicle. The data is expressed in centimeters. Any add-on equipment is excluded from the overall length of the vehicle (i.e., a pick-up with an after-market bumper added).

COLUMN Name: OAL

SAS Value	Value Text
100 - 650	[Actual Value]
999	Unknown

REAR OVERHANG

This variable reports the original longitudinal distance between the rear axle and rear extent of the vehicle. The data is expressed in centimeters.

COLUMN Name: OVERHANG_REAR

SAS Value	Value Text
25 – 200	[Actual Value]
999	Unknown

SUSPECTED POST MANUFACTURER MODIFICATIONS

This variable reports whether the crash technician suspects the vehicle has had post-manufacturer modifications which aren't supported by a multi-stage manufacturer placard/label. These modifications are normally modifications accomplished by the vehicle's owner, e.g. lift kits, brush guards, etc.

COLUMN Name: SUSPMODS

SAS Value	Value Text
0	No
1	Yes

TRACK WIDTH

This variable reports the original width between the centers of the vehicle's tires. The data is expressed in centimeters.

COLUMN Name: TRACKWIDTH

SAS Value	Value Text
100 – 200	[Actual Value]
999	Unknown

TRANSMISSION

The variable reports the type of transmission that is in the vehicle.

COLUMN Name: TRANSMISSION

SAS Value	Value Text
1	Manual
2	Automatic
3	Electric Motor Only
9	Unknown

UNDEFORMED END WIDTH

This variable reports the lateral distance between the undamaged dimension of the contacted end plane measured between the apex of both bumper corners. The data is expressed in centimeters.

COLUMN Name: UEW

SAS Value	Value Text
100 – 250	[Actual Value]
999	Unknown

WHEELBASE

This variable reports the original longitudinal distance between the vehicle's front and rear axles. The data is expressed in centimeters.

COLUMN Name: WHEELBASE

SAS Value	Value Text
100 - 650	[Actual Value]
999	Unknown

VINDERIVED Dataset

This table reports various data derived from the vehicle's VIN. A row will be present for all vehicle's with a model year of 1981 and forward and having a known VIN which passes the check digit routine without error. Figure 8 displays the list of all the data elements in the VINDERIVED table.

```
Data Set Name       VINDERIVED              Observations        4771
Member Type         DATA                    Variables           153
Engine              V9                      Indexes             0
Created             04/02/2020 14:34:06     Observation Length  27400
Last Modified       04/02/2020 14:34:06     Deleted Observations  0
Protection                                  Compressed          NO
Data Set Type                               Sorted              YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 # Variable               Type Len Format     Informat    Label

102 ActiveSafetySysNote         Char 500 $500.      $500.       ActiveSafetySysNote
 28 AdaptiveCruiseControl       Char  10 $500.     $500.       ADAPTIVE CRUISE CONTROL (ACC)
113 AdaptiveDrivingBeam         Char 500 $500.      $500.       AdaptiveDrivingBeam
```

```
 38 AdaptiveHeadlights          Char  25 $500.     $500.      ADAPTIVE HEADLIGHTS
153 AdditionalErrorText_        Char 500 $500.     $500.      AdditionalErrorText
 88 AirBagLocCurtain            Char  30 $500.     $500.      CURTAIN AIR BAG LOCATIONS
 85 AirBagLocFront              Char  30 $500.     $500.      FRONT AIR BAG LOCATIONS
 86 AirBagLocKnee               Char  30 $500.     $500.      KNEE AIR BAG LOCATIONS
 89 AirBagLocSeatCushion        Char  30 $500.     $500.      CUSHION AIR BAG LOCATIONS
 87 AirBagLocSide               Char  30 $500.     $500.      SIDE AIR BAG LOCATIONS
 32 AntilockBrakeSystem         Char  10 $500.     $500.      ANTI-LOCK BRAKING SYSTEM (ABS)
105 AutoReverseSystem           Char 500 $500.     $500.      AutoReverseSystem
 33 AutomaticEmergencyBraking   Char  10 $500.     $500.      AUTOMATIC EMERGENCY BRAKING (AEB)
106 AutomaticPedestrian         Char 500 $500.     $500.      AutomaticPedestrianAlertingSound
   AlertingSound
 61 AxleConfiguration           Char  25 $500.     $500.      AXLE CONFIGURATION
 60 AxlesCount                  Num    3 6.        6.         NUMBER OF AXLES
145 BasePrice                   Char 500 $500.     $500.      BasePrice
133 BatteryA                    Char 500 $500.     $500.      BatteryA
142 BatteryA_to                 Char 500 $500.     $500.      BatteryA_to
 65 BatteryCellsPerModule       Num    3 6.        6.         NUMBER OF BATTERY
                                                              CELLS PER MODULE
125 BatteryInfo                 Char 500 $500.     $500.      BatteryInfo
135 BatteryKWh                  Char 500 $500.     $500.      BatteryKWh
144 BatteryKWh_to               Char 500 $500.     $500.      BatteryKWh_to
 64 BatteryModulesPerPack       Num    3 6.        6.         NUMBER OF BATTERY
                                                              MODULES PER PACK
 63 BatteryPacksPerVehicle      Num    3 6.        6.         NUMBER OF BATTERY
                                                              PACKS PER VEHICLE
 66 BatteryType                 Char  20 $500.     $500.      BATTERY TYPE
134 BatteryV                    Char 500 $500.     $500.      BatteryV
143 BatteryV_to                 Char 500 $500.     $500.      BatteryV_to
 34 BlindSpotMonitoring         Char  10 $500.     $500.      BLIND SPOT MONITORING SYSTEM
 20 BodyClass                   Char  60 $500.     $500.      BODY CLASS
132 BrakeSystemDesc             Char 500 $500.     $500.      BrakeSystemDesc
 62 BrakeSystemType             Char  20 $500.     $500.      BRAKE SYSTEM TYPE
 53 BusFloorConfigurationType   Char  10 $500.     $500.      BUS FLOOR CONFIGURATION TYPE
149 BusLength                   Char 500 $500.     $500.      BusLength
 95 BusType                     Char  15 $500.     $500.      BUS TYPE
107 CAN_AACN                    Char 500 $500.     $500.      CAN_AACN
  1 CASEID                      Num    5 11.       11.        SYSTEM CASE IDENTIFIER
  3 CASENO                      Num    3 11.       11.        SEQUENTIAL CASE NUMBER
  4 CASENUMBER                  Char  16 $20.      $20.       CASE NUMBER
 98 CASEWGT                     Num    8 26.20                CASE WEIGHT
  5 CATEGORY                    Num    3 11.       11.        CASE CATEGORY
 67 ChargerLevel                Char 100 $500.     $500.      CHARGER LEVEL
 68 ChargerPowerKW              Num    3 6.        6.         CHARGER POWER (KW)
 45 CurbWeightLB                Num    3 11.       11.        CURB WEIGHT (LBS.)
 92 CustomMotorcycleType        Char  25 $500.     $500.      CUSTOM MOTORCYCLE TYPE
110 DaytimeRunningLight         Char 500 $500.     $500.      DaytimeRunningLight
126 DestinationMarket           Char 500 $500.     $500.      DestinationMarket
 23 DisplacementCC              Char  20 $500.     $500.      ENGINE DISPLACEMENT (CC)
127 DisplacementCI              Char 500 $500.     $500.      DisplacementCI
128 DisplacementL               Char 500 $500.     $500.      DisplacementL
 21 DoorsCount                  Num    3 11.       11.        NUMBER OF DOORS
 59 DriveType                   Char  25 $500.     $500.      DRIVE TYPE
 37 DriverAssist                Char  25 $500.     $500.      DRIVER ASSIST
103 DynamicBrakeSupport         Char 500 $500.     $500.      DynamicBrakeSupport
108 EDR                         Char 500 $500.     $500.      EDR
136 EVDriveUnit                 Char 500 $500.     $500.      EVDriveUnit
 29 ElectronicStabilityControl  Char  10 $500.     $500.      ELECTRONIC STABILITY
                                                              CONTROL (ESC)
 78 EngineBrakeHP               Num    8 12.2      12.2       ENGINE BRAKE (HP)
 79 EngineBrakeUpToHP           Num    8 12.2      12.2       ENGINE BRAKE UP TO (HP)
 76 EngineConfiguration         Char  10 $500.     $500.      ENGINE CONFIGURATION
 72 EngineCoolingType           Char  10 $500.     $500.      ENGINE COOLING TYPE
 71 EngineCylindersCount        Num    3 6.        6.         ENGINE NUMBER OF CYLINDERS
 81 EngineElectrificationLevel  Char  40 $500.     $500.      ENGINE ELECTRIFICATION LEVEL
 69 EngineManufacturer          Char  30 $500.     $500.      ENGINE MANUFACTURER
```

```
 22 EngineModel               Char 125 $500.     $500.      ENGINE MODEL
 77 EnginePowerKW             Num    8 12.2      12.2       ENGINE POWER (KW)
 70 EngineStrokeCycles        Num    3 6.        6.         ENGINE STROKE CYCLES
 82 EngineTurbo               Char   5 $500.     $500.      ENGINE TURBO
 80 EngineValveTrainDesign    Char  30 $500.     $500.      ENGINE VALVE TRAIN DESIGN
129 EntertainmentSystem       Char 500 $500.     $500.      EntertainmentSystem
124 ErrorText                 Char 500 $500.     $500.      ErrorText
 30 ForwardCollisionWarning   Char  10 $500.     $500.      FORWARD COLLISION WARNING (FCW)
 75 FuelDeliveryInjectionType Char  50 $500.     $500.      FUEL DELIVERY/FUEL
                                                           INJECTION TYPE
 73 FuelTypePrimary           Char  30 $500.     $500.      PRIMARY FUEL TYPE
 74 FuelTypeSecondary         Char  30 $500.     $500.      SECONDARY FUEL TYPE
117 GrossCombinationWeightRating Char 500 $500.  $500.      GrossCombinationWeightRating
118 GrossCombination          Char 500 $500.     $500.      GrossCombinationWeightRatingUpTo
  WeightRatingUpTo
 44 GrossVehicleWeightRating  Char  60 $500.     $500.      GROSS VEHICLE WEIGHT RATING
123 GrossVehicleWeightRatingUpTo Char 500 $500.  $500.      GrossVehicleWeightRatingUpTo
109 KeylessIgnition           Char 500 $500.     $500.      KeylessIgnition
 31 LaneDepartureWarning      Char  10 $500.     $500.      LANE DEPARTURE WARNING (LDW)
 35 LaneKeepSystem            Char  10 $500.     $500.      LANE KEEPING SYSTEM (LKS)
111 LowerBeamHeadlampLightSource Char 500 $500.  $500.      LowerBeamHeadlampLightSource
 12 Make                      Char  25 $500.     $500.      MAKE
 10 ManufacturerCommonName    Char  60 $500.     $500.      MANUFACTURER COMMON NAME
  9 ManufacturerFullName      Char  60 $500.     $500.      MANUFACTURER FULL NAME
 40 ManufacturerId            Num    3 11.       11.        MANUFACTURER ID
 11 ManufacturerParent        Char  60 $500.     $500.      MANUFACTURER PARENT
 13 Model                     Char  50 $500.     $500.      MODEL
 14 ModelYear                 Num    3 11.       11.        MODEL YEAR
 55 MotorcycleChassisType     Char  50 $500.     $500.      MOTORCYCLE CHASSIS TYPE
 54 MotorcycleSuspensionType  Char  25 $500.     $500.      MOTORCYCLE SUSPENSION TYPE
122 NCSAMapExcApprovedBy      Char 500 $500.     $500.      NCSAMapExcApprovedBy
121 NCSAMapExcApprovedOn      Char 500 $500.     $500.      NCSAMapExcApprovedOn
120 NCSAMappingException      Char 500 $500.     $500.      NCSAMappingException
119 NCSANote                  Char 500 $500.     $500.      NCSANote
137 Note                      Char 500 $500.     $500.      Note
150 OtherBusInfo              Char 500 $500.     $500.      OtherBusInfo
141 OtherEngineInfo           Char 500 $500.     $500.      OtherEngineInfo
151 OtherMotorcycleInfo       Char 500 $500.     $500.      OtherMotorcycleInfo
140 OtherRestraintSystemInfo  Char 500 $500.     $500.      OtherRestraintSystemInfo
152 OtherTrailerInfo          Char 500 $500.     $500.      OtherTrailerInfo
  2 PSU                       Num    3 11.       11.        PRIMARY SAMPLING UNIT
 99 PSUSTRAT                  Num    3 11.       11.        PSU STRATIFICATION
 39 ParkAssist                Char  10 $500.     $500.      PARKING ASSIST
104 PedestrianAutomatic       Char 500 $500.     $500.      PedestrianAutomatic
  EmergencyBrak                                            EmergencyBraking
 25 PlantCity                 Char  50 $500.     $500.      PLANT CITY
 41 PlantCompanyName          Char  55 $500.     $500.      PLANT COMPANY NAME
 27 PlantCountry              Char  25 $500.     $500.      PLANT COUNTRY
 26 PlantState                Char  30 $500.     $500.      PLANT STATE
148 PossibleValues            Char 500 $500.     $500.      PossibleValues
 84 Pretensioner              Char   5 $500.     $500.      PRETENSIONER
116 RearCrossTrafficAlert     Char 500 $500.     $500.      RearCrossTrafficAlert
 36 RearVisibilityCamera      Char  10 $500.     $500.      REAR VISIBILITY CAMERA
114 SAEAutomationLevel        Num    8 11.       11.        SAEAutomationLevel
115 SAEAutomationLevel_to     Num    8 11.       11.        SAEAutomationLevel_to
 83 SeatBeltsType             Char  20 $500.     $500.      SEAT BELTS TYPE
 57 SeatRowsCount             Num    3 6.        6.         NUMBER OF SEAT ROWS
 56 SeatsCount                Num    3 6.        6.         NUMBER OF SEATS
112 SemiautomaticHeadlamp     Char 500 $500.     $500.      SemiautomaticHeadlamp
  BeamSwitchi                                              BeamSwitching
 16 Series                    Char 200 $500.     $500.      SERIES
 18 Series2                   Char  50 $500.     $500.      SERIES2
130 SteeringLocation          Char 500 $500.     $500.      SteeringLocation
147 SuggestedVIN              Char 500 $500.     $500.      SuggestedVIN
 97 TPMS                      Char  10 $500.     $500.      TIRE PRESSURE MONITORING
                                                           SYSTEM (TPMS)
```

```
146 TopSpeedMPH              Char 500 $500.     $500.      TopSpeedMPH
 43 TrackWidth               Num    8 12.2      12.2       TRACK WIDTH
 90 TractionControl          Char  10 $500.     $500.      TRACTION CONTROL
 94 TrailerBodyType          Char  25 $500.     $500.      TRAILER BODY TYPE
 52 TrailerLengthFT          Num    8 12.2      12.2       TRAILER LENGTH (FT.)
 51 TrailerTypeConnection    Char  30 $500.     $500.      TRAILER TYPE CONNECTION
 58 TransmissionSpeeds       Num    3 6.        6.         TRANSMISSION SPEEDS
 24 TransmissionStyle        Char  50 $500.     $500.      TRANSMISSION STYLE
 17 Trim                     Char 100 $500.     $500.      TRIM
 19 Trim2                    Char  40 $500.     $500.      TRIM2
 50 TruckBedLengthIN         Num    3 11.       11.        TRUCK BED LENGTH (INCHES)
 49 TruckBedType             Char  10 $500.     $500.      TRUCK BED TYPE
 93 TruckBodyCabType         Char  40 $500.     $500.      TRUCK BODY CAB TYPE
  6 VEHNO                    Num    3 11.       11.        VEHICLE NUMBER
100 VERSION                  Num    3 6.        6.         VERSION NUMBER
  7 VIN                      Char  12 $12.      $12.       VEHICLE IDENTIFICATION NUMBER
 91 VINDecodeError           Char  20 $500.     $500.      VIN DECODE ERROR CODE
101 VINDecodedOn             Num    8 DATETIME16. DATETIME22.3 VIN DECODED ON
 96 VehicleDescriptor        Char  14 $17.      $17.       VEHICLE DESCRIPTOR
 15 VehicleType              Char  40 $500.     $500.      VEHICLE TYPE
  8 WMI                      Char   3 $6.       $6.        WORLD MANUFACTURER IDENTIFIER
 46 WheelBaseIN              Num    8 12.2      12.2       WHEEL BASE (INCHES)
 42 WheelBaseType            Char  15 $500.     $500.      WHEEL BASE TYPE
 47 WheelBaseUpToIN          Num    8 12.2      12.2       WHEEL BASE UPTO (INCHES)
138 WheelSizeFront           Char 500 $500.     $500.      WheelSizeFront
139 WheelSizeRear            Char 500 $500.     $500.      WheelSizeRear
 48 WheelsCount              Num    3 6.        6.         NUMBER OF WHEELS
131 Windows                  Char 500 $500.     $500.      Windows


      Sort Information

Sortedby      PSU CASENO VEHNO
Validated     YES
Character Set  ANSI
```

Figure 9.

The EXTERIOR VEHICLE Data Files

The data for the Exterior Vehicle data files is collected during the inspection of the vehicle. The amount of data collected is based upon whether the vehicle is towed (all data), not towed (all data), or not in-transport (only impact related data) as defined in the individual tables.

CDC Dataset

Key Identifiers: PSU, CASENO, VEHNO, EVENTNO

The CDC table captures the Collision Deformation Classification (CDC) code for each impact, as well as a description and profile/measurements of the damage, and associated delta V information. Normally there will be one CDC per impact, however in rare situations there may be more than one. This data will be present for all inspected vehicles which have a CDC applicable event. Figure 9 displays the list of all the data elements in the CDC table. Information about the type of each variable, its length, the format and the label are displayed.

Data Set Name	CDC	Observations	5798
Member Type	DATA	Variables	56
Engine	V9	Indexes	0
Created	04/02/2020 14:34:00	Observation Length	552
Last Modified	04/02/2020 14:34:00	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
46	C1	Num	3	UNKNA18F.		C1 MEASUREMENT
47	C2	Num	3	UNKNA18F.		C2 MEASUREMENT
48	C3	Num	3	UNKNA18F.		C3 MEASUREMENT
49	C4	Num	3	UNKNA18F.		C4 MEASUREMENT
50	C5	Num	3	UNKNA18F.		C5 MEASUREMENT
51	C6	Num	3	UNKNA18F.		C6 MEASUREMENT
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
54	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
14	CDC	Char	8	$10.	$10.	CDC
18	CDCDISTRIB	Char	1	$TDD18F.	$50.	CDC DAMAGE DISTRIBUTION
19	CDCEXTENT	Char	2	$EXTENT18F.	$50.	CDC DAMAGE EXTENT
16	CDCLONGLAT	Char	1	$LONGLAT18F.	$50.	CDC LONGITUDINAL/LATERAL LOCATION
15	CDCPLANE	Char	1	$GAD18F.	$50.	CDC PLANE OF IMPACT
17	CDCVERTLAT	Char	1	$50.	$50.	CDC VERTICAL/LATERAL LOCATION
45	CMAX	Num	3	UNKNA18F.		C MAX MEASUREMENT
25	CMAXHEIGHT	Num	3	UNKNA18F.	11.	C MAX HEIGHT
39	CMAXLOCATION	Char	125	$255.	$255.	CRUSH PROFILE C MAX LOCATION

20	DAMAPILLAR	Num	3	PILLAR18F.	11.	DAMAGE TO A PILLAR
21	DAMBPILLAR	Num	3	PILLAR18F.	11.	DAMAGE TO B PILLAR
22	DAMCPILLAR	Num	3	PILLAR18F.	11.	DAMAGE TO C PILLAR
23	DAMOTHPILLAR	Num	3	PILLAR18F.	11.	DAMAGE TO OTHER PILLAR
43	DIRECTD	Num	3	UNKNA18F.		DIRECT L D
42	DIRECTL	Num	3	UNKNA18F.	11.	DIRECT L
37	DIRECTLOCATION	Char	125	$255.	$255.	CRUSH PROFILE DIRECT DAMAGE LOCATION
44	DIRECTWIDTH	Num	3	UNKNA18F.		DIRECT DAMAGE WIDTH
26	DOORSILLDIFF	Num	3	UNKNA18F.	11.	DOOR SILL DIFFERENTIAL
34	DVBARRIER	Num	3	BAREQSP18F.	11.	DELTA V BARRIER EQUIVALENT SPEED
27	DVBASIS	Num	3	DVBASIS18F.	11.	DELTA V BASIS
31	DVENERGY	Num	5	ENERGY18F.	11.	DELTA V ENERGY
35	DVESTIMATE	Num	3	DVEST18F.	11.	DELTA V ESTIMATED SEVERITY
30	DVLAT	Num	3	DVLONLAT18F.	11.	DELTA V LATERAL
29	DVLONG	Num	3	DVLONLAT18F.	11.	DELTA V LONGITUDINAL
33	DVMOMENT	Num	3	DVMOMENT18F.	11.	DELTA V MOMENT ARM
36	DVRANK	Num	3	DVRANK18F.	11.	DELTA V RANK
32	DVSPEED	Num	3	DVSPEED18F.	11.	DELTA V IMPACT SPEED
28	DVTOTAL	Num	3	DVTOTAL18F.	11.	DELTA V TOTAL
11	ENDSHIFT	Num	3	SHIFT18F.	11.	END SHIFT
7	EVENTNO	Num	3	6.	6.	EVENT NUMBER
40	FIELDL	Num	3	UNKNA18F.		FIELD L
41	FIELDLD	Num	3	UNKNA18F.		FIELD L D
38	FIELDLLOCATION	Char	125	$255.	$255.	CRUSH PROFILE FIELD L LOCATION
13	HEADINGANG	Num	3	CDCHDG18F.	11.	HEADING ANGLE AT IMPACT
8	OBJCONT	Num	3	OBJCONT18F.	11.	OBJECT CONTACTED
10	OCLOCK	Num	3	CLOCK18F.	11.	OCLOCK
12	OVERUNDER	Num	3	UNDERRIDE18F.	11.	OVERRIDE UNDERRIDE
9	PDOF	Num	3	PDOF18F.	11.	PRINCIPLE DIRECTION OF FORCE
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
55	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
52	ROLLLAT	Num	3	UNKNA18F.	11.	ROLLOVER LATERAL MEASUREMENT
53	ROLLVERT	Num	3	UNKNA18F.	11.	ROLLOVER VERTICAL MEASUREMENT
24	SILLHEIGHT	Num	3	UNKNA18F.	11.	SILL HEIGHT
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
56	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO EVENTNO
Validated YES
Character Set ANSI

Figure 10.

CDC

This variable reports the eight character CDC which gives a gross description of the damage to the vehicle for the mentioned crash event.

COLUMN Name: CDC

OCLOCK

This variable reports the first and second characters of the CDC. It reports the direction of force in terms of clock positions.

COLUMN Name: OCLOCK

SAS Value	Value Text
00	NONHORIZONTAL FORCE
01	1 O`CLOCK
02	2 O`CLOCK
03	3 O`CLOCK
04	4 O`CLOCK
05	5 O`CLOCK
06	6 O`CLOCK
07	7 O`CLOCK
08	8 O`CLOCK
09	9 O`CLOCK
10	10 O`CLOCK
11	11 O`CLOCK
12	12 O`CLOCK
99	UNKNOWN
.	NO CDC

CDC PLANE OF IMPACT

This variable reports the third character of the CDC which denotes the plane of impact. This variable will normally match the related GAD variable in the EVENT table for this impact.

COLUMN Name: CDCPLANE

SAS Value	Value Text
F	Front
L	Left Side
R	Right Side
B	Back (rear)
T	Top
U	Undercarriage
9	Unknown

CDC LONGITUDINAL/LATERAL LOCATION

This variable reports the fourth character of the CDC which is the Longitudinal (side/top plane impacts) or Lateral (end plane impacts) component.

COLUMN Name: CDCLONGLAT

SAS Value	Value Text
B	Side rear - left or right
C	Center - front or rear
D	Distributed-side or end
F	Side Front - left or right
L	Left - front or rear
P	Side center section - L or R
R	Right - front or rear
Y	Side (F + P) or end (L + C)
Z	Side (P + B) or end (C + R)
9	Unknown

CDC VERTICAL/LATERAL LOCATION

This variable reports the fifth character of the CDC which is the vertical (side/end planes) or lateral (top plane) component.

COLUMN Name: CDCVERTLAT

CDC

SAS Value	Value Text
A	All
C	Center
D	Distributed
E	Everything below belt line
G	Belt line and above
H	Top of frame to top
L	Frame - top of frame, frame, bottom of frame (end and side plane impacts only)
L	Left (Top and Undercarriage impacts only)
M	Middle - top of frame to belt line or hood
R	Right
W	Below undercarriage level (wheels and tires only)
Y	Left and Center (L + C)
Z	Right and Center (R + C)
9	Unknown

DAMAGE DISTRIBUTION

This variable reports the sixth character of the CDC which is a description of the damage type.

COLUMN Name: CDCDISTRIB

SAS Value	Value Text
A	Overhanging structure
E	Corner
K	Conversion impact type
N	Narrow impact area
O	Rollover (includes side)
S	Sideswipe
U	No residual deformation
W	Wide impact area
9	Unknown

CDC DAMAGE EXTENT

This variable reports the seventh and eighth character of the CDC which is a gross description of the depth of damage in relation to the CDCPLANE.

COLUMN Name: CDCEXTENT

SAS Value	Value Text
01	One
02	Two
03	Three
04	Four
05	Five
06	Six
07	Seven
08	Eight
09	Nine
99	Unknown

OBJECT CONTACTED

This variable reports the contacting vehicle or object for this impact.

COLUMN Name: OBJCONT

SAS Value	Value Text
1-30	Vehicle #1-30
31	Overturn - rollover (excludes end-over-end)
32	Rollover - end-over-end

33	Fire or explosion
34	Jackknife
35	Other intraunit damage (specify):
36	Noncollision injury
38	Other noncollision (specify):
39	Noncollision - details unknown
41	Tree (<= 10 cm in diameter)
42	Tree (> 10 cm in diameter)
43	Shrubbery or bush
44	Embankment
45	Breakaway pole or post (any diameter)
47	Cable barrier guardrail
48	Guardrail Face
49	Guardrail End
50	Nonbreakaway Pole or post (<= 10 cm in diameter)
51	Nonbreakaway Pole or post (> 10 cm but <= 30 cm in diameter)
52	Nonbreakaway Pole or post (> 30 cm in diameter)
53	Nonbreakaway Pole or post (diameter unknown)
54	Concrete traffic barrier
55	Impact attenuator
56	Other traffic barrier (specify):
57	Fence
58	Wall
59	Building
60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object (specify):
69	Unknown fixed object
72	Pedestrian
73	Cyclist or cycle
74	Other nonmotorist or conveyance (specify)
75	Vehicle occupant
76	Animal
77	Railway vehicle
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object (specify):
89	Unknown nonfixed object

98	Other event (specify):
99	Unknown event or object

C MAX HEIGHT

The vertical distance between the ground and area of the max crush sustained in the "P" zone. This data is only collected under certain conditions. Please refer to the CISS Coding & Editing manual for further information. The data is expressed in centimeters.

COLUMN Name: CMAXHEIGHT

SAS Value	Value Text
0 – 120	[Actual Value]
888	Not Applicable
999	Unknown

C MAX MEASUREMENT

This variable reports the maximum depth of crush as measured by the crash technician. This field will be blank when CDC Damage Distribution (CDCDISTRIB) equals Rollover (O). The data is expressed in centimeters.

COLUMN Name: CMAX

SAS Value	Value Text
0 – 250	[Actual Value]
999	Unknown

CRUSH PROFILE DIRECT DAMAGE LOCATION

This text variable describes the location of direct damage for this impact.

COLUMN Name: DIRECTLOCATION

CRUSH PROFILE FIELD L LOCATION

This text variable describes the location of the Field L, or the area to be measured for the crush profile.

COLUMN Name: FIELDLLOCATION

CRUSH PROFILE C MAX LOCATION

This text variable describes the location of the maximum crush for this impact.

COLUMN Name: CMAXLOCATION

C1 MEASUREMENT

This variable reports the first crush measurement of the Field L as measured by the crash technician. This field will be blank when CDC Damage Distribution (CDCDISTRIB) equals Rollover (O). The data is expressed in centimeters.

COLUMN Name: C1

SAS Value	Value Text
0 – 250	[Actual Value]
999	Unknown

C2 MEASUREMENT

This variable reports the second crush measurement of the Field L as measured by the crash technician. This field will be blank when CDC Damage Distribution (CDCDISTRIB) equals Rollover (O). The data is expressed in centimeters.

COLUMN Name: C2

SAS Value	Value Text
0 – 250	[Actual Value]
999	Unknown

C3 MEASUREMENT

This variable reports the third crush measurement of the Field L as measured by the crash technician. This field will be blank when CDC Damage Distribution (CDCDISTRIB) equals Rollover (O). The data is expressed in centimeters.

COLUMN Name: C3

SAS Value	Value Text
0 – 250	[Actual Value]
999	Unknown

C4 MEASUREMENT

This variable reports the fourth crush measurement of the Field L as measured by the crash technician. This field will be blank when CDC Damage Distribution (CDCDISTRIB) equals Rollover (O). The data is expressed in centimeters.

COLUMN Name: C4

SAS Value	Value Text
0 – 250	[Actual Value]
999	Unknown

C5 MEASUREMENT

This variable reports the fifth crush measurement of the Field L as measured by the crash technician. This field will be blank when CDC Damage Distribution (CDCDISTRIB) equals Rollover (O). The data is expressed in centimeters.

COLUMN Name: C5

SAS Value	Value Text
0 – 250	[Actual Value]
999	Unknown

C6 MEASUREMENT

This variable reports the sixth crush measurement of the Field L as measured by the crash technician. This field will be blank when CDC Damage Distribution (CDCDISTRIB) equals Rollover (O). The data is expressed in centimeters.

COLUMN Name: C6

SAS Value	Value Text
0 – 250	[Actual Value]
999	Unknown

DAMAGE TO A PILLAR

This variable reports if there was any damage to the A-pillar from this impact. This data is only collected under certain conditions. Please refer to the CISS Coding & Editing manual for further information.

COLUMN Name: DAMAPILLAR

SAS Value	Value Text
0	None
1	Yes
8	Not Applicable
9	Unknown

DAMAGE TO B PILLAR

This variable reports if there was any damage to the B-pillar from this impact. This data is only collected under certain conditions. Please refer to the CISS Coding & Editing manual for further information.

COLUMN Name: DAMBPILLAR

SAS Value	Value Text
0	None
1	Yes
8	Not Applicable
9	Unknown

DAMAGE TO C PILLAR

This variable reports if there was any damage to the C-pillar from this impact. This data is only collected under certain conditions. Please refer to the CISS Coding & Editing manual for further information.

COLUMN Name: DAMCPILLAR

SAS Value	Value Text
0	None
1	Yes
8	Not Applicable
9	Unknown

DAMAGE TO OTHER PILLAR

This variable reports if there was any damage to any other pillar other than the A, B or C pillars from this impact. This data is only collected under certain conditions. Please refer to the CISS Coding & Editing manual for further information.

COLUMN Name: DAMOTHPILLAR

SAS Value	Value Text
0	None
1	Yes
8	Not Applicable
9	Unknown

DOOR SILL DIFFERENTIAL

This variable reports the difference in crush between the door sill and the door structure. This data is only collected under certain conditions. The data is expressed in centimeters. Please refer to the CISS Coding & Editing manual for further information.

COLUMN Name: DOORSILLDIFF

SAS Value	Value Text
0 – 100	[Actual Value]
888	Not Applicable
999	Unknown

DELTA V BASIS

This variable is used to indicate: (1) which CISSWeb WinSMASH algorythm was used to compute this CDC's delta V or (2) the reason a CISSWeb WinSMASH routine was not applied to this impact.

COLUMN Name: DVBASIS

SAS Value	Value Text
0	Not Inspected
1	SMASH - Damage only
2	SMASH - Damage and trajectory
3	SMASH - Missing vehicle
4	SMASH - Damage with CDC only
5	At least one vehicle is beyond the scope of SMASH
6	Rollover
7	Other non-horizontal forces
8	Sideswipe type damage
9	Severe override
10	Yielding object
11	Overlapping damage
12	Insufficient data (specify)
98	Other (specify)
99	Unknown

DELTA V BARRIER EQUIVALENT SPEED

The Barrier Equivalent speed is automatically generated by WinSMASH for this impact. The BES is defined as the speed with which a vehicle would have to collide with a fixed barrier in order to absorb the same amount of energy or produce the same amount of crush as in this crash. The data is stored in kilometers per hour (kmph).

COLUMN Name: DVBARRIER

SAS Value	Value Text
0 – 160	[Actual Value]
999	Unknown

DELTA V ESTIMATED SEVERITY

The purpose of this variable is to record an estimate of the Delta V for those situations where the WinSMASH program (including the Barrier Equivalent Speed) cannot be properly utilized (*e.g.*, overlapping damage, crush profile not measured, severe underride/override, swiping, or rollover type impacts).

COLUMN Name: DVESTIMATE

SAS Value	Value Text
0	Reconstruction Delta V coded
1	Less than 10 kmph
2	10 kmph < 25 kmph
3	25 kmph < 40 kmph
4	40 kmph < 55 kmph
5	>= 55 kmph
6	Minor
7	Moderate
8	Severe
9	Unknown

DELTA V ENERGY

This variable reports the energy absorption for this impact as generated by the WinSMASH program. The data is expressed in joules.

COLUMN Name: DVENERGY

SAS Value	Value Text
40 - 1000000	[Actual Value]
9999999	Unknown

DELTA V IMPACT SPEED

The Impact Speed is generated by the WinSMASH damage and trajectory program for this impact. The data is expressed in kilometers per hour (kmph). NOTE: The Damage and Trajectory algorithm is rarely used in CISS.

COLUMN Name: DVSPEED

SAS Value	Value Text
0 – 160	[Actual Value]
998	Damage and Trajectory run not made
999	Unknown

DELTA V LONGITUDINAL

The Longitudinal Component of Delta V is generated by the WinSMASH program for this impact. The data is expressed in kilometers per hour (kmph).

COLUMN Name: DVLONG

SAS Value	Value Text
-160 – +160	[Actual Value]
999	Unknown

DELTA V LATERAL

The Lateral Component of Delta V is generated by the WinSMASH program for this impact. This data is expressed in kilometers per hour (kmph).

COLUMN Name: DVLAT

SAS Value	Value Text
-160 – +160	[Actual Value]
999	Unknown

DELTA V MOMENT ARM

The moment arm of Principal Force is the perpendicular distance between the principal direction of force and the Center of Gravity (c.g.) of the vehicle. The moment arm is generated by the WinSMASH program and is expressed in centimeters.

COLUMN Name: DVMOMENT

SAS Value	Value Text
0 – 400	[Actual Value]
999	Unknown

DELTA V RANK

The Rank of an event is based on the Total Delta-V and the Estimated Severity coded in the Estimated Severity. Only the top two highest delta V are ranked. All others are coded 8/“Other Delta V”.

COLUMN Name: DVRANK

SAS Value	Value Text
1	Highest Delta V
2	Second Highest Delta V
8	Other Delta V

DELTA V TOTAL

The Total Delta V is generated by the WinSMASH program for this impact. The data is expressed in kilometers per hour (kmph).

COLUMN Name: DVTOTAL

SAS Value	Value Text
1 – 160	[Actual Value]
999	Unknown

DIRECT DAMAGE WIDTH

The direct damage width is measured on the vehicle from one end of the direct damage to the other, along the damaged area and not necessarily along the damage plane. The value will be 888/“Not Applicable” for rollover impacts. The data is expressed in centimeters.

COLUMN Name: DIRECTWIDTH

SAS Value	Value Text
1 – 659	[Actual Value]
888	Not Applicable
999	Unknown

DIRECT L

The Direct L is the measured length used for calculating WinSMASH results. On side planes it will normally be the Field L value, however for end planes it will normally be the Underformed End Width. This value will be 888/“Not Applicable” for rollover impacts. The data is expressed in centimeters.

COLUMN Name: DIRECTL

SAS Value	Value Text
0 - 650	[Actual Value]
888	Not Applicable
999	Unknown

DIRECT L D

This is the Direct +/- D that will be used for the WinSMASH program. It is the measurement from the damaged center of the end plane or damaged wheelbase to the center of the direct damage, measured in the field on the damaged vehicle. This value can be positive or negative based upon its relationship to the vehicle's center of gravity. The value will be 888/"Not Applicable" for rollover impacts. The data is expressed in centimeters.

COLUMN Name: DIRECTD

SAS Value	Value Text
-390 - +299	[Actual Value]
888	Not Applicable
999	Unknown

END SHIFT

This variable captures instances where the impact resulted in the shifting of the end structure.

COLUMN Name: ENDSHIFT

SAS Value	Value Text
0	No
1	Yes
9	Unknown

EVENT NUMBER

This variable captures the event number associated with this CDC. This variable can be used to merge with other datasets.

COLUMN Name: EVENTNO

SAS Value	Value Text

1-30	[Actual Value]

FIELD L

The Field L represents both direct and induced damage as measured perpendicular to the damaged plane. The value will be 888/“Not Applicable” for rollover impacts. The data is expressed in centimeters.

COLUMN Name: FIELDL

SAS Value	Value Text
1 - 1000	[Actual Value]
888	Not Applicable
999	Unknown

FIELD L D

This is the measurement from the center of the damaged end plane or wheelbase to the center of the Field L, measured in the field on the damaged vehicle. This value can be positive or negative based upon its relationship to the vehicle’s center of gravity. The value will be 888/“Not Applicable” for rollover impacts. The data is expressed in centimeters.

COLUMN Name: FIELDLD

SAS Value	Value Text
-500 - +500	[Actual Value]
888	Not Applicable
999	Unknown

HEADING ANGLE AT IMPACT

This variable reports this vehicle’s heading angle at the time of impact. It is only completed for vehicle-to-vehicle impacts. This data is captured to the nearest five degree increment.

COLUMN Name: HEADINGANG

SAS Value	Value Text
0 – 355	[Actual Value]
888	Not Applicable
999	Unknown

OVERRIDE UNDERRIDE

This variable reports whether the vehicle experienced an override/underride situation for this impact.

COLUMN Name: OVERUNDER

SAS Value	Value Text
0	None
1	Override
2	Underride
7	Medium/heavy truck or bus override
9	Unknown

PRINCIPLE DIRECTION OF FORCE

This variable reports the refined PDOF to the nearest 10 degrees.

COLUMN Name: PDOF

SAS Value	Value Text
0 – 350	[Actual Value]
998	Non-Horizontal Force
999	Unknown

ROLLOVER LATERAL MEASUREMENT

This variable reports the greatest lateral crush to one of the roof structures of the vehicle during this impact's rollover. This data is expressed in centimeters.

COLUMN Name: ROLLLAT

SAS Value	Value Text
0 – 100	[Actual Value]
888	Not Applicable
999	Unknown

ROLLOVER VERTICAL MEASUREMENT

This variable reports the greatest vertical crush to one of the roof structures of the vehicle during this impact's rollover. This data is expressed in centimeters.

COLUMN Name: ROLLVERT

SAS Value	Value Text
0 – 100	[Actual Value]
888	Not Applicable
999	Unknown

SILL HEIGHT

The original vertical distance between the ground and the sill where it meets the door seam at or as near as possible to the B-pillar. This data is expressed in centimeters.

COLUMN Name: SILLHEIGHT

SAS Value	Value Text
5 – 110	[Actual Value]
888	Not Applicable
999	Unknown

TIREPLAC Dataset

Key Identifiers: PSU, CASENO, VEHNO

The TIREPLAC table collects information normally taken from the vehicle's Tire Placard found on the vehicle. This data is only collected for in-transport inspected CISS applicable vehicles. Figure 10 displays the list of all the data elements in the TIREPLAC table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       TIREPLAC              Observations        3620
Member Type         DATA                  Variables           24
Engine              V9                    Indexes             0
Created             04/02/2020 14:34:05   Observation Length  168
Last Modified       04/02/2020 14:34:05   Deleted Observations 0
Protection                                Compressed          NO
Data Set Type                             Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 #  Variable     Type  Len   Format      Informat   Label

 1  CASEID       Num     5   11.         11.        SYSTEM CASE IDENTIFIER
 3  CASENO       Num     3   11.         11.        SEQUENTIAL CASE NUMBER
 4  CASENUMBER   Char   16   $20.        $20.       CASE NUMBER
22  CASEWGT      Num     8   26.20                  CASE WEIGHT
 5  CATEGORY     Num     3   11.         11.        CASE CATEGORY
 8  GAWRFRONT    Num     3   GWR18F.     11.        GROSS AXLE WEIGHT RATING - FRONT
```

```
 9   GAWRREAR     Num     3   GWR18F.      11.      GROSS AXLE WEIGHT RATING - REAR
 7   GVWR         Num     3   GWR18F.      11.      GROSS VEHICLE WEIGHT RATING
 2   PSU          Num     3   11.          11.      PRIMARY SAMPLING UNIT
23   PSUSTRAT     Num     3   11.          11.      PSU STRATIFICATION
10   RECFRONT1    Char   15   $50.         $50.     RECOMMENDED FRONT TIRE SIZE 1
14   RECFRONT2    Char   15   $50.         $50.     RECOMMENDED FRONT TIRE SIZE 2
18   RECFRONT3    Char   15   $50.         $50.     RECOMMENDED FRONT TIRE SIZE 3
11   RECFRPRESS1  Num     3   RECPRESS18F. 11.      RECOMMENDED FRONT PRESSURE 1
15   RECFRPRESS2  Num     3   RECPRESS18F. 11.      RECOMMENDED FRONT PRESSURE 2
19   RECFRPRESS3  Num     3   RECPRESS18F. 11.      RECOMMENDED FRONT PRESSURE 3
12   RECREAR1     Char   15   $50.         $50.     RECOMMENDED TIRE SIZE REAR 1
16   RECREAR2     Char   15   $50.         $50.     RECOMMENDED TIRE SIZE REAR 2
20   RECREAR3     Char   15   $50.         $50.     RECOMMENDED TIRE SIZE REAR 3
13   RECRRPRESS1  Num     3   RECPRESS18F. 11.      RECOMMENDED REAR PRESSURE 1
17   RECRRPRESS2  Num     3   RECPRESS18F. 11.      RECOMMENDED REAR PRESSURE 2
21   RECRRPRESS3  Num     3   RECPRESS18F. 11.      RECOMMENDED REAR PRESSURE 3
 6   VEHNO        Num     3   11.          11.      VEHICLE NUMBER
24   VERSION      Num     3   6.           6.       VERSION NUMBER


                Sort Information

            Sortedby      PSU CASENO VEHNO
            Validated     YES
            Character Set  ANSI
```

Figure 11.

GROSS VEHICLE WEIGHT RATING

The Gross Vehicle Weight Rating (GVWR) is the maximum permissible total weight of the unit in kilograms (kgs), including the vehicle itself plus all fluids, optional equipment, accessories, all cargo, driver and passengers.

COLUMN Name: GVWR

SAS Value	Value Text
600 - 6000	[Actual Value]
9999	Unknown

GROSS AXLE WEIGHT RATING – FRONT

The Front Gross Axle Weight Rating (GAWR) is the maximum weight in kilograms (kgs) that the front axle, suspension and tire system is designed to carry.

COLUMN Name: GAWRFRONT

SAS Value	Value Text
440 - 3742	[Actual Value]
9999	Unknown

GROSS AXLE WEIGHT RATING – REAR

The Rear Gross Axle Weight Rating (GAWR) is the maximum weight in kilograms (kgs) that the front axle, suspension and tire system is designed to carry.

COLUMN Name: GAWRREAR

SAS Value	Value Text
440 - 4300	[Actual Value]
9999	Unknown

RECOMMENDED FRONT TIRE SIZE 1

This text field reports the first Manufacturer's Recommended Front Tire Size as reported on the placard. 9999999999 is used for Unknown.

COLUMN Name: RECFRONT1

RECOMMENDED FRONT PRESSURE 1

This field reports the first Manufacturer Recommended COLD Tire Pressure Front in kilopascals (kPa).

COLUMN Name: RECFRPRESS1

SAS Value	Value Text
69 – 552	[Actual Value]
999	Unknown

RECOMMENDED TIRE SIZE REAR 1

This text field reports the first Manufacturer's Recommended Rear Tire Size. 9999999999 is used for Unknown.

COLUMN Name: RECREAR1

RECOMMENDED REAR PRESSURE 1

This field reports the first Manufacturer Recommended COLD Tire Pressure Rear in kilopascals (kPa).

COLUMN Name: RECRRPRESS1

SAS Value	Value Text

69 – 552	[Actual Value]
999	Unknown

RECOMMENDED FRONT TIRE SIZE 2

This text field reports the second Manufacturer's Recommended Front Tire Size.

COLUMN Name: RECFRONT2

RECOMMENDED FRONT PRESSURE 2

This field reports the second Manufacturer Recommended COLD Tire Pressure Front in kilopascals (kPa).

COLUMN Name: RECFRPRESS2

SAS Value	Value Text
69 – 552	[Actual Value]
999	Unknown

RECOMMENDED TIRE SIZE REAR 2

This text field reports the second Manufacturer's Recommended Rear Tire Size.

COLUMN Name: RECREAR2

RECOMMENDED REAR PRESSURE 2

This field reports the second Manufacturer Recommended COLD Tire Pressure Rear in kilopascals (kPa).

COLUMN Name: RECRRPRESS2

SAS Value	Value Text
69 – 552	[Actual Value]
999	Unknown

RECOMMENDED FRONT TIRE SIZE 3

This text field reports the third Manufacturer's Recommended Front Tire Size.

COLUMN Name: RECFRONT3

RECOMMENDED FRONT PRESSURE 3

This field reports the third Manufacturer Recommended COLD Tire Pressure Front in kilopascals (kPa).

COLUMN Name: RECFRPRESS3

SAS Value	Value Text
69 - 552	[Actual Value]
999	Unknown

RECOMMENDED TIRE SIZE REAR 3

This text field reports the third Manufacturer's Recommended Rear Tire Size.

COLUMN Name: RECREAR3

RECOMMENDED REAR PRESSURE 3

This field reports the third Manufacturer Recommended COLD Tire Pressure Rear in kilopascals (kPa).

COLUMN Name: RECRRPRESS3

SAS Value	Value Text
69 – 552	[Actual Value]
999	Unknown

TIRE Dataset

Key Identifiers: PSU, CASENO, VEHNO, TIRELOC

This dataset contains information regarding the Tires on the vehicle. There are 4 rows per vehicle. This data is only collected for in-transport inspected CISS applicable vehicles. Figure 11 displays the list of all the data elements in the TIRE table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name	TIRE	Observations	14477
Member Type	DATA	Variables	17
Engine	V9	Indexes	0
Created	04/02/2020 14:34:05	Observation Length	152
Last Modified	04/02/2020 14:34:05	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES

```
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable      Type   Len   Format         Informat   Label

 1  CASEID        Num      5   11.            11.        SYSTEM CASE IDENTIFIER
 3  CASENO        Num      3   11.            11.        SEQUENTIAL CASE NUMBER
 4  CASENUMBER    Char    16   $20.           $20.       CASE NUMBER
15  CASEWGT       Num      8   26.20                     CASE WEIGHT
 5  CATEGORY      Num      3   11.            11.        CASE CATEGORY
 2  PSU           Num      3   11.            11.        PRIMARY SAMPLING UNIT
16  PSUSTRAT      Num      3   11.            11.        PSU STRATIFICATION
 7  TIRELOC       Char     2   $10.           $10.       TIRE LOCATION
 8  TIREMANUF     Num      3   TIREMAKE18F.   11.        TIRE MANUFACTURER
 9  TIREMODEL     Char    50   $50.           $50.       TIRE MODEL
13  TIRERESTR     Num      3   TIRERESTR18F.  11.        TIRE RESTRICTION
10  TIRESIZE      Char    15   $20.           $20.       TIRE SIZE
14  TIRESIZETYPE  Num      3   SIZETYPE18F.   11.        TIRE SIZE TYPE
11  TIRETIN       Char    20   $TIRETIN18F.   $20.       TIRE TIN
12  TIRETREAD     Num      3   TREADDEPTH18F. 11.        TIRE TREAD DEPTH
 6  VEHNO         Num      3   11.            11.        VEHICLE NUMBER
17  VERSION       Num      3   6.             6.         VERSION NUMBER


                    Sort Information

                Sortedby      PSU CASENO VEHNO TIRELOC
                Validated     YES
                Character Set  ANSI
```

Figure 12.

TIRE LOCATION

This variable represents the tire's location on the vehicle. Only the main locations are represented (i.e. LF, RF, LR, RR). If there are dual tires on the rear axle, only the outer tire is recorded.

COLUMN Name: TIRELOC

SAS Value	Value Text
LF	Left Front
LR	Left Rear
RF	Right Front
RR	Right Rear

TIRE MANUFACTURER

This variable records the tire's manufacturer.

COLUMN Name: TIREMANUF

SAS Value	Value Text
1	AKURET
2	ALLEGIANCEIV
3	AMERICAN
4	AMERICAN RADIAL
5	APACHE
6	ARIZONIAN
7	ARMSTRONG
8	ASTRO
9	ATLAS
10	AURORA
11	AVON
12	BARUM
13	BFGOODRICH
14	BIG O
15	BILT-MOR
16	BRADLEY
17	BRIDGESTONE
18	BRIGADIER
19	BRUNSWICK
20	CARQUEST
21	CASCADE
22	CAVALIER
23	CEAT
24	CENTENNIAL
25	CHENG SHIN
26	CONCORDE
27	CONTENTAL/TAG
28	CONTINENTAL
29	CO-OP
30	COOPER
31	COOPER-EXPORT
32	CORDOVAN
33	CORNELL
34	COSMO
35	CRESTWOOD
36	CROWN
37	DANZIG
38	DAYTON

39	DEAN
40	DEFINITY
41	DELTA
42	DENMAN
43	DIAMOND
44	DOMINATOR
45	DORAL
46	DOUBLE COIN
47	DOUGLAS
48	DUNLOP
49	DURALON
50	DYNASTAR
51	ELDORADO
52	ELECTRA
53	EMBASSY
54	ESCORT
55	EUROTECH
56	EXXON
57	FALKEN
58	FEDERAL
59	FIRESTONE
60	FISK
61	FORMULA
62	FRONTIER
63	FULDA
64	FUTURA
65	FUZION
66	GENERAL
67	GILLETE
68	GISLAVED
69	GOODRICH
70	GOODYEAR
71	GT TIRE
72	GT TIRE US
73	GUARDIAN
74	GUARDSMAN
75	HALLMARK
76	HANKOOK
77	HERCULES
78	HIGH COUNTRY
79	HOOD

80	HOOSIER
81	JETZON
82	JUPITER
83	KELLY
84	KELLY-SPRINGFIELD
85	KINGSTAR
86	KIRKLAND
87	KIRKWOOD
88	K-MART
89	KUMHO
90	LARAMIE
91	LASSA
92	LEE
93	LEMANS
94	LIBERATOR
95	M&H
96	MABOR
97	MARSHAL
98	MASTERCRAFT
99	MAXXIS
100	MEDALIST
101	MENTOR
102	MERIT
103	MICHELIN
104	MICKEY THOMPSON
105	MILLER
106	MITAS
107	MODI
108	MOHAWK
109	MONARCH
110	MONTGOMERY WARD
111	MRF
112	MULTI-MILE
113	NANKANG/BRADLEY
114	NATIONAL
115	NEXEN
116	NITTO
117	NOKIAN
118	NTB
119	OHTSU
120	PACEMARK

121	PANTHER
122	PARKWAY
123	PARNELLI
124	PATHFINDER
125	PATRIOT
126	PEERLESS
127	PENSKE
128	PHILLIPS
129	PIRELLI
130	POLARIS
131	POS-A-TRAC
132	POS-A-TRACTION
133	PRIMEWELL
134	REGUL
135	RELIANT
136	REMINGTON
137	REPUBLIC
138	REYNOLDS
139	RIKEN
140	ROAD KING
141	ROADMASTER
142	ROADPRO
143	RUNWAY
144	SEARS
145	SEMPERIT
146	SHELL
147	SIDEWINDER
148	SIEBERLING
149	SIGMA
150	SOLO-TECH
151	SONIC
152	SPARTAN
153	SPORT IV
154	STAR
155	STARFIRE
156	SUMITOMO
157	SUMMIT
158	SUPER SPORT
159	TACOMA
160	TBC
161	TELSTAR

162	TEMCO
163	TIGAR
164	TNT
165	TOSCO 76
166	TOURING SUPREME
167	TOYO
168	TREDTECH
169	TRIBUNE
170	TURNPIKE USA
171	ULTRA-TECH
172	UNION 76
173	UNIROYAL
174	UNIVERSAL
175	VANDERBILT
176	VIKING
177	VISA
178	VOGUE
179	VREDESTEIN
180	WANLI
181	WESTERN AUTO
182	WESTLAKE
183	WINSTON
184	WOOSUNG
185	WYNSTAR
186	YKS
187	YOKOHAMA
887	TIRE MISSING
998	Other (specify)
999	Unknown

TIRE MODEL

This variable records the model of the tire.

COLUMN Name: TIREMODEL

TIRE SIZE

This variable records the size of the tire as found on the sidewall of the tire.

COLUMN Name: TIRESIZE

TIRE TIN

The tire identification number is used to identify the tire manufacturer, tire size, and week of manufacture. The pound sign ("#") is used for unreadable characters, while all "9"s are used for totally unknown Tire TINs.

COLUMN Name: TIRETIN

TIRE TREAD DEPTH

This variable records the minimum tread depth of the tire as recorded in millimeters.

COLUMN Name: TIRETREAD

SAS Value	Value Text
0 – 25	[Actual Value]
99	Unknown

TIRE RESTRICTION

This variable records whether the tire/wheel was restricted as a result of damage during the crash.

COLUMN Name: TIRERESTR

SAS Value	Value Text
0	No
1	Yes
8	Not applicable
9	Unknown

TIRE SIZE TYPE

This vehicle records the size type of the tire based upon the Tire Size (TIRESIZE). This variable basically serves to determine which mask should be used for coding the Tire Size.

COLUMN Name: TIRESIZETYPE

SAS Value	Value Text
1	P-Metric
2	Light Truck Metric
3	Light Truck Numeric
4	Light Truck High Flotation

8	Other
9	Unknown

TIREDAMAGE Dataset

Key Identifiers: PSU, CASENO, VEHNO, TIRELOC

The TIREDAMAGE table collects information regarding any damage found on the tire. There may be more than one row per tire. This data is only collected for in-transport inspected CISS applicable vehicles. Figure 12 displays the list of all the data elements in the TIREDAMAGE table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name TIREDAMAGE Observations 14971
Member Type DATA Variables 11
Engine V9 Indexes 0
Created 04/02/2020 14:34:05 Observation Length 56
Last Modified 04/02/2020 14:34:05 Deleted Observations 0
Protection Compressed NO
Data Set Type Sorted YES
Label
Data Representation WINDOWS_32
Encoding wlatin1 Western (Windows)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
9	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CRASH CATEGORY
8	DAMAGE	Num	3	DAMAGE18F.	11.	TIRE DAMAGE
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
10	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
7	TIRELOC	Char	2	$2.	$2.	TIRE LOCATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
11	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO TIRELOC
Validated YES
Character Set ANSI

Figure 13.

TIRE LOCATION

The location of the tire being examined.

COLUMN Name: TIRELOC

SAS Value	Value Text
LF	Left Front
LR	Left Rear
RF	Right Front
RR	Right Rear

TIRE DAMAGE

This field reports the type of damage experienced by the tire.

COLUMN Name: DAMAGE

SAS Value	Value Text
0	None
1	Tread separation
2	Sidewall separation
3	Tire puncture in tread
4	Tire puncture in sidewall
5	Tire cut/torn
6	Tire rotted
7	De-beaded
8	Other (specify)
9	Unknown

AVOID Dataset

Key Identifiers: PSU, CASENO, VEHNO

This table reports the vehicle's crash avoidance features which may be installed in the vehicle. This data is only collected for in-transport inspected CISS applicable vehicles whose Model Year (GV.MODELYR) is equal to or greater than 2010. Figure 13 displays the list of all the data elements in the AVOID table. Information about the type of each variable, its length, the format and the label are displayed.

Data Set Name	AVOID	Observations	25680
Member Type	DATA	Variables	12
Engine	V9	Indexes	0
Created	04/02/2020 14:34:00	Observation Length	56
Last Modified	04/02/2020 14:34:00	Deleted Observations	0

```
Protection                      Compressed      NO
Data Set Type                   Sorted          YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable    Type   Len   Format       Informat   Label

9   ACTIVATE    Num      3   ACTIVATE18F.   11.      EQUIPMENT ACTIVATED
8   AVAIL       Num      3   AVAIL18F.      11.      EQUIPMENT AVAILABLE
1   CASEID      Num      5   11.            11.      SYSTEM CASE IDENTIFIER
3   CASENO      Num      3   11.            11.      SEQUENTIAL CASE NUMBER
4   CASENUMBER  Char    16   $20.           $20.     CASE NUMBER
10  CASEWGT     Num      8   26.20                   CASE WEIGHT
5   CATEGORY    Num      3   11.            11.      CASE CATEGORY
7   EQUIP       Num      3   EQUIP18F.      11.      AVOIDANCE EQUIPMENT
2   PSU         Num      3   11.            11.      PRIMARY SAMPLING UNIT
11  PSUSTRAT    Num      3   11.            11.      PSU STRATIFICATION
6   VEHNO       Num      3   11.            11.      VEHICLE NUMBER
12  VERSION     Num      3   6.             6.       VERSION NUMBER


                    Sort Information

Sortedby      PSU CASENO VEHNO EQUIP
Validated     YES
Character Set  ANSI
```

Figure 14.

AVOIDANCE EQUIPMENT

This variable reports the type of crash avoidance feature.

COLUMN Name: EQUIP

SAS VALUE	VALUE TEXT
1	Lane Keeping Support
2	Automatic Crash Notification
3	Blind Spot Detection
4	Daytime Running Lamps
5	Rearview Video System
6	Dynamic Brake Support
7	Pedestrian Automatic Emergency Braking
8	Advanced Lighting
9	Adaptive Cruise Control
10	Lane Departure Warning
11	Crash Imminent Braking
12	Forward Collision Warning

EQUIPMENT AVAILABLE

This variable stores the availability of the equipment mentioned in the EQUIP field. Note: This variable is only collected for model year vehicles 2010 and newer, 8/NA otherwise.

COLUMN Name: AVAIL

SAS Value	Value Text
0	No
1	Yes
9	Unk

EQUIPMENT ACTIVATED

This variable stores the activation status of the equipment mentioned in the EQUIP field. Note: This variable is only collected for model year vehicles 2010 and newer, 8/NA otherwise.

COLUMN Name: ACTIVATE

SAS Value	Value Text
1	Yes
2	No
3	No (Disabled)
8	NA
9	Unk

FUEL Dataset

Key Identifiers: PSU, CASENO, VEHNO, FUELNO

This dataset contains information regarding the fuel sources of the vehicle (liquid or electric). There may be more than one row per vehicle. While most vehicles will have one source, some vehicles may have two (e.g. hybrid vehicles). This data is only collected for in-transport inspected CISS applicable vehicles. Full information is only collected when the system suffered a leakage, damage, or a fire event (FIRE.FIRE equals 1 or 2), otherwise only FUELTYPE, CELLDAM, and FUELLEAK are collected. Figure 14 displays the list of all the data elements in the FUEL table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       FUEL                  Observations         3664
Member Type         DATA                  Variables            17
Engine              V9                    Indexes              0
Created             04/02/2020 14:34:02   Observation Length   72
Last Modified       04/02/2020 14:34:02   Deleted Observations 0
Protection                                Compressed           NO
Data Set Type                             Sorted               YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable    Type   Len   Format       Informat   Label

1   CASEID      Num      5   11.          11.        SYSTEM CASE IDENTIFIER
3   CASENO      Num      3   11.          11.        SEQUENTIAL CASE NUMBER
4   CASENUMBER  Char    16   $20.         $20.       CASE NUMBER
15  CASEWGT     Num      8   26.20                   CASE WEIGHT
5   CATEGORY    Num      3   11.          11.        CASE CATEGORY
9   CELLDAM     Num      3   CELLDAM18F.  11.        DAMAGE TO FUEL CELL
13  FILLCAP     Num      3   FILLCAP18F.  11.        LOCATION OF FILLER CAP
12  FUELCELL    Num      3   CELLTYPE18F. 11.        TYPE OF FUEL CELL
14  FUELCOND    Num      3   FUELCOND18F. 11.        PRE-CRASH CONDITION
10  FUELEAK     Num      3   FUELLEAK18F. 11.        FUEL LEAKAGE LOCATION
11  FUELLOC     Num      3   CELLLOC18F.  11.        LOCATION OF FUEL CELL
7   FUELNO      Num      3   11.          11.        FUEL SYSTEM NUMBER
8   FUELTYPE    Num      3   FUELTYPE18F. 11.        FUEL SYSTEM TYPE
2   PSU         Num      3   11.          11.        PRIMARY SAMPLING UNIT
16  PSUSTRAT    Num      3   11.          11.        PSU STRATIFICATION
6   VEHNO       Num      3   11.          11.        VEHICLE NUMBER
17  VERSION     Num      3   6.           6.         VERSION NUMBER


                    Sort Information

              Sortedby      PSU CASENO VEHNO FUELNO
              Validated     YES
              Character Set ANSI
```

Figure 15.

FUEL SYSTEM NUMBER

Fuel systems are sequentially numbered beginning with one.

COLUMN Name: FUELNO

FUEL SYSTEM TYPE

This variable records the fuel type available for this system.

COLUMN Name: FUELTYPE

SAS Value	Value Text
1	Gasoline
2	Gasoline/Ethanol (E85)

3	Gasoline/Methanol (M85)
4	Diesel
5	CNG (Compressed Natural Gas)
6	LPG (Liquid Petroleum Gas) also known as Propane
7	LNG (Liquid Natural Gas)
8	Ethanol (E100)
9	Methanol (M100)
10	Hydrogen Fuel Cell
11	Lithium-ion Battery
12	Nickel-Metal Hydride (NiMH)
98	Other (specify):
99	Unknown fuel type

DAMAGE TO FUEL CELL

This variable records the damage, if any, to the fuel cell that occurred during the crash events.

COLUMN Name: CELLDAM

SAS Value	Value Text
1	No damage to cell
2	Deformed, no seam separation
3	Deformed, with a seam separation
4	Punctured
5	Lacerated (ripped)
6	Abraded (scraped)
7	Filler neck separation from the fuel cell
8	Other damage (specify):
9	Unknown

FUEL LEAKAGE LOCATION

This variable records the location of any leakage to the fuel system.

COLUMN Name: FUELEAK

SAS Value	Value Text
1	No fuel leakage
2	Cell
3	Filler neck
4	Cap

5	Lines/pump/filter
6	Vent/emission recovery
7	Other (specify):
9	Unknown

LOCATION OF FUEL CELL

This variable identifies the location of this fuel cell.

COLUMN Name: FUELLOC

SAS Value	Value Text
1	Aft of rear axle centered
2	Aft of rear axle left side
3	Aft of rear axle right side
4	Forward of rear axle centered
5	Forward of rear axle left side
6	Forward of rear axle right side
7	Over the rear axle
8	Other (specify):
88	Not Applicable
99	Unknown

TYPE OF FUEL CELL

This variable records the composition of the fuel cell.

COLUMN Name: FUELCELL

SAS Value	Value Text
0	Electric/solar Powered
1	Metallic
2	Non-Metallic
8	Not Applicable
9	Unknown

LOCATION OF FILLER CAP

This variable records the location of the fuel systems filler cap.

COLUMN Name: FILLCAP

SAS Value	Value Text
1	On back plane
2	Over the rear axle on left side plane
3	Over the rear axle on right side plane
4	Aft of rear axle on left side plane
5	Aft of rear axle on right side plane
6	Forward of rear axle on left side plane
7	Forward of rear axle on right side plane
8	Other (specify):
77	Electric/solar powered
88	Not Applicable
99	Unknown

PRE-CRASH CONDITION

This variable records the pre-crash condition of the fuel cell prior to the crash.

COLUMN Name: FUELCOND

SAS Value	Value Text
0	Electric/solar powered
1	No damage
2	Corroded
3	Leaking
4	Abraded
7	Other (specify):
8	Not Applicable
9	Unknown

FIRE Dataset

Key Identifiers: PSU, CASENO, VEHNO

This dataset contains basic information about the existence of any fire event. This data is only collected for in-transport inspected CISS applicable vehicles. Figure 15 displays the list of all the data elements in the FIRE table Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name	FIRE	Observations	3620
Member Type	DATA	Variables	11
Engine	V9	Indexes	0

```
Created          04/02/2020 14:34:02      Observation Length   56
Last Modified    04/02/2020 14:34:02      Deleted Observations 0
Protection                                Compressed           NO
Data Set Type                             Sorted               YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable    Type   Len   Format      Informat   Label

1   CASEID      Num      5   11.         11.        SYSTEM CASE IDENTIFIER
3   CASENO      Num      3   11.         11.        SEQUENTIAL CASE NUMBER
4   CASENUMBER  Char    16   $20.        $20.       CASE NUMBER
9   CASEWGT     Num      8   26.20                  CASE WEIGHT
5   CATEGORY    Num      3   11.         11.        CASE CATEGORY
7   FIRE        Num      3   FIRE18F.    11.        FIRE OCCURRENCE
8   FIREORGIN   Num      3   FIREORIG18F.11.        FIRE ORIGIN
2   PSU         Num      3   11.         11.        PRIMARY SAMPLING UNIT
10  PSUSTRAT    Num      3   11.         11.        PSU STRATIFICATION
6   VEHNO       Num      3   11.         11.        VEHICLE NUMBER
11  VERSION     Num      3   6.          6.         VERSION NUMBER


                     Sort Information

                Sortedby      PSU CASENO VEHNO FIRE
                Validated     YES
                Character Set ANSI
```

Figure 16.

FIRE OCCURRENCE

This variable reports the existence, and magnitude, of any fire event.

COLUMN Name: FIRE

SAS Value	Value Text
0	No fire
1	Minor fire
2	Major fire
9	Unknown

FIRE ORIGIN

This variable identifies the location of fire initiation.

COLUMN Name: FIREORIGIN

SAS Value	Value Text
0	No fire

1	Vehicle exterior (front, side, back, top)
2	Exhaust system
3	Fuel tank (and other fuel retention system parts)
4	Engine compartment
5	Cargo/trunk compartment
6	Instrument panel
7	Passenger compartment area
8	Other location (specify):
9	Unknown

EDRCOLLECT Dataset

Key Identifiers: PSU, CASENO, VEHNO

Data in this table is populated for all inspected CISS applicable vehicles which are in-transport or are working vehicles. Figure 16 displays the list of all the data elements in the EDRCOLLECT table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

EDR is an event data recorder or a device installed in some vehicles to record technical vehicle information for a brief period of time (milliseconds or seconds, not minutes) before and during a crash.

The EDR data collected in CISS differs somewhat from the data collected in NASS-CDS. CISS is primarily collecting that data mentioned in Table 1 and 2 of 49 CFR Part 563.7, although there are several variables completed by the technician which aren't captured by the EDR, e.g. EDR Imaging Method.

When crash technicians are able to image the EDR or otherwise obtain a copy of the CDRx file from a third party, the data variables are translated and entered into the database in an automated fashion. If the file is obtained as a PDF file, the crash technician transcribes the information into the database.

```
Data Set Name       EDRCOLLECT              Observations        3620
Member Type         DATA                    Variables           11
Engine              V9                      Indexes             0
Created             04/02/2020 14:34:01     Observation Length  56
Last Modified       04/02/2020 14:34:01     Deleted Observations  0
Protection                                  Compressed          NO
Data Set Type                               Sorted              YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


          Alphabetic List of Variables and Attributes
```

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
9	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
8	EDRMETHOD	Num	3	EDRMETH18F.	11.	EDR IMAGING METHOD
7	EDROBTAINED	Num	3	EDROBT18F.	11.	WAS EDR INFORMATION OBTAINED
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
10	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
11	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO
Validated YES
Character Set ANSI

Figure 17.

EDR IMAGING METHOD

This variable captures the method used to image the EDR data from the vehicle.

COLUMN Name: EDRMETHOD

SAS Value	Value Text
1	DLC
2	Fuse Block
3	Direct to Module
4	Third Party

WAS EDR INFORMATION OBTAINED

This variable captures whether the EDR data was able to be imaged from the vehicle. If it was not, a detailed list of attributes capture the reason.

COLUMN Name: EDROBTAINED

SAS Value	Value Text
1	Yes - Data entered
2	Yes - No event recorded
3	EDR information not obtained - Vehicle make/model not supported by software or hardware.

4	EDR information not obtained - Vehicle damage prevents accessing EDR data.
5	EDR information not obtained - Permission not received (specify)
6	EDR information not obtained - Hardware issue (specify)
7	EDR information not obtained - Software issue (specify)
8	EDR information not obtained - EDR submitted to manufacturer
9	EDR information not obtained - Other reasons (specify)
99	Unknown

EDRSUMM Dataset

Key Identifiers: PSU, CASENO, VEHNO, EDRSUMMNO

This table contains one row per EDR file imaged from the vehicle (EDRCOLLECT.EDROBTAINED = 1 (Yes – Data entered) or 2 (Yes – No event recorded)). Figure 17 displays the list of all the data elements in the EDRSUMM table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

The EDR data collected in CISS differs somewhat from the data collected in NASS-CDS. CISS is primarily collecting that data mentioned in Table 1 and 2 of 49 CFR Part 563.7, although there are several variables completed by the technician which aren't captured by the EDR, e.g. EDR Imaging Method.

When crash technicians are able to image the EDR or otherwise obtain a copy of the CDRx file from a third party, the data variables are translated and entered into the database in an automated fashion. If the file is obtained as a PDF file, the crash technician transcribes the information into the database.

```
Data Set Name       EDRSUMM                 Observations        1843
Member Type         DATA                    Variables           15
Engine              V9                      Indexes             0
Created             04/02/2020 14:34:02     Observation Length  168
Last Modified       04/02/2020 14:34:02     Deleted Observations  0
Protection                                  Compressed          NO
Data Set Type                               Sorted              YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes
```

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
13	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
9	CDRVERCOLL	Char	50	$50.	$50.	CDR VERSION COLLECTED
10	CDRVERREPT	Char	50	$50.	$50.	CDR VERSION REPORTED
7	EDRSUMMNO	Num	3	20.	20.	EDR SUMMARY NUMBER
12	IGCYCDOWN	Num	4	NOTREPT18F.	11.	IGNITION CYCLE DOWNLOAD
11	MODTYPE	Num	3	MODTYPE18F.	11.	CDR MODULE TYPE
8	NUMEVENTS	Num	5	11.	11.	NUMBER OF EDR EVENTS
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
14	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
15	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO EDRSUMMNO
Validated YES
Character Set ANSI

Figure 18.

EDR SUMMARY NUMBER

This variable is a sequential number and key variable for the table.

COLUMN Name: EDRSUMMNO

CDR VERSION COLLECTED

The Bosch CDR software version used to download the EDR data.

COLUMN Name: CDRVERCOLL

CDR VERSION REPORTED

The Bosch CDR software version used to report the EDR data.

COLUMN Name: CDRVERREPT

CDR MODULE TYPE

Type of module that the record was obtained from.

COLUMN Name: MODTYPE

SAS Value	Value Text
1	Air Bag Control Module

2	Powertrain Control Module
3	Rollover Sensor
4	Pedestrian Protection Module
7	Not reported
8	Reported - Data Not Valid

IGNITION CYCLE DOWNLOAD

The number of power cycles applied to the recording device at the time when the data was downloaded since the first use of the EDR.

COLUMN Name: IGCYCDOWN

SAS Value	Value Text
1-120000	[Actual Value]
999997	Reported - Data Not Valid
999998	Not reported

NUMBER OF EDR EVENTS

This variable reports the number of events captured by the EDR.

COLUMN Name: NUMEVENTS

EDREVENT Dataset

Key Identifiers: PSU, CASENO, VEHNO, EDRSUMMNO, EDREVENTNO

This table will have one row for each event recorded by the EDR for a particular vehicle, i.e. EDRSUMM.NUMEVENTS is greater than 0. Only inspected CISS applicable vehicles with imaged EDRs will have rows. Users should note that a vehicle may have more than one EDR file (EDRSUMMARY) and each file may have more than one event (EDREVENT). Figure 18 displays the list of all the data elements in the EDREVENT table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

The EDR data collected in CISS differs somewhat from the data collected in NASS-CDS. CISS is primarily collecting that data mentioned in Table 1 and 2 of 49 CFR Part 563.7, although there are several variables completed by the technician which aren't captured by the EDR, e.g. EDR Imaging Method.

When crash technicians are able to image the EDR or otherwise obtain a copy of the CDRx file from a third party, the data variables are translated and entered into the

database in an automated fashion. If the file is obtained as a PDF file, the crash technician transcribes the information into the database.

Data Set Name EDREVENT Observations 2753
Member Type DATA Variables 23
Engine V9 Indexes 0
Created 04/02/2020 14:34:01 Observation Length 176
Last Modified 04/02/2020 14:34:01 Deleted Observations 0
Protection Compressed NO
Data Set Type Sorted YES
Label
Data Representation WINDOWS_32
Encoding wlatin1 Western (Windows)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
21	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
10	CDCEVENT	Num	3	CDCEVENT18F.	6.	RELATED CDC EVENT
8	EDREVENTNO	Num	3	EDREVENT18F.	11.	EDR EVENT NUMBER
7	EDRSUMMNO	Num	3	20.	20.	EDR SUMMARY NUMBER
14	EVENT1TO2	Num	8	EDRTIME18F.	14.4	TIME FROM EVENT 1 TO 2
9	EVENTDESC	Char	50	$50.	$50.	EDR EVENT DESCRIPTION
15	FILEREC	Num	3	FILEREC18F.	11.	COMPLETE FILE RECORDED
11	IGCYCRASH	Num	4	IGCYCLE18F.	11.	IGNITION CYCLE - CRASH
19	MAXDVLAT	Num	8	EDRDV18F.	14.4	MAX DELTA V - LATERAL
20	MAXDVLATTIME	Num	8	EDRTIME18F.	14.4	TIME TO MAX DELTA V - LATERAL
17	MAXDVLONG	Num	8	EDRDV18F.	14.4	MAX DELTA V - LONGITUDINAL
18	MAXDVLONGTIME	Num	8	EDRTIME18F.	14.4	TIME TO MAX DELTA V - LONGITUDINAL
16	MAXDVRESTIME	Num	8	EDRTIME18F.	14.4	TIME TO MAX DELTA V - RESULTANT
13	NUMEVENTS	Num	5	EDREVENT18F.	11.	MULTI-EVENT, NUMBER OF EVENTS
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
22	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
23	VERSION	Num	3	6.	6.	VERSION NUMBER
12	WARNLAMP	Num	3	WARNLAMP18F.	11.	FRONTAL AIR BAG WARNING LAMP STATUS

Sort Information

Sortedby PSU CASENO VEHNO EDRSUMMNO EDREVENTNO
Validated YES
Character Set ANSI

Figure 19.

COMPLETE FILE RECORDED

Indicates whether the process imaging EDR data into a non-volatile memory for subsequent retrieval was completed successfully. This data is captured by the EDR module but augmented with additional codes (7,8) when data isn't part of the EDR file or falls outside of the normal range.

COLUMN Name: FILEREC

SAS Value	Value Text
0	No
1	Yes
7	Not reported
8	Reported - Data Not Valid

EDR SUMMARY NUMBER

This variable provides a link back to the EDRSUMM dataset, along with other key data elements.

COLUMN Name: EDRSUMMNO

EDR EVENT NUMBER

A unique sequential number assigned for the EDR event.

COLUMN Name: EDREVENTNO

EDR EVENT DESCRIPTION

An text explanation given about the event that happened in the crash.

COLUMN Name: EVENTDESC

RELATED CDC EVENT

This variable reports the event number associated with the EDR data as determined by the data coder.

COLUMN Name: CDCEVENT

SAS Value	Value Text
1-30	[Actual Value]
95	Related, unknown event
97	Event not related to this crash
99	Unknown

FRONTAL AIR BAG WARNING LAMP STATUS

This variable indicates whether the warning lamp required by FMVSS No. 208 is on or off.

COLUMN Name: WARNLAMP

SAS Value	Value Text
0	Off
1	On
7	Not reported
8	Reported - Data Not Valid

IGNITION CYCLE – CRASH

The number of power cycles applied to the recording device at the time when the data was downloaded since the first use of the EDR.

COLUMN Name: IGCYCRASH

SAS Value	Value Text
0-120000	[Actual Value]
999997	Reported - Data Not Valid
999998	Not reported

MAX DELTA V – LATERAL

The maximum value of the cumulative change in velocity, as recorded by the EDR, of the vehicle along the lateral axis. This data is reported in kilometers (kmph).

COLUMN Name: MAXDVLAT

SAS Value	Value Text
-150 - +150	[Actual Value]
888	Reported - Data Not Valid
997	Not reported

MAX DELTA V – LONGITUDINAL

The maximum value of the cumulative change in velocity, as recorded by the EDR, along the longitudinal axis. This data is reported in kilometers (kmph).

COLUMN Name: MAXDVLONG

SAS Value	Value Text
-150 - +150	[Actual Value]

888	Reported - Data Not Valid
997	Not reported

MULTI-EVENT, NUMBER OF EVENTS

The occurrence of 2+ events, the first and last of which begin not more than 5 seconds apart.

COLUMN Name: NUMEVENTS

SAS Value	Value Text
0-5	[Actual Value]
7	Not reported

RELATED CDC EVENT

This variable reports the event associated with the air bag's deployment.

COLUMN Name: CDCEVENT

SAS Value	Value Text
1-30	[Actual Value]
95	Related, unknown event
97	Event not related to this crash
99	Unknown

TIME FROM EVENT 1 TO 2

The elapsed time from time zero of the first event to time zero of the second event.

COLUMN Name: EVENT1TO2

SAS Value	Value Text
0-5	[Actual Value]
8888	Reported - Data Not Valid
9995	Time between events exceeds 5.0 seconds
9997	Not reported

TIME TO MAX DELTA V – RESULTANT

The time from crash time zero to the point where the maximum delta-V resultant occurs, as recorded by the EDR or processed during data download.

COLUMN Name: MAXDVRESTIME

SAS Value	Value Text
0-600	[Actual Value]
8888	Reported - Data Not Valid
9997	Not reported

TIME TO MAX DELTA V – LONGITUDINAL

The time from crash time zero to the point where the maximum value of the cumulative change in velocity is found, as recorded by the EDR, along the longitudinal axis.

COLUMN Name: MAXDVLONGTIME

SAS Value	Value Text
0-670	[Actual Value]
8888	Reported - Data Not Valid
9997	Not reported

TIME TO MAX DELTA V – LATERAL

The time from crash time zero to the point where the maximum value of the cumulative change in velocity is found, as recorded by the EDR, along the lateral axis. This data is expressed in kilometers per hour (kmph).

COLUMN Name: MAXDVLATTIME

SAS Value	Value Text
0-670	[Actual Value]
8888	Reported – Data Not Valid
9997	Not reported

EDRREST Dataset

Key Identifiers: PSU, CASENO, VEHNO, EDRSUMMNO, EDREVENTNO

This table will contain one row for each row in the EDREVENT table when EDRSUMM.MODTYPE equals ‘Air Bag Control Module’ (1), ‘Rollover Sensor’ (3), or ‘Pedestrian Protection Module’ (4). The table contains information regarding the front outboard restraints (air bags and seat belts) in the vehicle. Figure 19 displays the list of

all the data elements in the EDRREST table Information about the type of each variable, its length, the format, and the label is provided for each data element.

The EDR data collected in CISS differs somewhat from the data collected in NASS-CDS. CISS is primarily collecting that data mentioned in Table 1 and 2 of 49 CFR Part 563.7, although there are several variables completed by the technician which aren't captured by the EDR, e.g. EDR Imaging Method.

When crash technicians are able to image the EDR or otherwise obtain a copy of the CDRx file from a third party, the data variables are translated and entered into the database in an automated fashion. If the file is obtained as a PDF file, the crash technician transcribes the information into the database.

Data Set Name	EDRREST	Observations	2749
Member Type	DATA	Variables	37
Engine	V9	Indexes	0
Created	04/02/2020 14:34:02	Observation Length	208
Last Modified	04/02/2020 14:34:02	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
35	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
8	EDREVENTNO	Num	3	11.	11.	EDR EVENT NUMBER
7	EDRSUMMNO	Num	3	20.	20.	EDR SUMMARY NUMBER
10	LF1STAGEDEP	Num	8	EDRSTAG118F.	14.2	DRIVER TIME TO STAGE 1 FRONTAL DEPLOYMENT
11	LF2STAGEDEP	Num	8	EDRSTAG218F.	14.2	DRIVER TIME TO STAGE 2 FRONTAL DEPLOYMENT
9	LFBELT	Num	3	EDRBELT18F.	11.	DRIVER BELT STATUS
18	LFBUCKDEPTIME	Num	8	EDRTIMEPRET18F.	14.2	DRIVER TIME TO BUCKLE PRETENSIONER DEPLOYMENT
15	LFCURTDEPTIME	Num	8	EDRTIMECUR18F.	14.2	DRIVER TIME TO CURTAIN/TUBE BAG DEPLOYMENT
13	LFDISPOSAL	Num	3	EDRDISPOSAL18F.	11.	DRIVER AIR BAG DISPOSAL
21	LFOCCPOS	Num	3	OCCPOS18F.	11.	DRIVER OUT OF POSITION
20	LFOCCSIZE	Num	3	OCCSIZE18F.	11.	DRIVER OCCUPANT SIZE CLASSIFICATION
16	LFPRETENDEPTIME	Num	8	EDRTIMEPRET18F.	14.2	DRIVER TIME TO PRETENSIONER DEPLOYMENT
17	LFRETRACTDEPTIME	Num	8	EDRTIMEBUCK18F.	14.2	DRIVER TIME TO RETRACTOR DEPLOYMENT
14	LFSIDEDEPTIME	Num	8	EDRTIMESIDE18F.	14.2	DRIVER TIME TO SIDE AIR BAG DEPLOYMENT
12	LFSWITCH	Num	3	EDRSWITCH18F.	11.	DRIVER AIR BAG SUPPRESSION SWITCH STATUS
19	LFTRACKPOS	Num	3	TRACKPOS18F.	11.	DRIVER SEAT TRACK POSITION, FOREMOST
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
36	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
23	RF1STAGEDEP	Num	8	EDRSTAG118F.	14.2	PASSENGER TIME TO STAGE 1 FRONTAL DEPLOYMENT
24	RF2STAGEDEP	Num	8	EDRSTAG218F.	14.2	PASSENGER TIME TO STAGE 2 FRONTAL DEPLOYMENT
22	RFBELT	Num	3	EDRBELT18F.	11.	PASSENGER BELT STATUS
31	RFBUCKDEPTIME	Num	8	EDRTIMEPRET18F.	14.2	PASSENGER TIME TO BUCKLE PRETENSIONER DEPLOYMENT
28	RFCURTDEPTIME	Num	8	EDRTIMECUR18F.	14.2	PASSENGER TIME TO CURTAIN/TUBE BAG DEPLOYMENT
26	RFDISPOSAL	Num	3	EDRDISPOSAL18F.	11.	PASSENGER AIR BAG DISPOSAL
34	RFOCCPOS	Num	3	OCCPOS18F.	11.	PASSENGER OUT OF POSITION
33	RFOCCSIZE	Num	3	OCCSIZE18F.	11.	PASSENGER OCCUPANT SIZE CLASSIFICATION

```
29 RFPRETENDEPTIME  Num    8 EDRTIMEPRET18F. 14.2    PASSENGER TIME TO PRETENSIONER DEPLOYMENT
30 RFRETRACTDEPTIME Num    8 EDRTIMEBUCK18F. 14.2    PASSENGER TIME TO RETRACTOR DEPLOYMENT
27 RFSIDEDEPTIME    Num    8 EDRTIMESIDE18F. 14.2    PASSENGER TIME TO SIDE AIR BAG DEPLOYMENT
25 RFSWITCH         Num    3 EDRSWITCH18F.  11.    PASSENGER AIR BAG SUPPRESSION SWITCH STATUS
32 RFTRACKPOS       Num    3 TRACKPOS18F.   11.    PASSENGER SEAT TRACK POSITION, FOREMOST
 6 VEHNO            Num    3 11.            11.    VEHICLE NUMBER
37 VERSION          Num    3 6.             6.     VERSION NUMBER


                    Sort Information

              Sortedby      PSU CASENO VEHNO EDRSUMMNO EDREVENTNO
              Validated     YES
              Character Set  ANSI
```

Figure 20.

EDR SUMMARY NUMBER

This variable provides a link back to the EDRSUMM dataset, along with other key data elements.

COLUMN Name: EDRSUMMNO

EDR EVENT NUMBER

This variable provides a link back to the EDREVENT dataset, along with other key data elements.

COLUMN Name: EDREVENTNO

DRIVER AIR BAG SUPPRESSION SWITCH STATUS

The status of the switch indicating whether an air bag suppression system is on or off.

COLUMN Name: LFSWITCH

SAS Value	Value Text
0	Off
1	On
2	Auto
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

DRIVER AIR BAG DISPOSAL

Indicates whether the deployment command of the second (or higher, if present) stage of a frontal air bag for the purpose of disposing the propellant from the air bag device.

COLUMN Name: LFDISPOSAL

SAS Value	Value Text
0	Second stage deployment was not for the purpose of disposal
1	Second stage deployment was a disposal
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

DRIVER BELT STATUS

The signal from the safety system that is used to determine that a driver's safety belt (for both driver and right front passenger) is buckled or not buckled.

COLUMN Name: LFBELT

SAS Value	Value Text
0	Unbuckled
1	Buckled
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

DRIVER OCCUPANT SIZE CLASSIFICATION

Classifies the driver occupant size.

COLUMN Name: LFOCCSIZE

SAS Value	Value Text
0	Empty
1	Child
2	5th percentile female
3	Larger than 5th percentile female
4	Child or Empty
5	Adult, size not specified
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

DRIVER OUT OF POSITION

The classification indicating that the seating posture of a front outboard is determined as being out-of-position.

COLUMN Name: LFOCCPOS

SAS Value	Value Text
0	No
1	Yes
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

DRIVER SEAT TRACK POSITION, FOREMOST

COLUMN Name: LFTRACKPOS

SAS Value	Value Text
0	No
1	Yes
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

DRIVER TIME TO STAGE 1 FRONTAL DEPLOYMENT

The elapsed time between time zero and the time when the first stage of a frontal air bag was commanded to deploy.

COLUMN Name: LF1STAGEDEP

SAS Value	Value Text
0-3000	[Actual Value]
8888	Reported - Data Not Valid
9994	Frontal air bag deployed, no time specified
9995	Frontal air bag not deployed
9996	No event recorded
9997	Not reported

DRIVER TIME TO STAGE 2 FRONTAL DEPLOYMENT

The elapsed time from crash time zero to the deployment command for the 2nd stage of a frontal air bag. All vehicles assumed to have only two stages.

COLUMN Name: LF2STAGEDEP

SAS Value	Value Text
0-3000	[Actual Value]
8888	Reported - Data Not Valid
9994	Frontal air bag deployed, no time specified
9995	Frontal air bag not deployed
9996	No event recorded
9997	Not reported

DRIVER TIME TO SIDE AIR BAG DEPLOYMENT

The elapsed time from crash time zero to the deployment command for a curtain air bag.

COLUMN Name: LFSIDEDEPTIME

SAS Value	Value Text
0-3000	[Actual Value]
8888	Reported - Data Not Valid
9994	Side air bag deployed, no time specified
9995	Side air bag not deployed
9996	No event recorded
9997	Not reported

DRIVER TIME TO CURTAIN/TUBE BAG DEPLOYMENT

The elapsed time from crash time zero to the deployment command for a curtain air bag.

COLUMN Name: LFCURTDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9994	Curtain air bag deployed, no time specified
9995	Curtain air bag not deployed

9996	No event recorded
9997	Not reported

DRIVER TIME TO PRETENSIONER DEPLOYMENT

The elapsed time from crash time zero to the deployment command for the safety belt pretensioner. If multiple pretensioner locations provide time to deployment, the smallest time is reported. EDR modules that report multiple pretensioner locations do not necessarily report the same time to deployment. The lowest time to deployment is reported.

COLUMN Name: LFPRETENDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9994	Pretensioner deployed, no time specified
9995	Pretensioner not deployed
9996	No event recorded
9997	Not reported

DRIVER TIME TO RETRACTOR DEPLOYMENT

This variable reports the time at which the driver's restraint retractor deployed.

COLUMN Name: LFRETRACTDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9995	Pretensioner not deployed
9996	No event recorded
9997	Not reported
9999	Pretensioner deployed, no time specified

DRIVER TIME TO BUCKLE PRETENSIONER DEPLOYMENT

The elapsed time from crash time zero to the deployment command for the safety belt pretensioner. If multiple pretensioner locations provide time to deployment, the smallest time is reported.

COLUMN Name: LFBUCKDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9994	Pretensioner deployed, no time specified
9995	Pretensioner not deployed
9996	No event recorded
9997	Not reported

PASSENGER AIR BAG SUPPRESSION SWITCH STATUS

The status of the switch indicating whether an air bag suppression system is on or off.

COLUMN Name: RFSWITCH

SAS Value	Value Text
0	Off
1	On
2	Auto
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

PASSENGER AIR BAG DISPOSAL

Indicates whether the deployment command of the second (or higher, if present) stage of a frontal air bag for the purpose of disposing the propellant from the air bag device.

COLUMN Name: RFDISPOSAL

SAS Value	Value Text
0	Second stage deployment was not for the purpose of disposal
1	Second stage deployment was a disposal
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

PASSENGER BELT STATUS

The signal from the safety system that is used to determine that an occupant's safety belt (for both driver and right front passenger) is buckled or not buckled.

COLUMN Name: RFBELT

SAS Value	Value Text
0	Unbuckled
1	Buckled
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

PASSENGER OCCUPANT SIZE CLASSIFICATION

Classifies the occupant size.

COLUMN Name: RFOCCSIZE

SAS Value	Value Text
0	Empty
1	Child
2	5th percentile female
3	Larger than 5th percentile female
4	Child or Empty
5	Adult, size not specified
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

PASSENGER OUT OF POSITION

The classification indicating that the seating posture of a front outboard is determined as being out-of-position.

COLUMN Name: RFOCCPOS

SAS Value	Value Text
0	No
1	Yes
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

PASSENGER SEAT TRACK POSITION, FOREMOST

COLUMN Name: RFTRACKPOS

SAS Value	Value Text
0	No
1	Yes
6	No event recorded
7	Not reported
8	Reported - Data Not Valid

PASSENGER TIME TO STAGE 1 FRONTAL DEPLOYMENT

The elapsed time between time zero and the time when the first stage of a frontal air bag was commanded to deploy.

COLUMN Name: RF1STAGEDEP

SAS Value	Value Text
0-3000	[Actual Value]
8888	Reported - Data Not Valid
9994	Frontal air bag deployed, no time specified
9995	Frontal air bag not deployed
9996	No event recorded
9997	Not reported

PASSENGER TIME TO STAGE 2 FRONTAL DEPLOYMENT

The elapsed time from crash time zero to the deployment command for the 2nd stage of a frontal air bag.

COLUMN Name: RF2STAGEDEP

SAS Value	Value Text
0-3000	[Actual Value]
8888	Reported - Data Not Valid
9994	Frontal air bag second stage fired, no time specified
9995	Frontal air bag second stage not fired
9996	No event recorded
9997	Not reported

PASSENGER TIME TO SIDE AIR BAG DEPLOYMENT

The elapsed time from crash time zero to the deployment command for a side air bag.

COLUMN Name: RFSIDEDEPTIME

SAS Value	Value Text
0-3000	[Actual Value]
8888	Reported - Data Not Valid
9994	Side air bag deployed, no time specified
9995	Side air bag not deployed
9996	No event recorded
9997	Not reported

PASSENGER TIME TO CURTAIN/TUBE BAG DEPLOYMENT

The elapsed time from crash time zero to the deployment command for a curtain air bag.

COLUMN Name: RFCURTDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9994	Side air bag deployed, no time specified
9995	Side air bag not deployed
9996	No event recorded
9997	Not reported

PASSENGER TIME TO PRETENSIONER DEPLOYMENT

The elapsed time from crash time zero to the deployment command for the safety belt pretensioner. If multiple pretensioner locations provide time to deployment, the smallest time is reported.

COLUMN Name: RFPRETENDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9994	Pretensioner deployed, no time specified
9995	Pretensioner not deployed

9996	No event recorded
9997	Not reported

PASSENGER TIME TO RETRACTOR DEPLOYMENT

This variable reports the time at which the passenger's restraint retractor deployed.

COLUMN Name: RFRETRACTDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9995	Pretensioner not deployed
9996	No event recorded
9997	Not reported
9999	Pretensioner deployed, no time specified

PASSENGER TIME TO BUCKLE PRETENSIONER DEPLOYMENT

The elapsed time from crash time zero to the deployment command for the safety belt pretensioner. If multiple pretensioner locations provide time to deployment, the smallest time is reported.

COLUMN Name: RFBUCKDEPTIME

SAS Value	Value Text
0-2000	[Actual Value]
8888	Reported - Data Not Valid
9994	Pretensioner deployed, no time specified
9995	Pretensioner not deployed
9996	No event recorded
9997	Not reported

EDRPRECRASH Dataset

Key Identifiers: PSU, CASENO, VEHNO, EDRSUMMNO, EDREVENTNO

This table will contain one row per recorded time value of each recorded point code type as recorded by the EDR. There may be one or more rows per point code type. Figure 20 displays the list of all the data elements in the EDRPRECRASH table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

The EDR data collected in CISS differs somewhat from the data collected in NASS-CDS. CISS is primarily collecting that data mentioned in Table 1 and 2 of 49 CFR Part 563.7, although there are several variables completed by the technician which aren't captured by the EDR, e.g. EDR Imaging Method.

When crash technicians are able to image the EDR or otherwise obtain a copy of the CDRx file from a third party, the data variables are translated and entered into the database in an automated fashion. If the file is obtained as a PDF file, the crash technician transcribes the information into the database.

Data Set Name EDRPRECRASH Observations 212762
Member Type DATA Variables 14
Engine V9 Indexes 0
Created 04/02/2020 14:34:01 Observation Length 72
Last Modified 04/02/2020 14:34:01 Deleted Observations 0
Protection Compressed NO
Data Set Type Sorted YES
Label
Data Representation WINDOWS_32
Encoding wlatin1 Western (Windows)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
12	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
8	EDREVENTNO	Num	3	11.	11.	EDR EVENT NUMBER
7	EDRSUMMNO	Num	3	20.	20.	EDR SUMMARY NUMBER
9	PCODE	Num	3	CODETYPE18F.	11.	EDR POINT TYPE
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
13	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
10	PTIME	Num	8	PTIME18F.	14.4	EDR POINT TIME
11	PVALUE	Num	8	10.4	14.4	EDR POINT VALUE
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
14	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO EDRSUMMNO EDREVENTNO PCODE PTIME
Validated YES
Character Set ANSI

Figure 21.

EDR SUMMARY NUMBER

This variable provides a link back to the EDRSUMM dataset, along with other key data elements.

COLUMN Name: EDRSUMMNO

EDR EVENT NUMBER

This variable provides a link back to the EDREVENT dataset, along with other key data elements.

COLUMN Name: EDREVENTNO

EDR POINT TYPE

This variable identifies which type of data is being recorded.

COLUMN Name: PCODE

SAS Value	Value Text
1010	Vehicle Speed
1020	Engine Throttle (% full)
1030	Accelerator Pedal (% full)
1040	Service Brake
1050	Engine RPM
1060	ABS Activity
1070	Stability Control
1080	Steering input (deg)

EDR POINT TIME

This variable identifies the time at which the data was recorded. The actual value will vary based upon the type of point.

COLUMN Name: PTIME

SAS Value	Value Text
9996	Reported - Data Not Valid
9997	Not reported

EDR POINT VALUE

This variable identifies the actual value recorded for the particular type and time. The actual value will vary based upon the type of point.

COLUMN Name: PVALUE

SAS Value	Value Text
99996	Reported, data not valid
99997	Not reported

EDRPOSTCRASH Dataset

Key Identifiers: PSU, CASENO, VEHNO, EDRSUMMNO, EDREVENTNO

This table will contain one row per recorded time value of each recorded point code type as recorded by the EDR. There may be one or more rows per point code type. Figure 21 displays the list of all the data elements in the EDRPOSTCRASH table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

The EDR data collected in CISS differs somewhat from the data collected in NASS-CDS. CISS is primarily collecting that data mentioned in Table 1 and 2 of 49 CFR Part 563.7, although there are several variables completed by the technician which aren't captured by the EDR, e.g. EDR Imaging Method.

When crash technicians are able to image the EDR or otherwise obtain a copy of the CDRx file from a third party, the data variables are translated and entered into the database in an automated fashion. If the file is obtained as a PDF file, the crash technician transcribes the information into the database.

```
Data Set Name       EDRPOSTCRASH              Observations        311612
Member Type         DATA                      Variables           14
Engine              V9                        Indexes             0
Created             04/02/2020 14:34:01       Observation Length  72
Last Modified       04/02/2020 14:34:01       Deleted Observations  0
Protection                                    Compressed          NO
Data Set Type                                 Sorted              YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable     Type   Len    Format       Informat    Label

1   CASEID       Num      5    11.          11.         SYSTEM CASE IDENTIFIER
3   CASENO       Num      3    11.          11.         SEQUENTIAL CASE NUMBER
4   CASENUMBER   Char    16    $20.         $20.        CASE NUMBER
12  CASEWGT      Num      8    26.20                    CASE WEIGHT
5   CATEGORY     Num      3    11.          11.         CASE CATEGORY
8   EDREVENTNO   Num      3    11.          11.         EDR EVENT NUMBER
7   EDRSUMMNO    Num      3    20.          20.         EDR SUMMARY NUMBER
9   PCODE        Num      3    CODETYPE18F.  11.        EDR POINT TYPE
2   PSU          Num      3    11.          11.         PRIMARY SAMPLING UNIT
13  PSUSTRAT     Num      3    11.          11.         PSU STRATIFICATION
10  PTIME        Num      8    PTIME18F.    14.4        EDR POINT TIME
```

```
11   PVALUE     Num    8   9.4        14.4     EDR POINT VALUE
 6   VEHNO      Num    3   11.        11.      VEHICLE NUMBER
14   VERSION    Num    3   6.         6.       VERSION NUMBER


                    Sort Information

Sortedby     PSU CASENO VEHNO EDRSUMMNO EDREVENTNO PCODE PTIME
Validated    YES
Character Set  ANSI
```

Figure 22.

EDR SUMMARY NUMBER

This variable provides a link back to the EDRSUMM dataset, along with other key data elements.

COLUMN Name: EDRSUMMNO

EDR EVENT NUMBER

This variable provides a link back to the EDREVENT dataset, along with other key data elements.

COLUMN Name: EDREVENTNO

EDR POINT TYPE

This variable identifies which type of data is being recorded.

COLUMN Name: PCODE

SAS Value	Value Text
2010	Delta-V, Longitudinal
2020	Delta-V, Lateral
2030	Acceleration, Longitudinal (g)
2040	Acceleration, Lateral (g)
2050	Acceleration, Normal (g)
2060	Roll Angle (deg)

EDR POINT TIME

This variable identifies the time at which the data was recorded. The actual value will vary based upon the type of point.

COLUMN Name: PTIME

SAS Value	Value Text
9996	Reported - Data Not Valid
9997	Not reported

EDR POINT VALUE

This variable identifies the actual value recorded for the particular type and time. The actual value will vary based upon the type of point.

COLUMN Name: PVALUE

VEHMEAS Dataset

Key Identifiers: PSU, CASENO, VEHNO

The VEHMEAS dataset captures two types of measurements: 1) post-crash measurements taken from the vehicle during inspection, and 2) original dimension measurements of some sections of the vehicle used for determining CDC extent zones. These measurements will only be found for inspected vehicles, and not all measurements will necessarily be taken. The presence of some data will be dependent upon the damaged plane and the accessibility of the vehicle at the inspection site. There will be only one row per vehicle. Figure 22 displays the list of all the data elements in the VEH_MEAS dataset. Information about the type of each variable, its length, the format and the label are displayed.

```
Data Set Name       VEHMEAS              Observations        3693
Member Type         DATA                 Variables           37
Engine              V9                   Indexes             0
Created             04/02/2020 14:34:05  Observation Length  136
Last Modified       04/02/2020 14:34:05  Deleted Observations 0
Protection                               Compressed          NO
Data Set Type                            Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 #   Variable     Type   Len    Format         Informat    Label

26   BACKBPILL    Num      3    MEASUNKNA18F.   11.        BACK EXTENT - B PILLAR
25   BACKLIGHT    Num      3    MEASUNKNA18F.   11.        BACK EXTENT - BACKLIGHT
33   BACKPICKUP   Num      3    MEASUNKNA18F.   11.        PICK-UP REAR EXTENT
24   BACKTRUNK    Num      3    MEASUNKNA18F.   11.        BACK EXTENT - TRUNK
 1   CASEID       Num      5    11.             11.        SYSTEM CASE IDENTIFIER
 3   CASENO       Num      3    11.             11.        SEQUENTIAL CASE NUMBER
 4   CASENUMBER   Char    16    $20.            $20.       CASE NUMBER
35   CASEWGT      Num      8                                CASE WEIGHT
 5   CATEGORY     Num      3    11.             11.        CASE CATEGORY
17   FRNTBUMP     Num      3    MEASUNKNA18F.   11.        FRONT BUMPER HEIGHT
```

21	FRNTHOOD	Num	3	MEASUNKNA18F.	11.	FRONT EXTENT - HOOD
23	FRNTPILL	Num	3	MEASUNKNA18F.	11.	FRONT EXTENT - PILLAR
19	FRNTTRACK	Num	3	MEASUNKNA18F.	11.	FRONT TRACK WIDTH
22	FRNTWIND	Num	3	MEASUNKNA18F.	11.	FRONT EXTENT - WINDSHIELD
8	LFBC	Num	3	MEASUNKNA18F.	11.	LEFT FRONT BUMPER CORNER
7	LFOH	Num	3	MEASUNKNA18F.	11.	LEFT FRONT OVERHANG
10	LRBC	Num	3	MEASUNKNA18F.	11.	LEFT REAR BUMPER CORNER
11	LROH	Num	3	MEASUNKNA18F.	11.	LEFT REAR OVERHANG
34	PBED	Num	3	MEASUNKNA18F.	11.	PICK-UP BED LENGTH
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
36	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
18	REARBUMP	Num	3	MEASUNKNA18F.	11.	REAR BUMPER HEIGHT
20	REARTRACK	Num	3	MEASUNKNA18F.	11.	REAR TRACK WIDTH
13	RFBC	Num	3	MEASUNKNA18F.	11.	RIGHT FRONT BUMPER CORNER
12	RFOH	Num	3	MEASUNKNA18F.	11.	RIGHT FRONT OVERHANG
15	RRBC	Num	3	MEASUNKNA18F.	11.	RIGHT REAR BUMPER CORNER
16	RROH	Num	3	MEASUNKNA18F.	11.	RIGHT REAR OVERHANG
27	SIDEDOOR	Num	3	MEASUNKNA18F.	11.	SIDE EXTENT - DOOR
28	SIDEGLAZ	Num	3	MEASUNKNA18F.	11.	SIDE EXTENT - GLAZING
29	SIDEROOF	Num	3	MEASUNKNA18F.	11.	SIDE EXTENT - ROOF
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
37	VERSION	Num	3	6.	6.	VERSION NUMBER
32	VERTDOOR	Num	3	MEASUNKNA18F.	11.	VERTICAL EXTENT - DOOR
31	VERTGLAZ	Num	3	MEASUNKNA18F.	11.	VERTICAL EXTENT - GLAZING
30	VERTROOF	Num	3	MEASUNKNA18F.	11.	VERTICAL EXTENT - ROOF
9	WBLEFT	Num	3	MEASUNKNA18F.	11.	WHEELBASE - LEFT
14	WBRIGHT	Num	3	MEASUNKNA18F.	11.	WHEELBASE - RIGHT

Sort Information

Sortedby PSU CASENO VEHNO
Validated YES
Character Set ANSI

Figure 23.

LEFT FRONT OVERHANG

This variable stores the post-crash longitudinal measurement between the left front axle and the front extent of the vehicle. The data is expressed in centimeters.

COLUMN Name: LFOH

SAS Value	Value Text
25 – 250	[Actual Value]
887	Not Applicable
999	Unknown

LEFT FRONT BUMPER CORNER

This variable stores the post-crash longitudinal measurement between the left front axle and the left front bumper corner. This data is expressed in centimeters.

COLUMN Name: LFBC

SAS Value	Value Text
0 – 250	[Actual Value]
887	Not Applicable
999	Unknown

WHEELBASE - LEFT

This variable stores the post-crash distance between the left side rear axle and the front axle. The data is expressed in centimeters.

COLUMN Name: WBLEFT

SAS Value	Value Text
50 – 650	[Actual Value]
887	Not Applicable
999	Unknown

LEFT REAR BUMPER CORNER

This variable stores the post-crash longitudinal measurement between the left rear axle and the left rear bumper corner. This data is expressed in centimeters.

COLUMN Name: LRBC

SAS Value	Value Text
0 - 450	[Actual Value]
887	Not Applicable
999	Unknown

LEFT REAR OVERHANG

This variable stores the post-crash longitudinal measurement between the left rear axle and the rear extent of the vehicle. This data is expressed in centimeters.

COLUMN Name: LROH

SAS Value	Value Text
50 – 450	[Actual Value]
887	Not Applicable
999	Unknown

RIGHT FRONT OVERHANG

This variable stores the post-crash longitudinal distance between the right front axle and the frontal extent of the vehicle. The data is expressed in centimeters.

COLUMN Name: RFOH

SAS Value	Value Text
25 – 250	[Actual Value]
887	Not Applicable
999	Unknown

RIGHT FRONT BUMPER CORNER

This variable stores the post-crash longitudinal distance between the right front axle and the right front bumper corner. The data is expressed in centimeters.

COLUMN Name: RFBC

SAS Value	Value Text
0 – 250	[Actual Value]
887	Not Applicable
999	Unknown

WHEELBASE - RIGHT

This variable stores the post-crash distance between the right side rear axle and the front axle. The data is expressed in centimeters.

COLUMN Name: WBRIGHT

SAS Value	Value Text
50 – 650	[Actual Value]
887	Not Applicable
999	Unknown

RIGHT REAR BUMPER CORNER

This variable stores the post-crash longitudinal distance between the right rear axle and the right rear bumper corner. The data is expressed in centimeters.

COLUMN Name: RRBC

SAS Value	Value Text
0 – 250	[Actual Value]
887	Not Applicable
999	Unknown

RIGHT REAR OVERHANG

This variable stores the post-crash longitudinal distance between the right rear axle and the rear extent of the vehicle. The data is expressed in centimeters.

COLUMN Name: RROH

SAS Value	Value Text
50 – 450	[Actual Value]
887	Not Applicable
999	Unknown

FRONT EXTENT - HOOD

This variable stores the original longitudinal measurement between the front extent of the vehicle to the base of the windshield. The data is expressed in centimeters.

COLUMN Name: FRNTHOOD

SAS Value	Value Text
15 - 225	[Actual Value]
887	Not Applicable
999	Unknown

FRONT EXTENT - WINDSHIELD

This variable stores the original longitudinal measurement between the base of the windshield and the top of the windshield. The data is expressed in centimeters.

COLUMN Name: FRNTWIND

SAS Value	Value Text
1 – 150	[Actual Value]
887	Not Applicable

999	Unknown

FRONT EXTENT - PILLAR

This variable stores the original longitudinal measurement between the top of the windshield and the B-pillar. The data is expressed in centimeters.

COLUMN Name: FRNTPILL

SAS Value	Value Text
10 – 150	[Actual Value]
887	Not Applicable
999	Unknown

SIDE EXTENT - DOOR

This variable stores the original lateral distance between the outer side extent of the vehicle to the base of the side glazing. The data is expressed in centimeters.

COLUMN Name: SIDEDOOR

SAS Value	Value Text
2 – 25	[Actual Value]
887	Not Applicable
999	Unknown

SIDE EXTENT - GLAZING

This variable stores the original lateral distance between the base of the side glazing to the top of the side glazing. The data is expressed in centimeters.

COLUMN Name: SIDEGLAZ

SAS Value	Value Text
1 - 35	[Actual Value]
887	Not Applicable
999	Unknown

SIDE EXTENT - ROOF

This variable stores the original lateral distance between the top of the left side glazing to the top of the right side glazing. The data is expressed in centimeters.

COLUMN Name: SIDEROOF

SAS Value	Value Text
70 – 205	[Actual Value]
887	Not Applicable
999	Unknown

BACK EXTENT - TRUNK

This variable stores the original longitudinal measurement between the rear extent of the vehicle and the base of the backlight. The data is expressed in centimeters.

COLUMN Name: BACKTRUNK

SAS Value	Value Text
10 – 145	[Actual Value]
887	Not Applicable
999	Unknown

BACK EXTENT - BACKLIGHT

This variable stores the original longitudinal measurement between the base of the backlight to the top of the backlight. The data is expressed in centimeters.

COLUMN Name: BACKLIGHT

SAS Value	Value Text
1 – 150	[Actual Value]
887	Not Applicable
999	Unknown

BACK EXTENT - B PILLAR

This variable stores the original longitudinal measurement between the top of the backlight to the B-pillar. The data is expressed in centimeters.

COLUMN Name: BACKBPILL

SAS Value	Value Text
0 – 300	[Actual Value]
887	Not Applicable

999	Unknown

PICK-UP REAR EXTENT

This variable stores the original longitudinal distance between the rear extent of the pick-up to the vehicle's B-Pillar, representing the CDC rear extent. The data is expressed in centimeters.

COLUMN Name: BACKPICKUP

SAS Value	Value Text
90 – 400	[Actual Value]
887	Not Applicable
999	Unknown

VERTICAL EXTENT - DOOR

This variable stores the original vertical distance between the bottom of the door sill to the bottom of the door's side glazing. The data is expressed in centimeters.

COLUMN Name: VERTDOOR

SAS Value	Value Text
40 – 135	[Actual Value]
887	Not Applicable
999	Unknown

VERTICAL EXTENT - GLAZING

This variable stores the original vertical distance between the bottom of the side glazing to the top of the side glazing. The data is expressed in centimeters.

COLUMN Name: VERTGLAZ

SAS Value	Value Text
15 – 85	[Actual Value]
887	Not Applicable
999	Unknown

VERTICAL EXTENT - ROOF

This variable stores the original vertical distance between the top of the side glazing to the top of the roof. The data is expressed in centimeters.

COLUMN Name: VERTROOF

SAS Value	Value Text
0 – 30	[Actual Value]
887	Not Applicable
999	Unknown

FRONT TRACK WIDTH

This variable stores the post-crash lateral measurement between the center of the left front tire to the right front tire. The data is expressed in centimeters.

COLUMN Name: FRNTTRACK

SAS Value	Value Text
100 – 200	[Actual Value]
887	Not Applicable
999	Unknown

REAR TRACK WIDTH

This variable stores the post-crash lateral measurement between the center of the left rear tire to the right rear tire. The data is expressed in centimeters.

COLUMN Name: REARTRACK

SAS Value	Value Text
100 – 200	[Actual Value]
887	Not Applicable
999	Unknown

FRONT BUMPER HEIGHT

This variable stores the original height of the front bumper from the ground to the bottom of the bumper. The data is expressed in centimeters.

COLUMN Name: FRNTBUMP

SAS Value	Value Text
10 - 150	[Actual Value]
887	Not Applicable

999	Unknown

REAR BUMPER HEIGHT

This variable stores the original height of the bumper from the ground to the bottom of the bumper. The data is expressed in centimeters.

COLUMN Name: REARBUMP

SAS Value	Value Text
10 – 150	[Actual Value]
887	Not Applicable
999	Unknown

The INTERIOR VEHICLE Data Files

The data for the Interior Vehicle data files is collected during the inspection of the vehicle. This data is only collected for inspected in-transport towed CISS applicable vehicles. The Interior Vehicle data files contain **the Key Data Elements**, which are described in the beginning of the **Data Element Definitions and Codes** section. The Interior Vehicle data files also contain the data elements on the following pages.

ADAPT Dataset

Key Identifiers: PSU, CASENO, VEHNO

The Adapt dataset records any equipment whose primary purpose is to assist persons with disabilities in the operation of a vehicle. This variable is designed to capture those vehicles that have this type of after-market adaptive driving equipment installed. Use of the equipment at the time of the crash is irrelevant. At least one row can be found in this dataset whenever INTERIOR.ADAPTEQUIP equals one (1). Figure 23 displays the list of all the data elements in the ADAPT table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       ADAPT                  Observations        13
Member Type         DATA                   Variables           10
Engine              V9                     Indexes             0
Created             04/02/2020 14:34:00    Observation Length  56
Last Modified       04/02/2020 14:34:00    Deleted Observations 0
Protection                                 Compressed          NO
Data Set Type                              Sorted              YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


     Alphabetic List of Variables and Attributes
```

```
#   Variable    Type   Len   Format     Informat   Label

7   ADAPT       Num      3   ADAPT18F.  11.        ADAPTIVE EQUIPMENT
1   CASEID      Num      5   11.        11.        SYSTEM CASE IDENTIFIER
3   CASENO      Num      3   11.        11.        SEQUENTIAL CASE NUMBER
4   CASENUMBER  Char    16   $20.       $20.       CASE NUMBER
8   CASEWGT     Num      8   24.20                 CASE WEIGHT
5   CATEGORY    Num      3   11.        11.        CASE CATEGORY
2   PSU         Num      3   11.        11.        PRIMARY SAMPLING UNIT
9   PSUSTRAT    Num      3   11.        11.        PSU STRATIFICATION
6   VEHNO       Num      3   11.        11.        VEHICLE NUMBER
10  VERSION     Num      3   6.         6.         VERSION NUMBER


                Sort Information

Sortedby     PSU CASENO VEHNO ADAPT
Validated    YES
                                                   Character Set  ANSI
```

Figure 24.

ADAPTIVE EQUIPMENT

This variable captures those vehicles that have this type of after-market adaptive driving equipment installed.

COLUMN Name: ADAPT

Attribute Codes

SAS Value	Value Text
1	Hand controls for braking/acceleration
2	Steering control devices (attached to OEM steering wheel)
3	Steering knob attached to steering wheel
4	Low effort power steering (unit or device)
5	Replacement steering wheel (i.e. reduced diameter)
6	Joy-stick steering controls
7	Wheelchair tie-downs
8	Modifications to seat belts (specify)
9	Additional or relocated switches (specify)
10	Raised roof
11	Wall mounted head rest (used behind wheelchair)
12	Pedal extender
19	Unknown type of adaptive device
98	Other adaptive device (specify)

GLAZING Dataset

Key Identifiers: PSU, CASENO, VEHNO, GLAZLOC

The Glazing dataset reports the status of the vehicle's glazings. This data only reports glazings which have been contacted by an occupant, or ALL glazings if there was a suspected occupant ejection. This data has information when INTERIOR.GALZINGCONT=1. Figure 24 displays the list of all the data elements in the GLAZING table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name	GLAZING	Observations	761
Member Type	DATA	Variables	14
Engine	V9	Indexes	0
Created	04/02/2020 14:34:02	Observation Length	64
Last Modified	04/02/2020 14:34:02	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
12	CASEWGT	Num	8	25.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
10	GLAZIMP	Num	3	GLIMP18F.	11.	GLAZING IMPACT DAMAGE
7	GLAZLOC	Num	3	GLLOC18F.	11.	GLAZING LOCATION
11	GLAZOCC	Num	3	GLOCC18F.	11.	GLAZING OCCUPANT DAMAGE
9	GLAZPRE	Num	3	GLPRE18F.	11.	GLAZING PRE-CRASH STATUS
8	GLAZTYPE	Num	3	GLTYPE18F.	11.	GLAZING TYPE
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
13	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
14	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby	PSU CASENO VEHNO GLAZLOC
Validated	YES
Character Set	ANSI

Figure 25.

GLAZING IMPACT DAMAGE

The damage to the glazing as a result of impact forces and/or vehicle damage (including damage from interior loose objects).

COLUMN Name: GLAZIMP

SAS Value	Value Text
1	No glazing damage from impact forces
2	Glazing in place and cracked from impact forces
3	Glazing in place and holed from impact forces
4	Glazing out-of-place (cracked or not) and not holed from impact forces
5	Glazing out-of-place and holed from impact forces
6	Glazing disintegrated from impact forces
7	Glazing removed prior to crash
9	Unknown if damaged

GLAZING OCCUPANT DAMAGE

This variable reports direct occupant contact to the glazing during the crash sequence.

COLUMN Name: GLAZOCC

SAS Value	Value Text
1	No occupant contact
2	Glazing contacted by occupant but no glazing damage
3	Glazing in place and cracked by occupant contact
4	Glazing in place and holed by occupant contact
5	Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact
6	Glazing out-of-place by occupant contact and holed by occupant contact
7	Glazing removed prior to crash
8	Glazing disintegrated by occupant contact
9	Unknown if contacted by occupant

GLAZING LOCATION

This variable reports the location of a particular glazing.

COLUMN Name: GLAZLOC

SAS Value	Value Text
1	Windshield (WS)
2	Left front window (driver`s window) (LF)

3	Right front window (RF)
4	Left rear window (adjacent to LF window) (LR)
5	2nd left rear window (adjacent to LR window) (LR2)
6	3rd left rear window (adjacent to LR2 window) LR3
7	Right rear window (adjacent to RF window) (RR)
8	2nd right rear window (adjacent to RR window) RR2
9	3rd right rear window (adjacent to RR2 window) RR3
10	Backlight, tailgate/hatchback/liftgate window (BL)
11	Left backlight (left side of a divided backlight, i.e., rear doors on some vans)(LBL)
12	Right backlight (right side of a divided backlight, i.e., rear doors on some vans) (RBL)
13	Sun roof, moon roof, "T" roof, etc. (Roof)
98	Other sidelights, door wing windows, and any other light not identified above (Other)

GLAZING PRE-CRASH STATUS

This variable records the operational modes of the glazing prior to the crash.

COLUMN Name: GLAZPRE

SAS Value	Value Text
1	Fixed
2	Closed
3	Partially opened
4	Fully opened
7	Glazing removed prior to crash
9	Unknown

GLAZING TYPE

This variable reports the type of glazing as identified by unique AS (American Standard) numbers which are etched in the glazing surface.

COLUMN Name: GLAZTYPE

SAS Value	Value Text
1	AS-1 - Laminated
2	AS-2 - Tempered
3	AS-2 - Laminated
4	AS-2 - Laminated-with after market tint
5	AS-2 - Tempered-with after market tint

6	AS-3 - Tempered-tinted (original)
7	AS-3 - Laminated tinted (original)
8	AS-3 - Laminated tinted (with additional after market tint)
9	AS-3 - Tempered-tinted (with additional after market tint)
10	AS-6 - Flexible plastic safety glazing
11	Glazing removed prior to crash
98	Other (specify):
99	Unknown

INTEGRITY Dataset

Key Identifiers: PSU, CASENO, VEHNO

The INTEGRITY dataset stores information regarding the structural integrity of the vehicle. Consider the passenger compartment as a "package" which is designed to contain the occupant. If an opening occurs of sufficient magnitude through which an occupant could have been ejected totally or partially (although it is not necessary for an occupant to have been ejected), the integrity of the compartment is considered to have been lost. Figure 25 displays the list of all the data elements in the INTEGRITY table.

There will be at least one row per towed in-transport inspected CISS applicable vehicle.

```
Data Set Name        INTEGRITY               Observations         3901
Member Type          DATA                    Variables            10
Engine               V9                      Indexes              0
Created              04/02/2020 14:34:00     Observation Length   45
Last Modified        04/02/2020 14:34:00     Deleted Observations 0
Protection                                   Compressed           NO
Data Set Type                                Sorted               YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable     Type    Len    Format        Informat    Label

1   CASEID       Num       5    11.           11.         SYSTEM CASE IDENTIFIER
3   CASENO       Num       3    11.           11.         SEQUENTIAL CASE NUMBER
4   CASENUMBER   Char     16    $20.          $20.        CASE NUMBER
8   CASEWGT      Num       3    26.20                     CASE WEIGHT
5   CATEGORY     Num       3    11.           11.         CRASH CATEGORY
7   INTEGRITY    Num       3    INTEGRITY18F. 11.         COMPARTMENT INTEGRITY
2   PSU          Num       3    11.           11.         PRIMARY SAMPLING UNIT
9   PSUSTRAT     Num       3    11.           11.         PSU STRATIFICATION
6   VEHNO        Num       3    11.           11.         VEHICLE NUMBER
10  VERSION      Num       3    6.            6.          VERSION NUMBER
```

Sort Information

Sortedby PSU CASENO VEHNO INTEGRITY
Validated YES
Character Set ANSI

Figure 26.

COMPARTMENT INTEGRITY

This variable reports the type of integrity loss experienced during the crash. Damage which is not impact related (*e.g.*, fire, extrication) is not captured.

COLUMN Name: INTEGRITY

SAS Value	Value Text
0	No Integrity Loss
1	Windshield
2	Door (side)
3	Door/hatch (back door)
4	Roof
5	Roof glass
6	Side window
7	Rear window (backlight)
9	Unknown

INTERIOR Dataset

Key Identifiers: PSU, CASENO, VEHNO

The Interior dataset includes various data regarding the interior the vehicle. This includes the status of any doors, steering wheel, row widths, etc. It also serves as a gateway to the Glazing and Adaptive Equipment datasets. This data has information for all inspected towed in-transport CISS applicable vehicles. Figure 26 displays the list of all the data elements in the INTERIOR table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name INTERIOR Observations 3326
Member Type DATA Variables 32
Engine V9 Indexes 0
Created 04/02/2020 14:34:04 Observation Length 120
Last Modified 04/02/2020 14:34:04 Deleted Observations 0
Protection Compressed NO
Data Set Type Sorted YES
Label

```
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 #  Variable      Type  Len  Format       Informat  Label

24  ADAPTEQUIP    Num     3  ADAPTEQ18F.  11.       ADAPTIVE EQUIPMENT PRESENCE
 1  CASEID        Num     5  11.          11.       SYSTEM CASE IDENTIFIER
 3  CASENO        Num     3  11.          11.       SEQUENTIAL CASE NUMBER
 4  CASENUMBER    Char   16  $20.         $20.      CASE NUMBER
30  CASEWGT       Num     8  26.20                  CASE WEIGHT
 5  CATEGORY      Num     3  11.          11.       CASE CATEGORY
13  DAMAGELF      Num     3  DRDAM18F.    11.       LF DOOR DAMAGE
14  DAMAGELR      Num     3  DRDAM18F.    11.       LR DOOR DAMAGE
15  DAMAGERF      Num     3  DRDAM18F.    11.       RF DOOR DAMAGE
16  DAMAGERR      Num     3  DRDAM18F.    11.       RR DOOR DAMAGE
17  DAMAGETG      Num     3  DRDAM18F.    11.       TAILGATE/HATCH DAMAGE
18  GLAZINGCONT   Num     3  IVGLAZE18F.  11.       EJECTION OR GLAZING CONTACT
 8  OPENLF        Num     3  DROPEN18F.   11.       LF DOOR OPENING
 9  OPENLR        Num     3  DROPEN18F.   11.       LR DOOR OPENING
10  OPENRF        Num     3  DROPEN18F.   11.       RF DOOR OPENING
11  OPENRR        Num     3  DROPEN18F.   11.       RR DOOR OPENING
12  OPENTG        Num     3  DROPEN18F.   11.       TAILGATE/HATCH OPENING
 7  POSTINTEGLOSS Num     3  YESNO18F.    11.       POST-CRASH INTEGRITY LOSS
 2  PSU           Num     3  11.          11.       PRIMARY SAMPLING UNIT
31  PSUSTRAT      Num     3  11.          11.       PSU STRATIFICATION
29  RIMDEF        Num     3  RIMDEF18F.   11.       RIM DEFORMATION MEASUREMENT
28  RIMDEFLOC     Num     3  RIMLOC18F.   11.       RIM DEFORMATION LOCATION
19  ROWIDTH1      Num     3  IVROW18F.    11.       FRONT ROW WIDTH
20  ROWIDTH2      Num     3  IVROW18F.    11.       SECOND ROW WIDTH
21  ROWIDTH3      Num     3  IVROW18F.    11.       THIRD ROW WIDTH
22  ROWIDTH4      Num     3  IVROW18F.    11.       FOURTH ROW WIDTH
23  ROWIDTH5      Num     3  IVROW18F.    11.       FIFTH ROW WIDTH
25  STEERINGTYPE  Num     3  COLMTYPE18F. 11.       STEERING COLUMN TYPE
27  STEERTELEADJ  Num     3  COLMTELE18F. 11.       TELESCOPING STEERING COLUMN ADJUSTMENT
26  STEERTILTADJ  Num     3  COLMTILT18F. 11.       TILT STEERING COLUMN ADJUSTMENT
 6  VEHNO         Num     3  11.          11.       VEHICLE NUMBER
32  VERSION       Num     3  6.           6.        VERSION NUMBER


                    Sort Information

                Sortedby      PSU CASENO VEHNO
                Validated     YES
                Character Set ANSI
```

Figure 27.

ADAPTIVE EQUIPMENT PRESENCE

This variable serves as a gateway to the ADAPT dataset. If ADAPTEQUIP equals 1, at least one row will exist in the ADAPT dataset. Adaptive driving equipment is defined as equipment whose primary purpose is to assist persons with disabilities in the operation of a vehicle. This variable is designed to capture those vehicles that have this type of after-market adaptive driving equipment installed.

COLUMN Name: ADAPTEQUIP

SAS Value	Value Text

0	No adaptive driving equipment
1	Yes, adaptive driving equipment installed
9	Unknown

EJECTION OR GLAZING CONTACT

This variable serves as a gateway to the GLAZING dataset. If GLAZINGCONT equals 1, at least on row will exist in the GLAZING dataset.

COLUMN Name: GLAZINGCONT

SAS Value	Value Text
0	No
1	Yes
9	Unknown

FOURTH ROW WIDTH

This variable reports the width of the vehicle's fourth row. The data is expressed in centimeters.

COLUMN Name: ROWIDTH4

SAS Value	Value Text
110 – 190	[Actual Value]
888	Not Applicable
999	Unknown

FIFTH ROW WIDTH

This variable reports the width of the vehicle's fifth row. The data is expressed in centimeters.

COLUMN Name: ROWIDTH5

SAS Value	Value Text
110 - 190	[Actual Value]
888	Not Applicable
999	Unknown

FRONT ROW WIDTH

This variable reports the width of the vehicle's first row. The data is expressed in

centimeters.

COLUMN Name: ROWIDTH1

SAS Value	Value Text
110 – 190	[Actual Value]
888	Not Applicable
999	Unknown

LF DOOR OPENING

This variable reports the operational status of the left front door as a result of the crash.

COLUMN Name: OPENLF

SAS Value	Value Text
0	No door/gate/hatch
1	Door/gate/hatch remained closed and operational
2	Door/gate/hatch jammed shut
3	Door/gate/hatch came open during collision
8	Others (specify):
9	Unknown

LR DOOR OPENING

This variable reports the operational status of the left rear door as a result of the crash.

COLUMN Name: OPENLR

SAS Value	Value Text
0	No door/gate/hatch
1	Door/gate/hatch remained closed and operational
2	Door/gate/hatch jammed shut
3	Door/gate/hatch came open during collision
8	Others (specify):
9	Unknown

LF DOOR DAMAGE

This variable is designed to capture the reason the left front door opened during the collision sequence.

COLUMN Name: DAMAGELF

SAS Value	Value Text
0	No door/gate/hatch
1	Door not opened
2	Door operational
3	Latch/striker separation due to damage
4	Hinge separation due to damage
5	Door structure separation due to damage
6	Door support (i.e., pillar, sill, roof side rail, etc.) separation due to damage
7	Latch/striker and hinge separation due to damage
8	Other separation (specify):
99	Unknown

LR DOOR DAMAGE

This variable is designed to capture the reason the left rear door opened during the collision sequence.

COLUMN Name: DAMAGELR

SAS Value	Value Text
0	No door/gate/hatch
1	Door not opened
2	Door operational
3	Latch/striker separation due to damage
4	Hinge separation due to damage
5	Door structure separation due to damage
6	Door support (i.e., pillar, sill, roof side rail, etc.) separation due to damage
7	Latch/striker and hinge separation due to damage
8	Other separation (specify):
99	Unknown

POST-CRASH INTEGRITY LOSS

This variable reports the presence of any integrity loss that is caused post-crash. Examples include Fire/EMS extrication damage.

COLUMN Name: POSTINTEGLOSS

RF DOOR DAMAGE

This variable reports the operational status of the right front door as a result of the crash.

COLUMN Name: DAMAGERF

SAS Value	Value Text
0	No door/gate/hatch
1	Door not opened
2	Door operational
3	Latch/striker separation due to damage
4	Hinge separation due to damage
5	Door structure separation due to damage
6	Door support (i.e., pillar, sill, roof side rail, etc.) separation due to damage
7	Latch/striker and hinge separation due to damage
8	Other separation (specify):
99	Unknown

RR DOOR DAMAGE

This variable reports the operational status of the right rear door as a result of the crash.

COLUMN Name: DAMAGERR

SAS Value	Value Text
0	No door/gate/hatch
1	Door not opened
2	Door operational
3	Latch/striker separation due to damage
4	Hinge separation due to damage
5	Door structure separation due to damage
6	Door support (i.e., pillar, sill, roof side rail, etc.) separation due to damage
7	Latch/striker and hinge separation due to damage
8	Other separation (specify):
99	Unknown

RF DOOR OPENING

This variable reports the operational status of the right front door as a result of the crash.

COLUMN Name: OPENRF

SAS Value	Value Text

0	No door/gate/hatch
1	Door/gate/hatch remained closed and operational
2	Door/gate/hatch jammed shut
3	Door/gate/hatch came open during collision
8	Others (specify):
9	Unknown

RR DOOR OPENING

This variable reports the operational status of the right rear door as a result of the crash.

COLUMN Name: OPENRR

SAS Value	Value Text
0	No door/gate/hatch
1	Door/gate/hatch remained closed and operational
2	Door/gate/hatch jammed shut
3	Door/gate/hatch came open during collision
8	Others (specify):
9	Unknown

RIM DEFORMATION LOCATION

This variable reports the location of the deformation to the steering rim as a result of occupant contact. The steering wheel rim is divided into four quarter sections (A through D) and four half sections (upper half, lower half, left half, right half).

COLUMN Name: RIMDEFLOC

SAS Value	Value Text
0	No steering rim deformation
1	Section A
2	Section B
3	Section C
4	Section D
5	Upper half of rim/spoke
6	Lower half of rim/spoke
7	Left half of rim/spoke
8	Right half of rim/spoke
9	Complete steering wheel collapse
10	Undetermined location
99	Unknown

RIM DEFORMATION MEASUREMENT

This variable captures the amount of deformation to the steering wheel as a result of occupant contact. The data is expressed in centimeters.

COLUMN Name: RIMDEF

SAS Value	Value Text
0 – 20	[Actual Value]
88	Not applicable
99	Unknown

SECOND ROW WIDTH

This variable reports the width of the vehicle's second row. The data is expressed in centimeters. The data is expressed in centimeters.

COLUMN Name: ROWIDTH2

SAS Value	Value Text
110 – 190	[Actual Value]
888	Not Applicable
999	Unknown

STEERING COLUMN TYPE

This variable reports the type of steering wheel.

COLUMN Name: STEERINGTYPE

SAS Value	Value Text
1	Fixed column
2	Tilt column
3	Telescoping column
4	Tilt and telescoping column
8	Other column type (specify):
9	Unknown

TAILGATE/HATCH DAMAGE

This variable is designed to capture the reason the left front door opened during the collision sequence.

COLUMN Name: DAMAGETG

SAS Value	Value Text
0	No door/gate/hatch
1	Door not opened
2	Door operational
3	Latch/striker separation due to damage
4	Hinge separation due to damage
5	Door structure separation due to damage
6	Door support (i.e., pillar, sill, roof side rail, etc.) separation due to damage
7	Latch/striker and hinge separation due to damage
8	Other separation (specify):
99	Unknown

TAILGATE/HATCH OPENING

This variable reports the operational status of the left rear door as a result of the crash.

COLUMN Name: OPENTG

SAS Value	Value Text
0	No door/gate/hatch
1	Door/gate/hatch remained closed and operational
2	Door/gate/hatch jammed shut
3	Door/gate/hatch came open during collision
8	Others (specify):
9	Unknown

TELESCOPING STEERING COLUMN ADJUSTMENT

This variable is used to describe the pre-impact telescoping position of adjustable steering columns.

COLUMN Name: STEERTELEADJ

SAS Value	Value Text
0	No telescoping steering column
1	Full back
2	Between full back and midpoint
3	Midpoint

4	Between midpoint and full forward
5	Full forward
9	Unknown

TILT STEERING COLUMN ADJUSTMENT

This variable is used to describe the pre-impact tilt position of adjustable steering columns.

COLUMN Name: STEERTILTADJ

SAS Value	Value Text
1	Full up
2	Between full up and center
3	Center
4	Between center and full down
5	Full down
9	Unknown

THIRD ROW WIDTH

This variable reports the width of the vehicle's third row. The data is expressed in centimeters.

COLUMN Name: ROWIDTH3

SAS Value	Value Text
110 – 190	[Actual Value]
888	Not Applicable
999	Unknown

INTRUSION Dataset

Key Identifiers: PSU, CASENO, VEHNO, INTRUNO, SEATLOC

The Intrusion table reports any intrusion experienced by the vehicle during the crash. Intrusion results whenever the internal boundary surface of the passenger compartment is moved inward due to direct or indirect damage resulting from the application of a crushing force to the exterior surface of a vehicle. An exterior component can intrude into the passenger compartment.

A passenger compartment is defined as that interior occupant space which is normally

available for occupant seating, based upon both the vehicle design and seat configuration at the time of the crash. Adjacent cargo areas and other enclosed areas open to the passenger compartment are included. Intrusion can occur from the vertical, longitudinal, or lateral direction. Intrusion can also occur from the displacement of interior seatbacks and/or seat cushions. Figure 27 displays the list of all the data elements in the INTRUSION table Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name INTRUSION Observations 4840
Member Type DATA Variables 15
Engine V9 Indexes 0
Created 04/02/2020 14:34:04 Observation Length 72
Last Modified 04/02/2020 14:34:04 Deleted Observations 0
Protection Compressed NO
Data Set Type Sorted YES
Label
Data Representation WINDOWS_32
Encoding wlatin1 Western (Windows)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
12	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
8	INTCOMP	Num	3	INCOMP18F.	11.	INTRUSION COMPONENT
11	INTDIRECT	Num	3	INDIR18F.	11.	INTRUSION DIRECTION
10	INTMAG	Num	3	INMAG18F.	11.	INTRUSION MAGNITUDE
7	INTRUNO	Num	3	11.	11.	INTRUSION NUMBER
9	INTRUSION	Num	3	UNKNA18F.	11.	INTRUDED VALUE
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
13	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
15	SEATLOC	Num	8	SEATPOS18F.	11.	SEAT LOCATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
14	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO INTRUNO
Validated YES
Character Set ANSI

Figure 28.

SEAT LOCATION

This key variable reports the seating position in the vehicle. This is a 2 digit field where the first digit denotes the row of the vehicle, and the second digit denotes the lateral location of the seat. Seat rows are numbered longitudinally from the driver's row backwards. The seat locations are numbered from left to right and is normally three positions although there could be up to four seating locations in a particular row.

COLUMN Name: SEATLOC

SAS Value	Value Text
11	Front Left
12	Front Middle
13	Front Right
15	Front on/in the lap of another occupant
21	Second Left
22	Second Middle
23	Second Right
24	Second Other
25	Second on/in the lap of another occupant
31	Third Left
32	Third Middle
33	Third Right
34	Third Other
35	Third on/in the lap of another occupant
41	Fourth Left
42	Fourth Middle
43	Fourth Right
44	Fourth Other
45	Fourth on/in the lap of another occupant
51	Fifth Left
52	Fifth Middle
53	Fifth Right
54	Fifth Other
55	Fifth on/in the lap of another occupant
97	In or on unenclosed area
98	Other enclosed area
99	Unknown seat location

INTRUSION COMPONENT

This variable reports the component that intruded.

COLUMN Name: INTCOMP

SAS Value	Value Text
1	Steering assembly
2	Instrument panel left
3	Instrument panel center
4	Instrument panel right

5	Toe pan
6	Floor pan (includes sill)
7	A (A1/A2)-pillar
8	B-pillar
9	C-pillar
10	D-pillar
11	Grab Handles
12	Side panel - forward of the A1/A2-pillar
13	Side panel - rear of the Bpillar
14	Door/Forward upper quadrant
15	Door/Forward lower quadrant
16	Door/Rear upper quadrant
17	Door/Rear lower quadrant
18	Door-Undetermined Location
19	Roof (or convertible top)
20	Roof side rail
21	Windshield
22	Windshield header
23	Window frame
24	Front seat back
25	Second seat back
26	Third seat back
27	Fourth seat back
28	Fifth seat back
29	Seat cushion
30	Backlight header
31	Back door/panel (e.g., tailgate)
32	Other interior component (specify):
33	Hood
34	Outside surface of this vehicle (specify):
35	Other exterior object in the environment (specify):
36	Unknown exterior object
96	Multiple/Other severe intrusions
97	Catastrophic
98	Intrusion of unlisted component(s)
99	Unknown

INTRUSION DIRECTION

This variable assesses the direction of displacement for the intruded component. The direction of movement is determined independently from the PDOF applied to the vehicle.

COLUMN Name: INTDIRECT

SAS Value	Value Text
1	Vertical
2	Longitudinal
3	Lateral
7	Catastrophic
8	Multiple/Other Severe Intrusions
9	Unknown

INTRUSION MAGNITUDE

This variable reports the magnitude of the components intrusion put into a range of values. This range can be estimated by the technician or determined based upon an exact measurement.

COLUMN Name: INTMAG

SAS Value	Value Text
0	<= 2 cm
1	>= 3 cm but < 8 cm
2	>= 8 cm but < 15 cm
3	>= 15 cm but < 30 cm
4	>= 30 cm but < 46 cm
5	>= 46 cm but < 61 cm
6	>=61 cm
7	Catastrophic
8	Multiple/Other Severe Intrusions
9	Unknown

INTRUDED VALUE

This variable reports the amount of intrusion as documented by the crash technician. The data is expressed in centimeters.

COLUMN Name: INTRUSION

SAS Value	Value Text
1 – 160	[Actual Value]

997	Catastrophic
999	Unknown

OCCONTACT Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO, CONTACT

This table contains information regarding occupant contacts documented by the crash technician during the vehicle inspection. Only those contacts attributed to occupants are coded. This table will only be populated when there is an interior vehicle inspection and at least one contact is identified. Figure 28 displays the list of all the data elements in the OCCONTACT table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name        OCCONTACT               Observations          7102
Member Type          DATA                    Variables             16
Engine               V9                      Indexes               0
Created              04/02/2020 14:34:04     Observation Length    72
Last Modified        04/02/2020 14:34:04     Deleted Observations  0
Protection                                   Compressed            NO
Data Set Type                                Sorted                YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable     Type    Len    Format        Informat    Label

11   BODYREGION    Num      3    CONTBODY18F.   11.       BODY REGION CONTACTED
 1   CASEID        Num      5    11.            11.       SYSTEM CASE IDENTIFIER
 3   CASENO        Num      3    11.            11.       SEQUENTIAL CASE NUMBER
 4   CASENUMBER    Char    16    $20.           $20.      CASE NUMBER
14   CASEWGT       Num      8    26.20                    CASE WEIGHT
 5   CATEGORY      Num      3    11.            11.       CASE CATEGORY
13   CONFIDENCE    Num      3    CONTCONF18F.   11.       CONFIDENCE IN CONTACT
 7   CONTACT       Char     3    $10.           $10.      CONTACT REFERENCE
 8   CONTAREA      Num      3    CONTAREA18F.   11.       CONTACTED COMPONENT AREA
 9   CONTCOMP      Num      3    CONTCOMP18F.   11.       CONTACTED COMPONENT
12   EVIDENCE      Num      3    CONTEVID18F.   11.       EVIDENCE OF CONTACT
10   OCCNO         Num      3    6.             6.        OCCUPANT NUMBER
 2   PSU           Num      3    11.            11.       PRIMARY SAMPLING UNIT
15   PSUSTRAT      Num      3    11.            11.       PSU STRATIFICATION
 6   VEHNO         Num      3    11.            11.       VEHICLE NUMBER
16   VERSION       Num      3    6.             6.        VERSION NUMBER


                    Sort Information

              Sortedby      PSU CASENO VEHNO OCCNO CONTACT
              Validated     YES
              Character Set  ANSI
```

Figure 29.

OCCUPANT NUMBER

This variable reports the occupant attributed to this contact. All contacts are required to be linked to an occupant.

COLUMN Name: OCCNO

BODY REGION CONTACTED

This variable reports the suspected body region which made contact to the Contacting Component.

COLUMN Name: BODYREGION

SAS Value	Value Text
101	Head
201	Face
301	Neck
401	Chest
501	Abdomen
511	Flank - Left
512	Flank - Right
519	Flank - Unknown
521	Genitals
601	Back
711	Shoulder - Left
712	Shoulder - Right
719	Shoulder - Unknown
721	Upper Arm - Left
722	Upper Arm - Right
729	Upper Arm - Unknown
731	Elbow - Left
732	Elbow - Right
739	Elbow - Unknown
741	Lower Arm - Left
742	Lower Arm - Right
749	Lower Arm - Unknown
751	Wrist - Left
752	Wrist - Right
759	Wrist - Unknown
761	Hand - Left
762	Hand - Right
769	Hand - Unknown

811	Hip-Left
812	Hip - Right
813	Hips-Both
814	Pelvis
819	Hip - Unknown
821	Buttock - Left
822	Buttock - Right
823	Buttock - Both
829	Buttock - Unknown
831	Thigh - Left
832	Thigh - Right
839	Thigh - Unknown
841	Knee - Left
842	Knee - Right
849	Knee - Unknown
851	Lower Leg - Left
852	Lower Leg - Right
859	Lower Leg - Unknown
861	Foot - Left
862	Foot - Right
869	Foot - Unknown
871	Ankle - Left
872	Ankle - Right
879	Ankle - Unknown
999	Unknown

CONFIDENCE IN CONTACT

This variable reports the crash technician's confidence in the information presented for this row.

COLUMN Name: CONFIDENCE

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

CONTACT REFERENCE

This variable is a key variable for the table, and the reported attribute is unique for this vehicle. The attributes are assigned alphabetically beginning with “A”.

COLUMN Name: CONTACT

CONTACTED COMPONENT

This variable reports the vehicle component the occupant is suspected to have contacted.

COLUMN Name: CONTCOMP

SAS Value	Value Text
1	Windshield
2	Mirror
3	Sunvisor
4	Steering wheel rim
5	Steering wheel hub/spoke
6	Steering wheel rim/hub/spoke
7	Steering column, transmission selector lever, other attachment
8	Cellular telephone or CB radio
9	Add on equipment (e.g., tape deck, air conditioner)
13	Glove compartment door
15	[Dr only] WS incl 1/+: fr hdr, A pill, instr pnl, mirror, or steering assembly
16	[Pass only] WS incl 1/+: fr hdr, A pill, instr pnl, or mirror
17	Windshield reinforced by exterior object (specify)
19	Other front object (specify):
20	Sunvisor reinforced by front header
21	Left instrument panel
22	Center instrument panel
23	Right instrument panel
24	Left lower instrument panel (includes knee bolster)
25	Center lower instrument panel (includes knee bolster)
26	Right lower instrument panel (includes knee bolster)
53	Left A (A1/A2)-pillar
54	Left B-pillar
55	Other left pillar (specify):
56	Left side window glass
57	Left side window frame
58	Left side window sill

59	Lt side glass +: frame, win sill, A pill, B pill, or roof side rail
60	Left side glass (Laminated) reinforced by exterior object (specify)
61	Other left side object (specify):
62	LeftSide panel forward A1/A2 pillar
63	Left Side panel rear of Bpillar
103	Right A (A1/A2) Pillar
104	Right B-pillar
105	Other right pillar (specify):
106	Right side window glass
107	Right side window frame
108	Right side window sill
109	Rt side glass +: frame, win sill, A pill, B pill, or roof side rail
110	Right side glass (Laminated) reinforced by exterior object (specify)
111	Other right side object (specify):
112	Right Side panel forward A1/A2 pillar
113	Right Side panel rear of Bpillar
151	Seat, back support
152	Belt restraint webbing/buckle
153	Belt restraint B-pillar or door frame attachment point
154	Other restraint system component (specify):
155	Head restraint system
161	Interior loose object (specify)
162	Other interior object (specify):
163	Center console first row
164	Center console second row
165	Center console other row
166	Fold down armrest first row
167	Fold down armrest second row
168	Fold down armrest other row
201	Front header
202	Rear header
203	Roof left side rail
204	Roof right side rail
205	Roof or convertible top
206	Roof maplight/console
207	Sunroof/components
208	Roll bar
251	Floor (including toe pan)

252	Floor or console mounted transmission lever, including console
253	Parking brake handle
254	Foot controls including parking brake
301	Backlight (rear window)
302	Backlight storage rack, door, etc.
303	Other rear object (specify):
401	Hand controls for braking /acceleration
402	Steering control devices (attached to OEM steering wheel)
403	Steering knob attached to steering wheel
404	Replacement steering wheel (i.e.,reduced diameter)
406	Joy stick steering controls
407	Wheelchair tie-downs
408	Modification to seat belts,(specify):
409	Additional or relocated switches,(specify):
410	Raised roof
411	Wall mounted head rest (used behind wheel chair)
412	Other adaptive device (specify):
571	Cargo in vehicle
572	Seat LATCH points for child restraints
573	Grab handles
574	Engine shroud/cover
575	Seatback trays
576	Left forward upper quadrant
577	Left forward lower quadrant
578	Left rear upper quadrant
579	Left rear lower quadrant
580	Left armrest/hardware forward upper quadrant
581	Left armrest/hardware forward lower quadrant
582	Left armrest/hardware rear upper quadrant
583	Left armrest/hardware rear lower quadrant
584	Right door panel forward upper quadrant
585	Right door panel forward lower quadrant
586	Right door panel rear upper quadrant
587	Right door panel rear lower quadrant
588	Right armrest/hardware forward upper quadrant
589	Right armrest/hardware forward lower
590	Right armrest/hardware rear upper quadrant
591	Right armrest/hardware rear lower quadrant
592	Child safety seat shell
593	Child safety seat harness

594	Unknown child safety seat component
611	Steering wheel hub
612	Steering wheel hub compartment cover
615	Left bottom instrument panel
616	Left bottom instrument panel compartment cover
617	Left seat back
618	Left door/panel
619	Left roof side rail
620	Left seat belt
621	Left other (specify)
631	Right top instrument panel
632	Right top instrument panel cover
633	Right middle instrument panel
634	Right middle instrument panel cover
635	Right bottom instrument panel
636	Right bottom instrument panel cover
637	Right seat back
638	Right door/panel
639	Right roof side rail
640	Right seat belt
641	Right other (specify)

CONTACTED COMPONENT AREA

This variable serves as a filter variable for Contacted Component and reports a basic area of the vehicle contacted by the occupant.

COLUMN Name: CONTAREA

SAS Value	Value Text
1	Front
2	Left Side
3	Left Door Panel
4	Left Air Bag
5	Right Side
6	Right Door Panel
7	Right Air Bag
8	Interior
9	Floor
10	Roof
11	Rear

12	Adaptive (Assistive) Driving Equipment

EVIDENCE OF CONTACT

This variable reports the evidence in the vehicle which led the crash technician to believe the occupant contacted the component.

COLUMN Name: EVIDENCE

SAS Value	Value Text
1	Bent
2	Cracked
3	Scuffed
4	Transfer (specify)
5	Deformed
6	Blood
7	Hair
8	Stretched
9	Scratched
10	Teeth marks
11	Imprint
12	Spider Web
96	Combination (specify)
98	Other (specify)

The PERSON Data Files

The Person Data Files contain information regarding the occupants of in-transport towed CISS applicable vehicles. The files also contain **Key Data Elements**, which are described in the beginning of the **Data Element Definitions and Codes** section.

OCC Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO

This dataset contains information regarding all the occupants of in-transport towed CISS applicable vehicles. Figure 29 displays the list of all the data elements in the OCC table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name OCC Observations 5554
Member Type DATA Variables 87
Engine V9 Indexes 0
Created 04/02/2020 14:34:04 Observation Length 296
Last Modified 04/02/2020 14:34:04 Deleted Observations 0
Protection Compressed NO
Data Set Type Sorted YES
Label
Data Representation WINDOWS_32
Encoding wlatin1 Western (Windows)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
9	AGE	Num	3	AGE18F.	11.	OCCUPANT`S AGE
29	BELTANCHOR	Num	3	BELTANCHOR18F.	11.	BELT ANCHORAGE ADJUSTMENT
24	BELTAVAIL	Num	3	BELTAVAIL18F.	11.	BELT AVAILABILITY
33	BELTGUIDE	Num	3	BELTGUIDE18F.	11.	BELT GUIDE ROUTING
26	BELTLAPPOS	Num	3	BELTLAP18F.	11.	LAP BELT POSITION
28	BELTMALF	Num	3	BELTMALF18F.	11.	BELT MALFUNCTION
31	BELTPOSDEVPRES	Num	3	BELTPOSPRES18F.	11.	BELT POSITIONING DEVICE PRESENCE
32	BELTPOSDEVUSE	Num	3	BELTPOSUSE18F.	11.	BELT POSITIONING DEVICE USE
27	BELTSHLPOS	Num	3	BELTSHLDR18F.	11.	SHOULDER BELT POSITION
25	BELTUSE	Num	3	BELTUSE18F.	11.	BELT USE DETERMINATION
30	BELTUSESRC	Num	3	BELTSOURCE18F.	11.	SOURCE OF BELT USE
45	BMI	Num	8	BMI18F.	17.1	COMPUTED BODY MASS INDEX
50	CARDIOCOND	Num	3	COMORBIDITY18F.	11.	COMORBIDITY - CARDIOVASCULAR CONDITION
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
85	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
55	CAUSE1	Num	3	CAUSE18F.	11.	1ST MEDICALLY REPORTED CAUSE OF DEATH
56	CAUSE2	Num	3	CAUSE18F.	11.	2ND MEDICALLY REPORTED CAUSE OF DEATH
57	CAUSE3	Num	3	CAUSE18F.	11.	3RD MEDICALLY REPORTED CAUSE OF DEATH
34	CHILDSEATUSE	Num	3	YESNOUNK18F.	11.	CHILD SEAT USE BY THIS OCCUPANT
54	COMORBOTH	Num	3	COMORBIDITY18F.	11.	COMORBIDITY - OTHER
41	DEATH	Num	3	DEATH18F.	11.	ELAPSED TIME FROM CRASH TO TIME OF DEATH
46	EMSDATA	Num	3	EMSDATA18F.	11.	WAS EMS DATA OBTAINED
75	EMSDIASTOLIC	Num	3	HEART18F.	11.	EMS DIASTOLIC RATE
80	EMSGCS	Num	3	GCSTOTAL18F.	11.	EMS OBSERVED GCS
81	EMSGCSEYE	Num	3	GCSEYE18F.	11.	EMS GCS EYE SCORE
79	EMSGCSLOC	Num	3	EMSLOCATION18F.	11.	LOCATION EMS GCS DATA OBSERVED
84	EMSGCSMOD	Num	3	GCSMOD18F.	11.	EMS GCS MODIFIER
83	EMSGCSMOTOR	Num	3	GCSMOTOR18F.	11.	EMS GCS MOTOR SCORE
78	EMSGCSTIME	Num	5	ELAPSEDTIME18F.	11.	ELAPSED TIME FROM CRASH EMS GCS OBSERVED
82	EMSGCSVERB	Num	3	GCSVERB18F.	11.	EMS GCS VERBAL SCORE
73	EMSPULSE	Num	3	HEART18F.	11.	EMS PULSE RATE
76	EMSRESPRATE	Num	3	RESPIRATORY18F.	11.	EMS RESPIRATORY RATE
74	EMSSYSTOLIC	Num	3	HEART18F.	11.	EMS SYSTOLIC RATE
77	EMSVITALSRC	Num	3	EMSSOURCE18F.	11.	SOURCE OF EMS VITALS DATA
72	EMSVITALTIME	Num	3	ELAPSEDTIME18F.	11.	ELAPSED TIME FROM CRASH EMS VITALS WERE TAKEN
21	ENTRAP	Num	3	ENTRAP18F.	11.	WAS THE OCCUPANT ENTRAPPED
16	ETHNICITY	Num	3	ETHNIC18F.	11.	ETHNICITY OF OCCUPANT
17	EYEWEAR	Num	3	EYEWEAR18F.	11.	WAS THE OCCUPANT WEARING EYEWEAR
13	FETALMORT	Num	3	FETALMORT18F.	11.	FETAL MORTALITY
64	GCSOBTAINED	Num	3	11.	11.	GCS OBTAINED
10	HEIGHT	Num	3	HEIGHT18F.	11.	OCCUPANT`S HEIGHT
61	HOSPDIASTOLIC	Num	3	HEART18F.	11.	HOSPITAL DIASTOLIC RATE
67	HOSPGCS	Num	3	GCSTOTAL18F.	11.	HOSPITAL OBSERVED GCS
68	HOSPGCSEYE	Num	3	GCSEYE18F.	11.	HOSPITAL GCS EYE SCORE
66	HOSPGCSLOC	Num	3	GCSLOC18F.	11.	LOCATION HOSPITAL GCS DATA OBSERVED
71	HOSPGCSMOD	Num	3	GCSMODIFIER18F.	11.	HOSPITAL GCS MODIFIER
70	HOSPGCSMOTOR	Num	3	GCSMOTOR18F.	11.	HOSPITAL GCS MOTOR SCORE

65 HOSPGCSTIME Num 5 ELAPSEDTIME18F. 11. ELAPSED TIME FROM CRASH HOSPITAL GCS OBSERVED
69 HOSPGCSVERB Num 3 GCSVERB18F. 11. HOSPITAL GCS VERBAL SCORE
59 HOSPPULSE Num 3 HEART18F. 11. HOSPITAL PULSE RATE
62 HOSPRESPRATE Num 3 RESPIRATORY18F. 11. HOSPITAL RESPIRATORY RATE
38 HOSPSTAY Num 3 HOSPSTAY18F. 11. HOSPITAL STAY
60 HOSPSYSTOLIC Num 3 HEART18F. 11. HOSPITAL SYSTOLIC RATE
63 HOSPVITALSRC Num 3 HOSPSOURCE18F. 11. SOURCE OF HOSPITAL VITALS DATA
58 HOSPVITALTIME Num 4 ELAPSEDTIME18F. 11. ELAPSED TIME FROM CRASH HOSPITAL VITALS WERE TAKEN
47 IMPAIREDCOAG Num 3 COMORBIDITY18F. 11. COMORBIDITY - IMPAIRED COAGULATION
49 IMPLANTFUS Num 3 COMORBIDITY18F. 11. COMORBIDITY - HISTORY OF IMPLANT, SURG, FUSION
42 INJNUM Num 3 11. 11. NUMBER OF CODED INJURIES FOR THIS OCCUPANT
40 INJSTATUS Num 3 INJSTAT18F. 11. INJURED STATUS
44 ISS Num 3 ISS18F. 11. INJURY SEVERITY SCORE
43 MAIS Num 3 MAIS18F. 11. MAXIMUM AIS
37 MEDFACILITY Num 3 MEDFACIL18F. 11. TYPE OF FACILITY FOR INITIAL TREATMENT
22 MOBILITY Num 3 MOBIL18F. 11. OCCUPANT MOBILITY
35 MORTALITY Num 3 MORTALITY18F. 11. OCCUPANT MORTALITY
53 OBESITY Num 3 COMORBIDITY18F. 11. COMORBIDITY - OBESITY
7 OCCNO Num 3 6. 6. OCCUPANT NUMBER
51 OSTEOCOND Num 3 COMORBIDITY18F. 11. COMORBIDITY - OSTEOPOROSIS OR OSTEOPENIA
19 PARAIRBAG Num 3 PARBAG18F. 11. POLICE REPORTED AIR BAG AVAILABILITY
18 PARBELTUSE Num 3 PARBELT18F. 11. POLICE REPORTED BELT USE
20 PARINJSEV Num 3 PARSEV18F. 11. POLICE REPORTED INJURY SEVERITY
23 POSTURE Num 3 POSTURE18F. 11. OCCUPANT`S POSTURE
48 PREGNANT Num 3 COMORBIDITY18F. 11. COMORBIDITY - PREGNANCY
2 PSU Num 3 11. 11. PRIMARY SAMPLING UNIT
86 PSUSTRAT Num 3 11. 11. PSU STRATIFICATION
15 RACE Num 3 RACE18F. 11. RACE OF OCCUPANT
14 ROLE Num 3 ROLE18F. 11. OCCUPANT`S ROLE
8 SEATLOC Num 3 SEATPOS18F. 11. SEAT LOCATION
12 SEX Num 3 SEX18F. 11. OCCUPANT`S SEX
52 SPINEDEGEN Num 3 COMORBIDITY18F. 11. COMORBIDITY - DEGENERATIVE SPINAL CONDITION
36 TREATMENT Num 3 TREATMENT18F. 11. OCCUPANT TREATMENT
6 VEHNO Num 3 11. 11. VEHICLE NUMBER
87 VERSION Num 3 6. 6. VERSION NUMBER
11 WEIGHT Num 3 WEIGHT18F. 11. OCCUPANT`S WEIGHT
39 WORKDAYS Num 3 WORKDAYS18F. 11. WORK DAYS LOST

Sort Information

Sortedby PSU CASENO VEHNO OCCNO
Validated YES
Character Set ANSI

Figure 30.

OCCUPANT`S AGE

This variable reports the age of the occupant in years. The occupant's age at the time of the crash is recorded with respect to the occupant's last birthday. Zero (0) is used for occupants less than one year old. The associated AGETEXT field will contain the age with a suffix of “y” for ages in years, and “m” for ages in months for those occupants less than 24 months.

COLUMN Name: AGE

SAS Value	Value Text
0	Less than 1 year old

1 - 120	[Actual Value]
999	Unknown

OCCUPANT`S HEIGHT

This variable reports the occupant's height. Data is reported in centimeters.

COLUMN Name: HEIGHT

SAS Value	Value Text
30 - 220	[Actual Value]
999	Unknown

OCCUPANT`S WEIGHT

This variable reports the occupant's weight. Coded to the nearest kilogram.

COLUMN Name: WEIGHT

SAS Value	Value Text
2 – 275	[Actual Value]
999	Unknown

OCCUPANT`S SEX

This variable reports the occupant's sex. In addition, if the occupant is pregnant it reports the semester of the pregnancy.

COLUMN Name: SEX

SAS Value	Value Text
1	Male
2	Female
3	Female, pregnant - 1st trimester (1st-3rd month)
4	Female, pregnant - 2nd trimester (4th-6th month)
5	Female, pregnant - 3rd trimester (7th-9th month)
6	Female, pregnant - trimester unknown
9	Unknown

FETAL MORTALITY

This variable reports the mortality of the occupant's fetus. A fetal fatality is indicated when fetal death occurs within 30 days of the crash. The death must have occurred as a consequence of the crash.

COLUMN Name: FETALMORT

SAS Value	Value Text
0	No
1	Yes
8	Not Applicable

OCCUPANT`S ROLE

This variable reports the role of the occupant (i.e. driver or passenger).

COLUMN Name: ROLE

SAS Value	Value Text
1	Driver
2	Passenger
9	Unknown

SEAT LOCATION

This is a 2 digit field where the first digit denotes the row of the vehicle, and the second digit denotes the later location of the seat. Seat rows are numbered longitudinally from the driver's row backwards. The Seat locations are numbered from left to right and is normally three positions although there could be up to four seating locations in a particular row.

COLUMN Name: SEATLOC

Front Row
11 Left side
12 Middle
13 Right side

Second Row
21 Left side
22 Middle
23 Right side

Third Row
31 Left side
32 Middle
33 Right side
34 Other (specify)

Fourth Row
41 Left side
42 Middle
43 Right side

24 Other (specify)

44 Other (specify)

Fifth Row
51 Left side
52 Middle
53 Right side
54 Other (specify)

Other Rows
97 In or on Unenclosed Area
98 Cargo Area
99 Unknown

OCCUPANT`S POSTURE

This variable is designed to capture those instances where an occupant was not in the usual upright, forward facing seated position.

COLUMN Name: POSTURE

SAS Value	Value Text
0	Normal posture
1	Kneeling or standing on seat
2	Lying on or across seat
3	Kneeling, standing or sitting in front of seat
4	Sitting sideways or turned
5	Sitting on a console
6	Lying back in a reclined seat position
7	Bracing with feet or hands on a surface of the vehicle
8	In the lap of another occupant
9	Sharing a seat-sitting side by side
10	In a child seat
98	Other posture (specify):
99	Unknown

RACE OF OCCUPANT

This variable reports the race of the occupant. This field is a self-identification field and the primary source of the data is the interview.

COLUMN Name: RACE

SAS Value	Value Text
1	White
2	Black or African American
3	Asian
4	Native Hawaiian or Other Pacific Islander

5	American Indian or Alaska Native
7	Other (specify):
8	No driver present
9	Unknown

ETHNICITY OF OCCUPANT

This variable reports the ethnicity of the occupant. This field is a self-identification field and the primary source of the data is the interview.

COLUMN Name: ETHNICITY

SAS Value	Value Text
1	Hispanic or Latino
2	Not Hispanic or Latino
8	No driver present
9	Unknown

OCCUPANT MOBILITY

This variable reports the way the occupant exited or was removed from the vehicle after the crash.

COLUMN Name: MOBILITY

SAS Value	Value Text
1	Exited from vehicle under own power
2	Exited from vehicle with some assistance
3	Removed from vehicle due to perceived serious injuries
4	Removed from vehicle while unconscious or not oriented to time or place
5	Occupant fatal before removed from vehicle
6	Occupant fully ejected
8	Removed from vehicle for other reasons (specify):
9	Unknown

BELT AVAILABILITY

This variable reports the availability of belt restraints for this seating position.

COLUMN Name: BELTAVAIL

SAS Value	Value Text
0	None available
1	Belt removed/destroyed
2	Shoulder belt
3	Lap belt
4	Lap and shoulder belt
5	Belt available - type unknown
6	Shoulder belt (lap belt destroyed/removed)
7	Lap belt (shoulder belt destroyed/removed)
8	Other belt (specify)
9	Unknown

BELT ANCHORAGE ADJUSTMENT

This variable captures the position of the shoulder belt anchorage adjuster found on the upper B-pillar.

COLUMN Name: BELTANCHOR

SAS Value	Value Text
0	No manual shoulder belt
1	None for manual shoulder belt
2	In full up position
3	In mid position
4	In full down position
5	Position unknown
9	Unknown if adjuster present

BELT GUIDE ROUTING

This variable reports whether the seat belt was routed thru a belt guide.

COLUMN Name: BELTGUIDE

SAS Value	Value Text
0	Not Applicable
1	Yes
2	No
9	Unknown

BELT MALFUNCTION

This variable reports if there was any evidence of a belt malfunction during the crash. This data is captured during the vehicle inspection.

COLUMN Name: BELTMALF

SAS Value	Value Text
0	None used/not available/removed or destroyed
1	No belt malfunction(s)
2	Torn webbing (stretched webbing not included)
3	Broken buckle or latch plate
4	Upper anchorage separated
5	Other anchorage separated (specify)
6	Broken retractor
7	Combination of above (specify)
8	Other belt malfunction (specify)
9	Unknown

SHOULDER BELT POSITION

This variable reports the position of the shoulder belt on the occupant.

COLUMN Name: BELTSHLPOS

SAS Value	Value Text
0	Not equipped/not available/not used
1	Snugly across the collarbone and over shoulder
2	Resting on neck
3	On edge of shoulder
4	Under arm
5	Behind occupant's back or seat
6	Used to install child restraint
7	Across the collarbone and over shoulder with extra "slack room"
8	Resting on neck with extra "slack room"
9	On edge of shoulder with extra "slack room"
10	Under arm with extra "slack room"
98	Other position (specify)
99	Unknown belt position

LAP BELT POSITION

This variable reports the position of the lap belt on the occupant.

COLUMN Name: BELTLAPPOS

SAS Value	Value Text
0	Not equipped/not available/not used
1	Snug and low across hips
2	Across abdomen
3	Used to install child restraint
4	Low across hips with extra “slack room”
5	Across abdomen with extra “slack room”
8	Other position (specify)
9	Unknown position

BELT POSITIONING DEVICE PRESENCE

This variable reports the presence of a belt positioning device in use for this seating position at the time of the crash.

COLUMN Name: BELTPOSDEVPRES

SAS Value	Value Text
0	None present
1	Safety belt guide
2	Belt extender
3	Shoulder belt fit adjuster
8	Other (specify)
9	Unknown if present

BELT POSITIONING DEVICE USE

This variable reports the use of a belt positioning device in use for this seating position at the time of the crash.

COLUMN Name: BELTPOSDEVUSE

SAS Value	Value Text
0	None present
1	Device not used
2	Device used
9	Unknown if device used

BELT USE DETERMINATION

This variable reports whether the belt was used during the crash. This information is based upon all information in the case.

COLUMN Name: BELTUSE

SAS Value	Value Text
0	None used not available/removed or destroyed
1	Inoperative (specify)
2	Shoulder belt
3	Lap belt
4	Lap and shoulder belt
5	Belt used - type unknown
8	Other belt used (specify)
12	Shoulder belt with child safety seat
13	Lap belt with child safety seat
14	Lap and shoulder belt with child safety seat
15	Belt with child safety seat - type unknown
18	Other belt with child safety seat (specify)
99	Unknown if belt used

OCCUPANT MORTALITY

This variable reports the mortality of the occupant. Fatal applies to those occupants who die of crash related injuries up to thirty (30) days after the crash.

COLUMN Name: MORTALITY

SAS Value	Value Text
0	Not Fatal
1	Fatal
2	Fatal — ruled disease (specify)

OCCUPANT TREATMENT

This variable reports the treatment this occupant received. Occupants who receive treatment but do not go directly to a medical facility are coded (7) Treatment Later.

COLUMN Name: TREATMENT

SAS Value	Value Text
0	No treatment
1	Treatment at scene - non-transported
2	Transported and released
3	Hospitalization
4	Dead on Arrival (DOA) at hospital
5	Dead Prior To Admission
6	Transported to a medical facility - unknown if treated
7	Treatment later
8	Treatment - other (specify)
9	Unknown

INJURED STATUS

This element serves as a gateway element to allow injury coding to be completed on the occupant when INJURED STATUS equals Injured. It also serves to let the user known that injury information exists for this occupant.

COLUMN Name: INJSTATUS

SAS Value	Value Text
0	Not Injured
1	Injured
9	Injured, Details Unknown
99	Unknown if Injured

NUMBER OF CODED INJURIES FOR THIS OCCUPANT

This derived variable reports the number of injuries found in the Injury dataset for this occupant.

COLUMN Name: INJNUM

Comorbidities are pre-existing conditions, documented in the case subject's medical history, that have the potential to affect the injury severity. The comorbidities available for selection in CISS have been identified, based on experience in the CIREN program, as the most common and likely to affect injury severity or likelihood. Sources include medical records and the interview with the occupant or their surrogate.

COMORBIDITY - CARDIOVASCULAR CONDITION

This variable reports if the occupant had a pre-existing cardiovascular condition, and it

had the potential to affect the injury severity. This field will be blank for uninjured occupants.

COLUMN Name: CARDIOCOND

SAS Value	Value Text
0	No
1	Yes

COMORBIDITY - DEGENERATIVE SPINAL CONDITION

This reports if the occupant had a pre-existing degenerative spinal condition, and it had the potential to affect the injury severity. This field will be blank for uninjured occupants.

COLUMN Name: SPINEDEGEN

SAS Value	Value Text
0	No
1	Yes

COMORBIDITY - IMPAIRED COAGULATION

This variable reports if the occupant had a pre-existing impaired coagulation condition, and it had the potential to affect the injury severity. This variable will be blank if the occupant is uninjured.

COLUMN Name: IMPAIREDCOAG

SAS Value	Value Text
0	No
1	Yes

COMORBIDITY - HISTORY OF IMPLANT, SURG, FUSION

This variable reports if the occupant had a history of musculoskeletal implant, surgery, or fusion, and it had the potential to affect the injury severity. This field will be blank for uninjured occupants.

COLUMN Name: IMPLANTFUS

SAS Value	Value Text
0	No
1	Yes

COMORBIDITY – OBESITY

This variable reports if the occupant had a pre-existing history of obesity, and it had the potential to affect the injury severity. This field will be blank for uninjured occupants.

COLUMN Name: OBESITY

SAS Value	Value Text
0	No
1	Yes

COMORBIDITY - OSTEOPOROSIS OR OSTEOPENIA

This variable reports if the occupant had a pre-existing history of osteoporosis or osteopenia, and it had the potential to affect the injury severity. This field will be blank for uninjured occupants.

COLUMN Name: OSTEOCOND

SAS Value	Value Text
0	No
1	Yes

COMORBIDITY – OTHER

This variable reports if the occupant had a pre-existing comorbidity that isn't captured in the other comorbidity variables, and that other comorbidity had the potential to affect the injury severity. This field will be blank for uninjured occupants.

COLUMN Name: COMORBOTH

SAS Value	Value Text
0	No
1	Yes

COMORBIDITY – PREGNANCY

This variable reports if the occupant was pregnant at the time of the crash and that pregnancy had the potential to affect the injury severity. This field will be blank for uninjured occupants.

COLUMN Name: PREGNANT

SAS Value	Value Text
0	No
1	Yes

COMPUTED BODY MASS INDEX

This variable stores the computed Body Mass Index (BMI) based upon the occupant's coded weight and height. This field will be blank if either the height or weight is unknown.

COLUMN Name: BMI

SAS Value	Value Text
10.0 – 70.0	[Actual Value]
99.9	BMI UNKNOWN

CHILD SEAT USE BY THIS OCCUPANT

This variable alerts the user that there is a row for this occupant in the CHILDSEAT dataset.

COLUMN Name: CHILDSEATUSE

SAS Value	Value Text
0	No
1	Yes

WAS EMS DATA OBTAINED

This variable reports whether EMS data was obtained for this occupant and if there will be data captured in the different EMS variables. If EMSDATA equals 0/No then the other EMS prefixed variables will be blank.

COLUMN Name: EMSDATA

SAS Value	Value Text
0	No
1	Yes

ELAPSED TIME FROM CRASH EMS VITALS WERE TAKEN

This variable stores the elapsed time in minutes between the Crash Time and time the EMS took vital signs from this occupant. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained.

COLUMN Name: EMSVITALTIME

SAS Value	Value Text
9997	Not Reported
9999	Unknown

EMS SYSTOLIC RATE

This variable reports the occupant's systolic blood pressure rate documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained. The data is expressed in millimeters of mercury (mmHg).

COLUMN Name: EMSSYSTOLIC

SAS Value	Value Text
0 – 300	[Actual Value]
888	Palpable
997	Not Reported
999	Unknown

EMS DIASTOLIC RATE

This variable reports the occupant's diastolic rate documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained. The data is expressed in millimeters of mercury (mmHg).

COLUMN Name: EMSDIASTOLIC

SAS Value	Value Text

0 – 300	[Actual Value]
888	Palpable
997	Not Reported
999	Unknown

EMS OBSERVED GCS

This variable reports the GCS score documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained.

COLUMN Name: EMSGCS

SAS Value	Value Text
3 – 15	[Actual Value]
97	Not Reported
99	Unknown

ELAPSED TIME FROM CRASH EMS GCS OBSERVED

This variable stores the elapsed time in minutes between the Crash Time and the time the GCS was observed by EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained.

COLUMN Name: EMSGCSTIME

SAS Value	Value Text
9997	Not Reported
9999	Unknown

EMS GCS EYE SCORE

This variable reports the eye score component of the GCS score documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained.

COLUMN Name: EMSGCSEYE

SAS Value	Value Text
1	1
2	2

3	3
4	4
7	Not Reported
9	UnKnown

EMS GCS MOTOR SCORE

This variable reports the occupant's motor component of the GCS score documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained.

COLUMN Name: EMSGCSMOTOR

SAS Value	Value Text
1	1
2	2
3	3
4	4
5	5
6	6
7	Not Reported
9	Unknown

EMS GCS VERBAL SCORE

This variable reports the verbal component of the GCS score documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained.

COLUMN Name: EMSGCSVERB

SAS Value	Value Text
1	1
2	2
3	3
4	4
5	5
7	Not Reported
9	Unknown

EMS GCS MODIFIER

This variable reports additional information to support, or better explain, a low GCS score reported by EMS.

COLUMN Name: EMSGCSMOD

SAS Value	Value Text
1	Legitimate
2	Intubated
3	Tubed & Paralyzed
4	Sedated
5	(Spinal cord Injury)/Unk
7	Not Reported

EMS PULSE RATE

This variable stores the occupant's pulse rate documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained. The data is expressed in heart beats per minute.

COLUMN Name: EMSPULSE

SAS Value	Value Text
0 – 300	[Actual Value]
888	Palpable
997	Not Reported
999	Unknown

EMS RESPIRATORY RATE

This variable reports the occupant's respiratory rate documented by the EMS. This variable will be blank when either the occupant was not injured or when an EMS report was not obtained. The data is expressed in breaths per minute.

COLUMN Name: EMSRESPRATE

SAS Value	Value Text
0 – 98	[Actual Value]
888	Agonal
997	Not Reported
999	Unknown

ELAPSED TIME FROM CRASH HOSPITAL VITALS WERE TAKEN

This variable stores the elapsed time in minutes between the Crash Time and the time the medical facility obtained vital signs. This variable will be blank when either the occupant was not injured or when medical records were not obtained.

COLUMN Name: HOSPVITALTIME

SAS Value	Value Text
9997	Not Reported
9999	Unknown

HOSPITAL SYSTOLIC RATE

This variable reports the systolic component of the blood pressure documented by the medical facility. This variable will be blank when either the occupant was not injured or when GCS Obtained equals 0. The data is expressed in millimeters of mercury (mmHg).

COLUMN Name: HOSPSYSTOLIC

SAS Value	Value Text
1 – 300	[Actual Value]
888	Palpable
997	Not Reported
999	Unknown

HOSPITAL DIASTOLIC RATE

This variable reports the diastolic component of the blood pressure documented by the medical facility. This variable will be blank when either the occupant was not injured or when medical records were not obtained. The data is expressed in millimeters of mercury (mmHg).

COLUMN Name: HOSPDIASTOLIC

SAS Value	Value Text
0 – 300	[Actual Value]
888	Palpable
997	Not Reported
999	Unknown

HOSPITAL PULSE RATE

This variable reports the pulse rate measured by the medical facility. This field will be blank if the occupant is not injured or GCS Obtained equals 0. The data is expressed in heart beats per minute.

COLUMN Name: HOSPPULSE

SAS Value	Value Text
0 – 300	[Actual Value]
888	Palpable
997	Not Reported
999	Unknown

GCS OBTAINED

This variable reports whether vitals and/or GCS information was acquired from the medical records.

COLUMN Name: GCSOBTAINED

SAS Value	Value Text
0	No
1	Yes

ELAPSED TIME FROM CRASH HOSPITAL GCS OBSERVED

This variable stores the elapsed time in minutes between the Crash Time and the time the GCS was observed at a medical facility. This variable will be blank when either the occupant was not injured or when medical facility reports were not obtained.

COLUMN Name: HOSPGCSTIME

SAS Value	Value Text
9997	Not Reported
9999	Unknown

HOSPITAL GCS EYE SCORE

This variable reports the eye score component of the GCS documented by the medical facility. This variable will be blank when either the occupant was not injured or when

medical records were not obtained.

COLUMN Name: HOSPGCSEYE

SAS Value	Value Text
1	1
2	2
3	3
4	4
7	Not Reported
9	Unknown

HOSPITAL GCS VERBAL SCORE

This variable reports the verbal component of the GCS score obtained by the medical facility. This field will be blank if the occupant is not injured or GCS Obtained equals 0.

COLUMN Name: HOSPGCSVERB

SAS Value	Value Text
1	1
2	2
3	3
4	4
5	5
7	Not Reported
9	Unknown

HOSPITAL GCS MOTOR SCORE

This variable reports the motor component of the GCS score obtained by the medical facility. This field will be blank if the occupant is not injured or GCS Obtained equals 0.

COLUMN Name: HOSPGCSMOTOR

SAS Value	Value Text
1	1
2	2
3	3
4	4

5	5
6	6
7	Not Reported
9	Unknown

HOSPITAL OBSERVED GCS

This variable reports the GCS (Glasgow Coma Scale) score as observed by the medical facility. This field will be blank if the occupant is not injured or GCS Obtained equals 0.

COLUMN Name: HOSPGCS

SAS Value	Value Text
3 – 15	[Actual Value]
97	Not Reported
99	Unknown

HOSPITAL GCS MODIFIER

This variable reports additional information to support, or better explain, a low GCS score reported by the medical facility. This variable will be blank when either the occupant was not injured or when medical records were not obtained.

COLUMN Name: HOSPGCSMOD

SAS Value	Value Text
1	Legitimate
2	Intubated
3	Tubed & Paralyzed
4	Sedated
5	(Spinal cord Injury)/Unk
7	Not Reported

HOSPITAL RESPIRATORY RATE

This variable reports the respiratory rate measured by the medical facility. This field will be blank if the occupant is not injured or GCS Obtained equals 0.

COLUMN Name: HOSPRESPRATE

SAS Value	Value Text

0 – 98	[Actual Value]
888	Agonal
997	Not Reported
999	Unknown

HOSPITAL STAY

This variable reports the number of days the occupant was admitted to the medical facility.

COLUMN Name: HOSPSTAY

SAS Value	Value Text
0	Not hospitalized
1 - 60	[Actual Value]
61	61 days or more
99	Unknown

LOCATION EMS GCS DATA OBSERVED

This variable reports where the EMS personnel obtained the GCS information.

COLUMN Name: EMSGCSLOC

SAS Value	Value Text
0	Not Available or None
1	At Crash Site
2	EMS Vehicle
3	Emergency Department
4	Floor
5	Intensive Care Unit
6	Intermediate Care Unit
7	Operating Room
8	Other Hospital
9	Pre-Hospital, Not Specified
10	Radiology
11	Resus. Room – not in ED
98	Other (Specify)
99	Unknown

LOCATION HOSPITAL GCS DATA OBSERVED

This variable reports the location where the medical facility obtained the GCS data. This field will be blank if the occupant is not injured or GCS Obtained equals (0) No.

COLUMN Name: HOSPGCSLOC

SAS Value	Value Text
0	Not Available or None
1	At Crash Site
2	EMS Vehicle
3	Emergency Department
4	Floor
5	Intensive Care Unit
6	Intermediate Care Unit
7	Operating Room
8	Other Hospital
9	Pre-Hospital, Not Specified
10	Radiology
11	Resus. Room – not in ED
98	Other (Specify)
99	Unknown

MAXIMUM AIS

This derived variable reports the maximum AIS Severity for this occupant by scanning the data in the Injury dataset. Please see INJURY.AIS for further information and range of values.

COLUMN Name: MAIS

SAS Value	Value Text
0	Not Injured
1	Minor injury
2	Moderate injury
3	Serious injury
4	Severe injury
5	Critical injury
6	Maximum (untreatable) injury
9	Injury, unknown severity
99	Unknown if injured

INJURY SEVERITY SCORE

This variable is derived by scanning the AIS Severity found in the Injury dataset. The Injury Severity Score is

COLUMN Name: ISS

SAS Value	Value Text
0	Not Injured
1-75	Actual ISS
97	Injured, Unknown Severity
99	Unknown if Injured

POLICE REPORTED AIR BAG AVAILABILITY

This variable reports what was documented on the PCR regarding the availability and functioning of any air bag system.

COLUMN Name: PARAIRBAG

SAS Value	Value Text
0	No Air Bag Available
1	Deployed
2	Not Deployed
3	Unknown if deployed
7	Not Reported
9	Police indicated "Unknown"

ELAPSED TIME FROM CRASH TO TIME OF DEATH

This variable reports the elapsed time from the Crash Time until the time of death. This information is recorded in hours when the time of death is between 1 and 23 hours from the time of the crash (occupants who die immediately are coded as “1”). The data is otherwise stored in days beginning with 1 day equals 31, 2 days equals 32, etc. This data will be blank when the occupant is not injured.

COLUMN Name: DEATH

SAS Value	Value Text
0	Not Fatal
96	Fatal, ruled disease
99	Unknown

POLICE REPORTED BELT USE

This variable reports what was documented on the PCR regarding occupant use of available vehicle restraints (*i.e.*, manual belts, child safety seat, or automatic restraints).

COLUMN Name: PARBELTUSE

SAS Value	Value Text
0	None used
1	Shoulder belt
2	Lap belt
3	Lap and shoulder belt
4	Belt used, type not specified
5	Child safety seat
6	Automatic belt
7	Other type belt (specify)
8	Police indicated "unknown"
9	Not Reported

SOURCE OF BELT USE

This variable explains what preponderance of information the technician used to make the determination whether the manual seat belt was used, **not** whether the belt system was available.

COLUMN Name: BELTUSESRC

SAS Value	Value Text
0	Not equipped/not available
1	Vehicle Inspection
2	Official Injury Data
3	Driver/occupant interview
8	Other (specify)
9	Unknown if belt used

SOURCE OF EMS VITALS DATA

This variable reports at what location the EMS obtained the vitals information found in the EMS GCS variable.

COLUMN Name: EMSVITALSRC

SAS Value	Value Text
0	Not Available or None
1	At Crash Site
2	EMS Vehicle
11	Pre-Hospital, Not Specified
99	Unknown

SOURCE OF HOSPITAL VITALS DATA

This variable reports at what location the medical facility obtained the vitals information found in the hospital GCS variable.

COLUMN Name: HOSPVITALSRC

SAS Value	Value Text
0	Not Available or None
3	Emergency Department
4	Floor
5	Intensive Care Unit
6	Intermediate Care Unit
8	Operating Room
10	Other Hospital
11	Pre-Hospital, Not Specified
12	Radiology
13	Resus. Room – not in ED
98	Other (Specify)
99	Unknown

TYPE OF FACILITY FOR INITIAL TREATMENT

This variable reports the type of facility the occupant went to *immediately* after the crash. The treatment of injuries by a physician immediately (*i.e.*, within one hour) following a crash is of utmost importance in serious injury crashes.

COLUMN Name: MEDFACILITY

SAS Value	Value Text
0	Not treated at a medical facility
1	Trauma center

2	Hospital
3	Medical clinic
4	Physician`s office
5	Treatment later at medical facility
8	Other (specify)
9	Unknown

WAS THE OCCUPANT ENTRAPPED

This variable reports whether the occupant was entrapped in the vehicle due to crash related circumstances.

COLUMN Name: ENTRAP

SAS Value	Value Text
0	Not entrapped/exit not inhibited
1	Entrapped/pinned — mechanically restrained
2	Could not exit vehicle due to jammed doors
3	Could not exit vehicle due to external circumstances (specify)
9	Unknown

WAS THE OCCUPANT WEARING EYEWEAR

This variable reports whether the occupant was wearing eyeglasses/lenses at the time of the crash.

COLUMN Name: EYEWEAR

SAS Value	Value Text
0	No
1	Eyeglasses/sunglasses
2	Contact lenses with sunglasses
3	Contact lenses
7	Other (specify)
9	Unknown

WORK DAYS LOST

This variable reports the number of "work" days lost due to the crash by an employed person or a full-time college student. Children, adolescents, retirees, or unemployed persons are included in *Not working prior to crash.*

COLUMN Name: WORKDAYS

SAS Value	Value Text
0	No working days lost
1 – 60	[Actual Value]
61	61 days or more
62	Fatally injured
97	Not working prior
99	Unknown

POLICE REPORTED INJURY SEVERITY

This variable reports the police reported injury severity for this occupant using the KABCOU scale. If the police report doesn't use the KABCOU scale, the appropriate code is translated by using other police report information.

COLUMN Name: PARINJSEV

SAS Value	Value Text
0	O- No Injury
1	C- Possible Injury
2	B- Nonincapacitating Injury
3	A- Incapacitating injury
4	K- Killed
5	U- Injury, severity unknown
6	Died prior to crash
9	Unknown

1ST MEDICALLY REPORTED CAUSE OF DEATH

This variable records the injury number (INJURY.INJNO) which was determined by a medical professional completing the medical report, or by injury coders using official medical records, to be the cause of death or had the greatest effect on the occupant's death.

COLUMN Name: CAUSE1

SAS Value	Value Text
0	Not fatal or no additional causes
96	Mode given but not linked to Injuries (Specify)

97	Other result (includes fatal ruled disease) (specify)
99	Unknown

2ND MEDICALLY REPORTED CAUSE OF DEATH

This variable records the injury number (INJURY.INJNO) which was determined by a medical professional completing the medical report, or by injury coders using official medical records, to be the cause of death or had the greatest effect on the occupant's death. If only one injury was determined to be the cause of death, this field will be blank.

COLUMN Name: CAUSE2

SAS Value	Value Text
0	Not fatal or no additional causes
96	Mode given but not linked to Injuries (Specify)
97	Other result (includes fatal ruled disease) (specify)
99	Unknown

3RD MEDICALLY REPORTED CAUSE OF DEATH

This variable records the injury number (INJURY.INJNO) which was determined by a medical professional completing the medical report, or by injury coders using official medical records, to be the cause of death or had the greatest effect on the occupant's death.

COLUMN Name: CAUSE3

SAS Value	Value Text
0	Not fatal or no additional causes
96	Mode given but not linked to Injuries (Specify)
97	Other result (includes fatal ruled disease) (specify)
99	Unknown

SEAT Dataset

Key Identifiers: PSU, CASENO, VEHNO, SEATLOC

The Seat dataset contains information regarding the seating positions in the vehicle.

While all seating positions in the vehicle are defined, only seating positions occupied (or suspected of being occupied) are fully documented during vehicle inspections or occupant coding. If the seating position was not occupied at the time of crash, only the Key Identifiers will be completed. Figure 30 displays the list of all the data elements in the SEAT table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       SEAT                    Observations         18032
Member Type         DATA                    Variables            28
Engine              V9                      Indexes              0
Created             04/02/2020 14:34:05     Observation Length   104
Last Modified       04/02/2020 14:34:05     Deleted Observations 0
Protection                                  Compressed           NO
Data Set Type                               Sorted               YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 # Variable          Type Len Format        Informat Label

20 BELTANCHORINSP     Num    3 BELTANCHOR18F. 11.    BELT ANCHORAGE ADJUSTMENT - INSPECTION
17 BELTAVAILINSP      Num    3 BELTAVAIL18F.  11.    BELT AVAILABILITY - INSPECTION
23 BELTGUIDEINSP      Num    3 BELTGUIDE18F.  11.    BELT GUIDE ROUTING - INSPECTION
19 BELTMALFUNCTIONINSP Num   3 BELTMALF18F.   11.    BELT MALFUNCTION - INSPECTION
22 BELTPOSDEVPRESINSP Num    3 BELTPOSPRES18F. 11.   BELT POSITIONING DEVICE PRESENCE - INSPECTION
21 BELTPRETENSIONINSP Num    3 BELTPRETENS18F. 11.   BELT PRETENSIONER ACTUATION - INSPECTION
18 BELTUSEINSP        Num    3 BELTUSE18F.    11.    BELT USE DETERMINATION - INSPECTION
 1 CASEID             Num    5 11.            11.    SYSTEM CASE IDENTIFIER
 3 CASENO             Num    3 11.            11.    SEQUENTIAL CASE NUMBER
 4 CASENUMBER         Char  16 $20.           $20.    CASE NUMBER
26 CASEWGT            Num    8 26.20                  CASE WEIGHT
 5 CATEGORY           Num    3 11.            11.    CASE CATEGORY
15 HEADRESTACT        Num    3 HEADACTIVE18F. 11.    ACTIVE HEAD RESTRAINT
14 HEADRESTDAM        Num    3 HEADDAM18F.    11.    HEAD RESTRAINT DAMAGE
13 HEADRESTYPE        Num    3 HEADTYPE18F.   11.    HEAD RESTRAINT TYPE
12 INTRESTRAINT       Num    3 INTEGREST18F.  11.    INTEGRATED RESTRAINT
25 LOCATION           Num    3 SEATLOC18F.    11.    SEAT LOCATION
 9 ORIENTATION        Num    3 ORIENT18F.     11.    SEAT ORIENTATION
11 PERFORMANCE        Num    3 STPERF18F.     11.    SEAT PERFORMANCE
 2 PSU                Num    3 11.            11.    PRIMARY SAMPLING UNIT
27 PSUSTRAT           Num    3 11.            11.    PSU STRATIFICATION
16 ROLLPROTECTION     Num    3 ROLLPROTECT18F. 11.   ROLLOVER PROTECTION
 7 SEATLOC            Num    3 SEATPOS18F.    11.    SEAT LOCATION
24 SEATROW            Num    3 SEATROW18F.    11.    SEAT ROW
 8 SEATTYPE           Num    3 SEATTYPE18F.   11.    SEAT TYPE
10 TRACK              Num    3 TRACK18F.      11.    SEAT TRACK POSITON
 6 VEHNO              Num    3 11.            11.    VEHICLE NUMBER
28 VERSION            Num    3 6.             6.     VERSION NUMBER


                    Sort Information

                Sortedby      PSU CASENO VEHNO SEATLOC
                Validated     YES
                Character Set ANSI
```

Figure 31.

ACTIVE HEAD RESTRAINT

This variable reports the presence of active head restraints for this seating position.

COLUMN Name: HEADRESTACT

SAS Value	Value Text
0	Occupant not seated, or no seat
1	None Present
2	Present
8	Not Applicable
9	Unknown

BELT ANCHORAGE ADJUSTMENT – INSPECTION

This variable captures the position of the shoulder belt anchorage adjuster found on the upper B-pillar as found during the vehicle inspection.

COLUMN Name: BELTANCHORINSP

SAS Value	Value Text
0	No manual shoulder belt
1	None for manual shoulder belt
2	In full up position
3	In mid position
4	In full down position
5	Position unknown
9	Unknown if adjuster present

BELT AVAILABILITY – INSPECTION

This variable reports the availability of belt restraints for this seating position at the time of the vehicle inspection.

COLUMN Name: BELTAVAILINSP

SAS Value	Value Text
0	None available
1	Belt removed/destroyed
2	Shoulder belt
3	Lap belt
4	Lap and shoulder belt
5	Belt available - type unknown
6	Shoulder belt (lap belt destroyed/removed)

7	Lap belt (shoulder belt destroyed/removed)
8	Other belt (specify)
9	Unknown

BELT GUIDE ROUTING - INSPECTION

This variable reports whether the seat belt was routed thru a belt guide, as found during the vehicle inspection.

COLUMN Name: BELTGUIDEINSP

SAS Value	Value Text
0	Not Applicable
1	Yes
2	No
9	Unknown

BELT MALFUNCTION – INSPECTION

This variable reports if there was any evidence of a belt malfunction during the crash. This data is captured during the vehicle inspection.

COLUMN Name: BELTMALFUNCTIONINSP

SAS Value	Value Text
0	None used/not available/removed or destroyed
1	No belt malfunction(s)
2	Torn webbing (stretched webbing not included)
3	Broken buckle or latch plate
4	Upper anchorage separated
5	Other anchorage separated (specify)
6	Broken retractor
7	Combination of above (specify)
8	Other belt malfunction (specify)
9	Unknown

BELT POSITIONING DEVICE PRESENCE – INSPECTION

This variable reports the presence of a belt positioning device in use for this seating position at the time of the crash. This variable is documented during the vehicle inspection.

COLUMN Name: BELTPOSDEVPRESINSP

SAS Value	Value Text
0	None present
1	Safety belt guide
2	Belt extender
3	Shoulder belt fit adjuster
8	Other (specify)
9	Unknown if present

BELT PRETENSIONER ACTUATION - INSPECTION

This variable reports the presence and type of belt pretensioner, and whether the belt pretensioner actuated during the crash. This information is collected during the vehicle inspection.

COLUMN Name: BELTPRETENSIONINSP

SAS Value	Value Text
0	Not equipped
1	Pretensioner not actuated
2	Retractor type actuated
3	Buckle type actuated
4	Retractor and buckle type actuated
5	Pretensioner present, Unknown if actuated
6	Anchor type actuated
7	Retractor and anchor type actuated
8	Buckle and anchor type actuated
9	Unknown if equipped
10	Retractor, buckle, and anchor type actuated
99	No Vehicle Inspection

BELT USE DETERMINATION - INSPECTION

This variable reports whether the belt was used during the crash. This information is based solely on evidence found during the vehicle inspection.

COLUMN Name: BELTUSEINSP

SAS Value	Value Text
0	None used not available/removed or destroyed
1	Inoperative (specify)
2	Shoulder belt
3	Lap belt

4	Lap and shoulder belt
5	Belt used - type unknown
8	Other belt used (specify)
12	Shoulder belt with child safety seat
13	Lap belt with child safety seat
14	Lap and shoulder belt with child safety seat
15	Belt with child safety seat - type unknown
18	Other belt with child safety seat (specify)
99	Unknown if belt used

HEAD RESTRAINT DAMAGE

This variable reports whether the seat's head restraint was damaged by the occupant during the crash.

COLUMN Name: HEADRESTDAM

SAS Value	Value Text
0	Occupant not seated, or no seat
1	No head restraints
2	No damage
3	Damaged during crash
8	Not Applicable
9	Unknown

HEAD RESTRAINT TYPE

This variable reports the type of head restraint for this seating position.

COLUMN Name: HEADRESTYPE

SAS Value	Value Text
0	Occupant not seated, or no seat
1	No head restraints
2	Integral
3	Adjustable
4	Add-on
97	Not Applicable
98	Other (specify)
99	Unknown

INTEGRATED RESTRAINT

This variable reports whether the restraint was integrated, or integral, with the seat.

COLUMN Name: INTRESTRAINT

SAS Value	Value Text
0	Occupant not seated, or no seat
1	No
2	Yes
8	Not Applicable
9	Unknown if integrated

ROLLOVER PROTECTION

This variable reports whether this seating position was protected during a rollover by an active device that would normally deploy during a rollover.

COLUMN Name: ROLLPROTECTION

SAS Value	Value Text
0	Occupant not seated, or no seat
1	No/Unknown
2	Yes

SEAT LOCATION

This key variable reports the seating position in the vehicle. This is a 2 digit field where the first digit denotes the row of the vehicle, and the second digit denotes the lateral location of the seat. Seat rows are numbered longitudinally from the driver's row backwards. The seat locations are numbered from left to right and is normally three positions although there could be up to four seating locations in a particular row.

COLUMN Name: SEATLOC

SAS Value	Value Text
11	Front Left
12	Front Middle
13	Front Right
15	Front on/in the lap of another occupant
21	Second Left
22	Second Middle
23	Second Right
24	Second Other

25	Second on/in the lap of another occupant
31	Third Left
32	Third Middle
33	Third Right
34	Third Other
35	Third on/in the lap of another occupant
41	Fourth Left
42	Fourth Middle
43	Fourth Right
44	Fourth Other
45	Fourth on/in the lap of another occupant
51	Fifth Left
52	Fifth Middle
53	Fifth Right
54	Fifth Other
55	Fifth on/in the lap of another occupant
97	In or on unenclosed area
98	Other enclosed area
99	Unknown seat location

SEAT ORIENTATION

This variable reports the orientation of this seat in relation to the front of the vehicle. Most seats are fixed in terms of their orientation within the vehicle. Swivel seats and reversible seats are entered according to their orientation at the time of impact.

COLUMN Name: ORIENTATION

SAS Value	Value Text
0	Occupant not seated, or no seat
1	Forward facing seat
2	Side facing seat (inward)
3	Side facing seat (outward)
4	Rear facing seat
7	Other (specify):
8	Not Applicable
9	Unknown Orientation

SEAT PERFORMANCE

This variable reports any performance or deformation issues with this seat.

COLUMN Name: PERFORMANCE

SAS Value	Value Text
0	Occupant not seated, or no seat
1	Seat assembly intact
2	Seat adjuster mechanism separated/deformed
3	Seat back folding locks or seat back structure separation (specify)
4	Seat tracks/anchors separated/deformed
5	Deformed by occupant of this seat
6	Deformed by passenger compartment intrusion (specify)
7	Deformed by Cargo
8	Deformed by Other Occupant
9	Combination of above (specify)
88	Not Applicable
98	Other (specify)
99	Unknown

SEAT TYPE

This variable reports the type of seat present at each position.

COLUMN Name: SEATTYPE

SAS Value	Value Text
1	Bucket
2	Bucket with folding back
3	Bench
4	Bench with separate back cushions
5	Bench with folding back(s)
6	Split bench with separate back cushions
7	Split bench with folding back(s)
8	Pedestal (i.e., column supported)
9	Box mounted seat (i.e., van type)
11	Stowed/Removed
98	Other seat type (specify)
99	Unknown Seat Type

SEAT TRACK POSITON

This variable reports the position of this seat on the seat track.

COLUMN Name: TRACK

SAS	Value Text

Value	
0	Occupant not seated, or no seat
1	Non-adjustable seat track
2	Seat at forward most track position
3	Seat between forward most and middle track positions
4	Seat at middle track position
5	Seat between middle and rear most track position
6	Seat at rear most track position
8	Not Applicable
9	Unknown Seat Track Position

SEATXBAG Dataset

Key Identifiers: PSU, CASENO, VEHNO, SEATLOC, BAGNO (to SEAT)
Key Identifiers: PSU, CASENO, VEHNO, BAGNO, SEATLOC (to AIRBAG)

The SEATXBAG table is used to match rows between the SEAT and AIRBAG tables. This is needed since the two tables have a many-to-many relationship, i.e. there could be many seats related to one air bag (e.g. roof side rail air bags which protect more than one seat), and there could be more than one air bag for any one seat position (e.g. the driver's seat can have both a steering wheel hub air bag and a door panel air bag). Figure 31 displays the list of all the data elements in the SEATXBAG table Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       SEATXBAG              Observations        22810
Member Type         DATA                  Variables           11
Engine              V9                    Indexes             0
Created             04/02/2020 14:34:05   Observation Length  56
Last Modified       04/02/2020 14:34:05   Deleted Observations 0
Protection                                Compressed          NO
Data Set Type                             Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable    Type   Len   Format      Informat   Label

7   BAGNO       Num      3   6.          6.         AIR BAG NUMBER
1   CASEID      Num      5   11.         11.        SYSTEM CASE IDENTIFIER
3   CASENO      Num      3   11.         11.        SEQUENTIAL CASE NUMBER
4   CASENUMBER  Char    16   $20.        $20.       CASE NUMBER
9   CASEWGT     Num      8   26.20                  CASE WEIGHT
5   CATEGORY    Num      3   11.         11.        CASE CATEGORY
2   PSU         Num      3   11.         11.        PRIMARY SAMPLING UNIT
```

10	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
8	SEATLOC	Num	3	SEATPOS18F.	11.	SEAT LOCATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
11	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby	PSU CASENO VEHNO SEATLOC BAGNO
Validated	YES
Character Set	ANSI

Figure 32.

AIR BAG NUMBER

This variable contains the air bag number for this vehicle used along with the PSU, CASENO, and VEHNO to match to the AIRBAG dataset.

COLUMN Name: BAGNO

SEAT LOCATION

This variable contains the seat location for this vehicle used along with PSU, CASENO, and VEHNO to match to the SEAT dataset.

COLUMN Name: SEATLOC

AIRBAG Dataset

Key Identifiers: PSU, CASENO, VEHNO, BAGNO

The AIRBAG dataset contains information regarding the air bags originally installed or retrofitted in the vehicle. For inspected vehicles, a row will exist for every air bag location found in the vehicle. For uninspected vehicles, a row will exist for every air bag located in an occupied seating location. The completeness of data in a row is determined by whether the seating location was occupied. If a seating position is not occupied, then a number of fields will be missing. Additionally, missing data will be found for the delta V columns when an air bag did not deploy or cannot be linked to an event. Figure 32 displays the list of all the data elements in the AIRBAG dataset. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name	AIRBAG	Observations	17744
Member Type	DATA	Variables	31
Engine	V9	Indexes	0
Created	04/02/2020 14:34:00	Observation Length	120
Last Modified	04/02/2020 14:34:00	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			

Data Representation WINDOWS_32
Encoding wlatin1 Western (Windows)

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
15	BAGDAMAGE	Num	3	BAGDAM18F.	11.	AIR BAG DAMAGE
16	BAGDAMSOURCE	Num	3	BAGDAMSRC18F.	11.	AIR BAG DAMAGE SOURCE
11	BAGDEPLOY	Num	3	BAGDEPLY18F.	11.	AIR BAG DEPLOYMENT
25	BAGDVBES	Num	3	BAREQSP18F.	11.	AIR BAG DELTA V - BARRIER EQUIV SPEED
23	BAGDVENERGY	Num	5	ENERGY18F.	11.	AIR BAG DELTA V - ENERGY
26	BAGDVEST	Num	3	DVEST18F.	11.	AIR BAG DELTA V - ESTIMATE
22	BAGDVLAT	Num	3	DVLONLAT18F.	11.	AIR BAG DELTA V - LATERAL
21	BAGDVLONG	Num	3	DVLONLAT18F.	11.	AIR BAG DELTA V - LONGITUDINAL
27	BAGDVRANK	Num	3	DVRANK18F.	11.	AIR BAG DELTA V - RANK
24	BAGDVSPEED	Num	3	DVSPEED18F.	11.	AIR BAG DELTA V - IMPACT SPEED
20	BAGDVTOTAL	Num	3	DVTOTAL18F.	11.	AIR BAG DELTA V - TOTAL
14	BAGFLAPSDAM	Num	3	FLAPDAM18F.	11.	AIR BAG FLAP DAMAGE
13	BAGFLAPSOPEN	Num	3	FLAPOPEN18F.	11.	AIR BAG FLAPS OPEN AT TEAR POINTS
8	BAGLOCATION	Num	3	BAGLOC18F.	11.	AIR BAG LOCATION
12	BAGMALFUNCTION	Num	3	BAGMALF18F.	11.	AIR BAG MALFUNCTION
7	BAGNO	Num	3	6.	6.	AIR BAG NUMBER
9	BAGSTATUS	Num	3	BAGSTAT18F.	11.	AIR BAG STATUS
10	BAGTYPE	Num	3	BAGTYPE18F.	11.	AIR BAG TYPE
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
29	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
28	CDCFORDEPLOY	Num	3	BAGCDC18F.	11.	CDC FOR DEPLOYMENT IMPACT
19	DEPLOYEVENT	Num	3	DEPLOYEVENT18F.	6.	AIR BAG DEPLOYMENT EVENT
17	PREVCRASH	Num	3	PREVCRASH18F.	11.	VEHICLE IN PREVIOUS CRASHES
18	PRIORMAINT	Num	3	PRIORMAINT18F.	11.	PRIOR MAINTENANCE OR SERVICE
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
30	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
31	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby PSU CASENO VEHNO BAGNO
Validated YES
Character Set ANSI

Figure 33.

AIR BAG NUMBER

This variable is a key variable identifying the air bag in the vehicle. Air bags are numbered sequentially, beginning with one, for each vehicle.

COLUMN Name: BAGNO

AIR BAG LOCATION

This air bag reports the location of the air bag's location within the vehicle.

COLUMN Name: BAGLOCATION

SAS Value	Value Text
1	Steering Wheel Hub
2	Top Instrument Panel
3	Mid Instrument Panel
4	Bottom Instrument Panel
5	Seat Back (Outboard)
6	Seat Back (Inboard)
7	Door/Panel
8	Roof Side Rail
9	Seat Belt
98	Other (specify)
99	Unknown

AIR BAG STATUS

This variable reports whether the air bag was available at the time of the crash, or had been removed prior (i.e. previous deployment or disconnected).

COLUMN Name: BAGSTATUS

SAS Value	Value Text
1	Air Bag available
2	Air Bag disconnected (specify):
3	Air Bag not reinstalled
9	Unknown status if available for this crash

AIR BAG TYPE

This variable reports whether the air bag was originally manufactured with the vehicle or if the air bag was retrofitted after production.

COLUMN Name: BAGTYPE

SAS Value	Value Text
1	Original manufacturer install
2	Replacement Air Bag
3	Retrofitted Air Bag
70	No Air Bag available for this crash (disconnected/not reinstalled
79	Unknown status if Air Bag available for this crash
99	Unknown Type

AIR BAG DEPLOYMENT

This variable reports the deployment status of the air bag.

COLUMN Name: BAGDEPLOY

SAS Value	Value Text
1	Deployed during crash (as a result of impact)
2	Deployed inadvertently just prior to crash
3	Deployed, details unknown
4	Non-collision deployment
7	Not deployed
70	No air bag available for this crash (disconnected/not reinstalled)
79	Unknown status if air bag available for this crash
99	Unknown if Deployed

AIR BAG MALFUNCTION

This variable flags “indications of an air bag malfunction” and means that something abnormal has occurred to the air bag system. It may not necessarily mean that the air bag system was defective.

COLUMN Name: BAGMALFUNCTION

SAS Value	Value Text
0	No
1	Yes (specify)
70	No Air Bag available for this crash (disconnected/not reinstalled)
79	Unknown status if Air Bag available for this crash
99	Unknown

AIR BAG DAMAGE

This variable reports whether the air bag sustained damage during the bag’s deployment.

COLUMN Name: BAGDAMAGE

SAS Value	Value Text
0	Not damaged
1	Ruptured
2	Cut

3	Torn
4	Holed
5	Burned
6	Abraded
8	Other damage (specify)
9	Damaged, details unknown
60	Air Bag did not deploy
69	Unknown if Air Bag deployed
70	No Air Bag available for this crash (disconnected/not reinstalled
79	Unknown status if Air Bag available for this crash
97	Post crash damage
99	Deployed, unknown if damaged

AIR BAG DAMAGE SOURCE

This variable reports what caused the damage reported in the BAGDAMAGE variable.

COLUMN Name: BAGDAMSOURCE

SAS Value	Value Text
1	Object worn by occupant (specify)
2	Object carried by occupant (specify)
3	Adaptive/assistive controls, (specify)
4	Cover flaps
5	Fire in vehicle
6	Thermal burns
7	Glazing
8	Other damage source (specify)
9	Damaged unknown source
50	Air Bag Not Damaged
59	Deployed, unknown of damaged
60	Air Bag did not deploy
69	Unknown if Air Bag deployed
70	No Air Bag available for this crash (disconnected/not reinstalled)
79	Unknown status if Air Bag available for this crash
97	Post crash damage

AIR BAG FLAPS OPEN AT TEAR POINTS

This variable reports whether the air bag's cover flaps opened at the designated tear point(s). Some air bags in the seat cushion and seat back may not have cover flaps, but will deploy through a seam that separates during the air bag deployment.

COLUMN Name: BAGFLAPSOPEN

SAS Value	Value Text
0	No
1	Yes
60	Air Bag did not deploy
69	Unknown if Air Bag deployed
70	No Air Bag available for this crash (disconnected/not reinstalled
79	Unknown status if Air Bag available for this crash
99	Unknown flaps/seams opened at tear points

AIR BAG FLAP DAMAGE

This variable reports whether the air bag cover flaps sustained damage during the deployment of the air bag.

COLUMN Name: BAGFLAPSDAM

SAS Value	Value Text
0	No
1	Yes (specify)
60	Not Deploy
69	Unknown if deployed
70	No Air Bag available for this crash
79	Unknown if Air Bag available for this crash
99	Unknown if flaps damaged

AIR BAG DEPLOYMENT EVENT

This variable reports the event associated with the deployment with this air bag.

COLUMN Name: DEPLOYEVENT

SAS Value	Value Text
1-30	[Actual Value]
60	Air Bag did not deploy
69	Unknown if Air Bag deployed
70	No Air Bag available for this crash (disconnected/not reinstalled)
79	Unknown status if Air Bag available for this crash
99	Deployed, unknown event

AIR BAG DELTA V - BARRIER EQUIV SPEED

This variable reports the Barrier Equivalent Speed related to the deployment of this air bag and calculated by the WinSMASH application. The data is expressed in kilometers per hour (kmph).

COLUMN Name: BAGDVBES

SAS Value	Value Text
-160 - +160	[Actual Value]
999	Unknown

AIR BAG DELTA V - ENERGY

This variable reports the Energy (expressed in joules) related to the deployment of this air bag and calculated by the WinSMASH application. The data is expressed in joules.

COLUMN Name: BAGDVENERGY

SAS Value	Value Text
40 - 1000000	[Actual Value]
9999999	Unknown

AIR BAG DELTA V - ESTIMATE

This variable reports the delta V estimate calculated by the WinSMASH application (for delta V ranges), or the level of damage (for Minor/Moderate/Severe) as determined by the crash technician, related to the deployment of this air bag.

COLUMN Name: BAGDVEST

SAS Value	Value Text
0	Reconstruction Delta V coded
1	Less than 10 kmph
2	10 kmph < 25 kmph
3	25 kmph < 40 kmph
4	40 kmph < 55 kmph
5	>= 55 kmph
6	Minor
7	Moderate
8	Severe
9	Unknown

AIR BAG DELTA V - IMPACT SPEED

This variable reports the Impact Speed calculated when the WinSMASH Damage and Trajectory algorithm (rarely used) is used for calculating delta V. The data is expressed in kilometers per hour (kmph).

COLUMN Name: BAGDVSPEED

SAS Value	Value Text
0 – 160	[Actual Value]
998	Damage and Trajectory run not made
999	Unknown

AIR BAG DELTA V - LONGITUDINAL

This variable reports the longitudinal component of the delta V results for the event related to the deployment of this air bag. This data is expressed in kilometers per hour (kmph).

COLUMN Name: BAGDVLONG

SAS Value	Value Text
-160 - +160	[Actual Value]
999	Unknown

AIR BAG DELTA V - LATERAL

This variable reports the lateral component of the delta V results for the event related to the deployment of this air bag. The data is expressed in kilometers per hour (kmph).

COLUMN Name: BAGDVLAT

SAS Value	Value Text
-160 - +160	[Actual Value]
999	Unknown

AIR BAG DELTA V - RANK

This variable reports the ranking of this deployment event as to its severity, as determined by the crash technician.

COLUMN Name: BAGDVRANK

SAS Value	Value Text

1	Highest Delta V
2	Second Highest Delta V
8	Other Delta V

AIR BAG DELTA V - TOTAL

This variable reports the total component of the delta V results for the event related to the deployment of this air bag. The data is expressed in kilometers per hour (kmph).

COLUMN Name: BAGDVTOTAL

SAS Value	Value Text
0 – 160	[Actual Value]
999	Unknown

CDC FOR DEPLOYMENT IMPACT

This variable reports whether this event was the highest, secondary, or other delta V associated with this bag's deployment event.

COLUMN Name: CDCFORDEPLOY

SAS Value	Value Text
1	Highest Delta V
2	Second highest Delta V
3	Other Delta V (specify)
60	Air Bag did not deploy
69	Unknown if Air Bag deployed
70	No Air Bag available for this crash (disconnected/not reinstalled
79	Unknown status if Air Bag available for this crash
99	Deployed, unknown event

PRIOR MAINTENANCE OR SERVICE

This variable reports whether this air bag had maintenance or service prior to this crash.

COLUMN Name: PRIORMAINT

SAS Value	Value Text
1	No prior maintenance
2	Yes, prior maintenance (specify)
9	Unknown

VEHICLE IN PREVIOUS CRASHES

This variable reports whether this vehicle had been in previous crashes and whether the crash resulted in a deployment of this air bag.

COLUMN Name: PREVCRASH

SAS Value	Value Text
1	No previous crashes
2	Previous crash(es) without deployment(s)
3	One previous crash with deployment
4	More than one previous crash with at least one deployment
8	Previous crashes, unknown deployment status
9	Unknown

CHILDSEAT Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO, CHILDSEATNO

This table contains information about child restraints either used by occupants or found in the vehicle by the crash technician. These child restraints include child seats, vests, etc. Most rows will be associated with an occupant. This table contains information about child restraints either used by occupants (i.e., OCC.CHILDSEATUSE=1) or found in the vehicle by the crash technician. Figure 33 displays the list of all the data elements in the CHILDSEAT table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       CHILDSEAT              Observations        244
Member Type         DATA                   Variables           37
Engine              V9                     Indexes             0
Created             04/02/2020 14:34:00    Observation Length  160
Last Modified       04/02/2020 14:34:00    Deleted Observations  0
Protection                                 Compressed          NO
Data Set Type                              Sorted              YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 #  Variable        Type  Len  Format          Informat   Label

31  BELTRETYPE       Num    3  RETRACTTYPE18F.   11.     BELT RETRACTOR TYPE
27  BELTROUT         Num    3  BELTROUT18F.      11.     BELT ROUTING AND USE
 1  CASEID           Num    5  11.               11.     SYSTEM CASE IDENTIFIER
 3  CASENO           Num    3  11.               11.     SEQUENTIAL CASE NUMBER
```

```
 4  CASENUMBER        Char   16  $20.          $20.     CASE NUMBER
35  CASEWGT           Num    8   26.20                  CASE WEIGHT
 5  CATEGORY          Num    3   11.           11.      CASE CATEGORY
15  CHILDDATEMAN      Char   10  $CRSDATE18F.  $4000.   CHILD SEAT DATE OF MANUFACTURE
11  CHILDMAKE         Num    3   CRSMAKE18F.   11.      CHILD SEAT MAKE
10  CHILDMANUF        Num    3   CRSMAN18F.    11.      CHILD SEAT MANUFACTURER
12  CHILDMODEL        Num    4   CRSMODEL18F.  11.      CHILD SEAT MODEL
13  CHILDMODELNO      Char   20  $CRSMODELNO18F. $50.    CHILD SEAT MODEL NUMBER
30  CHILDPOSITION     Num    3   CHILDPOSITION18F. 11.   CHILD POSITION IN CHILD SEAT
 8  CHILDSEATNO       Num    3   20.           20.      CHILD SEAT NUMBER
14  CHILDSEATYPE      Num    3   CRSTYPE18F.   11.      CHILD SEAT TYPE
17  DATASOURCE        Num    3   CRSSOURCE18F. 11.      CHILD SEAT DATA SOURCE
19  HARNESSDESIGN     Num    3   HARNDESIGN18F. 11.     HARNESS DESIGN
23  HARNESSUSE        Num    3   HARNUSE18F.   11.      HARNESS USE
16  HOWUSED           Num    3   CRSUSE18F.    11.      CHILD SEAT HOW USED
33  LATCHANCHOR       Num    3   LATCHANCHOR18F. 11.    LATCH ANCHOR
22  LATCHDESIGN       Num    3   LATCHDESIGN18F. 11.    LATCH DESIGN
32  LATCHPLATE        Num    3   LATCHPLATE18F. 11.     LATCH PLATE TYPE
34  LATCHTETHER       Num    3   LATCHTETHER18F. 11.    LATCH TETHER
26  LATCHUSE          Num    3   LATCHUSE18F.  11.      LATCH USE
28  LOCKCLIPUSE       Num    3   LOCKUSE18F.   11.      LOCKING CLIP USE
 7  OCCNO             Num    3   6.            6.       OCCUPANT NUMBER
18  ORIENTATION       Num    3   CRSORIENT18F. 11.      CHILD SEAT ORIENTATION
29  PLACEMENT         Num    3   CRSPLACE18F.  11.      CHILD SEAT PLACEMENT
 2  PSU               Num    3   11.           11.      PRIMARY SAMPLING UNIT
36  PSUSTRAT          Num    3   11.           11.      PSU STRATIFICATION
20  RETAINERCLIPDESIGN Num   3   CLIPDESIGN18F. 11.     RETAINER CLIP DESIGN
24  RETAINERCLIPUSE   Num    3   CLIPUSE18F.   11.      RETAINER CLIP USE
 9  SEATLOC           Num    3   SEATPOS18F.   11.      SEAT LOCATION
21  TETHERDESIGN      Num    3   TETHERDESIGN18F. 11.   TETHER DESIGN
25  TETHERUSE         Num    3   TETHERUSE18F. 11.      TETHER USE
 6  VEHNO             Num    3   11.           11.      VEHICLE NUMBER
37  VERSION           Num    3   6.            6.       VERSION NUMBER


                    Sort Information

          Sortedby      PSU CASENO VEHNO OCCNO CHILDSEATNO
          Validated     YES
          Character Set  ANSI
```

Figure 34.

SEAT LOCATION

All child restraints found inside the vehicles are coded into CISS. This includes unoccupied child restraints. This variable assigns a seating location for each CRS.

COLUMN Name: SEATLOC

SAS Value	Value Text
11	Front Left
12	Front Middle
13	Front Right
15	Front on/in the lap of another occupant
21	Second Left
22	Second Middle

23	Second Right
24	Second Other
25	Second on/in the lap of another occupant
31	Third Left
32	Third Middle
33	Third Right
34	Third Other
35	Third on/in the lap of another occupant
41	Fourth Left
42	Fourth Middle
43	Fourth Right
44	Fourth Other
45	Fourth on/in the lap of another occupant
51	Fifth Left
52	Fifth Middle
53	Fifth Right
54	Fifth Other
55	Fifth on/in the lap of another occupant
97	In or on unenclosed area
98	Other enclosed area
99	Unknown seat location

OCCUPANT NUMBER

This variable identifies a particular occupant in the vehicle. Occupants are numbered sequentially from left to right beginning in the front row, and then going backwards to rearward seating rows. This variable can be used to link a child seat to a particular occupant.

COLUMN Name: OCCNO

CHILD SEAT MANUFACTURER

This variable reports the original manufacturer of the child restraint.

COLUMN Name: CHILDMANUF

SAS Value	Value Text
0	No Child Safety Seat
1	Angel Guard Products
2	Baby Trend
3	Besi
4	Britax
5	BubbleBum
6	Chicco

7	Columbia Medical
8	Combi
9	Diono
10	Dorel Juvenile Group
11	EZ-On
12	Goodbaby International
13	Graco
14	Happy Kidz
15	Harmony
16	IMMI
17	Kiddy USA
18	Lilly Gold
19	Magna
20	Merritt Mft.
21	Mia Moda
22	Nania
23	Orbit Baby
24	Peg Perego
25	R82
26	Recaro
27	Renolux
28	Safe Traffic Systems
29	Safety Angel
30	Sammons Preston
31	Serenity Safety Products
32	Special Tomato
33	Tomy
34	Tumble Forms
35	Mifold
95	Built-in child safety seat
97	Other manufacturer (specify)
98	Unknown Manufacturer
99	Unknown if child safety seat used

CHILD SEAT MAKE

This variable reports the make of the child restraint.

COLUMN Name: CHILDMAKE

SAS Value	Value Text
0	No Child Safety Seat
1	Angel Guard Products

2	Baby Trend
3	Besi
4	Britax
5	BubbleBum
6	Chicco
7	Columbia Medical
8	Car Seat Specialty
9	Combi
10	Diono
11	Sunshine Kids
12	Cosco
13	Dorel Juvenile Group
14	Eddie Bauer
15	Maxi-Cosi
16	Safety 1st
17	EZ-On
18	Cybex
19	Evenflo
20	Goodbaby International
21	Regal Lager
22	Urbini
23	Graco
24	Teutonia
25	Happy Kidz
26	Harmony
27	IMMI
28	Jupiter
29	Safeguard
30	Kiddy USA
31	Lilly Gold
32	Safeline
33	Tripleplay Products
34	Clek
35	Magna
36	Merritt Mft.
37	Mia Moda
38	Mifold
39	Nania
40	Safety Baby
41	Team Tex
42	Orbit Baby
43	Peg Perego
44	R82

45	Snug Seat
46	Recaro
47	Renolux
48	Safe Traffic Systems
49	Safety Angel
50	Sammons Preston
51	Guardian
52	Serenity Safety Products
53	Special Tomato
54	Compass
55	Learning Curve
56	Tomy
57	The First Years
58	Tumble Forms
95	Built-in child safety seat
97	Other make (specify)
98	Unknown Make
99	Unknown if child safety seat used

CHILD SEAT MODEL

This variable reports the child restraint's model. The assigned model is a four digit number with the first digit representing the Child Seat Type. The second through fourth digits are a sequentially assigned number within that type.

COLUMN Name: CHILDMODEL

SAS Value	Value Text
0	No Child Safety Seat
1022	Nurture
1023	Port About
1024	Tot Taxi
1025	Sonti
1026	CoachRider Travel System
1027	DuoGlider Travel System
1028	LiteRider
1029	LiteRider Breeze
1030	LiteRider Glider
1031	LiteRider Sterling
1032	MetroLite Travel System
1033	Safe Seat Step 1
1034	Snug Ride

1035	Snug Ride DX5
1036	t-tario 35
1037	Doona
1038	Evolution Pro 2
1039	Certo
1040	G2
1041	Primo Viaggio
1042	Via
1043	onBoard 35
2001	Advantage
2002	Advocate CS
2003	Boulevard
2004	Decathlon
2005	Diplomat
2006	Elite
2007	Galaxy
2008	Marathon
2009	Roundabout
2010	Wizard
2011	Coccoro
2012	Apt 40
2013	Apt 50
2014	Scenera
2015	XRS 65
2016	Priori
2017	Comfort Ride
2018	Complete Air with Air Protect
2019	Forerunner
2020	Uptown
2021	Conquest V
2022	Horizon V
2023	Momentum 65 DLX
2024	Odyssey V
2025	Orion
2026	Scout
2027	Sonus
2028	Titan
2029	Titan 5
2030	Tribute
2031	Tribute 5
2032	Triumph

2033	ComfortSport
2034	Contender
2035	Head Wise 65/70
2036	My Ride 65
2037	MY SIze (70)
2038	Sit n' Stroll
2039	Sit n' Stroll
2040	FIlo
2041	Foonf
2042	Como
2043	ProRide
2044	Signo
2045	GT 2000
2046	GT 4000
2047	GT-5000 Turn-A-Tot
2048	GT-7000
2049	True Fit
2050	Mighty Fit
2051	Next Fit
3001	Husky
3002	Romer King
3003	G3 Toddler Car Seat
4001	Radian RXT
4002	Easy Elite 3-in-1
4003	Deluxe Convertible
4004	All-in-One
4005	Alpha Omega Elite
4006	Alpha Sport 3 Phase
4007	Enspira'
4008	Grow And Go
4009	Intera
4010	Symphony
4011	4Ever All-in-One
4012	Signature Series Smart Seat
4013	Milestone 3-in-1
5001	Hybrid 3-in-1
5002	Frontier
5003	Regent
5005	High Back Booster
5006	Summit
5007	Ventura/Vision

5008	High Back Booster
5009	Apex 65
5010	Prospect
5011	Summit Deluxe
5012	Surveyor
5013	Vantage Point
5014	Apollo
5015	Bolero
5016	Chase DLX
5017	Comet
5018	Express
5019	Maestro
5020	Traditions
5021	Vision
5022	Argos
5023	CarGo
5024	Cherished CarGo
5025	Grand Cargo
5026	Nautilus
5027	Quest
5028	Teasured Cargo
5029	Ultra Cargo
5030	Defender 360 3-in-1
5031	ProSport
5032	Young Sport
5950	Built-in child safety seat
6001	Recaro
6002	Trend
6003	Bodyguard
6004	Cruiser
6005	Monarch
6006	Parkway
6007	Stariser/Comfy
6008	Inflatable Booster
6009	Kobuk
6010	Highrise
6011	Pronto
6012	Protek
6013	Select Ride
6014	Stack It BSS
6015	Traveler

6016	Valet
6017	Vista
6018	Voyager
6019	Rodi
6020	Highrider
6021	Store N Go
6022	Solution X-Fix
6023	Big Kid
6024	Booster Seat
6025	Confidence
6026	Secure Comfort
6027	Sightseer Comfort Touch
6028	Affix
6029	AirBooster
6030	My CarGo
6031	TurboBooster
6032	Secure Comfort Deluxe Booster
6033	Youth Booster Seat
6034	Grand Touring
6035	Komfort Kruiser
6036	Komfort Rider
6037	Komfort Rider GT
6038	Cruiser 3
6039	Clek Olli
6040	Clek Oobr
6041	Clek Ozzi
6042	Grab-and-Go
6043	Start
6044	Vivo
6045	Booster
6046	Ride Ryte
6047	Doble Up
6048	Compass B500 Booster
6049	Top Side
7001	Vest
7002	Tote `n Go
7003	E-Z-On Vest
7004	Ride Safer Travel Vest
7005	Travel Vest
8001	Harness
8002	SafeGuard

8003	Safeguard Star Plus
8004	Safeguard Star Standard
9001	2000
9002	Snug Seat Hippo
9003	Traveller Plus
9004	Pilot
9005	Churchill EZ Up
9006	Spirit APS
9007	MPS Special Needs'
9008	Carrie Car Seat
9997	Other model (specify)
9998	Unknown Model
1001	EZ Loc
1002	Flex Loc
1003	Latch Loc
1004	Tahoe
1005	Baby Safe
1006	Baby Trend Latch-Loc
1007	Chaperone
1008	Companion
1009	KeyFit
1010	Shuttle
1011	Light N Comfy
1012	Deluxe Infant Car Seat
1013	Infant Car Seat
1014	Integrated Travel System
1015	SureFit
1016	Mico
1017	Comfy Carry Elite
1018	Designer 22
1019	Starter
1020	Aton
1021	Embrace

CHILD SEAT MODEL NUMBER

This variable reports the model number of the child restraint. 99999999 is used for unknown.

COLUMN Name: CHILDMODELNO

CHILD SEAT DATE OF MANUFACTURE

This variable reports the child seat's manufacture date as found on the label affixed to the seat.

COLUMN Name: CHILDDATEMAN

SAS Value	Value Text
9999999999	Unknown

BELT RETRACTOR TYPE

This variable reports the retractor type of the seat belt used with this child seat.

COLUMN Name: BELTRETYPE

SAS Value	Value Text
0	None Present
1	Emergency Locking Retractor
2	Automatic Locking Retractor
3	Switchable Retractor in ELR Mode
4	Switchable Retractor in ALR Mode
5	Switchable Retractor in Unknown Mode
9	Unknown Type of Retractor

BELT ROUTING AND USE

This variable reports the routing of the seat belt used with this child seat.

COLUMN Name: BELTROUT

SAS Value	Value Text
0	No belt routing
1	No belt used
2	Belt routed through belt positioning slots/channels
3	Belt routed through forward facing slots/channels
4	Belt routed through rear facing slots/channels
5	Belt routed unconventionally (specify)
9	Unknown belt path or if belt routed

CHILD POSITION IN CHILD SEAT

This variable reports the occupant's position in the child seat at the time of impact.

COLUMN Name: CHILDPOSITION

SAS Value	Value Text
0	Not occupied
1	Upright
2	Reclined/lying back
3	Supine, facing upwards
4	Slumped forward
5	Slumped to the side
6	Kneeling
8	Other (specify)
9	Unknown

CHILD SEAT DATA SOURCE

This variable reports the source of the data for the child restraint information. The Source of Data variable represents all of the coded CRS variables.

COLUMN Name: DATASOURCE

SAS Value	Value Text
1	Vehicle
2	Interview
3	Vehicle and Interview
4	Photographs Only
5	Official Records

CHILD SEAT HOW USED

Since this variable represents how the CRS was actually used, this information is determined during the child seat inspection and/or by asking appropriate questions during the interview.

COLUMN Name: HOWUSED

SAS Value	Value Text
1	Infant seat (ISS)
2	Forward facing (FSS)
3	Booster seat (BSS)
4	Integrated seat (INT)
5	Harness (HSS)
6	Vest (VSS)
7	Special needs (SNSS)
8	Other (specify)
9	Unknown

CHILD SEAT NUMBER

This variable is a key variable. Child Seat Numbers are assigned sequentially beginning with one for the seats in the vehicle.

COLUMN Name: CHILDSEATNO

CHILD SEAT PLACEMENT

This variable reports the placement of the child restraint in the seating position.

COLUMN Name: PLACEMENT

SAS Value	Value Text
1	Seat
2	Floor
3	Lap of other occupant
4	Console
8	Other (specify)
9	Unknown

CHILD SEAT TYPE

This variable reports the type of this child restraint.

COLUMN Name: CHILDSEATYPE

SAS Value	Value Text
1	Infant seat (ISS)
2	Convertible seat (CSS)
3	Forward facing (FSS)
4	Booster/Convertible facing seat (BSS/CSS)
5	Booster/Forward facing seat (BSS/FSS)
6	Booster seat (BSS)
7	Vest (VSS)
8	Harness (HSS)
9	Special needs (SNSS)
96	Integrated seat (INT)
97	Other (specify)
99	Unknown

CHILD SEAT ORIENTATION

This variable reports the orientation of the child seat at the time of the crash.

COLUMN Name: ORIENTATION

SAS Value	Value Text
1	Rear facing
2	Forward facing
3	Supine
8	Other (specify)
9	Unknown

HARNESS DESIGN

This variable reports whether this child restraint was designed with a harness.

COLUMN Name: HARNESSDESIGN

SAS Value	Value Text
0	No harness/shield available (or not designed with harness/shield)
1	3 pt
2	5 pt
3	6 pt
4	T-Shield
5	Tray Shield
6	Shield
9	Unknown

HARNESS USE

This variable reports how the child seat harness was used at the time of the crash.

COLUMN Name: HARNESSUSE

SAS Value	Value Text
0	Not designed with harness
1	Harness/shield not used
2	Harness straps in Top/Highest slots
3	Harness straps in the Middle slots
4	Harness straps in the Bottom/Lower slots
5	Harness used - slot use unknown
6	Retrofitted with Harness

7	Shield used
8	Other (specify)
9	Unknown if harness/shield used

LATCH ANCHOR USE

This variable reports whether the LATCH anchors on the child seat were being used at the time of the crash.

COLUMN Name: LATCHUSE

SAS Value	Value Text
0	Not designed with lower anchors
1	Lower anchors used
3	Lower anchors – not used
9	Unknown if lower anchors used

LATCH ANCHOR DESIGN

This variable reports whether the child seat was designed with LATCH anchors to secure the child seat to the seating position.

COLUMN Name: LATCHDESIGN

SAS Value	Value Text
0	No lower anchors available (or not designed with lower anchors)
1	Lower anchors available (or designed with lower anchors)
9	Unknown

LATCH PLATE TYPE

This variable is coded for all seat belts in seats associated with a child restraint.

COLUMN Name: LATCHPLATE

SAS Value	Value Text
0	Not used/not available
1	Sliding
2	Light weight locking/cinching
3	Locking
4	Switchable
5	Sewn On
9	Unknown Type

LATCH TETHER AVAILABILITY

This variable reports whether the vehicle was equipped with a LATCH system tether. In some vehicles, such as mini-vans and station wagons, the tether anchor may be found on the rear floor of the vehicle, on the back of the rear seat, and on the roof area. It may be concealed by some sort of covering which can be removed or “flipped up”.

COLUMN Name: LATCHTETHER

SAS Value	Value Text
0	No
1	Yes
9	Unknown if tether

LOCKING CLIP USE

A locking clip is usually included with the CRS at the time of purchase and typically found on the back aspect of CRS seat back. The purpose of a locking clip is to lock belt systems of vehicles that contain sliding latch plates and emergency locking retractors only (e.g., vehicles that do not have automatic locking capability). Locking clips used on the lap and shoulder belt combination are to be positioned not more than one inch above the latch plate. Seat belts are usually labeled indicating the need of a locking clip and this need is also discussed in the vehicle owner's manual.

COLUMN Name: LOCKCLIPUSE

SAS Value	Value Text
0	None present
1	Locking clip used on lap and shoulder belt
2	Locking clip used on lap belt only
3	Locking clip used on shoulder belt only
4	Internal belt lock present and used
5	Internal belt lock present and not used
6	Internal belt lock present, use unknown
8	Other (specify)
9	Unknown

LOWER ANCHORS AVAILABILITY

This variable reports whether the LATCH anchors were in use at the time of the crash.

COLUMN Name: LATCHANCHOR

SAS Value	Value Text
0	No
1	Yes
9	Unknown if anchor

RETAINER CLIP DESIGN

This variable reports whether the child seat was designed to be used with a chest retainer clip. A chest retainer clip is a plastic device which attaches the two harness straps.

COLUMN Name: RETAINERCLIPDESIGN

SAS Value	Value Text
0	No clip available, or not designed with retainer clip
1	Clip available
9	Unknown

RETAINER CLIP USE

This variable reports whether a chest retainer clip was being used at the time of the crash, and if so, the position of the clip in relation to the child's torso.

COLUMN Name: RETAINERCLIPUSE

SAS Value	Value Text
0	Not designed with retainer clip
1	Retainer clip not used
2	Retainer clip used – neck level
3	Retainer clip used – chest/armpit Level
4	Retainer clip used – stomach level
5	Retainer clip used – unknown level
6	Retrofitted with retainer clip
9	Unknown if retainer clip used

TETHER DESIGN

The Lower Anchors and Tethers for Children (LATCH) system is comprised of a top tether strap and lower anchor straps. This variable reports if the CRS was equipped with a top tether strap that is used to secure the top of the CRS to the vehicle.

COLUMN Name: TETHERDESIGN

SAS Value	Value Text
0	No tether available (or not designed with Tether)
1	Tether available (or designed with Tether)
9	Unknown

TETHER USE

This variable reports if the child seat's tether was being used to secure the child seat to the seat position.

COLUMN Name: TETHERUSE

SAS Value	Value Text
0	Not designed with Tether
1	Tether not used
2	Tether used
9	Unknown if Tether Used

EJECT Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO, EJECTNO

The EJECT dataset captures whether an occupant was ejected or not. This table Figure 34 displays the list of all the data elements in the EJECT table. Information about the type of each variable, its length, the format, and the label is provided for each data element. There will normally be one row per occupant.

```
Data Set Name       EJECT                 Observations          5554
Member Type         DATA                  Variables             15
Engine              V9                    Indexes               0
Created             04/02/2020 14:34:02   Observation Length    72
Last Modified       04/02/2020 14:34:02   Deleted Observations  0
Protection                                Compressed            NO
Data Set Type                             Sorted                YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

#   Variable      Type   Len   Format        Informat   Label

1   CASEID        Num      5   11.           11.        SYSTEM CASE IDENTIFIER
3   CASENO        Num      3   11.           11.        SEQUENTIAL CASE NUMBER
4   CASENUMBER    Char    16   $20.          $20.       CASE NUMBER
13  CASEWGT       Num      8   26.20                    CASE WEIGHT
```

```
 5   CATEGORY      Num     3   11.          11.      CASE CATEGORY
10   EJECTAREA     Num     3   EJECTAREA18F.  11.      EJECTION AREA
11   EJECTMED      Num     3   EJECTMED18F.   11.      EJECTION MEDIUM
12   EJECTMEDSTAT  Num     3   EJECTMEDST18F. 11.      EJECTION MEDIUM STATUS
 8   EJECTNO       Num     3   11.          11.      EJECTION NUMBER
 9   EJECTTYPE     Num     3   EJECTION18F.   11.      EJECTION TYPE
 7   OCCNO         Num     3   6.           6.       OCCUPANT NUMBER
 2   PSU           Num     3   11.          11.      PRIMARY SAMPLING UNIT
14   PSUSTRAT      Num     3   11.          11.      PSU STRATIFICATION
 6   VEHNO         Num     3   11.          11.      VEHICLE NUMBER
15   VERSION       Num     3   6.           6.       VERSION NUMBER


                  Sort Information

Sortedby      PSU CASENO VEHNO OCCNO EJECTNO
Validated     YES
Character Set  ANSI
```

Figure 35.

EJECTION NUMBER

This variable, in addition to PSU, CASENO, VEHNO and OCCNO, is the key field to identify a particular ejection. The field is numbered sequentially beginning with one (1). Ejections are numbered in regards to the vehicle, not an occupant, so an occupant with multiple ejections may not have sequentially numbered entries in the Eject dataset. While most occupants will only have one entry, there is the possibility an occupant may experience more than one ejection during a crash.

COLUMN Name: EJECTNO

OCCUPANT NUMBER

This variable is a sequentially assigned number for all occupants in the vehicle. Numbers are assigned from left to right with the front row and then other rows going backwards.

COLUMN Name: OCCNO

EJECTION AREA

This field denotes the basic area of the ejection.

COLUMN Name: EJECTAREA

SAS Value	Value Text
0	No Ejection
1	Windshield
2	Left front
3	Right front

4	Left rear
5	Right rear
6	Rear
7	Roof
89	Unknown if ejected
98	Other area
99	Unknown

EJECTION MEDIUM

This field gives more information regarding the area of ejection and should be used with EJECTAREA for determining the location of the ejection.

COLUMN Name: EJECTMED

SAS Value	Value Text
0	No Ejection
1	Door/hatch/tailgate
2	Non-fixed roof structure
3	Fixed glazing
4	Non-fixed glazing (specify)
5	Integral structure
79	Unknown ejection area
89	Unknown if ejected
98	Other medium (specify)
99	Unknown

EJECTION MEDIUM STATUS

This variable is a description of the status of the area through which an occupant was ejected. It reports the status of the medium immediately prior to the impact.

COLUMN Name: EJECTMEDSTAT

SAS Value	Value Text
0	No ejection
1	Open
2	Closed
3	Integral Structure
79	Unknown ejection area
89	Unknown if ejected
99	Unknown status

EJECTION TYPE

This variable reports the extent of the ejection.

COLUMN Name: EJECTTYPE

.

SAS Value	Value Text
0	Not Ejected
1	Ejected, Totally
2	Ejected, Partially
3	Ejection - Unknown Degree
9	Unknown

EMSCARE Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO, EMSNO

The EMSCARE dataset contains information regarding EMS care afforded to the occupant. Data can be found in this dataset when OCC.EMSDATA=1. Figure 35 displays the list of all the data elements in the EMSCARE table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       EMSCARE              Observations        787
Member Type         DATA                 Variables           19
Engine              V9                   Indexes             0
Created             04/02/2020 14:34:02  Observation Length  88
Last Modified       04/02/2020 14:34:02  Deleted Observations 0
Protection                               Compressed          NO
Data Set Type                            Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 # Variable   Type Len Format      Informat Label

16 ARRMEDICAL Num    4 EMSLAPS18F. 11.     ELAPSED TIME FROM CRASH THAT EMS UNIT ARRIVED AT MEDICAL
 1 CASEID     Num    5 11.         11.     SYSTEM CASE IDENTIFIER
 3 CASENO     Num    3 11.         11.     SEQUENTIAL CASE NUMBER
 4 CASENUMBER Char  16 $20.        $20.    CASE NUMBER
17 CASEWGT    Num    8 25.20               CASE WEIGHT
 5 CATEGORY   Num    3 11.         11.     CASE CATEGORY
 9 EMSAGENCY  Num    3 EMSAGNCY18F. 11.    EMS AGENCY
12 EMSCARE    Num    3 EMSCARE18F. 11.     TYPE OF EMS CARE RECEIVED
11 EMSMODE    Num    3 EMSMODE18F. 11.     EMS UNIT MODE OF TRANSPORTATION
 8 EMSNO      Num    3 20.         20.     EMS NUMBER
10 EMSTYPE    Num    3 EMSTYPE18F. 11.     TYPE OF EMS UNIT
13 NOTIFIED   Num    4 EMSTIME18F. 11.     ELAPSED TIME FROM CRASH THAT EMS WAS NOTIFIED
```

```
 7 OCCNO     Num    3 6.        6.     OCCUPANT NUMBER
 2 PSU       Num    3 11.       11.    PRIMARY SAMPLING UNIT
18 PSUSTRAT  Num    3 11.       11.    PSU STRATIFICATION
14 SCENEARR  Num    4 EMSLAPS18F. 11.  ELAPSED TIME BETWEEN CRASH AND EMS ARRIVAL AT SCENE
15 SCENEDEP  Num    4 EMSLAPS18F. 11.  ELAPSED TIME BETWEEN CRASH AND EMS SCENE DEPARTURE
 6 VEHNO     Num    3 11.       11.    VEHICLE NUMBER
19 VERSION   Num    3 6.        6.     VERSION NUMBER


                Sort Information

          Sortedby      PSU CASENO VEHNO OCCNO EMSNO
          Validated     YES
          Character Set ANSI
```

Figure 36.

EMS NUMBER

The EMS Number is a key variable used to number the units which respond to the scene. This field is number sequentially beginning with one (1).

COLUMN Name: EMSNO

EMS AGENCY

This variable reports the type of EMS agency that responded to the scene of the crash.

COLUMN Name: EMSAGENCY

SAS Value	Value Text
1	Fire Department
2	Rescue Squad
3	Police Department
4	Trauma Unit
5	Disaster Unit
6	Ambulance Service Unit
7	Hospital
8	Mortuaries/Funeral Home
98	Other (specify)
99	Unknown

TYPE OF EMS UNIT

This variable reports the type of EMS unit that responded.

COLUMN Name: EMSTYPE

SAS Value	Value Text

1	Ambulance
2	Fire Truck/Apparatus
8	Other
9	Unknown

EMS UNIT MODE OF TRANSPORTATION

This variable reports whether the responding EMS vehicle responded via land or air.

COLUMN Name: EMSMODE

SAS Value	Value Text
1	Land
2	Air

TYPE OF EMS CARE RECEIVED

This variable reports the level of care the occupant received from the responding EMS unit.

COLUMN Name: EMSCARE

SAS Value	Value Text
0	No Care Administered
1	Basic Life Support
2	Advanced Life Support
3	Care administered, type unknown
9	Unknown if care administered

ELAPSED TIME FROM CRASH THAT EMS WAS NOTIFIED

This variable reports the number of minutes between the time of the crash and when EMS was notified. Since coders are required to document the time coded on the EMS report, in rare occasions this value may be negative due to conflicts between the police crash report and the EMS report.

COLUMN Name: NOTIFIED

SAS Value	Value Text
-50 - +200	[Actual Value]
9997	Transport refused
9998	Not Applicable

9999	Unknown

ELAPSED TIME BETWEEN CRASH AND EMS ARRIVAL AT SCENE

This field reports the number of minutes between the time of the crash and when EMS arrived at the scene. Since coders are required to document the time coded on the EMS report, in rare occasions this value may be negative due to conflicts between the police crash report and the EMS report.

COLUMN Name: SCENEARR

SAS Value	Value Text
-50 - +1600	[Actual Value]
9998	Not Applicable
9999	Unknown

ELAPSED TIME BETWEEN CRASH AND EMS SCENE DEPARTURE

This variable reports the number of minutes between the time of the crash and when EMS departed the scene. Since coders are required to document the time coded on the document, in rare occasions this value may be negative due to conflicts between the police crash report and the EMS report.

COLUMN Name: SCENEDEP

SAS Value	Value Text
-50 - 1600	[Actual Value]
9997	Transport refused
9998	Not Applicable
9999	Unknown

ELAPSED TIME FROM CRASH THAT EMS UNIT ARRIVED AT MEDICAL

This variable reports the number of minutes between the time of the crash and when EMS arrived at the medical facility.

COLUMN Name: ARRMEDICAL

SAS Value	Value Text
0 – 1600	[Actual Value]
9998	Not Applicable
9999	Unknown

INJURY Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO, INJNO

The INJURY dataset contains information regarding any injuries sustained by the occupant as documented from official medical sources as well as the interview from the occupant or its surrogate. Data will be found in this dataset for any occupant with OCC.INJSTATUS=1. Figure 36 displays the list of all the data elements in the INJURY table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Data Set Name	INJURY	Observations	13574
Member Type	DATA	Variables	17
Engine	V9	Indexes	0
Created	04/02/2020 14:34:04	Observation Length	80
Last Modified	04/02/2020 14:34:04	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
14	AIS	Num	3	AIS18F.	11.	AIS SEVERITY
9	AISCODE	Char	8	$10.	$10.	AIS CODE
1	CASEID	Num	5	11.	11.	SYSTEM CASE IDENTIFIER
3	CASENO	Num	3	11.	11.	SEQUENTIAL CASE NUMBER
4	CASENUMBER	Char	16	$20.	$20.	CASE NUMBER
15	CASEWGT	Num	8	26.20		CASE WEIGHT
5	CATEGORY	Num	3	11.	11.	CASE CATEGORY
13	INJLEVEL	Num	3	11.	11.	AIS INJURY LEVEL
8	INJNO	Num	3	11.	11.	INJURY NUMBER
7	OCCNO	Num	3	6.	6.	OCCUPANT NUMBER
2	PSU	Num	3	11.	11.	PRIMARY SAMPLING UNIT
16	PSUSTRAT	Num	3	11.	11.	PSU STRATIFICATION
10	REGION	Num	3	REGION18F.	11.	AIS BODY REGION
12	STRUSPEC	Num	3	11.	11.	AIS SPECIFIC ANATOMIC STRUCTURE
11	STRUTYPE	Num	3	11.	11.	AIS TYPE OF ANATOMIC STRUCTURE
6	VEHNO	Num	3	11.	11.	VEHICLE NUMBER
17	VERSION	Num	3	6.	6.	VERSION NUMBER

Sort Information

Sortedby	PSU CASENO VEHNO OCCNO INJNO
Validated	YES
Character Set	ANSI

Figure 37.

OCCUPANT NUMBER

This key variable reports the occupant this injury is associated. It can be used to merge

the INJURY dataset to the OCC dataset.

COLUMN Name: OCCNO

INJURY NUMBER

This key variable reports the sequential injury number for this injury. It can be used to merge with the ICS and LOCALIZER datasets.

COLUMN Name: INJNO

AIS CODE

This variable stores the AIS Code assigned to the injury. This is an eight digit code which contains information regarding the injury's body region, organ, type of injury, and severity. CISS currently uses the AIS 2015 codes developed by the Association for the Advancement of Automotive Medicine (AAAM).

COLUMN Name: AISCODE

AIS SEVERITY

This variable reports the severity of the coded injury (AISCODE).

COLUMN Name: AIS

SAS Value	Value Text
1	Minor
2	Moderate
3	Serious
4	Severe
5	Critical
6	Maximum (Untreatable) Injury
9	Injury, Unknown Severity

ICS Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO, INJNO

The ICS table reports Injury Causation Scenarios for the injuries coded to the occupant. While there will normally be one ICS per injury, there is the possibility the injury has two coded scenarios. The following fields are completed for every ICS row: Body Region Injured (BRI), Source of Energy (SOE), and ICS Type (ICS_TYPE). The remainder of the data fields will be completed based upon the ICS Type (ICS_TYPE):

- Basic (1) will see the completion of the following fields:

- IPCSAREA1
- IPC1, and
- IPCCONF1

- Critical IPCs 2pt (2) will see the completion of the following fields:
  - IPCAREA1
  - IPC1
  - IPCCONF1
  - REGCONTACT1
  - IPCAREA2
  - IPC2
  - IPCCONF2
  - REGCONTACT2
  - Additionally, any related suffixed "_ALT" (e.g. IPCAREA1_ALT) fields may or may not be completed

- Critical IPCs 3pt (3) will see the completion of the following fields:
  - IPCAREA1
  - IPC1
  - IPCCONF1
  - REGCONTACT1
  - IPCAREA2
  - IPC2
  - IPCCONF2
  - REGCONTACT2
  - IPCAREA3
  - IPC3
  - IPCCONF3
  - REGCONTACT3
  - Additionally, any related suffixed "_ALT" (e.g. IPCAREA1_ALT) fields may or may not be completed

- Isolated IPC (4) will see the completion of the following fields:
  - IPCAREA1
  - IPC1
  - IPCCONF1
  - REGCONTACT1
  - Additionally, any related suffixed "_ALT" (e.g. IPCAREA1_ALT) fields may or may not be completed

- Tandem IPC (5) will see the completion of the following fields:
  - IPCAREA1
  - IPC1
  - IPCCONF1
  - REGCONTACT1
  - IPCAREA_2ND

- IPC_2ND
- IPCCONF_2ND
- IPCAREA_3RD
- IPC_3RD
- IPCCONF_3RD

Additionally, the FACTOR1, FACTOR2, FACTOR3, FACTOR4, FACTOR5 fields will be completed when ICS_TYPE equals 2, 3, 4, or 5.

Figure 37 displays the list of all the data elements in the ICS table. Information about the type of each variable, its length, the format, and the label is provided for each data element.

Note: See Injury Causation Coding Overview section of the CISS Coding and Editing Manual for additional details.

```
Data Set Name       ICS                    Observations        13742
Member Type         DATA                   Variables           61
Engine              V9                     Indexes             0
Created             04/02/2020 14:34:04    Observation Length  224
Last Modified       04/02/2020 14:34:04    Deleted Observations 0
Protection                                 Compressed          NO
Data Set Type                              Sorted              YES
Label
Data Representation WINDOWS_32
Encoding            wlatin1  Western (Windows)


                Alphabetic List of Variables and Attributes

 # Variable      Type Len Format          Informat Label

10 BRI           Num    3 VAIDBRI18F.      11.    BODY REGION INJURED
 1 CASEID        Num    5 11.              11.    SYSTEM CASE IDENTIFIER
 3 CASENO        Num    3 11.              11.    SEQUENTIAL CASE NUMBER
 4 CASENUMBER    Char  16 $20.             $20.   CASE NUMBER
59 CASEWGT       Num    8 26.20                   CASE WEIGHT
 5 CATEGORY      Num    3 11.              11.    CRASH CATEGORY
54 FACTOR1       Num    3 VAIDFACTOR18F.   11.    CONTRIBUTING FACTOR 1
55 FACTOR2       Num    3 VAIDFACTOR18F.   11.    CONTRIBUTING FACTOR 2
56 FACTOR3       Num    3 VAIDFACTOR18F.   11.    CONTRIBUTING FACTOR 3
57 FACTOR4       Num    3 VAIDFACTOR18F.   11.    CONTRIBUTING FACTOR 4
58 FACTOR5       Num    3 VAIDFACTOR18F.   11.    CONTRIBUTING FACTOR 5
12 ICSCONFIDENCE Num    3 VAIDCONFIDENCE18F. 11.  ICS CONFIDENCE
 9 ICSNO         Num    3 11.              11.    ICS NUMBER
13 ICS_TYPE      Num    3 ICSTYPE18F.      11.    ICS TYPE
 8 INJNO         Num    3 11.              11.    INJURY NUMBER
15 IPC1          Num    4 VAIDIPC18F.      11.    IPC Component - #1 - Primary
25 IPC2          Num    3 VAIDIPC18F.      11.    IPC Component - #2 - Primary
35 IPC3          Num    3 VAIDIPC18F.      11.    IPC Component - #3 - Primary
20 IPC1_ALT      Num    3 VAIDIPC18F.      11.    IPC Component - #1 - Alternate
30 IPC2_ALT      Num    3 VAIDIPC18F.      11.    IPC Component - #2 - Alternate
40 IPC3_ALT      Num    3 VAIDIPC18F.      11.    IPC Component - #3 - Alternate
14 IPCAREA1      Num    3 VAIDAREA18F.     11.    IPC Area - #1 - Primary
24 IPCAREA2      Num    3 VAIDAREA18F.     11.    IPC Area - #2 - Primary
34 IPCAREA3      Num    3 VAIDAREA18F.     11.    IPC Area - #3 - Primary
19 IPCAREA1_ALT  Num    3 VAIDAREA18F.     11.    IPC Area - #1 - Alternate
29 IPCAREA2_ALT  Num    3 VAIDAREA18F.     11.    IPC Area - #2 - Alternate
39 IPCAREA3_ALT  Num    3 VAIDAREA18F.     11.    IPC Area - #3 - Alternate
44 IPCAREA_2ND   Num    3 VAIDAREA18F.     11.    Tandem IPC Secondary Area
49 IPCAREA_3RD   Num    3 VAIDAREA18F.     11.    Tandem IPC Tertiary Area
16 IPCCONF1      Num    3 VAIDCONFIDENCE18F. 11.  IPC Confidence - #1 - Primary
26 IPCCONF2      Num    3 VAIDCONFIDENCE18F. 11.  IPC Confidence - #2 - Primary
36 IPCCONF3      Num    3 VAIDCONFIDENCE18F. 11.  IPC Confidence - #3 - Primary
```

```
21 IPCCONF1_ALT   Num    3 VAIDCONFIDENCE18F. 11.    IPC Confidence - #1 - Alternate
31 IPCCONF2_ALT   Num    3 VAIDCONFIDENCE18F. 11.    IPC Confidence - #2 - Alternate
41 IPCCONF3_ALT   Num    3 VAIDCONFIDENCE18F. 11.    IPC Confidence - #3 - Alternate
46 IPCCONF_2ND    Num    3 VAIDCONFIDENCE18F. 11.    Tandem IPC Secondary Confidence
51 IPCCONF_3RD    Num    3 VAIDCONFIDENCE18F. 11.    Tandem IPC Tertiary Confidence
45 IPC_2ND        Num    3 VAIDIPC18F.      11.    Tandem IPC Secondary
50 IPC_3RD        Num    3 VAIDIPC18F.      11.    Tandem IPC Tertiary
18 LOADPATH1      Num    4 VAIDLOAD18F.     11.    LOAD PATH - #1 - PRIMARY
28 LOADPATH2      Num    4 VAIDLOAD18F.     11.    LOAD PATH - #2 - SECONDARY
38 LOADPATH3      Num    4 VAIDLOAD18F.     11.    LOAD PATH - #3 - TERTIARY
23 LOADPATH1_ALT  Num    4 VAIDLOAD18F.     11.    LOAD PATH - #1 - PRIMARY ALTERNATE
33 LOADPATH2_ALT  Num    4 VAIDLOAD18F.     11.    LOAD PATH - #2 - SECONDARY ALTERNATE
43 LOADPATH3_ALT  Num    4 VAIDLOAD18F.     11.    LOAD PATH - #3 - TERTIARY ALTERNATE
48 LOADPATH_2ND   Num    4 VAIDLOAD18F.     11.    LOAD PATH - TANDEM SECONDARY
53 LOADPATH_3RD   Num    4 VAIDLOAD18F.     11.    LOAD PATH - TANDEM TERTIARY
 7 OCCNO          Num    3 6.               6.     OCCUPANT NUMBER
 2 PSU            Num    3 11.              11.    PRIMARY SAMPLING UNIT
60 PSUSTRAT       Num    3 11.              11.    PSU STRATIFICATION
17 REGCONTACT1    Num    3 VAIDBRC18F.      11.    Body Region Contacted - #1 - Primary
27 REGCONTACT2    Num    3 VAIDBRC18F.      11.    Body Region Contacted - #2
37 REGCONTACT3    Num    3 VAIDBRC18F.      11.    Body Region Contacted - #3
22 REGCONTACT1_   Num    4 VAIDLOAD18F.     11.    BODY REGION CONTACTED - #1 - PRIMARY ALTERNATE
  ALT
32 REGCONTACT2_   Num    4 VAIDLOAD18F.     11.    BODY REGION CONTACTED - #2 – SECONDARY ALTERNATE
  ALT
42 REGCONTACT3_   Num    4 VAIDLOAD18F.     11.    BODY REGION CONTACTED - #3 - TERTIARY ALTERNATE
  ALT
47 REGCONTACT_2ND Num    4 VAIDLOAD18F.     11.    BODY REGION CONTACTED - TANDEM SECONDARY
52 REGCONTACT_3RD Num    4 VAIDLOAD18F.     11.    BODY REGION CONTACTED - TANDEM TERTIARY
11 SOE            Num    3 VAIDSOE18F.      11.    SOURCE OF ENERGY
 6 VEHNO          Num    3 11.              11.    VEHICLE NUMBER
61 VERSION        Num    3 6.               6.     VERSION NUMBER


                  Sort Information

               Sortedby      PSU CASENO VEHNO OCCNO INJNO ICSNO
               Validated     YES
               Character Set ANSI
```

Figure 38.

BODY REGION INJURED

COLUMN Name: BRI

SAS Value	Value Text
1	Head/Face
2	Neck
3	Cervical Spine
4	Thoracic Spine
5	Lumbar Spine
6	Shoulder
7	Arm
8	Elbow
9	Forearm
10	Wrist
11	Hand

12	Thorax
13	Abdomen
14	Pelvis
15	Hip
16	Thigh
17	Knee
18	Leg
19	Ankle
20	Foot
99	Unknown

SOURCE OF ENERGY

This variable reports the source of energy of the injury. This field is coded for all rows. The value is a three digit number. The 100 series of codes refer to crash events where the second and third digits refer to the event which was the source of energy for this injury. The 200 series of codes refer to air bags where the second and third digits refer to the air bag which was the source of energy for this injury.

COLUMN Name: SOE

SAS Value	Value Text
1##	Crash - Event XX
199	Crash - Event unknown
2##	Air Bag ##
300	Pretensioner
5##	Injury ##
999	Unknown

ICS TYPE

This variable reports the type of Injury Causation Scenario (ICS) completed for this injury. This field should alert the user to the completeness of the data in this dataset.

COLUMN Name: ICS_TYPE

SAS Value	Value Text
1	Basic IPC
2	Critical IPC 2-point
3	Critical IPC 3-point
4	Isolated IPC
5	Tandem IPC

BODY REGION CONTACTED - #1 - PRIMARY

This variable reports the body region contacted by the injury producing component (IPC), it does not necessarily have to be the same body region that was injured. This field is NOT coded when ICS_TYPE equals 1/Basic. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT1

BODY REGION CONTACTED - #1 - ALTERNATE

This variable reports the body region contacted by the injury producing component (IPC), it does not necessarily have to be the same body region that was injured. This field is NOT coded when ICS_TYPE equals 2, 3, or 4. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT1_ALT

BODY REGION CONTACTED - #2

This variable reports situations where a second body region was contacted in addition to another body region. This variable is only collected when ICS_TYPE equals (2) Critical IPCs 2pt or (3) Critical IPCs 3pt. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT2

BODY REGION CONTACTED - #2 - ALTERNATE

This variable reports situations where a second body region was contacted in addition to another body region. This variable is only collected when ICS_TYPE equals (2) Critical IPCs 2pt or (3) Critical IPCs 3pt. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT2_ALT

BODY REGION CONTACTED - #3

This variable reports situations where a third body region was contacted in addition to two other body regions. This variable is only collected when ICS_TYPE equals (3) Critical IPCs 3pt. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT3

BODY REGION CONTACTED - #3 - ALTERNATE

This variable reports situations where a third body region was contacted in addition to

two other body regions. This variable is only collected when ICS_TYPE equals (3) Critical IPCs 3pt. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT3_ALT

BODY REGION CONTACTED – 2ND

This variable reports situations where a third body region was contacted in addition to two other body regions. This variable is only collected when ICS_TYPE equals (3) Critical IPCs 3pt. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT_2ND

BODY REGION CONTACTED – 3RD

This variable reports situations where a third body region was contacted in addition to two other body regions. This variable is only collected when ICS_TYPE equals (3) Critical IPCs 3pt. Please refer to BODY REGION INJURED for a list of codes and attributes.

COLUMN Name: REGCONTACT_3RD

ICS CONFIDENCE

This variable reports the injury coder's confidence in their coding of the injury causation scenario.

COLUMN Name: ICSCONFIDENCE

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

IPC AREA - #1 - PRIMARY

This variable reports the primary injury producing component (IPC) area, and serves as a filter for the selection of the more specific IPC1 field. This variable is coded for all injuries.

COLUMN Name: IPCAREA1

SAS Value	Value Text
1	Front
2	Left Side
3	Left Door Panel
4	Right Side
5	Right Door Panel
6	Interior
7	Roof
8	Floor
9	Rear
10	Adaptivedriving Equipment
11	Exterior Of Occupant's Vehicle
12	Exterior Of Other Motor Vehicle
13	Other Vehicle Or Object
14	Noncontact Injury
15	Left Air Bag
16	Right Air Bag
99	Injured, Unknown Source

IPC AREA - #1 - ALTERNATE

This variable reports the alternative primary injury producing component (IPC) area, and serves as a filter for the selection of the more specific IPC1_ALT field. This field may or may not be completed, however it is NOT assessed when ICS_TYPE equals (1) Basic. Please refer to IPC AREA - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCAREA1_ALT

IPC AREA - #2 - PRIMARY

This variable reports the secondary injury producing component (IPC) area, and serves as a filter for the selection of the more specific IPC2 field. This field is only completed when ICS_TYPE equals (3) IPC Critical 2pt, or (4) IPC Critical 3pt. Please refer to IPC AREA - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCAREA2

IPC AREA - #2 - ALTERNATE

This variable reports the possible secondary alternative injury producing component (IPC) area, and serves as a filter for the selection of the more specific IPC2_ALT field. This field is only completed when the injury coder believes it's possible this component, as opposed to IPCAREA2, may have contributed to the injury. This field may or may not be completed, and is only completed when ICS_TYPE equals (3) IPC Critical 2pt, or (4)

IPC Critical 3pt. Please refer to IPC AREA - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCAREA2_ALT

IPC AREA - #3 - PRIMARY

This variable reports the tertiary injury producing component (IPC) area, and serves as a filter for the selection of the more specific IPC3 field. This field is only completed when ICS_TYPE equals (4) IPC Critical 3pt. Please refer to IPC AREA - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCAREA3

IPC AREA - #3 - ALTERNATE

This variable reports the possible tertiary injury producing component (IPC) area, and serves as a filter for the selection of the more specific IPC3_ALT field. This field is only completed when the injury coder believes it's possible this component, as opposed to IPCAREA3, may have contributed to the injury. This field may or may not be completed, but is only completed when ICS_TYPE equals (4) IPC Critical 3pt. Please refer to IPC AREA - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCAREA3_ALT

IPC COMPONENT - #1 - PRIMARY

This variable reports the primary injury producing component (IPC) for this ICS. This field is completed for all ICS entries.

COLUMN Name: IPC1

SAS Value	Value Text
101	Windshield
102	Mirror
103	Sunvisor
104	Steering wheel rim
105	Steering wheel hub/spoke
106	Steering wheel (combination of rim and hub/spoke)
107	Steering column, transmission selector lever, other attachment
108	Mounted electronic equipment (phone, laptop, GPS, etc.)
109	Glove compartment door
110	Other front object (specify):
111	Left instrument panel

112	Center instrument panel
113	Right instrument panel
114	Left, center instrument panel, junction
115	Right, center instrument panel, junction
116	Left lower instrument panel (includes knee bolster)
117	Center lower instrument panel (includes knee bolster)
118	Right lower instrument panel (includes knee bolster)
119	Left lower instrument panel, center console, junction
120	Right lower instrument panel, center console, junction
201	Left A (A1/A2)-pillar
202	Left B-pillar
203	Other left pillar (specify):
211	Left side window glass
212	Left side window frame
213	Left side window sill
221	Left side panel forward of A1/A2 pillar
222	Left side panel rear of the B-pillar
231	Left A-pillar, instrument panel, door, junction
232	Left A-pillar, windshield header, roof side rail, roof, junction
233	Left B-pillar, roof side rail, roof, junction
234	Left B-pillar, door, junction
235	Left C-pillar, roof side rail, roof, junction
298	Other left side object (specify)
301	Left forward upper quadrant
302	Left forward lower quadrant
303	Left rear upper quadrant
304	Left rear lower quadrant
309	Left door panel unknown/multiple quadrant
311	Left hardware/armrest forward upper quadrant
312	Left hardware/armrest forward lower quadrant
313	Left hardware/armrest rear upper quadrant
314	Left hardware/armrest rear lower quadrant
319	Left hardware/armrest unknown/multiple quadrant
401	Right A (A1/A2)-pillar
402	Right B-pillar
403	Other right pillar (specify):
411	Right side window glass
412	Right side window frame
413	Right side window sill
421	Right side panel forward of A1/A2 pillar
422	Right side panel rear of the B-pillar

431	Right A-pillar, instrument panel, door, junction
432	Right A-pillar, windshield header, roof side rail, roof, junction
433	Right B-pillar, roof side rail, roof, junction
434	Right B-pillar, door, junction
435	Right C-pillar, roof side rail, roof, junction
498	Other right side object (specify)
501	Right forward upper quadrant
502	Right forward lower quadrant
503	Right rear upper quadrant
504	Right rear lower quadrant
509	Right door panel unknown/multiple quadrant
511	Right hardware/armrest forward upper quadrant
512	Right hardware/armrest forward lower quadrant
513	Right hardware/armrest rear upper quadrant
514	Right hardware/armrest rear lower quadrant
519	Right hardware/armrest unknown/multiple quadrant
601	This occupants seat cushion
602	This occupants seat back
603	Seat latch points for child restraints
609	This occupants seat, unknown cushion or back
611	Other seating position seat cushion
612	Other seating position seat back
613	Other seating position, unknown cushion or back
621	Lap portion of belt restraint
622	Shoulder portion of belt restraint
623	Belt restraint B-pillar or door frame attachment point
624	Other restraint system component (specify):
631	This occupants head restraint
632	Other seating position head restraint
641	Other occupants (specify):
642	Interior loose objects (specify):
651	Transmission shifter
652	Grab handles
653	Engine shroud/cover
654	Seatback trays
661	Center console first row
662	Center console second row
663	Center console other row
671	Fold down armrest first row
672	Fold down armrest second row
673	Fold down armrest other row

681	Child safety seat shell, (i.e., interior, exterior, base, cup holder, padding, head restraint, handle)
682	Child safety seat harness system, (i.e., straps, retainer clip, latchplate, buckle)
683	Unknown child safety seat component
696	Same occupant contact (specify) (ex. knee)
697	Cargo in vehicle
698	Other interior object(s) (specify):
701	Front header
702	Rear header
703	Roof left side rail
704	Roof right side rail
705	Roof or convertible top
706	Roof map light/console
707	Sunroof/components
708	Roll bar
801	Floor (including toe pan)
802	Parking brake handle
803	Foot controls including parking brake
901	Backlight (rear window)
902	Backlight storage rack, door, etc.
998	Other rear object (specify):
1001	Steering control devices (attached to OEM steering wheel)
1002	Steering knob attached to steering wheel
1003	Replacement steering wheel (i.e., reduced diameter)
1004	Joy stick steering controls
1005	Wheelchair tie-downs
1006	Modification to seat belts,(specify):
1007	Additional or relocated switches, (specify):
1008	Raised roof
1009	Wall mounted head rest (used behind wheel chair)
1098	Other adaptive device (specify):
1101	Hood
1102	Outside hardware (e.g., outside mirror, antenna)
1198	Other exterior surface or tires (specify):
1199	Unknown exterior objects
1201	Front bumper
1202	Hood edge
1203	Other front of vehicle (specify):
1204	Hood
1205	Hood ornament
1206	Windshield, roof rail, A-pillar

1207	Side surface
1208	Side mirrors
1209	Other side protrusions (specify):
1210	Rear surface
1211	Undercarriage
1212	Tires and wheels
1298	Other exterior of other motor vehicle (specify):
1299	Unknown exterior of other motor vehicle
1301	Ground
1302	Tree
1303	Pole
1304	Traffic barrier (includes: jersey barrier, guardrail, etc.)
1398	Other object (specify):
1399	Unknown object (specify)
1401	Fire in vehicle
1402	Flying glass
1403	Air bag exhaust gases
1498	Other noncontact injury source (specify):
1501	Steering wheel hub
1502	Steering wheel hub compartment cover
1503	Left bottom instrument panel
1504	Left bottom instrument panel- compartment cover
1505	Left seat back
1506	Left door/panel
1507	Left roof side rail
1508	Left seat belt
1598	Left other air bag (specify)
1601	Right top instrument panel
1602	Right top instrument panel- compartment cover
1603	Right middle instrument panel
1604	Right middle instrument panel - compartment cover
1605	Right bottom instrument panel
1606	Right bottom instrument panel- compartment cover
1607	Right seat back
1608	Right door/panel
1609	Right roof side rail
1610	Right seat belt
1698	Right other air bag (specify)
9999	Injured, unknown source

IPC COMPONENT - #1 - ALTERNATE

This variable reports the alternative primary injury producing component (IPC), and serves as a filter for the selection of the more specific IPC1 field. This field may or may not be completed.

This field is only completed when ICS_TYPE equals (2) Isolated IPC, (3) IPC Critical 2pt, (4) IPC Critical 3pt, or (5) Tandem IPC.

Please refer to IPC COMPONENT - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPC1_ALT

IPC COMPONENT - #2 - PRIMARY

This variable reports the secondary injury producing component (IPC). This field is only completed when ICS_TYPE equals (3) IPC Critical 2pt, or (4) IPC Critical 3pt.

Please refer to IPC COMPONENT - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPC2

IPC COMPONENT - #2 - ALTERNATE

This variable reports the alternative secondary injury producing component (IPC). This field may or may not be completed. This field is only completed when ICS_TYPE equals (3) IPC Critical 2pt, or (4) IPC Critical 3pt.

Please refer to IPC COMPONENT - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPC2_ALT

IPC COMPONENT - #3 - PRIMARY

This variable reports the tertiary injury producing component (IPC). This field is only completed when ICS_TYPE equals (4) IPC Critical 3pt.

Please refer to IPC COMPONENT - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPC3

IPC COMPONENT - #3 - ALTERNATE

This variable reports the alternative tertiary injury producing component (IPC). This field may or may not be completed. This field is only completed when ICS_TYPE equals (4) IPC Critical 3pt.

Please refer to IPC COMPONENT - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPC3_ALT

IPC CONFIDENCE - #1 – PRIMARY

This variable reports the injury coder's confidence in the coding of the IPC1 field. This field is completed for all ICS entries.

COLUMN Name: IPCCONF1

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

IPC CONFIDENCE - #1 – ALTERNATE

This variable reports the injury coder's confidence in the coding of the IPC1_ALT field. This field is only completed when the IPC1_ALT field is completed. Please refer to IPC CONFIDENCE - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCCONF1_ALT

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

IPC CONFIDENCE - #2 – PRIMARY

This variable reports the injury coder's confidence in the coding of the IPC2 field. This field is only completed when the IPC2 field is completed. Please refer to IPC CONFIDENCE - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCCONF2

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

IPC CONFIDENCE - #2 – ALTERNATE

This variable reports the injury coder's confidence in the coding of the IPC2_ALT field. This field is only completed when the IPC2_ALT field is completed. Please refer to IPC CONFIDENCE - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCCONF2_ALT

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

IPC CONFIDENCE - #3 – PRIMARY

This variable reports the injury coder's confidence in the coding of the IPC3 field. This field is only completed when the IPC3 field is completed. Please refer to IPC CONFIDENCE - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCCONF3

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

IPC CONFIDENCE - #3 – ALTERNATE

This variable reports the injury coder's confidence in the coding of the IPC3_ALT field. This field is only completed when the IPC3_ALT field is completed. Please refer to IPC CONFIDENCE - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCCONF3_ALT

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

TANDEM IPC SECONDARY AREA

This variable reports the secondary injury producing component (IPC) area for Tandem ICSs only (ICS_TYPE=5), otherwise the field will be blank. The data also serves as a filter for the more specific field, IPC_2ND.

Please refer to IPC AREA - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCAREA_2ND

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

TANDEM IPC SECONDARY

This variable reports the secondary injury producing component (IPC) for Tandem ICSs only (ICS_TYPE=5), otherwise the field will be blank.

Please refer to IPC COMPONENT - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPC_2ND

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

TANDEM IPC TERTIARY AREA

This variable reports the tertiary injury producing component (IPC) area for Tandem ICSs only (ICS_TYPE=5), otherwise the field will be blank. The data also serves as a filter for the more specific field, IPC_3RD.

Please refer to IPC AREA - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPCAREA_3RD

SAS Value	Value Text
1	Certain
2	Probable

3	Possible
9	Unknown

TANDEM IPC TERTIARY

This variable reports the tertiary injury producing component (IPC) for Tandem ICSs only (ICS_TYPE=5), otherwise the field will be blank.

Please refer to IPC COMPONENT - #1 – PRIMARY for a list of codes and attributes.

COLUMN Name: IPC_3RD

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

TANDEM IPC SECONDARY CONFIDENCE

This variable reports the injury coders confidence in coding IPC_2ND for coding a Tandem ICS (ICS_TYPE=5), otherwise the field will be blank.

Please refer to IPC CONFIDENCE - #1 – PRIMARY for a list of codes and attributes

COLUMN Name: IPCCONF_2ND

SAS Value	Value Text
1	Certain
2	Probable
3	Possible
9	Unknown

TANDEM IPC TERTIARY CONFIDENCE

This variable reports the injury coders confidence in coding IPC_3RD for coding a Tandem ICS (ICS_TYPE=5), otherwise the field will be blank.

Please refer to IPC CONFIDENCE - #1 – PRIMARY for a list of codes and attributes

COLUMN Name: IPCCONF_3RD

SAS Value	Value Text

1	Certain
2	Probable
3	Possible
9	Unknown

CONTRIBUTING FACTOR 1

This variable reports when the coder believes something contributed to the severity of the injury. This field is only completed when ICS_TYPE does NOT equal (1) Basic.

COLUMN Name: FACTOR1

SAS Value	Value Text
0	None
1	High DV
2	Seat belt interaction
3	Intrusion
4	Full Ejection
5	Partial Ejection
6	Comorbidity
7	CRS used improperly
8	Unbelted case occupant
9	Unbelted other occupant
10	Pretensioner
11	Loose cargo
12	Possible late air bag deployment
13	Seat belt payout due to load limiter
14	Improper restraint use
15	Late or no airbag deployment
16	Non-optimal posture
17	Vehicle dynamics
98	Other

CONTRIBUTING FACTOR 2

This variable reports when the coder believes something contributed to the severity of the injury. This field is only completed when there exists at least one other Contributing Factor and ICS_TYPE does NOT equal (1) Basic.

Please refer to CONTRIBUTING FACTOR 1 for a list of codes and attributes.

COLUMN Name: FACTOR2

CONTRIBUTING FACTOR 3

This variable reports when the coder believes something contributed to the severity of the injury. This field is only completed when there exists at least two other Contributing Factors and ICS_TYPE does NOT equal (1) Basic.

Please refer to CONTRIBUTING FACTOR 1 for a list of codes and attributes.

COLUMN Name: FACTOR3

CONTRIBUTING FACTOR 4

This variable reports when the coder believes something contributed to the severity of the injury. This field is only completed when there exists at least three other Contributing Factors and ICS_TYPE does NOT equal (1) Basic.

Please refer to CONTRIBUTING FACTOR 1 for a list of codes and attributes.

COLUMN Name: FACTOR4

CONTRIBUTING FACTOR 5

This variable reports when the coder believes something contributed to the severity of the injury. This field is only completed when there exists at least four other Contributing Factors and ICS_TYPE does NOT equal (1) Basic.

Please refer to CONTRIBUTING FACTOR 1 for a list of codes and attributes.

COLUMN Name: FACTOR5

LOAD PATH PRIMARY

Load path is the anatomic linkage between Body Region Injured (BRI) and Body Region Contacted (REGCONTACT1). For example, a hip injury from a knee loading the instrument panel in a frontal crash would have a load path of 'Knee to Thigh to Hip." In rare cases, a non-contiguous path may be coded using the "Other" code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED - #1 - PRIMARY, then Not Applicable (9997) is coded.

This field will be blank when ICS TYPE (ICS_TYPE) equals 1.

This field is only completed when ICS_TYPE does NOT equal 1 (Basic).

COLUMN Name: LOADPATH1

SAS VALUE	VALUE TEXT
101	Head/Face to C-Spine to Neck
102	Head/Face to C-Spine
103	Head/Face to C-Spine to T-Spine

104	Head/Face to C-Spine to T-Spine to L-Spine
201	Neck to C-Spine to Head/Face
202	Neck to C-spine to Shoulder
203	Neck to C-Spine
204	Neck to C-Spine to T-Spine
205	Neck to C-Spine to T-Spine to L-Spine
401	Thorax to T-Spine to C-Spine to Head/Face
402	Thorax to T-Spine to C-Spine to Neck
403	Thorax to Shoulder
404	Thorax to T-Spine to C-Spine
405	Thorax to T-Spine
406	Thorax to T-Spine to L-Spine
601	Shoulder to Thorax
602	Shoulder to Arm
603	Shoulder to Arm to Elbow
604	Shoulder to Arm to Elbow to Forearm
605	Shoulder to Arm to Elbow to Forearm to Wrist
606	Shoulder to Arm to Elbow to Forearm to Wrist to Hand
701	Arm to Shoulder
702	Arm to Elbow
703	Arm to Elbow to Forearm
704	Arm to Elbow to Forearm to Wrist
705	Arm to Elbow to Forearm to Wrist to Hand
801	Elbow to Arm to Shoulder
802	Elbow to Arm
803	Elbow to Forearm
804	Elbow to Forearm to Wrist
805	Elbow to Forearm to Wrist to Hand
901	Forearm to Elbow to Arm to Shoulder
902	Forearm to Elbow to Arm
903	Forearm to Elbow
904	Forearm to Wrist
905	Forearm to Wrist to Hand
1001	Wrist to Forearm to Elbow to Arm to Shoulder
1002	Wrist to Forearm to Elbow to Arm
1003	Wrist to Forearm to Elbow
1004	Wrist to Forearm
1005	Wrist to Hand
1101	Hand to Wrist to Forearm to Elbow to Arm to Shoulder
1102	Hand to Wrist to Forearm to Elbow to Arm
1103	Hand to Wrist to Forearm to Elbow
1104	Hand to Wrist to Forearm
1105	Hand to Wrist
1301	Abdomen to L-Spine to T-Spine to C-Spine to Head/Face
1302	Abdomen to L-Spine to T-Spine to C-Spine to Neck
1303	Abdomen to L-Spine to T-Spine to C-Spine
1304	Abdomen to L-Spine to T-Spine
1305	Abdomen to L-Spine
1401	Pelvis to Hip
1402	Pelvis to L-Spine to T-Spine to C- Spine

1403	Pelvis to L-Spine to T-Spine
1404	Pelvis to L-Spine
1501	Hip to Pelvis
1502	Hip to Thigh
1503	Hip to Thigh to Knee
1504	Hip to Thigh to Knee to Leg
1505	Hip to Thigh to Knee to Leg to Ankle
1506	Hip to Thigh to Knee to Leg to Ankle to Foot
1601	Thigh to Hip
1602	Thigh to Knee
1603	Thigh to Knee to Leg
1604	Thigh to Knee to Leg to Ankle
1605	Thigh to Knee to Leg to Ankle to Foot
1701	Knee to Thigh to Hip to Pelvis
1702	Knee to Thigh to Hip
1703	Knee to Thigh
1704	Knee to Leg
1705	Knee to Leg to Ankle
1706	Knee to Leg Ankle to Foot
1801	Leg to Knee to Thigh to Hip to Pelvis
1802	Leg to Knee to Thigh to Hip
1803	Leg to Knee to Thigh
1804	Leg to Knee
1805	Leg to Ankle
1806	Leg to Ankle to Foot
1901	Ankle to Leg to Knee to Thigh to Hip to Pelvis
1902	Ankle to Leg to Knee to Thigh to Hip
1903	Ankle to Leg to Knee to Thigh
1904	Ankle to Leg to Knee
1905	Ankle to Leg
1906	Ankle to Foot
2001	Foot to Ankle to Leg to Knee to Thigh to Hip to Pelvis
2002	Foot to Ankle to Leg to Knee to Thigh to Hip
2003	Foot to Ankle to Leg to Knee to Thigh
2004	Foot to Ankle to Leg to Knee
2005	Foot to Ankle to Leg
2006	Foot to Ankle
9997	N/A
9998	Other
9999	Unknown

LOAD PATH PRIMARY - ALTERNATE

Load path is the anatomic linkage between Body Region Injured (BRI) and Body Region Contacted (REGCONTACT1_ALT). For example, a hip injury from a knee loading the instrument panel in a frontal crash would have a load path of ‘Knee to Thigh to Hip.” In rare cases, a non-contiguous path may be coded using the “Other” code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED - #1 - ALTERNATE, then Not Applicable (9997) is coded.

This field is only completed when ICS_TYPE equals 2, 3 or 4, and IPC AREA - #1 - ALTERNATE is NOT blank.

COLUMN Name: LOADPATH1_ALT

Please refer to LOAD PATH PRIMARY for a list of codes and attributes.

LOAD PATH SECONDARY

Load path is the anatomic linkage between Body Region Injured (BRI) and Body Region Contacted - #2 (REGCONTACT2). For example, a hip injury from a knee loading the instrument panel in a frontal crash would have a load path of 'Knee to Thigh to Hip." In rare cases, a non-contiguous path may be coded using the "Other" code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED - #2 - PRIMARY, then Not Applicable (9997) is coded.

This field is only completed when ICS_TYPE equals 3 or 4, and IPC AREA - #2 is NOT blank.

COLUMN Name: LOADPATH2

Please refer to LOAD PATH PRIMARY for a list of codes and attributes.

LOAD PATH SECONDARY - ALTERNATE

Load path is the anatomic linkage between BODY REGION INJURED (BRI) and BODY REGION CONTACTED - #2 – ALTERNATE (REGCONTACT2_ALT). For example, a hip injury from a knee loading the instrument panel in a frontal crash would have a load path of 'Knee to Thigh to Hip." In rare cases, a non-contiguous path may be coded using the "Other" code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED - #2 – ALTERNATE, then Not Applicable (9997) is coded.

This field is only completed when ICS_TYPE equals 3 or 4, and IPC AREA - #2 – ALTERNATE is NOT blank.

COLUMN Name: LOADPATH2_ALT

Please refer to LOAD PATH PRIMARY for a list of codes and attributes.

LOAD PATH TERTIARY

Load path is the anatomic linkage between BODY REGION INJURED (BRI) and BODY REGION CONTACTED - #3 (REGCONTACT3). For example, a hip injury from a knee

loading the instrument panel in a frontal crash would have a load path of 'Knee to Thigh to Hip." In rare cases, a non-contiguous path may be coded using the "Other" code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED - #3 - ALTERNATE, then Not Applicable (9997) is coded.

This field is only completed when ICS_TYPE equals 3 or 4, and IPC AREA - #3 – PRIMARY is NOT blank.

COLUMN Name: LOADPATH3

Please refer to LOAD PATH PRIMARY for a list of codes and attributes.

LOAD PATH TERTIARY - ALTERNATE

Load path is the anatomic linkage between BODY REGION INJURED (BRI) and BODY REGION CONTACTED - #3 – ALTERNATE (REGCONTACT3_ALT). For example, a hip injury from a knee loading the instrument panel in a frontal crash would have a load path of 'Knee to Thigh to Hip." In rare cases, a non-contiguous path may be coded using the "Other" code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED - #3 – ALTERNATE, then Not Applicable (9997) is coded.

This field is only completed when ICS_TYPE equals 3 or 4, and IPC AREA - #3 – ALTERNATE is NOT blank.

COLUMN Name: LOADPATH3_ALT

Please refer to LOAD PATH PRIMARY for a list of codes and attributes.

LOAD PATH 2ND

Load path is the anatomic linkage between BODY REGION INJURED (BRI) and BODY REGION CONTACTED – 2ND (REGCONTACT_2ND). For example, a hip injury from a knee loading the instrument panel in a frontal crash would have a load path of 'Knee to Thigh to Hip." In rare cases, a non-contiguous path may be coded using the "Other" code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED – 2ND, then Not Applicable (9997) is coded.

This field is only completed when ICS_TYPE equals 5 (Tandem), and IPC AREA – 2ND is NOT blank.

COLUMN Name: LOADPATH_2ND

Please refer to LOAD PATH PRIMARY for a list of codes and attributes.

LOAD PATH 3RD

Load path is the anatomic linkage between BODY REGION INJURED (BRI) and BODY REGION CONTACTED – 3RD (REGCONTACT_3RD). For example, a hip injury from a knee loading the instrument panel in a frontal crash would have a load path of “Knee to Thigh to Hip.” In rare cases, a non-contiguous path may be coded using the “Other” code. If the BODY REGION INJURED (BRI) equals BODY REGION CONTACTED – 3RD, then Not Applicable (9997) is coded.

This field is only completed when ICS_TYPE equals 5 (Tandem), and IPC AREA – 3RD is NOT blank.

COLUMN Name: LOADPATH_3RD

Please refer to LOAD PATH PRIMARY for a list of codes and attributes.

LOCALIZER Dataset

Key Identifiers: PSU, CASENO, VEHNO, OCCNO, INJNO, LOCALNO

This table reports the localizers coded to the related injury in the Injury dataset. Localizers are meant to provide more specificity about the body region location of an injury. There will be at least one row per injury in the Injury dataset, and may have more than one. Figure 38 displays the list of all the data elements in the LOCALIZER dataset. Information about the type of each variable, its length, the format, and the label is provided for each data element.

```
Data Set Name       LOCALIZER               Observations         14940
Member Type         DATA                    Variables            15
Engine              V9                      Indexes              0
Created             04/02/2020 14:34:06     Observation Length   1064
Last Modified       04/02/2020 14:34:06     Deleted Observations 0
Protection                                  Compressed           NO
Data Set Type                               Sorted               YES
Label
Data Representation  WINDOWS_32
Encoding             wlatin1  Western (Windows)


            Alphabetic List of Variables and Attributes

#   Variable    Type    Len    Format    Informat    Label

1   CASEID      Num       5    11.       11.         SYSTEM CASE IDENTIFIER
3   CASENO      Num       3    11.       11.         SEQUENTIAL CASE NUMBER
4   CASENUMBER  Char     16    $20.      $20.        CASE NUMBER
15  CASEWGT     Num       8    26.20                 CASE WEIGHT
5   CATEGORY    Num       3    11.       11.         CRASH CATEGORY
8   INJNO       Num       3    11.       11.         INJURY NUMBER
10  L1          Char      3    $L118F.   $10.        L1 LOCALIZER
11  L2          Char      3    $L218F.   $10.        L2 LOCALIZER
12  LDEF        Char   1000    $1000.    $1000.      LOCALIZER DEFINITION
```

```
 9   LOCALNO     Num      3   11.     11.      LOCALIZER NUMBER
 7   OCCNO       Num      3   6.      6.       OCCUPANT NUMBER
 2   PSU         Num      3   11.     11.      PRIMARY SAMPLING UNIT
13   PSUSTRAT    Num      3   11.     11.      PSU STRATIFICATION
 6   VEHNO       Num      3   11.     11.      VEHICLE NUMBER
14   VERSION     Num      3   6.      6.       VERSION NUMBER


                    Sort Information

          Sortedby      PSU CASENO VEHNO OCCNO INJNO LOCALNO
          Validated     YES
          Character Set  ANSI
```

Figure 39.

INJURY NUMBER

Sequential number assigned by the system to each coded injury.

COLUMN Name: INJNO

LOCALIZER NUMBER

This key variable reports the sequential number for this localizer. It can be used to merge with the ICS datasets.

COLUMN Name: LOCALNO

PRIMARY LOCALIZER

This variable reports a more specific area of the body region injured as reported in the Injury dataset.

COLUMN Name: L1

SECONDARY LOCALIZER

This variable expands upon the L1 variable and gives the most specific information regarding the location of the injury. It should be used in conjunction with the AIS code found in the Injury dataset as well as the L1 variable.

COLUMN Name: L2

LOCALIZER DESCRIPTION

This variable gives the translation of the combined L1 and L2 attributes.

COLUMN Name: LDEF

APPENDIX A

REFERENCES

Zhang, F., Noh, E. Y., Subramanian, R., & Chen, C.-L. (2019, September). *Crash Investigation Sampling System: Sample design and weighting* (Report No. DOT HS 812 804). National Highway Traffic Safety Administration. Available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812804.

Zhang, F., Subramanian, R., Chen, C.-L., & Noh, E. Y. (2019, September). *Crash Investigation Sampling System: Design overview, analytic guidance, and FAQs* (Report No. DOT HS 812 801). National Highway Traffic Safety Administration. Available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812801

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APPENDIX B

VEHICLE MODEL CODE GROUPINGS

The primary source of information on vehicle make and model is vehicle inspection; the VIN provides vehicle make data. Secondary sources include the police report and interviews. If the make of the vehicle is known and the model is not known, but the vehicle type (e. g., passenger car) is known, then Vehicle Model is coded as "399" (Unknown automobile). If the make of the vehicle is not known but the body type is known (e.g., a hit-and-run 2-door sedan), then Vehicle Make is coded "99" (Unknown) and Vehicle Model is coded "399" (Unknown automobile). If no information is available for a vehicle, then Vehicle Make and Body Type are coded "99" (Unknown) and Vehicle Model is coded "999" (Unknown).
Vehicle models are organized into general groups. These groups are:

001-397 -	Passenger vehicle (automobile)
398 -	Other automobile
399 -	Unknown automobile
401-497 -	Light trucks (including compact and large utility vehicles, utility station wagons, minivans, large vans [includes step vans and van derivatives], compact pickup trucks, and large pickup trucks)
498 -	Other light truck
499 -	Unknown light truck
701-739 -	Motored Cycles/ATCs/ATVs (including motorcycles, mopeds, mini bikes, motor scooters and dirt bikes) (701 - 709 Motorcycles/Mopeds) (731 - 739 ATCs/ATVs)
801-890 -	Medium/heavy trucks (includes all trucks over 10,000 lbs. GVWR except some pickup type trucks under Body Type code "31" -Large pickup)
870 -	Medium/Heavy Van-Based vehicle
898 -	Other medium/heavy truck
901-987 -	Buses
988 -	Other bus
989 -	Unknown bus
998 -	Other vehicle (includes construction equipment, farm vehicles and go-karts)
999 -	Unknown vehicle

Within these groups, the model codes for automobiles and light trucks generally are not ordered to give any indication of vehicle size or type. However, the model codes for motored cycles, medium/heavy trucks, buses and other vehicles have specific definition. These definitions are:

Motored Cycles

701	0-50cc
702	51-124cc
703	125-349cc
704	350-449cc
705	450-749cc
706	750cc or greater
709	Unknown cc

All Terrain Cycles/Vehicles

731	0-50cc
732	51-124cc
733	125-349cc
734	350cc or greater
739	Unknown cc

Trucks and Buses

850	M/H truck based motor home
870	Medium/Heavy Van-Based vehicle
880	Medium/Heavy Pickup (pickup-style only – over 10,000 lbs.)
881	Medium/Heavy - CBE
882	Medium/Heavy - COE/low entry
883	Medium/Heavy - COE/high entry
884	Medium/Heavy - Unknown engine location
890	Medium/Heavy - COE entry position unknown
981	Bus - conventional front engine
982	Bus - front engine/flat front
983	Bus - rear engine/flat front

Other

398	Other automobile
498	Other light truck
598	Other (Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV))
898	Other medium/heavy truck
988	Other bus
998	Other vehicle (farm vehicle, go-kart)

Unknown

399	Unknown automobile
499	Unknown light truck

599 Unknown (Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle NEV))
709 Unknown cc motorcycle
989 Unknown bus
999 Unknown vehicle

VEHICLE MAKE AND MODEL CODES

(next page)

MAKE-MODEL

CODE	MAKE	MODEL	INCLUDES
01-001	American Motors	Rambler/American	
01-002	American Motors	Rebel/Matador/Marlin	Mariner, Briarcliff, Westerner, The Machine, SST, 550, Grant, King Brougham, X, Oleg Cassini, Barcelona, Police, The Machine Black, Radar, Tahiti, Marlin II
01-003	American Motors	Ambassador	
01-004	American Motors	Pacer	
01-005	American Motors	AMX	
01-006	American Motors	Javelin	
01-007	American Motors	Hornet/Concord	SST, Sportabout, AMX D/L, SC-360, Gucci Edition, Levi Trim Package, X AMX Limited, D/L, Levi Trim, Sport, Base, Sundancer
01-008	American Motors	Spirit/Gremlin	Base, X, Levi Trim, GT, AMX, D/L, SST
01-009	American Motors	Eagle	Sport, Series 30, Sundancer, Limited
01-010	American Motors	Eagle SX-4	50 Series, Kammback, Sport
01-398	American Motors	Other (automobile)	
01-399	American Motors	Unknown (automobile)	
02-001	Jeep/Kaiser-Jeep/Willys- Jeep	Compass	Base, Sport, Limited, Latitude, Altitude, High Altitude, SE, 75th Anniversary Edition
02-401	Jeep/Kaiser-Jeep/Willys- Jeep	CJ-2/CJ-3/CJ-4	Military
02-402	Jeep/Kaiser-Jeep/Willys- Jeep	CJ-5/CJ-6/CJ-7/CJ-8	Scrambler, Renegade, Golden Eagle, Laredo, Wrangler,
02-403	Jeep/Kaiser-Jeep/Willys- Jeep	YJ series/Wrangler	SE, Sport (Base, S), Sahara, X, Rubicon (Base, Hard Rock), Unlimited (Altitude, Dragon, Freedom, Polar, Rubicon X, Willys Wheeler, Sport, S, Sahara), Islander, Call of Duty: Black Ops Edition, Moab, Altitude, Freedom, Rio Grande, 60th/65th Anniversary Edition, Apex, Columbia, Golden Eagle, Rocky Mountain, Willys, Willys Wheeler (Base, W), Black Bear, 75th Anniversary Edition, Winter, Rubicon Recon
02-404	Jeep/Kaiser-Jeep/Willys- Jeep	Cherokee (1984-on) (For Grand Cherokee for 2014 on use 02-422.)	Limited, Laredo, Pioneer, Sport, Grand Cherokee, TSi, Briarwood, Country, RHD, SE, Classic, Overland, Special Edition, SRT8, Summit, Laredo X, Overland Summit, Altitude, Trail Hawk, Sport, Latitude (Base, Plus), Limited, 75th Anniversary, Sport Altitude, High Altitude, Upland
02-405	Jeep/Kaiser-Jeep/Willys- Jeep	Liberty	Sport, Limited Edition, Renegade, Columbia Edition, Rocky Mountain Edition, CRD, Special Edition, Latitude, Jet

02-406	Jeep/Kaiser-Jeep/Willys- Jeep	Commander	Base, Limited, Overland, Sport, Rocky Mountain
02-407	Jeep/Kaiser-Jeep/Willys- Jeep	Patriot	Sport (Base, SE), Limited, Latitude, X, Altitude, High Altitude, Freedom Edition, 75th Anniversary Edition
02-408	Jeep/Kaiser-Jeep/Willys- Jeep	Renegade	Trail Hawk, Latitude, Sport, Altitude, Limited, Desert Hawk, 75th Anniversary Edition, Upland, High Altitude
02-421	Jeep/Kaiser-Jeep/Willys- Jeep	Cherokee (thru 1983)	Wide Track, Chief, Commando, Jeepster
02-422	Jeep/Kaiser-Jeep/Willys- Jeep	Grand Cherokee (For 2014 on. Use model 404 for model years prior to 2013.)	Laredo (Base/E), Limited, Overland, Summit, SRT (Laredo [Base, E] 75th Anniversary Edition [Base, E], Altitude, Limited, Overland, Summit), Trailhawk, 75th Anniversary Edition (Base, Limited), Altitude, Latitude (Base, Plus), Upland, Limited X, High Altitude, Trailhawk Elite
02-431	Jeep/Kaiser-Jeep/Willys- Jeep	Grand Wagoneer	Custom, Brougham Limited, Wagoneer
02-481	Jeep/Kaiser-Jeep/Willys- Jeep	Pick-up	J-10, J-20, Honcho
02-482	Jeep/Kaiser-Jeep/Willys- Jeep	Comanche	Chief
02-498	Jeep/Kaiser-Jeep/Willys- Jeep	Other (light truck)	
02-499	Jeep/Kaiser-Jeep/Willys- Jeep	Unknown (light truck)	
02-999	Jeep/Kaiser-Jeep/Willys- Jeep	Unknown (JEEP)	
03-401	AM General	Dispatcher	Post Office (Jeep)
03-402	AM General	Hummer	H3 (Base, Luxury,Adventure, Limited Edition), x, Alpha
03-421	AM General	Hummer (SUV from 1993-2003; see 431 for 2004 on) (for Pickup, see model 481)	Slantback-HMSB, H1, H2
03-431	AM General	Hummer (2004 on; see model 421 for 1993-2003)	H1(Base, Luxury, Adventure),H2(Base, Luxury, Adventure), Limousine
03-441	AM General	MV-1	SE, DX, LX, Taxi
03-466	AM General	Dispatcher	DJ-series-Post Office Van
03-481	AM General	Hummer (Pickup) (for SUV see model 421 for 1993-2003; see 431 for 2004 on)	H1, H2 (Base, Luxury,Adventure, Limited Edition),Alpha
03-482	AM General	Hummer	H3T (Adventure, Luxury, Alpha)

03-498	AM General	Other (light truck)	H1, H2, Alpha
03-499	AM General	Unknown (light truck)	
03-884	AM General	Medium/Heavy Truck	Military off-road
03-898	AM General	Other (medium/heavy truck)	
03-983	AM General	Bus: Rear engine, Flat front	Transit
03-988	AM General	Other(bus)	
03-989	AM General	Unknown Bus Type	
03-998	AM General	Other (vehicle)	
03-999	AM General	Unknown (AM GENERAL)	
06-009	Chrysler	Cordoba	
06-010	Chrysler	New Yorker (thru 78)/ Newport/5th Avenue/Imperial (1979-83) (excludes all FWD)	Town and Country, Brougham, Custom, Royal, 300 (thru 1971) Frank Sinatra editions (FS), Royal Limo, Windsor Wagon/ Ambulance
06-014	Chrysler	New Yorker/E-Class/Imperial/ Fifth Avenue	
06-015	Chrysler	Laser	
06-016	Chrysler	LeBaron	
06-017	Chrysler	LeBaron GTS/GTC	
06-018	Chrysler	200	Limited (Base, Platinum), LX, Touring, S, Super S, C (Base, Platinum)
06-021	Chrysler	SRT Viper	Standard, GTS, TA, GT3-R, GTS-R
06-031	Chrysler	TC (Maserati Sport)	
06-035	Chrysler	Conquest	
06-041	Chrysler	Concorde	
06-042	Chrysler	LHS	
06-043	Chrysler	Sebring	JX, JXi, LX, LXi,GTC, TSi, Limited, Plus, Platinum, Touring, Signature Series
06-044	Chrysler	Cirrus	
06-050	Chrysler	Executive	
06-051	Chrysler	300M/300/300C/300S	Special, Platinum, Touring, Limited, SRT, Signature Series, SRT8, LX, SRT, Heritage, Great American, Walter P. Chrysler Executive Series, Luxury
06-052	Chrysler	PT Cruiser	Base, Touring, Limited, GT, Turbo, Dream Cruiser, Platinum, Series 4, Signature Series, Street Cruiser
06-053	Chrysler	Prowler (2002 on) (1997,1999-01 see Plymouth)	Roadster, Black Tie Edition

06-054	Chrysler	Pacifica	Premium, Luxury, Touring, Signature Series, LX, Hybrid
06-055	Chrysler	Crossfire	
06-398	Chrysler	Other (automobile)	
06-399	Chrysler	Unknown (automobile)	
06-421	Chrysler	Aspen	Limited, Signature, Hybrid
06-441	Chrysler	Town and Country	Minivan, SX, L, LX, Lxi, Ltd., SWB, LWB, AWD, FWD, eL, eX, Touring, Platinum, Signature Series, Limited, 30th Anniversary, S
06-442	Chrysler	Voyager (2000 on; 1984-00 see Plymouth)	Base, Popular, Value, LX, eC
06-443	Chrysler	Pacifica	L, LX, Touring (Base, L, L Plus, Plus) Limited, Hybrid (Touring, Touring L, Limited, Plus)
06-499	Chrysler	Unknown (light truck)	
06-999	Chrysler	Unknown (CHRYSLER)	
07-001	Dodge	Dart	
07-002	Dodge	Coronet/Magnum/ Charger (thru 1978)	Brougham, Custom, Superbee, 500, Crestwood, Deluxe, XE, R/T, 440, SE, Police
07-003	Dodge	Polara/Monaco/ Royal Monaco	
07-004	Dodge	Viper	RT/10, GTS, ACR, SRT-10, GT, SRT
07-005	Dodge	Challenger	
07-006	Dodge	Aspen	
07-007	Dodge	Diplomat	
07-008	Dodge	Omni/Charger (1983 on)	
07-009	Dodge	Mirada	
07-010	Dodge	St Regis	
07-011	Dodge	Aries (K)	
07-012	Dodge	400	
07-013	Dodge	Rampage (car-based pickup)	
07-014	Dodge	600	
07-015	Dodge	Daytona	
07-016	Dodge	Lancer	
07-017	Dodge	Shadow	
07-018	Dodge	Dynasty	
07-019	Dodge	Spirit	
07-020	Dodge	Neon	

07-021	Dodge	Magnum	SE, SXT, R/T, SRT8
07-024	Dodge	Charger	Daytona (Base, 392), SRT8, R/T, SE, SXT (RWD/AWD), Super Bee, 3.5L, Rallye, Plus, Max, R, Blacktop, 100th Anniversary, Red Line, Road & Track, Scat Pack, SRT 392, SRT, Hellcat, Blacktop, GT, Scat Pack
07-025	Dodge	Caliber	SE, SXT, R/T, SRT4, Sport, Heat, Mainstreet, Rush, Uptown
07-026	Dodge	Avenger	SE,SXT,R/T
07-027	Dodge	Journey (For 2009-2018 only. For model years 2019 on, see 07-404.)	SE, SXT, R/T, Heat, Hero, Uptown, Express, Crew, Mainstreet, Lux, American Value Package, Blacktop, AVP, SXT Plus, Limited, Crossroad (Base, Plus), GT
07-028	Dodge	Challenger (2008 on; for 1970-74 see model 005)	SRT (392, Hellcat), SE, R/T (Plus, Classic, Scat Pack, Road & Track, Shaker, Plus Shaker) , Plum Crazy Edition, Classic, SXT, SXT Plus, Rallye Redline, Blacktop, Shaker, 100th Anniversary, T/A (Base, Plus, 392), 392 Hemi Scat Pack Shaker, SRT (392, HellCat), GT, Demon, Hellcat Redeye
07-029	Dodge	Dart (2013 on. See model 001 for 1960-1976.)	Limited, Rallye, SE, SXT, Special Edition, Mopar'13, Aero, GT, Blacktop
07-030	Dodge	Barracuda	
07-033	Dodge	Challenger	
07-034	Dodge	Colt (includes 2WD Vista)	GT, Custom, Carousel, Premier, Deluxe, E, DL, GTS, Turbo, RS
07-035	Dodge	Conquest	
07-039	Dodge	Stealth	
07-040	Dodge	Monaco	
07-041	Dodge	Intrepid	
07-042	Dodge	Avenger	
07-043	Dodge	Stratus	
07-398	Dodge	Other (automobile)	
07-399	Dodge	Unknown (automobile)	
07-401	Dodge	RaiderSport	Sport
07-402	Dodge	Durango (1998-2003 only; see model 422 for 2004 on)	Sport, R/T, SLT, SXT, Plus, Black Top
07-403	Dodge	Nitro	SLT, SXT, R/T, SE, Heat, Detonator, Shock
07-404	Dodge	Journey (For 2019 on. For model years 2009-2018, see 07-027.)	SE, SXT, GT, Crossroads
07-421	Dodge	Ramcharger	

07-422	Dodge	Durango (2004 on; see 402 for 1998-2003 models)	ST, SLT, Limited, SXT (Base, Plus), Adventurer, Hybrid, Express, Crew, LUX, Citadel (Base, Anodized Platinum), R/T, Blacktop, Plus, Rallye, GT (Base, Plus)
07-441	Dodge	Vista Van	4x4 (Only)
07-442	Dodge	Caravan/Grand Caravan	Mini Ram Van, 112 & 19 WB, SE, ES, LE, Sport, EX, eC, eL, AWD, Sport, EPIC-elec* SXT, C/V, Special Edition, Cargo, Hero, American Value Package, R/T, Crew, Blacktop, AVP, 30th Anniversary, SE Plus, SXT Plus
07-443	Dodge	Ram C/V	Tradesman
07-444	Dodge	Promaster City	Cargo, Passenger, Tradesman (Base, SLT) Wagon (Base, SLT)
07-461	Dodge	B-Series Van/Ram Van/ Ram Wagon	Sportsman, Royal, Maxiwagon, Ram, B1500-B3500, Tradesman, Ram Maxivan (1500, 2500,500), Ram Wagon (1500, 2500, 3500) Conversion,Cargo Van (1500: van, nonmaxi van, maxi van; 2500: non-maxi, maxi van; 3500: non-maxi), Dodge Wagon (1500, 2500, 3500)
07-462	Dodge	Sprinter	Cargo and Passenger
07-463	Dodge	Ram Promaster	Cargo, Chassis, Cutaway, 1500 (Low Roof, High Roof), 2500 (Low Roof, High Roof), 3500 (Low Roof, High Roof)
07-470	Dodge	Van Derivative	Kary Van, Parcel Van
07-471	Dodge	D50, Colt pickup, Ram 50/Ram 100	
07-472	Dodge	Dakota	R/T, Limited Edition, Quad Cab, Club Cab, Plus, SLT, ST, SXT, Sport, Laramie, TRX, SE, Big Horn, Lone Star, TRX4
07-481	Dodge	D, W-Series pickup	Custom, Royal, Ram, Miser, D100-D350, W100-W350
07-482	Dodge	Ram Pickup	1500 (Limited, Longhorn, Rebel, Laramie, Sport , Big Horn, SLT, Express, ST, Black, Tradesman, EcoDiesel, Outdoorsman, Stinger Yellow, Night, Eco Diesel) 2500 (Limited, Laramie, Longhorn, Power Wagon, Big Horn, ST, SLT, Outdoorsman, Tradesman), 3500 (Limited, Laramie, Longhorn, Power Wagon, Big Horn, ST, SLT, Outdoorsman, Tradesman), Quad Cab, SLT, SLT+, ST, SRT-10, Laramie, Bumble Bee, Power Wagon, Daytona, TRX Off-Road, Sport, Black Ram, Red Wings Edition, Lone Star, Limited Tungsten, Hydro Blue, Harvest, Sublime Green, Kentucky Derby Edition, South Fork Edition
07-498	Dodge	Other (light truck)	
07-499	Dodge	Unknown (light truck)	
07-850	Dodge	Motor Home	Truck-based, Van-based

07-870	Dodge	Medium/Heavy Van-Based Vehicle	Sprinter, Promaster
07-880	Dodge	Medium/Heavy Pickup (pickup-style only – over 10,000 lbs)	
07-881	Dodge	Medium/Heavy – CBE	
07-882	Dodge	Medium/Heavy – COE low entry	
07-883	Dodge	Medium/Heavy – COE high entry	
07-884	Dodge	Medium/Heavy –Unknown engine location	
07-890	Dodge	Medium/Heavy – COE entry position unknown	
07-898	Dodge	Other (medium/heavy truck)	
07-981	Dodge	Bus**: Conventional (Engine out front)	(not van based)
07-988	Dodge	Other (bus)	
07-989	Dodge	Unknown (bus)	
07-998	Dodge	Other (vehicle)	
07-999	Dodge	Unknown (DODGE)	
08-010	Imperial	Imperial	
08-398	Imperial	Other (automobile	
08-399	Imperial	Unknown (automobile)	
09-001	Plymouth	Valiant/Scamp/Duster (thru 1976)	
09-002	Plymouth	Satellite/Belvedere	
09-003	Plymouth	Fury (Fury Gran thru '78)	
09-004	Plymouth	Gran Fury ('80 on)	
09-005	Plymouth	Barracuda	
09-006	Plymouth	Volare'	
09-007	Plymouth	Caravelle	
09-008	Plymouth	Horizon/Turismo	
09-011	Plymouth	Reliant (K)	
09-013	Plymouth	Scamp-(car-based p/u)	
09-017	Plymouth	Sundance	
09-019	Plymouth	Acclaim	
09-020	Plymouth	Neon (2002 and on, see Dodge)	
09-031	Plymouth	Cricket	

09-032	Plymouth	Arrow	
09-033	Plymouth	Sapporo	
09-034	Plymouth	Champ/Colt import (includes 2WD Vista)	
09-035	Plymouth	Conquest	
09-037	Plymouth	Laser	
09-038	Plymouth	Breeze	
09-039	Plymouth	Prowler (2002 and on, see Chrysler)	
09-398	Plymouth	Other (automobile)	
09-399	Plymouth	Unknown (automobile)	
09-421	Plymouth	Trailduster	
09-441	Plymouth	Vista Van	4X4 (only)
09-442	Plymouth	Voyager (minivan) (2001 and on, see Chrysler)	SE, LX, Grand Voyager, SE Expresso, EPIC-electric*
09-461	Plymouth	Van-fullsize (B-series)	Voyager (thru 1983), Sport, Premier
09-471	Plymouth	Arrow pickup (foreign)	
09-498	Plymouth	Other (light truck)	
09-499	Plymouth	Unknown (light truck)	
09-998	Plymouth	Other (vehicle)	
09-999	Plymouth	Unknown (PLYMOUTH)	
10-034	Eagle	Summit (excludes wagon)	
10-037	Eagle	Talon	
10-040	Eagle	Premier	
10-041	Eagle	Vision	
10-044	Eagle	Medallion	
10-045	Eagle	Summit Wagon	
10-398	Eagle	Other (automobile)	
10-399	Eagle	Unknown (automobile)	
12-001	Ford	Falcon	
12-002	Ford	Fairlane	
12-003	Ford	Mustang/Mustang II	Mach(I), Boss (302), Grande, Cobra (SVT), Ghia, SVO, GT (Premium, Base, Cal Spec. Pkg.), LX, Shelby (GT350, GT350R, GT500, GT500KR), Deluxe, Premium, Bullitt, V6 (Base, Premium, Pony), Fastback (V6, GT, Premium, Ecoboost)

12-004	Ford	Thunderbird (all sizes)	
12-005	Ford	LTD II	
12-006	Ford	LTD/Custom/Galaxy (all sizes)	
12-007	Ford	Ranchero	
12-008	Ford	Maverick	
12-009	Ford	Pinto	
12-010	Ford	Torino/Gran Torino/Elite	
12-011	Ford	Granada	
12-012	Ford	Fairmont	
12-013	Ford	Escort/EXP/ZX2	
12-015	Ford	Tempo	
12-016	Ford	Crown Victoria (For 2011 on, code as vehicle model 398)	LX, LTD Crown Victoria, LX Sport
12-017	Ford	Taurus/Taurus X	MT-5, L, GL, LX, SHO, G, SE, SVG, SES, SEL, Limited, Eddie Bauer, Police Interceptor
12-018	Ford	Probe	
12-021	Ford	Five Hundred	
12-022	Ford	Freestyle	
12-023	Ford	Fusion	I4 S/SE/SEL, V6 SE/SEL, S, SE, Sport, Hybrid (S, SE, Platinum, Titanium), Titanium (Hybrid, Energi) Energi (SE, Platinum, Titanium), Platinum
12-024	Ford	Edge (For model years 2007-2018 only. For model years 2019 on, see 12-424.)	SE, SEL, SEL Plus, Limited, Sport, Titanium, ST
12-025	Ford	Flex	SE, SEL, Limited, Titanium
12-026	Ford	City	
12-027	Ford	C-Max	Hybrid (SE, Titanium), Energi, SE, SEL
12-031	Ford	English Ford	
12-032	Ford	Fiesta	Sport, Ghia, S, SE, SES, SEL, Titanium, ST
12-033	Ford	Festiva	
12-034	Ford	Laser	
12-035	Ford	Contour	
12-036	Ford	Aspire	
12-037	Ford	Focus	ZX3, LX, SE, ZTS, SVT, ZX4, ZX4, ST, ZX5, ZXW, S, SES, SEL, SE, Titanium, Electric, ST, RS

12-038	Ford	GT	
12-398	Ford	Other (automobile)	Deluxe, Ford Six, Mainline, Crestline, Futura, Galaxie, Model A
12-399	Ford	Unknown (automobile)	
12-401	Ford	Bronco (thru 1977)/Bronco II/Explorer/Explorer Sport (Explorer for 1990-2018 only. For model years 2019 on, see 12-425.)	Eddie Bauer, XL, XLT, Explorer (1990 on) XLS, Explorer Sport (Value, Choice Premium), NBX, Adrenalin, Ironman, Police Interceptor, Base, Limited,Platinum
12-402	Ford	Escape	XLS (Value, Sport, V6 Choice/Premium), XLT (Choice, Premium, Sport), Hybrid (Base, Limited), No Boundaries, Limited. S, SE, SEL, Titanium
12-403	Ford	EcoSport	S, SE, SES (Black Appearance Package), Titanium
12-421	Ford	Bronco-fullsize (1978-on)	Eddie Bauer, Custom, XL, XLT
12-422	Ford	Expedition	EL, XLS, XLT (4x4,4x2), Eddie Bauer (4x4,4x2), NBX, Sport, NBX, Limited, King Ranch, Funk Master Flex Edition, XL, Platinum, XLT MAX, Limited MAX, Platinum MAX, Special Edition
12-423	Ford	Excursion	XLT, Limited (ltd.), Ultimate, Premium,XLS, Eddie Bauer
12-424	Ford	Edge(For 2019 on. For model years 2007-2018, see 12-024.)	SE, SEL, ST, Titanium
12-425	Ford	Explorer (For 2019 on. For model years 1990-2018 see 12-401.)	XLT, Limited, Sport, Platinum
12-441	Ford	Aerostar	XLT, Cargo Van
12-442	Ford	Windstar	GL, LX, XLT, Splash, Cargo Limited, SE, SEL
12-443	Ford	Freestar	Base, LX, SE, Limited
12-444	Ford	Transit Connect	XL (Van, Wagon), XLT (Van, Wagon), Premium, EV, Titanium
12-461	Ford	E-Series Van/Econoline	Clubwagon (XL, XLT), Chateau, (XL,XLT), Parcel Van, Econoline Wagon E-150 (XL/XLT/Premium); E-350 XL/XLT/ Extended), E-250 (EXT)
12-462	Ford	Transit	Van, Wagon (XL, XLT)
12-470	Ford	Van Derivative	
12-471	Ford	Ranger	Supercab, 4x4, STX, SL, SLT, Splash, XL (Standard/ Super Cab), XLT, Tremor (Standard/Super Cab/Off-Road/FX4), Edge (Regular/ Super Cab), EV* (electric), Level II, Sport, Lariat
12-472	Ford	Courier	
12-473	Ford	Explorer Sport Trac	2WD/4WD, Value, Choice, Premium, XLS, XLT, Adrenalin, Limited

12-481	Ford	F-Series pickup	F100, F150-F350, (XL, XLT, Crew Cab, Super Cab, Regular Cab, Lariat, Super Duty, Flareside, Styleside, SVT Lightning, Fireside, Harley-Davidson Edition, King Ranch, SuperCrew, STX, Heritage Edition, Sport Edition, FX4, FX2), F450 (10,000 GVWR and under) (see model 880 for F450 >10,000 GVWR), Amarillo Package, Platinum, Cabela's, STX, SVT Raptor, Limited
12-498	Ford	Other (light truck)	
12-499	Ford	Unknown (light truck)	
12-850	Ford	Motorhome	Truck-based, F-550, Van-Based (E Series)
12-870	Ford	Medium/Heavy Van-Based Vehicle	Econoline E350, E450, Transit
12-880	Ford	Medium/Heavy Pickup (pickup-style only - over 10,000 lbs)	Super Duty F250,350, F450/550, Lariat, XL, XLT, King Ranch
12-881	Ford	Medium/Heavy – CBE	F-5 thru F-8, L-series, FT-series, Super Duty F-Series: 350/450/550/650/750/800 (does not include pickup style)
12-882	Ford	Medium/Heavy – COE low entry	C/CT series, LCF
12-883	Ford	Medium/Heavy – COE high entry	CL/CLT series, LCF
12-884	Ford	Medium/Heavy – Unknown engine location	
12-890	Ford	Medium/Heavy – COE entry position unknown	
12-898	Ford	Other (medium/heavy truck)	
12-981	Ford	Bus**: Conventional (Engine out front)	B-series (not van based),F-series
12-988	Ford	Other (bus)	
12-989	Ford	Unknown (bus)	
12-998	Ford	Other (vehicle)	
12-999	Ford	Unknown (FORD)	
13-001	Lincoln	Continental (thru '81)/ Town Car	Continental, (thru '81), Signature/Designer Series, Town Car ('81 on, body 04 only), Cartier, Executive, L, Premium, Ballistic Protection Edition, Ultimate, Designer Series
13-002	Lincoln	Mark	
13-005	Lincoln	Continental ('82 on)	
13-011	Lincoln	Versailles	
13-012	Lincoln	LS	Convenience,Premium,Sport, Luxury, Ultimate

13-013	Lincoln	Zephyr/MKZ	FWD, AWD, Hybrid (Premiere 400A, Select 500A, Reserve 600A), 2.0L, 3.7L, EcoBoost, Premiere (100A), Select (200A), Reserve (300A, I, II), Black Label (Vineyard, Chalet, Thoroughbred), 3.0L
13-014	Lincoln	MKX	FWD, AWD, Black Label (Modern Heritage, Indulgence, Thoroughbred, The Muse), Premiere, Select, Reserve
13-015	Lincoln	MKS	Ecoboost, 3.7L FWD/AWD
13-016	Lincoln	MKT	EcoBoost, TownCar, 3.5L, 3.7L, Premiere, Reserve
13-017	Lincoln	Continental	Black Label Edition (Rhapsody, Chalet, Thoroughbred), Select, Premiere, Reserve, 80th Anniversary Coach Door Edition
13-398	Lincoln	Other (automobile)	
13-399	Lincoln	Unknown (automobile)	
13-401	Lincoln	Aviator	Premium, Luxury, Ultimate, Kitty Hawk Edition
13-402	Lincoln	MKC	FWD, AWD, Black Label (Modern Heritage, Center Stage, Indulgence), Premiere, Select, Reserve
13-403	Lincoln	Nautilus	Black Label Edition
13-421	Lincoln	Navigator	2WD, 4WD, Premium, Luxury, Ultimate, L, 5.4L, Premiere, Select (Base, L), Reserve (Base, L), Black Label (Base, L)
13-422	Lincoln	Nautilus	Black Label Edition, Reserve, Select
13-481	Lincoln	Blackwood	
13-482	Lincoln	Mark LT	2WD, 4WD
13-498	Lincoln	Other (light truck)	
13-499	Lincoln	Unknown (light truck)	
13-999	Lincoln	Unknown (LINCOLN)	
14-002	Mercury	Cyclone	
14-003	Mercury	Capri- domestic (1967 see 008)	
14-004	Mercury	Cougar/XR7 (1967-1997)	
14-006	Mercury	Marquis/Monterey (car version; for van version 2004 on see code 444) /Grand Marquis	, Limited Edition, Limited Edition, Limited Edition, Limited Edition, Limited Edition, Limited Edition, Limited Edition, Limited Edition, Limited Edition, Limited Edition, Limited Edition
14-008	Mercury	Comet	
14-009	Mercury	Bobcat	
14-010	Mercury	Montego (prior to 1976; for 2005 on see code 020)	
14-011	Mercury	Monarch	

14-012	Mercury	Zephyr	
14-013	Mercury	Lynx/LN7	
14-015	Mercury	Topaz	
14-017	Mercury	Sable	LS, GS (Premium), GS Plus, Platinum Edition
14-020	Mercury	Montego (2005 on)	
14-021	Mercury	Milan	I-4, V6 (Base/Premier)
14-031	Mercury	Capri-foreign	
14-033	Mercury	Pantera-foreign	
14-036	Mercury	Tracer	
14-037	Mercury	Mystique	
14-038	Mercury	Cougar (1999 on)	
14-039	Mercury	Marauder	M75, 300A
14-398	Mercury	Other (automobile)	
14-399	Mercury	Unknown (automobile)	
14-401	Mercury	Mountaineer	Convenience, Luxury, Premier (4.0/4.6L)
14-402	Mercury	Mariner	Luxury, Premier, Hybrid
14-443	Mercury	Villager	LS, GS, Nautica, Estate, Sport, Sport Plus, Popular
14-444	Mercury	Monterey (van version; for car version prior to 2004 see code 006)	Convenience, Luxury, Premier
14-498	Mercury	Other (light truck)	
14-499	Mercury	Unknown (light truck)	
14-999	Mercury	Unknown (MERCURY)	
18-001	Buick/Opel	Special/Skylark	GS (350, 400, 455), Deluxe GS California, Sport Wagon, Custom Roadmaster (1946-59), Skylark edition
18-002	Buick/Opel	LeSabre/Centurion/ Estate Wagon, Invicta, Custom, Limited, T-Type, Ltd, C.M.I, LE	
18-003	Buick/Opel	Electra/Electra 225/ Park Limited, Park Avenue, Ultra, Base	
18-004	Buick/Opel	Roadmaster	
18-005	Buick/Opel	Riviera	
18-007	Buick/Opel	Century	Luxus, T-Type, FWD (82-on), Custom, Regal (72-77), Limited, LE, SE, Base, Special
18-008	Buick/Opel	Apollo/Skylark	

18-010	Buick/Opel	Regal (RWD only)	
18-012	Buick/Opel	Skyhawk	
18-015	Buick/Opel	Skylark (76-85)	
18-018	Buick/Opel	Somerset/Skylark	
18-019	Buick/Opel	Regal (2011 on)	GS, CXL, Turbo, Premium I/ II, Base, Grand National, Sport Touring, Sportback/GS, TourX, Avenir
18-020	Buick/Opel	Regal (FWD)	
18-021	Buick/Opel	Reatta	
18-022	Buick/Opel	LaCrosse	CX, CXL (FWD/AWD), CXS, Super, Leather, Premium I/II, Touring, Preferred, Essence, Avenir
18-023	Buick/Opel	Lucerne	CX, CXL V6, CXL V8, CXS, Super, Special Edition
18-024	Buick/Opel	Enclave (2008-12 model years only. For 2013 on see model 421.)	
18-025	Buick/Opel	Verano	Base, Convenience, Leather, Turbo, Premium, Sport, Touring
18-026	Buick/Opel	Cascada	1SV, Base, Premium, Sport Touring
18-031	Buick/Opel	Opel Kadett	
18-032	Buick/Opel	Opel Manta	
18-033	Buick/Opel	Opel GT	
18-034	Buick/Opel	Opel Isuzu	
18-398	Buick/Opel	Other (automobile)	
18-399	Buick/Opel	Unknown (automobile)	
18-401	Buick/Opel	Rendezvous	CX, CXL, Ultra, Plus
18-402	Buick/Opel	Rainier	CXL,CXL Plus
18-404	Buick/Opel	Encore	Convenience, Leather, Premium, Base, Sport Touring, Preferred (I,II), Essence
18-405	Buick/Opel	Envision	Preferred, Premium (I,II) Essence, Base
18-421	Buick/Opel	Enclave (2013 on. See model 024 for 2008-12 model years.)	Convenience, Leather, Premium, Avenir, Essence
18-441	Buick/Opel	Terraza	CX, CXL
18-498	Buick/Opel	Other (light truck)	
18-499	Buick/Opel	Unknown (light truck)	
18-999	Buick/Opel	Unknown BUICK	
19-003	Cadillac	Deville/Fleetwood,Coupe de Ville, Sedan de Ville, Fleetwood	

		Brougham, Fleetwood 60 Special, d`Elegan	
19-004	Cadillac	Limousine	Fleetwood 75, Formal, Deville-based, DTS
19-005	Cadillac	Eldorado	
19-006	Cadillac	Commercial Series	
19-009	Cadillac	Allante'	
19-014	Cadillac	Seville	
19-016	Cadillac	Cimarron	
19-017	Cadillac	Catera	
19-018	Cadillac	CTS/CTC	Luxury, Luxury Sport, V-Series, 2.0L, 2.8L, 3.0L, 3.6L, 6.2L Supercharged, Premium, Performance, Standard, Luxury (Base and Premium), V-Sport (Base and Premium Luxury)
19-019	Cadillac	XLR	Neiman Marcus Edition, V Series
19-020	Cadillac	SRX	V6, V8, Sports Package, 2.8L Turbo, 3.0L, Luxury, Performance, Premium, Standard
19-021	Cadillac	STS	V6,V8, V-Series, Luxury, Premium
19-022	Cadillac	DTS	Luxury I, II, III, Performance
19-023	Cadillac	XTS	Standard, Luxury, Premium, Platinum, V-Sport, Limousine, Funeral Hearst, Twin Turbo
19-024	Cadillac	ATS	2.0L/2.5L/3.6L (Standard, Luxury, Performance, Premium, Turbo) V-Series
19-025	Cadillac	ELR	
19-026	Cadillac	CT6	2.0L (Turbo, Luxury) 3.0L (Twin Turbo, Platinum, Luxury), 3.6L (Premium Luxury, Platinum), Plug-In, V-Series
19-398	Cadillac	Other (automobile)	
19-399	Cadillac	Unknown (automobile)	
19-401	Cadillac	XT5	3.6L (Base, Luxury, Premium, Platinum)
19-421	Cadillac	Escalade/ESV (from 2004 on; see 431 for 2003 only)	4WD, 2WD, 6.2L, Standard, Platinum, Limousine, Hybrid, Luxury, Premium
19-422	Cadillac	XT4	Luxury, Premium Luxury, Sport
19-431	Cadillac	Escalade ESV	Luxury, Premium, Platinum
19-480	Cadillac	Escalade EXT (from 2002 -2006; for 2007 on see 481)	4WD, 2WD
19-481	Cadillac	Escalade EXT (from 2007 on; see 480 for 2002-2006)	4WD, 2WD, Luxury, Premium, Standard
19-498	Cadillac	Other (light truck)	

19-499	Cadillac	Unknown (light truck)	
19-999	Cadillac	Unknown CADILLAC	
20-001	Chevrolet	Chevelle/Malibu Classic, Councours, Laguna**, S-3, Greenbriar, Estate, 300,SS-396/454, Deluxe	
20-002	Chevrolet	Impala/Caprice (For SS from 2014 on, use 20-021.)	Biscayne, Belair, Super Sport, Classic, Classic Brougham, Townsman, Brookwood, Kingswood, LS, LT, LTZ, Sport, SS, Luxury, Premier
20-004	Chevrolet	Corvette	Stingray, C5, Z06, Z06-R, 50th Anniversary Edition, Commemorative Edition, Indy Pace Car, ZR1, Grand Sport, 427, 1LZ, 2LZ, 3LZ, ZL1
20-006	Chevrolet	Corvair	
20-007	Chevrolet	El Camino	
20-008	Chevrolet	Nova (-'79)	
20-009	Chevrolet	Camaro	SS, RS, LT, Berlinetta, Iroc-Z, Z/28, LS, LT, ZL1, 2.0L, 3.6L, 6.2L
20-010	Chevrolet	Monte Carlo (thru '88)	
20-011	Chevrolet	Vega	
20-012	Chevrolet	Monza	
20-013	Chevrolet	Chevette	
20-015	Chevrolet	Citation	
20-016	Chevrolet	Cavalier	
20-017	Chevrolet	Celebrity	
20-019	Chevrolet	Beretta/Corsica	
20-020	Chevrolet	Lumina	
20-021	Chevrolet	SS (For 2014 on. For Impala/Caprice SS use model 20-002.)	LS, LT, LTZ
20-022	Chevrolet	Cobalt	LS, LT, LTZ, SS, SS Supercharged
20-023	Chevrolet	HHR	LS, 1LT, 2LT
20-024	Chevrolet	Traverse (2009-2012 only. For 2013 on see model 423.)	LS, LT, LTZ
20-025	Chevrolet	Cruze	LS, LT, LTZ, ECO, Turbo Diesel, Limited, Premier
20-026	Chevrolet	Volt	Premier, LT
20-027	Chevrolet	Caprice PPV	

20-028	Chevrolet	Sonic	Base, LS, LT, LTZ, RS, Premier
20-029	Chevrolet	Spark	LS, LT, EV, ACTIV
20-031	Chevrolet	Spectrum	
20-032	Chevrolet	Nova/Geo Prizm/Prism	
20-033	Chevrolet	Sprint/Geo Sprint	
20-034	Chevrolet	Geo Metro/Metro	
20-035	Chevrolet	Geo Storm	
20-036	Chevrolet	Monte Carlo (1995 on)	FWD, LS, Z34, LS, LT, LTZ, SS, Sport Edition
20-037	Chevrolet	Malibu/Malibu Maxx	Base, L, LS, LT, LTZ, SS, Hybrid, ECO, Classic, Limited, Premier, RS
20-038	Chevrolet	SSR	Signature Series, LS, LS5, 1SS, 2SS, 3SS
20-039	Chevrolet	Aveo/Aveo 5	Base, LS, LT, Special Value
20-040	Chevrolet	Bolt	Base, LT, Premier
20-398	Chevrolet	Other (automobile)	Fleetmaster, Fleetline, Styline Special, One-fifty, Bel-Air, Del Ray, Biscayne
20-399	Chevrolet	Unknown (automobile)	
20-401	Chevrolet	S-10 Blazer/TrailBlazer (2002 only; for 2003 on, see 403)	S-10 p/u based,LS,LT,ZR2 TrailBlazer, Xtreme, ZR2, LS, LT, LTZ, EXT
20-402	Chevrolet	Geo Tracker/Tracker	Lsi, LT, ZR2
20-403	Chevrolet	TrailBlazer (2003 on; for 2002 model, see 401)	LS, LT, LTZ, North Face Edition, EXT, SS (LS/LT)
20-404	Chevrolet	Equinox	L, LS, LT, LTZ, Sport, Premier, Turbo (Base and Diesel)
20-405	Chevrolet	Captiva	Sport, LS, LT, LTZ
20-406	Chevrolet	Trax	LS, LT, LTZ, Premier
20-407	Chevrolet	Blazer	L, 2.5L, 3.6L, RS, Premier
20-421	Chevrolet	Fullsize Blazer/Tahoe	K-series, full-sized p/u based, LS, LT, LTD, LTZ, 4WD, Z71, Hybrid, Premier
20-422	Chevrolet	Suburban (from 2004 on; see 431 for 1950-2003)	LS, LT, LTZ, Z71, Premier
20-423	Chevrolet	Traverse (2013 on. For 2009-2012 see model 024.)	L, LS, LT(Cloth, Leather), LTZ, Premier, RS
20-431	Chevrolet	Suburban (from 1950-2003;see 422 for 2004 on)	all models (C1500/2500, K1500/2500), LS, LT, Z71
20-441	Chevrolet	Astro Van	Minivan, Cargo, Passenger, LT, LS, Conversion
20-442	Chevrolet	Lumina APV	Minivan, MPV

20-443	Chevrolet	Venture	Cargo, Passenger, Plus, LS, LT, Value, Value Plus, Extended, W. B. Edition, Entertainer
20-444	Chevrolet	Uplander	Base, LS, LT, LT(AWD), LT Entertainer
20-445	Chevrolet	City Express	LS, LT
20-461	Chevrolet	G-series van	Beauville,Chevy Van, Sport Van, G10-G30, Express, G1500/2500/3500, LT, LS
20-466	Chevrolet	P-series van	
20-470	Chevrolet	Van derivative	Parcel Van, Hi-cube
20-471	Chevrolet	S-10/T-10 Pickup	4 x 4, Fleetside, Extended,Crew, LS, S-10, Xtreme,ZR2, ZR5, electric pickup*
20-472	Chevrolet	LUV	Imported pickup
20-473	Chevrolet	Colorado	Z71, Z85, Sport, LS, LT, Work, Value, Shoreline, Midnight (LT, Z71), Trail Boss
20-481	Chevrolet	C, K, R, V-series pickup/Silverado	C10-C30, K10-K30, R10-R30, V10-V30, Silverado: 1500 (C-K, HD), 2500 (C-K, HD), 3500 (CK), ST, LS, LT, Z71, Fleetside, Sportside, Crew Cab, SS, Hybrid, LTZ, WT, High Country, Rally 1/2, Midnight (HD,Base), Realtree, Custom Sport HD, Blackout, Special Ops, High Country, Custom Trail Boss
20-482	Chevrolet	Avalanche	1500/2500 Premium, North Face Edition, Z71, Z66, LS, LT, LTZ, Black Diamond
20-498	Chevrolet	Other (light truck)	
20-499	Chevrolet	Unknown (light truck)	
20-850	Chevrolet	Motor Home	Truck-based, Van-based
20-870	Chevrolet	Medium/Heavy Van-Based Vehicle	Express 3500/4500
20-880	Chevrolet	Medium/Heavy Pickup (pickup-style only – over 10,000 lbs)	
20-881	Chevrolet	Medium/Heavy – CBE	C50/60/65; M60/65;H70/80/90; J70/80/90;Bison 90; Kodiak (C4500)all other CBE
20-882	Chevrolet	Medium/Heavy – COE low entry	T60/65, all other COE low entry
20-883	Chevrolet	Medium/Heavy – COE high entry	Titan 90, all other COE high entry
20-884	Chevrolet	Medium/Heavy –Unknown engine location	
20-890	Chevrolet	Medium/Heavy – COE entry position unknown	
20-898	Chevrolet	Other (medium/heavy truck)	
20-981	Chevrolet	Bus**: Conventional (Engine out front)	S-60 series

20-988	Chevrolet	Other (bus)	
20-989	Chevrolet	Unknown (bus)	
20-998	Chevrolet	Other (vehicle)	
20-999	Chevrolet	Unknown (CHEVROLET)	
21-001	Oldsmobile	Cutlass (RWD-only)	
21-002	Oldsmobile	Delta 88/LSS	
21-003	Oldsmobile	Ninety-Eight/Regency	
21-005	Oldsmobile	Toronado	
21-006	Oldsmobile	Commercial Series	
21-012	Oldsmobile	Starfire	
21-015	Oldsmobile	Omega	
21-016	Oldsmobile	Firenza	
21-017	Oldsmobile	Ciera	
21-018	Oldsmobile	Calais	
21-020	Oldsmobile	Cutlass (FWD)	
21-021	Oldsmobile	Achieva/Alero	
21-022	Oldsmobile	Aurora	
21-023	Oldsmobile	Intrigue	
21-398	Oldsmobile	Other (automobile)	
21-399	Oldsmobile	Unknown (automobile)	
21-401	Oldsmobile	Bravada	2WD, 4WD, Collector's Series
21-441	Oldsmobile	Silhouette	GL, GLS, Series I, Series II, GS Premier Edition, Collector's Series
21-499	Oldsmobile	Unknown (light truck)	
21-999	Oldsmobile	Unknown (OLDSMOBILE)	
22-001	Pontiac	Lemans/ Tempest (thru 1970)	
22-002	Pontiac	Bonneville/Catalina/ Parisienne	,GXP,GXP,GXP,GXP,GXP,GXP,GXP,GXP,GXP,GXP,GXP,GXP
22-005	Pontiac	Fiero	
22-008	Pontiac	Ventura/GTO	
22-009	Pontiac	Firebird/Trans AM	
22-010	Pontiac	Grand Prix (RWD)	
22-011	Pontiac	Astre	
22-012	Pontiac	Sunbird (thru 1980;1985 on see model 016)	

22-013	Pontiac	T-1000/1000	
22-015	Pontiac	Phoenix	
22-016	Pontiac	Sunbird (1985-1994)/J-2000/Sunfire (1995 on)	
22-017	Pontiac	6000	
22-018	Pontiac	Grand AM	, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package, SC/T Package
22-019	Pontiac	G5	Base, GT
22-020	Pontiac	Grand Prix (FWD)	
22-022	Pontiac	G6	
22-023	Pontiac	Solstice	GXP
22-024	Pontiac	G8	
22-025	Pontiac	G3	
22-026	Pontiac	G8-ST	
22-031	Pontiac	Lemans (1988-on)	
22-032	Pontiac	Vibe	GT, AWD
22-398	Pontiac	Other (automobile)	Torpedo, Streamliner, Chieftain Star Chief, Super Chief
22-399	Pontiac	Unknown (automobile)	
22-401	Pontiac	Aztek	GT, SE, 1SA, 1SB, 1SC, Rally Edition
22-403	Pontiac	Torrent	GXP
22-441	Pontiac	Trans Sport/ Montana/SV6	SE, Montana, Extended, Versatrak, 1SV, 1SA, 1SX, 1SY, 1SE, Chrome Sport,
22-499	Pontiac	Unknown (light truck)	
22-999	Pontiac	Unknown (PONTIAC)	
23-007	GMC	Caballero	
23-008	GMC	Acadia (2007-2012 only. For 2013 on see model 423.)	SLE, SLT
23-399	GMC	Unknown (automobile)	
23-401	GMC	Jimmy/Typhoon/Envoy	S-15 based, (100.5 WB), T15, SLE, SL, SLS, SLT, XL, XUV, Denali
23-402	GMC	Terrain	SL, SLE, SLT, Denali, Diesel (SLE, SLT), Black Edition
23-421	GMC	Fullsize Jimmy/Yukon	Fullsize pickup based, K5, K18, SL, SLE, SLT, SLS, Diamond Edition, Yukon Denali, Denali (Ultimate,Ultimate Black Edition), Hybrid, Premium Edition, Graphite Edition (Base, Performance)

23-422	GMC	Suburban/Yukon XL (2004 on; see 431 for 1950- 2003)	Yukon XL (Denali -1500-2500), SLE, SLT, Hybrid
23-423	GMC	Acadia (2013 on. For 2007-2012 see model 008.)	FWD/AWD, Denali, SL, SLE, SLT, All Terrain
23-431	GMC	Suburban/Yukon XL (2000 on) (1950-2003 only; see 422 for 2004 on)	all models, SLE, C16, C26, K16. K26, C1500-2500, K1500-2500, Yukon XL (Denali -1500-2500)
23-441	GMC	Safari (Minivan)	SLT, SLX, SLE, M15, L15, SL
23-461	GMC	G-series van/Savana	Rally Van, Vandura, G15-G35, Savana (G1500-3500) SLT, Extended, SLE, LS, LT, Uplifter, WT, Cargo
23-466	GMC	P-series van	
23-470	GMC	Van derivative	Hicube, Magna Van, Value Van, Parcel Van
23-471	GMC	S15/T15/Sonoma	4 X 4, Syclone, SL, SLS, SLE, Extended/Crew Cab, ZR2, ZRX, ZR5
23-472	GMC	Canyon	Base, SLE, SL, SLT, Z71, Z85, Work Truck, Crew Cab, Extended Cab, Denali, All Terrain (Base, X)
23-481	GMC	C, K, R, V-series pickup/ Sierra	Excluding Yukon, C15-C35, K15-K35, R15-R35, V15-V35, Sierra, C/K1500, 2500, 3500, Sportside, X81, SL, Special, SLE, Classic, Extended Cab, Denali, Limited 1500HD/2500HD/3500HD, C3, Hybrid, SLT, Work Truck, 5SA
23-498	GMC	Other (light truck)	
23-499	GMC	Unknown (light truck)	
23-850	GMC	Motor Home	
23-870	GMC	Medium/Heavy Van-Based Vehicle	Savana 3500, 4500
23-880	GMC	Medium/Heavy Pickup (pickup-style only - over 10,000 lbs	
23-881	GMC	Medium/Heavy - CBE	W5000/6000/7000 series,Kodiak Brigadier/General models, Top Kick
23-882	GMC	Medium/Heavy – COE low entry	W6000/W7000, all other COE, low entry, W/WT Series
23-883	GMC	Medium/Heavy – COE high entry	Astro 95, all other COE,high entry, T Series
23-884	GMC	Medium/Heavy – Unknown engine location	
23-890	GMC	Medium/Heavy – COE entry position unknown	
23-898	GMC	Other (medium/heavy truck)	
23-981	GMC	Bus**: Conventional (Engine out front)	B6000

23-988	GMC	Other (bus)	
23-989	GMC	Unknown (bus)	
23-998	GMC	Other (vehicle)	
23-999	GMC	Unknown (GMC)	
24-001	Saturn	SL	
24-002	Saturn	SC	
24-003	Saturn	SW	
24-004	Saturn	EV1/EGV1*	
24-005	Saturn	LS	LS, LS1, LS2, L100/L200/L300, L300-1/2/3
24-006	Saturn	LW	LW1, LW2, LW200/300 –1/2/3
24-007	Saturn	Ion	Quad-coupe, Ion- 1/2/3
24-008	Saturn	Sky	
24-009	Saturn	Aura	
24-010	Saturn	Outlook	XE, XR
24-011	Saturn	Astra	
24-398	Saturn	Other (automobile)	
24-399	Saturn	Unknown (automobile)	
24-401	Saturn	Vue	Red Line, 4, V6, Green Line, XE, XR-4, XR-V6
24-441	Saturn	Relay	2,3
24-499	Saturn	Unknown (Light truck)	
24-999	Saturn	Unknown (SATURN)	
25-401	Grumman	LLV	Postal vehicle
25-441	Grumman	Step-in van	Multi-stop, step van
25-498	Grumman	Other (light truck)	
25-499	Grumman	Unknown (light truck)	
25-881	Grumman	Medium/Heavy – CBE	
25-882	Grumman	Medium/Heavy - COE low entry	
25-883	Grumman	Medium/Heavy - COE high entry	
25-884	Grumman	Medium/Heavy - engine location unknown	
25-890	Grumman	Medium/Heavy - entry position unknown	
25-898	Grumman	Other (Medium/Heavy truck)	
25-983	Grumman	Bus: Flat front, rear engine	Transit

25-988	Grumman	Other (bus)	
25-989	Grumman	Unknown (bus)	
25-999	Grumman	Unknown (GRUMMAN/ GRUMMAN-OLSON)	
26-001	Coda	Coda	
26-398	Coda	Other (automobile)	
26-399	Coda	Unknown (automobile)	
29-001	Other Domestic Manufacturers	Studabaker/Avanti	Lark, Gran Turismo, Hawk, Cruiser, all associated subseries, light pick-up, Studebaker XUV/XUT, Lister
29-002	Other Domestic Manufacturers	Checker	
29-003	Other Domestic Manufacturers	Panoz	Esperante (Magnussen Edition, Spyder (Base, GT), Convertible, GTS), GT, GTS, GTLM, JRD, Abruzzi, Roadster, GTR1, 25th Anniversary, Spyder (GT), Avezzano
29-004	Other Domestic Manufacturers	Saleen	S7, S281, 435S, S302 (White Label, Yellow Label, Black Label), 570, 620, FOURSIXTEEN
29-005	Other Domestic Manufacturers	Tesla	Roadster (Base, Sport), Model S (Base, Signature, Performance), Model X, Super Charger , Model 3
29-398	Other Domestic Manufacturers	Other (automobile)	Desoto, Excaliber, Stutz,FiberFab, Hudson, Packard, Consulier, Gatsby, Auburn, Phaeton, Citicar, Clenet
29-399	Other Domestic Manufacturers	Unknown (automobile)	
30-031	Volkswagen	Karmann Ghia	
30-032	Volkswagen	Beetle 1300/1500	
30-033	Volkswagen	Super Beetle	
30-034	Volkswagen	411/412	
30-035	Volkswagen	Squareback/Fastback	
30-036	Volkswagen	Rabbit	
30-037	Volkswagen	Dasher	
30-038	Volkswagen	Scirocco	
30-040	Volkswagen	Jetta/Jetta SportsWagen	III, GL (TDI, 1.9L, 2.0L), GLI (2.0T, VR6), GLS (1.8T,1.8L/1.9L/ 2.0L/2.8L/ TDI/VR6),GT, Carat, TDI, GLX (VR6/ 2.8L), Turbo Diesel, 2.5L Wolfsburg Edition, S/SE/ SEL, Value Edition, 2.0T, 3.6, Autobahn, Hybrid (SE, SEL, SEL Premium), Premium, Edition 30, 1.4T, Sport, Turbo Charged, 35th Anniversary Edition
30-041	Volkswagen	Quantum	

30-042	Volkswagen	Golf/Cabriolet/Cabrio/GTI/ GLI	Golf II, GTI (GLS, GLX 1.8T/2.0T/2.8L), GT, GL(1.8T/ VR6/2.0L/1.9L/ TDI), Golf III, GLS (1.8T/1.8L/1.9L/ 2.0/TDI), Wolfsburg, Cabrio (GL, GLS, GLX), 20th Anniversary, R32, MkV, Convenience, R, 2.5L, Driver's Edition, S, SE, SEL, Autobahn, Launch Edition, Sport Wagen (S, SE, SEL), eGolf (SE, SEL Premium), Alltrack (S,SE, SEL), Alltrack
30-043	Volkswagen	Rabbit Pickup	
30-044	Volkswagen	Fox	
30-045	Volkswagen	Corrado	
30-046	Volkswagen	Passat (CC - 2008 thru 2011; see 052 for 2012 on)	GL,GLS(1.8T,Synchro,V6),TDI,GLX(1.8T, 2.0T, W8, Synchro,V6), 4MOTION, 3.6 GL, Value Edition, CC, Highline, Komfort, 2.5 (S/SE), Wolfsburg Edition, Sport, Premium, Clean Diesel, SEL, R-Line, 35th Anniversary Edition, Autobahn
30-047	Volkswagen	New Beetle	GL GLS TDI, 1.8T/1.8L/ 1.9L/2.0L/2.5/2.5L Syncro/ V6, GLX (1.8T), Turbo, Turbo S, Fender Edition, Sun and Sound, R-Line, GSR, Clean Diesel, Classic, SE, SEL, Dune, #PinkBeetle, Coast, Final Edition (SE, SEL)
30-048	Volkswagen	Phaeton	3.2L, 4.2L, V6, V8,W12
30-051	Volkswagen	Eos	2.0T, 3.2L, Executive, Komfort, Luxury, Turbo, VR6, Sport, Final Edition
30-052	Volkswagen	CC (For 2012 on. See model 046 for 2008-2011.)	Luxury, Sport, Sport Plus, VR6, R-Line, 2.0T, 4MOTION, Executive, V6
30-053	Volkswagen	Arteon	R-Line, SE, SEL
30-398	Volkswagen	Other (automobile)	
30-399	Volkswagen	Unknown (automobile)	
30-401	Volkswagen	The Thing (181)	
30-402	Volkswagen	Tiguan	S, SE, SEL, R-Line, 4MOTION, 2.0T, Wolfsburg, Sport, Premium, Limited (Base, 4MOTION)
30-403	Volkswagen	Atlas	S, V6 (S, 4MOTION, Launch Edition, SE, SEL)
30-421	Volkswagen	Touareg/Tourareg 2	V6, V8, V10, VR6 FSI, Lux, Executive, Hybrid, Sport, R-Line, X Special Edition, TDI, Wolfsburg
30-441	Volkswagen	Vanagon/Camper	Bus, Kombi, Van
30-442	Volkswagen	Eurovan	GLS, MV, Camper, Weekender Package
30-443	Volkswagen	Routan	S, SE, SEL Premium/RSE
30-498	Volkswagen	Other (light truck)	
30-499	Volkswagen	Unknown (light truck)	
30-998	Volkswagen	Other (vehicle)	

30-999	Volkswagen	Unknown (VOLKSWAGEN)	
31-031	Alfa Romeo	Spider (Spyder)	
31-032	Alfa Romeo	Sports Sedan	
31-033	Alfa Romeo	Sprint/Special	
31-034	Alfa Romeo	GTV-6	
31-035	Alfa Romeo	164 (Alpha 164)	
31-036	Alfa Romeo	4c	Launch Edition, Base, Spider
31-037	Alfa Romeo	Giulia	Base, Ti, Quadrifoglio
31-398	Alfa Romeo	Other (automobile)	
31-399	Alfa Romeo	Unknown (automobile)	
31-401	Alfa Romeo	Stelvio (For 2018 only. For model years 2019 on, see 31-422.)	Base, Ti, Quadrifoglio
31-422	Alfa Romeo	Stelvio (For 2019 on. For model year 2018, see 31-401.)	Base, Ti, Quadrifoglio
31-999	Alfa Romeo	Unknown (ALFA ROMEO)	--
32-031	Audi	Super 90	
32-032	Audi	100	
32-033	Audi	Fox	
32-034	Audi	4000	
32-035	Audi	5000	
32-036	Audi	80/90	
32-037	Audi	200	
32-038	Audi	V-8 Quattro	
32-039	Audi	Coupe Quattro	
32-040	Audi	S4 (1992-1994; 2000-2011 only. See model 055 for 2012 on)/S6 (1992-1994; 2000-2011 only. See model 056 for 2013 on.)	Quattro, Avant Quattro (Wagon), 4.2 Saloon, Avant (2.7), RS4, Special Edition
32-041	Audi	Cabriolet (1994-1998)	
32-042	Audi	A6	Avant Quattro Wagon (3.0L, 3.0T), Quattro (2.7T, 4.2), FrontTrak (2.8, 3.0L), RS6, 3.2, S Line, 3.0T, (Premium, Premium Plus, Prestige), 2.0T (Premium, Premium Plus), Special Edition
32-043	Audi	A4	Avant Wagon (1.8T, 2.0T, 2.8, 3.0, 3.2), Avant Quattro Wagon, FrontTrak (1.8, 2.8, 3.0),Quattro (1.8T, 2.0T, 3.0, 3.2), Special Edition, S Line, 2.0T(Premium, Premium Plus, Prestige)

32-044	Audi	A8	4.2 Quattro, L (3.0, 4.0), W12 (6.3), NWB, 3.0T, 4.0T, TDI, Sport
32-045	Audi	TT/TTS	FWD, Quattro AWD, 180, 225 Quattro Roadster, FrontTrak (180), 1.8L, 2.0, 3.2L, S Line, RS (Premium, Premium Plus, Prestige), 2.0T (Premium Plus, Prestiage)
32-046	Audi	S8	4.2 Quattro, 5.2, 4.0 TFSI, Plus (4.0)
32-047	Audi	Allroad (2001-05 only. See 403 for 2013 on)	
32-048	Audi	A3	2.0T/FSI, 3.2 S Line (Premium, Premium Plus), TDI, 1.8, Prestige, Sportback e-tron (Premium, Premium Plus, Prestige)
32-049	Audi	A5	2.0, 2.0T, 3.2, (Premium, Premium Plus, Prestige), Quattro
32-050	Audi	R8	4.2, 5.2, Spyder (V8, V10), GT (V8, V10, V10 Plus)
32-051	Audi	A7	4.2, 5.2, Spyder, GT (Spyder), (V8, V10, V10 Plus)
32-052	Audi	S5	4.2, 3.0T (Premium Plus, Prestige), Quattro
32-054	Audi	RS5	4.2 Prestige, V8
32-055	Audi	S4 (2012 on only. See model 040 for 1992-1994; 2000-2011)	3.0T Prestige, Premium Plus
32-056	Audi	S6 (2013 on. See model 040 for 1992-1994; 2000-2011)	4.0TFSI Premium Plus, Prestige
32-057	Audi	S7	4.0, Premium Plus, Prestige
32-058	Audi	RS7	4.0 TFSI, Performance
32-059	Audi	S3	2.0 (Premium Plus, Prestige)
32-060	Audi	RS3	--
32-398	Audi	Other (automobile)	
32-399	Audi	Unknown (automobile)	
32-401	Audi	Q7 (For 2007-2018 only. For model years 2019 on, see 32-422.)	3.6/4.2, 3.0T, TDI(Premium, Premium Plus,Prestige) Hybrid, S Line,
32-402	Audi	Q5	2.0T, 3.2, 3.0T (Premium, Premium Plus, Prestige), Hybrid (2.0)
32-403	Audi	Allroad (2013 on. For 2001-2005 see model 047.)	2.0T (Premium, Premium Plus, Prestige)
32-404	Audi	SQ5	3.0 (Premium Plus, Prestige)
32-405	Audi	Q3	2.0 TFSI (Premium Plus, Prestige)
32-406	Audi	e-Tron	Premium Plus, Prestige
32-421	Audi	Q8	Premium, Premium Plus, Prestige
32-422	Audi	Q7 (For 2019 on. For model years 2007-2018, see 32-401.)	2.0T, 3.0T

32-499	Audi	Unknown (light truck)	
32-999	Audi	Unknown (AUDI)	
33-031	Austin/Austin Healey	Marina	
33-032	Austin/Austin Healey	America	
33-033	Austin/Austin Healey	Healey Sprite	
33-034	Austin/Austin Healey	Healey 100/3000	
33-035	Austin/Austin Healey	Mini/Mini Cooper/Mini Moke	
33-398	Austin/Austin Healey	Other (automobile)	
33-399	Austin/Austin Healey	Unknown (automobile)	
34-031	BMW	1600, 1800, 2000,2002	
34-032	BMW	Coupe (before 1975)	
34-033	BMW	Bavarian Sedan	
34-034	BMW	3-series	3.0s/si, 318i/is/ti/iC, 320i, 323iS/iC/i/Ci,325e/es/i/iS/ii/ C/Ci/Cic/xi/iT/xiT, Sport Wagon (iT/xiT), 328d/i/iS/ti/ iC/Ci/x/xi, xDrive, 330e/i/Ci/ Cic/xi, 335i/is/xi/d, 340i, xDrive, ActiveHybrid, M3, Gran Turismo (328i), 340i
34-035	BMW	5-series	524i,525i/xi,/iT528i/iT/xi, xDrive, 530e/i/iT/xi,533i, 535d/i/xi,xDrive, 550i, xDrive 540/i/iA/iT, TD Sport Wagon, (wagon 1992-93), M5, 545i, 550i/ix, Gran Turismo (535i, 550i), ActiveHybrid 5
34-036	BMW	6-series	630, 633, 635, csi, M6, L6, 640i, 645Ci, 650i/ix, Neiman Marcus Edition, xDrive, Alpina B, B6, Gran Turismo (640i)
34-037	BMW	7-series	733i, 735i, L7, 740 e/d/i/L/iL /iA/Li Protection,750 i/iL/Li/ Lxi/ix Protection,745i/Li, 760i/Li, Alpina B7, Individual, ActiveHybrid 7, xDrive, M760i
34-038	BMW	8-series	840Ci/cia, 850i/iS/Ci/Cia, xDrive
34-039	BMW	Z3	
34-040	BMW	Z8	
34-041	BMW	V5	
34-042	BMW	Z4	2.5i, 2.8i, 3.0i/si, 3.5i/is, Z4M/s/sDrive, 28i, 30i, 35s
34-043	BMW	1-Series	128i, 135i/is

34-044	BMW	X6 (For 2008-2015. For 2016 on, see model 404.)	
34-045	BMW	i3	Base, Range Extender, s
34-046	BMW	i8	
34-047	BMW	4-Series	428i, 435i, xDrive, M4, 430i, 440i
34-048	BMW	2-Series	228i, 230i, M235i, M240i, Xdrive, M2
34-049	BMW	X4	28i, 35i, M40i, 30i
34-398	BMW	Other (automobile)	
34-399	BMW	Unknown (automobile)	
34-401	BMW	X5 (For 2000-16. For 2017 on, see model 421).	3.0i/si, 4.0is, 4.4i, 4.6is, 4.8is, M, 35i/d, Premium, 50i, Sport Activity, Premium, sDrive
34-402	BMW	X3	25i, 28 d/i, 30i/xDrive, 35i, 4.8is, M40i, M Sports, xLine, Luxury Package
34-403	BMW	X1	28i/is, 35i, xDrive, xLine
34-404	BMW	X6 (For 2016 on. For 2008-2015, see model 044.)	35i, 50i, xDrive, sDrive, M
34-405	BMW	X2	M35i
34-421	BMW	X5 (For 2017 on. For 2000-16, see model 401)	35i/d, 40e, 50i, M
34-422	BMW	X7	30i/40i xDrive
34-499	BMW	Unknown (light truck)	
34-703	BMW	125-349cc	G310
34-705	BMW	450-749cc	
34-706	BMW	750cc and over	
34-709	BMW	Unknown cc	
34-999	BMW	Unknown (BMW)	
35-031	Nissan/Datsun	F-10	
35-032	Nissan/Datsun	200SX/240SX	
35-033	Nissan/Datsun	210/1200/B210	
35-034	Nissan/Datsun	Z-car, ZX	
35-035	Nissan/Datsun	310	
35-036	Nissan/Datsun	510	
35-037	Nissan/Datsun	610	
35-038	Nissan/Datsun	710	

35-039	Nissan/Datsun	810/Maxima	SE (Titanium Special), GXE, GLE, 2.5 (S/SR/SL/SV), 3.5SE/SL/SEL/S/SV/SR, Platinum Edition, Midnight Edition, Platinum Reserve
35-040	Nissan/Datsun	Roadster	
35-041	Nissan/Datsun	311/411	
35-042	Nissan/Datsun	Stanza	
35-043	Nissan/Datsun	Sentra	E, XE, GXE, S, SE, SE-R (Spec V), GLE, CA, 2.5LE, 1.8, 1.8S, 2.0/S/SL/SR, Special Edition, Platinum Edition, Spec-V, FE, SV, FE+S, Nismo, SR Turbo
35-044	Nissan/Datsun	Pulsar	
35-045	Nissan/Datsun	Micra	
35-046	Nissan/Datsun	NX 1600/2000	
35-047	Nissan/Datsun	Altima	XE, GXE, SE, GLE, 2.5 S/SL/SR/SV, 3.5 S/SE/SL/SR/SV, SE-R, Hybrid, SR (Base, Midnight), Platinum, Special Edition, Edition One, VC-Turbo
35-048	Nissan/Datsun	350Z/370Z	Enthusiast, Performance, Touring, Track, Base, 35th Anniversary, Grand Touring, Nismo, 40th Anniversary, Sport, Sport Tech, Nismo Tech, Touring Sport, Heritage Edition (Magnetic Black, Pearl White, Deep Blue Pearl, and Chicane Yellow), 50th Anniversary Edition
35-049	Nissan/Datsun	Murano (For 2003-2018 only. For model years 2019 on, see 35-422.)	SE, SL, S, LE, SV, CrossCabriolet, Platinum, S Plus
35-050	Nissan/Datsun	Versa	1.8S/SL, 1.6 S/SV/SL, Plus, Note (S, S Plus, SV, SR, SL), S Plus, SR, SV Special Edition
35-051	Nissan/Datsun	Rogue (For 2008-2018 only. For model years 2019 on, see 35-404.)	S, SL, SV, Krom/Special Edition, Select (S) Sport
35-052	Nissan/Datsun	Cube	1.8 S/SL, Krom Edition, Indigo Edition
35-053	Nissan/Datsun	GT-R	Base, Premium, Black Edition, Track Edition, Nismo, 45th Anniversary, Pure, 50th Anniversary
35-055	Nissan/Datsun	Leaf	S, SL, SV, Plus
35-056	Nissan/Datsun	Kicks	S, SV, SR
35-398	Nissan/Datsun	Other (automobile)	
35-399	Nissan/Datsun	Unknown (automobile)	
35-401	Nissan/Datsun	Pathfinder	MPV, 4X4, XE, LE, SE, S, Off-Road, FE+, SV, Silver Edition, Hybrid, SL (Tech, Premium), Platinum, SL

35-402	Nissan/Datsun	Xterra	XE (I-4), SE, (S/C), SE-R, Spec V, X, S, Off-Road, Pro-4X
35-403	Nissan/Datsun	Juke	S, SL, SV, Nismo, Nismo RS
35-404	Nissan/Datsun	Rogue (For 2019 on. For model years 2008-2018, see 35-051.)	S, SV, SL, Hybrid, Sport (S, SV, SL)
35-421	Nissan/Datsun	Pathfinder Armada	LE, SE, SE Off-Road, Titanium, Platinum (Base/Reserve), SV, SL
35-422	Nissan/Datsun	Murano (For 2019 on. For model years 2003-2018, see 35-056.)	S, SV, SL, Platinum
35-441	Nissan/Datsun	Van	XE, GXE
35-442	Nissan/Datsun	Axxess	
35-443	Nissan/Datsun	Quest	XE, GXE, SE, GLE, 3.5 S/SE/SL, Special Edition, SV, LE, Platinum
35-444	Nissan/Datsun	Altra EV*	(electric vehicle*)
35-446	Nissan/Datsun	NV200/eNV200	S, SV, Taxi, Compact Cargo, Passenger (S, SL,SV), HD Cargo
35-461	Nissan/Datsun	NV	1500 (S, SV), 2500 HD (S, SV), 3500 (S, SV, SL)
35-471	Nissan/Datsun	Datsun/Nissan Pickup 1955-1997)	120,620 series, King Cab,Hardbody, XE, SE
35-472	Nissan/Datsun	Frontier (1998 on)	XE, SE, S/C (Regular Cab, King Cab, Desert Runner, Crew Cab), Open-Sky, SVE, Nismo, Pro-4X, LE, SV, SL, S, Diesel Runner, Midnight Edition
35-473	Nissan/Datsun	Titan (from 2004-06; see 481 for 2007 on)	E, LE, SE, XE
35-481	Nissan/Datsun	Titan (from 2007 on; see 473 for 2004-06)	LE, SE, XE, PRO-4X, S, SV, SL, XD (S, SV, SL, Platinum Reserve), Platinum, Platinum Reserve, Midnight Edition
35-498	Nissan/Datsun	Other (light truck)	Patrol (1960)
35-499	Nissan/Datsun	Unknown (light truck)	
35-870	Nissan/Datsun	Medium/Heavy Van-Based Vehicle	NV
35-883	Nissan/Datsun	Medium/Heavy – COE high entry	
35-898	Nissan/Datsun	Other (medium/heavy truck)	
35-999	Nissan/Datsun	Unknown (NISSAN/DATSUN)	
36-031	Fiat	124 (Coupe/Sedan)	
36-032	Fiat	124 Spider/Racer	
36-033	Fiat	Brava/131	
36-034	Fiat	850 (Coupe/Spider)	
36-035	Fiat	128	
36-036	Fiat	X-1/9	

36-037	Fiat	Strada	
36-038	Fiat	500/500c	Abarth, Pop, Sport, Lounge, e, Cabrio, Turbo, Cattiva, Gucci, eSport, GQ Edition, 1957 Edition
36-039	Fiat	124 Spider	Classica, Abarth, Lusso
36-398	Fiat	Other (automobile)	
36-399	Fiat	Unknown (automobile)	
36-401	Fiat	500L	Pop, Easy, Trekking, Lounge, Urbana
36-402	Fiat	500X	Pop, Easy, Trekking, Lounge, Trekking Plus
36-499	Fiat	Unknown (light truck)	
36-882	Fiat	Medium/Heavy – COE low entry	
36-883	Fiat	Medium/Heavy – COE high entry	
36-890	Fiat	Medium/Heavy – COE entry position unknown	
36-898	Fiat	Other (medium/heavy truck)	
36-998	Fiat	Other (vehicle)	
36-999	Fiat	Unknown (FIAT)	
37-031	Honda	Civic/CRX, del Sol	1300, 1500, CVCC, DX, EX, VX, CX, FE, CRX, CRX Si, S, Si, HF, LX, 4WD Wagon, GX (NGV), HX, VTEC, VP, Si, Civic, Hybrid, Special Edition, EX-L, DX-VP, LX-S, Natural Gas, Sport, Sport Touring, EX-T, LX-P, Touring, Type R
37-032	Honda	Accord (Note: For Crosstour model years 2010 and 2011 only. For Crosstour model years 2012-2015, see	
vehicle model 37-405)	LX (V-6, ULEV), LXI, DX, CVCC,SE-I,LX-I,V-6, SJE, SME, SMH, SMK, EX (Wagon, ULEV, V-6), SE (ULEV), Special Edition, Hybrid (Base, EX-L, Touring), Value Package, LX-S, LX-P, EX-L, Crosstour (EX, EX-L, EX(V6),		

	EX-L (V6)), Premium, Plug-In Hybrid, Sport, Hybrid(EX-L, Touring), Touring,Sport Special Edition, EX-T		
37-033	Honda	Prelude	
37-034	Honda	600	
37-035	Honda	S2000	
37-036	Honda	EV Plus*	*Electric vehicle (EV+)
37-037	Honda	Insight	*(Gasoline-Electric), MT/CVT, LX, EX, Touring
37-038	Honda	FCX/Clarity	Hydrogen Vehicle, Clarity, Electric, Fuel Cell, Touring
37-039	Honda	Fit	Base, DX, LX, Sport, EV, EX, EX-L
37-041	Honda	CR-Z	EX, Hybrid, Sport, LX, EX-L
37-398	Honda	Other (automobile)	
37-399	Honda	Unknown (automobile)	
37-401	Honda	Passport	LX, EX, DX, EX-L
37-402	Honda	CR-V	LX, EX, Special Edition (SE), SC, EX-L, Touring
37-403	Honda	Element	DX, EX, EX-P, LX, SC, Dog Friendly
37-404	Honda	HR-V	EX, EX-L, LX, Sport, Touring
37-405	Honda	Crosstour (2012-2015 only. See vehicle model 37-032 for model years	
2010 and 2011.)	Base, Luxury, Premium		
37-421	Honda	Pilot	EX, EX-L, LX, SE, Value Package, Touring, Elite
37-422	Honda	Passport (2019 on. For 1994-2002 see model 401.)	Sport, Elite, EX-L, Touring
37-441	Honda	Odyssey	LX, EX, EX-L (Res, NAVI), Touring, Touring Elite, SE, Special Edition
37-471	Honda	Ridgeline	RT, RTL, RTL-T, RTL-E,RTS, RTX, Sport, Black Edition
37-498	Honda	Other (light truck)	
37-499	Honda	Unknown (light truck)	

37-701	Honda	0- 50 cc	
37-702	Honda	51-124 cc	
37-703	Honda	125-349 cc	
37-704	Honda	350-449 cc	
37-705	Honda	450-749 cc	
37-706	Honda	750 cc or greater	
37-709	Honda	Unknown cc	
37-732	Honda	51-124cc (ATV)	
37-733	Honda	125-349cc (ATV)	
37-734	Honda	350cc or greater (ATV)	
37-739	Honda	Unknown cc (ATV)	
37-998	Honda	(Other Vehicle)	
37-999	Honda	Unknown (HONDA)	
38-031	Isuzu	I-Mark	
38-032	Isuzu	Impulse	
38-033	Isuzu	Stylus	
38-398	Isuzu	Other (automobile)	
38-399	Isuzu	Unknown (automobile)	
38-401	Isuzu	Trooper/Trooper II	Deluxe, LS, S, LTD
38-402	Isuzu	Rodeo/ Rodeo Sport	S, LS, LSE
38-403	Isuzu	Amigo	
38-404	Isuzu	VehiCROSS	VXO
38-405	Isuzu	Axiom	XS
38-421	Isuzu	Ascender	LS, S, Limited, Luxury
38-441	Isuzu	Oasis	S, LS
38-471	Isuzu	P'up (pickup)	4 X 4
38-472	Isuzu	Hombre	S, XS, XS Space Cab
38-473	Isuzu	i-280/i-290	S, LS, Luxury
38-474	Isuzu	i-350/i-370	LS, Limited, S
38-498	Isuzu	Other (light truck)	
38-499	Isuzu	Unknown (light truck)	
38-881	Isuzu	Medium/Heavy – CBE	
38-882	Isuzu	Medium/Heavy – COE, low entry	NOR, NPR,NQR, N Series
38-883	Isuzu	Medium/Heavy – COE, high entry	FRR, FRRI, FSR, FTR,FVR, F Series

38-884	Isuzu	Medium/Heavy – Unknown engine location	
38-890	Isuzu	Medium/Heavy – COE entry position unknown	
38-898	Isuzu	Other (medium/heavy truck)	
38-981	Isuzu	Bus**: Conventional (Engine out front)	
38-982	Isuzu	Bus: Front engine, Flat front	
38-983	Isuzu	Bus: Rear engine Flat front	
38-988	Isuzu	Other (bus)	
38-989	Isuzu	Unknown (bus)	
38-999	Isuzu	Unknown (ISUZU)	
39-031	Jaguar	XJ-S, XK8 Coupe	
39-032	Jaguar	XJ/XJL/XJ6/12/XJR/XJ8/ XJ8L Sedan/Coupe	Mk II, Mk X, XJ,3.85, 3.8, 340/420 Sedan; XJ8(LWB, L,Vanden Plas, Sport); XJ6(L), C, L, Vanden Plas, III, GT, Super 8, Limited, Portfolio, Supersport, Supercharged, Ultimate, Standard Wheelbase, Long Wheelbase, R-Sport, 50th Anniversary Special Edition
39-033	Jaguar	XK-E	
39-034	Jaguar	S-Type	
39-035	Jaguar	XKR/XK	Victory Edition, Portfolio, 175 Limited Edition, Black Pack, XKR-S
39-036	Jaguar	X-Type	
39-037	Jaguar	XF/XFR	4.2 Luxury, S, Premium Luxury, Supercharged, 3.0, 2.0T, Portfolio, Sport, Prestige, R-Sport, S, Sportbrake (First Edition, S, Prestige)
39-038	Jaguar	F-Type	S, V8, Project 7, Premium, SVR, Type R, British Design Edition, R-Dynamic, 400 Sport, Checkered Flag
39-039	Jaguar	XE	Premium, Prestige, R-Sport, R-Dynamic, S
39-398	Jaguar	Other (automobile)	
39-399	Jaguar	Unknown (automobile)	
39-401	Jaguar	F-Pace	20d/35t (Premium, Prestige, First Edition, Sport, R-Sport, S), SVR, Portfolio
39-402	Jaguar	E-Pace	Base, S, SE, R-Dynamic (S, SE, HSE), First Edition
39-403	Jaguar	I-Pace	Base, First Edition, e-Trophy, S, SE, HSE
39-499	Jaguar	Unknown (light truck)	--
39-999	Jaguar	Unknown (JAGUAR)	

40-031	Lancia	Beta Sedan – HPE	
40-032	Lancia	Zagato	
40-033	Lancia	Scorpion	
40-398	Lancia	Other (automobile)	
40-399	Lancia	Unknown (automobile)	
41-031	Mazda	RX2	
41-032	Mazda	RX3	
41-033	Mazda	RX4	
41-034	Mazda	RX7	
41-035	Mazda	323/GLC/ Protégé/ Protégé5	
41-036	Mazda	Cosmo	
41-037	Mazda	626	
41-038	Mazda	808	
41-039	Mazda	Mizer	
41-040	Mazda	R-100	
41-041	Mazda	616/618	
41-042	Mazda	1800	
41-043	Mazda	929	
41-044	Mazda	MX-6	
41-045	Mazda	Miata/MX-5	Miata (LS), SE, SV, Mazdaspeed, Sport, Touring, Grand Touring, Club, Special, Special Edition, PRHT, RF (Club, Grand Touring),30th Anniversary
41-046	Mazda	MX-3	
41-047	Mazda	Millenia	
41-048	Mazda	MP3	
41-049	Mazda	RX-8	
41-050	Mazda	Mazda6	Grand Touring, Sport, Mazdaspeed6, Grand Sport, SV, Plus, Touring, Skyactiv-D
41-051	Mazda	Mazda3	i (Sport, Touring, Grand Touring, SV) s (Touring, Grand Touring), SP23, Value, Mazdaspeed3, Touring 2.5, Select, Preferred, Premium
41-052	Mazda	Mazda5	Sport, Touring
41-053	Mazda	CX-7	Sport, Touring, Grand Touring
41-054	Mazda	CX-9 (2007-12 only.For 2013 on see model 421.)	Sport Touring, Grand Touring

41-055	Mazda	Mazda2	Sport, Touring
41-056	Mazda	CX-3	Sport, Touring, Grand Touring
41-398	Mazda	Other (automobile)	
41-399	Mazda	Unknown (automobile)	
41-401	Mazda	Navajo	
41-402	Mazda	Tribute	DX, DX-V6, LX-V6, ES-V6, ES, LX, i, s, Hybrid, Sport, Grand Touring, Touring
41-403	Mazda	CX5	Sport, Touring, Grand Touring, Diesel, Reserve, Signature, Skyactiv-D
41-421	Mazda	CX-9 (2013 on. See model 054 for 2007-12 model years.)	Sport, Touring, Grand Touring, Signature
41-441	Mazda	MPV	LX, ES, DX, All Sport, LX-SV
41-471	Mazda	Pickup/ B-Series Pickup	B2000, B2200, B2300, SE-5, LX, SE (2WD, 4WD), SX, DS, Cab Plus, B2500/B2600/B3000/B4000, Dual Sport Cab
41-498	Mazda	Other (light truck)	
41-499	Mazda	Unknown (light truck)	
41-999	Mazda	Unknown (MAZDA)	
42-031	Mercedes-Benz	200/220/230/240/ 250/260/280/300/ 320/420	
42-032	Mercedes-Benz	230/280 SL	
42-033	Mercedes-Benz	300/350/380/450/500/ 560 SL	
42-034	Mercedes-Benz	350/380/420/450/560 SLC	
42-035	Mercedes-Benz	280/300 SEL	
42-036	Mercedes-Benz	300/380/420/450/500/560/SEL & 500/560, 600 SEC & 300/350 SDL	
42-037	Mercedes-Benz	300/380/450 SE	
42-038	Mercedes-Benz	600, 6.9 Sedan	
42-039	Mercedes-Benz	190	
42-040	Mercedes-Benz	300	
42-041	Mercedes-Benz	400/500E	
42-042	Mercedes-Benz	C Class (94 on)	C220/C230 (Kompressor)/ C240/250/280/300/320/350/400 (W)/C32/ 36/43/55/63/63S AMG, Sport, Luxury, 450 (AMG), 350e Plug-In Hybrid

42-043	Mercedes-Benz	S Class (95 on)	S320/350/400(V)/420/430/ 450/500/550/560(V/e/Maybach)/600(V), 55/63/65 (AMG), Hybrid, 4-M, S600 (Maybach)
42-044	Mercedes-Benz	SL Class (95 on)	SL320/400/450/500/550(R)/ 600(R), Silver Arrow Edition, SL55/63/65 AMG
42-045	Mercedes-Benz	SLK	SLK230/280/300/320/350 (Sport), Kompressor, SLK 32/55 (AMG), Special Edition
42-046	Mercedes-Benz	CL Class	
42-047	Mercedes-Benz	CLK	CLK 320/350/430/500, Cabriolet, CLK 55(AMG)
42-048	Mercedes-Benz	E Class (97 on)	250/300/TD, 320/350 (4-M,A,C,S,W)/400/ 420/430/500/550 (4-M,A,C, W), 43/53/55/63/63S AMG, 320CDI, Hybrid
42-049	Mercedes-Benz	SLR	
42-050	Mercedes-Benz	R Class	R350, R500
42-051	Mercedes-Benz	CLS Class	CLS400/450/500/550, CLS 53/55/63/63S AMG
42-052	Mercedes-Benz	SLS Class	AMG (C/GT) Final Edition
42-053	Mercedes-Benz	B Class	250e
42-054	Mercedes-Benz	CLA Class	250, 45
42-055	Mercedes-Benz	GLA Class	250, 45 AMG
42-056	Mercedes-Benz	AMG GT S	450
42-057	Mercedes-Benz	SLC Series	300, 43 (AMG)
42-058	Mercedes-Benz	A-Class	220
42-398	Mercedes-Benz	Other (automobile)	
42-399	Mercedes-Benz	Unknown (automobile)	
42-401	Mercedes-Benz	M/ML Class	ML250/320/350/400/430/ 450/500/550, 55/63 AMG Special Edition, Hybrid, 4-M
42-402	Mercedes-Benz	G Class	G500/550, G55/63/65 (AMG)
42-403	Mercedes-Benz	GLK Class	220/280/320/350
42-404	Mercedes-Benz	GLE Class (For 2016-2018 only. For model years 2019 on, see 42-423.)	300d3/50/550e, 43/63/63S (AMG), Coupe (450, AMG - 43/63S)
42-405	Mercedes-Benz	GLC Class	300, 43/63/63S (AMG), Coupe (300, AMG 43)
42-421	Mercedes-Benz	GL Class	GL320/350/450/550, GL63 (AMG)
42-422	Mercedes-Benz	GLS Class	450, 550, 63 (AMG)
42-423	Mercedes-Benz	GLE Class (For 2019 on. For model years 2016-2018, see 42-404.)	400, 43/63/63S AMG

42-461	Mercedes-Benz	SPRINTER	(2004-2010 on see “Freightliner” and “Dodge”)
42-462	Mercedes-Benz	Metris	Cargo, Passenger
42-470	Mercedes-Benz	Van derivative	Kurbstar
42-498	Mercedes-Benz	Other (light truck)	
42-499	Mercedes-Benz	Unknown (light truck)	
42-850	Mercedes-Benz	Motor Home	Sprinter based
42-870	Mercedes-Benz	Medium Heavy Van-Based Vehicle	Sprinter
42-881	Mercedes-Benz	Medium/Heavy - CBE	
42-882	Mercedes-Benz	Medium/Heavy – COE low entry	
42-883	Mercedes-Benz	Medium/Heavy – COE high entry	
42-884	Mercedes-Benz	Medium/Heavy – Unknown engine location	
42-890	Mercedes-Benz	Medium/Heavy – COE entry position unknown	
42-898	Mercedes-Benz	Other (medium/heavy truck)	
42-981	Mercedes-Benz	Bus**: Conventional (Engine out front)	
42-988	Mercedes-Benz	Other (bus)	
42-989	Mercedes-Benz	Unknown (bus)	
42-998	Mercedes-Benz	Other (vehicle)	
42-999	Mercedes-Benz	Unknown (MERCEDES-BENZ)	
43-031	MG	Midget	
43-032	MG	MGB	
43-033	MG	MGB	
43-034	MG	MGA	
43-035	MG	TA/TC/TD/TF	
43-036	MG	MGC	
43-037	MG	Magnette/Sports Sedans	
43-398	MG	Other (automobile)	
43-399	MG	Unknown (automobile)	
44-031	Peugeot	304	
44-032	Peugeot	403	
44-033	Peugeot	404	
44-034	Peugeot	504/505	

44-035	Peugeot	604	
44-036	Peugeot	405	
44-398	Peugeot	Other (automobile)	202, 203
44-399	Peugeot	Unknown (automobile)	
44-701	Peugeot	0 - 50 cc	
44-702	Peugeot	51-124cc	
44-709	Peugeot	Unknown cc	
44-999	Peugeot	Unknown (PEUGEOT)	
45-031	Porsche	911/996	L, S, E, T, SC, Carrera (2, 4, Cabriolet, S, Targa, T), GT, Slopenose, 4S, Targa, Speedster, Turbo (Base, S, S Exclusive, Cabriolet), B series, S-Coupe, Cabriolet (S), GT2, GT3 (RS), GT, GTS, 4 GTS (Carrera/Targa)
45-032	Porsche	912	
45-033	Porsche	914	
45-034	Porsche	924	
45-035	Porsche	928	
45-036	Porsche	930	
45-037	Porsche	944	
45-038	Porsche	959	
45-039	Porsche	968	
45-040	Porsche	986/Boxster	Boxster, Boxster Cabriolet, S Roadster, S Anniversary, Limited Edition, Spyder, Black Edition, GTS
45-041	Porsche	Cayman	S, Hybrid, Black Edition, R, GTS, GT4
45-042	Porsche	Panamera	S, 4, 4S, Turbo, Turbo S, Hybrid, GTS, S, Platinum Edition, Executive, Edition, Exclusive, Sport Turismo (Base/4S/E-Hybrid/S E-Hybrid/Turbo),
45-043	Porsche	918	Spyder, Weissach Pkg
45-044	Porsche	718	Cayman (Base, S, GTS), Boxster (Base, S, GTS)
45-398	Porsche	Other (automobile)	Spyder, Speedster (prior to ’65), 356 (A,B,C) Grund, America, Super, 1500
45-399	Porsche	Unknown (automobile)	
45-401	Porsche	Macan	S, S Diesel, Turbo, GTS
45-421	Porsche	Cayenne	Turbo, S, Titanium, GTS (PD Edition),Transsyberia, Hybrid, Diesel, E-Hybrid
45-499	Porsche	Unknown (light truck)	S, S Diesel, Turbo
45-999	Porsche	Unknown(PORSCHE)	

46-031	Renault	LeCar	
46-032	Renault	Dauphine/10/R-8 Caravelle	
46-033	Renault	12	
46-034	Renault	15	
46-035	Renault	16	
46-036	Renault	17	
46-037	Renault	18i/Sportwagon	
46-038	Renault	Fuego	TL, TS, GTL, GTS, Turbo
46-039	Renault	Alliance/Encore GTA, Convertible	
46-041	Renault	Alpine	
46-044	Renault	Medallion **	
46-045	Renault	Premier**	
46-398	Renault	Other (automobile)	Juvaquatre, 4CV, Fregate, Domaine
46-399	Renault	Unknown (automobile)	
47-031	Saab	99/99E/900	
47-032	Saab	Sonnett	
47-033	Saab	95/96	
47-034	Saab	9000	
47-035	Saab	9-3/9-3X	SE (Hot), Viggen, Linear Arc, Vector, Aero, 2.0T, SportCombi, Combi, Estate
47-036	Saab	9-5	SE, Aero, 2.3T, Set, Arc, Linear, Aero, SportCombi, 2.5T, Turbo X, Vector
47-037	Saab	9-2X	Linear, Aero
47-038	Saab	9-4X	
47-398	Saab	Other (automobile)	Monte Carlo 850, GT850, GT750, 92/93
47-399	Saab	Unknown (automobile)	
47-401	Saab	9-7x	Arc, Linear, 4.2i, 5.3i, Altitude Edition, Aero
47-999	Saab	Unknown(SAAB)	
48-031	Subaru	Loyale (1990 on)/DL/ FE/G/GF/GL/GLF/STD	
48-032	Subaru	Star	
48-033	Subaru	360	
48-034	Subaru	Legacy/Outback(prior to 2003 only; see 045 for 2003 on)	L, LS, LSI, 4WD, Outback (Limited, Ltd, Sport, VDC, L.L. Bean Edition), GT, Brighton, Sport Utility Sedan (Ltd.), 30th Anniv. Outback, H-6, 35th Anniv., 2.5, 2.5i(Base, Premium, Sport,

			Limited) GT, spec. B, 3.0R, Limited, Premium, Sport, 3.6R (Base, Limited)
48-035	Subaru	XT/XT6	4WD Turbo, convertible, DL, GL
48-036	Subaru	Justy	
48-037	Subaru	SVX	
48-038	Subaru	Impreza	L, LS, Brighton, Outback Sport, RS, L-Sport, LX, 2.5i/RS/S/TS/ GT, WRX, WRX Sport/STI/SS/ TR, Limited Edition, Premium, SE, STI, STI-S, 2.0i (Premium, Limited, Sport, Sport Limited)
48-039	Subaru	RX	
48-043	Subaru	Brat	
48-044	Subaru	Baja	Sport, Turbo
48-045	Subaru	Outback (2003 on)(see 034 for prior to 2003)	H6-VDC, 35th Anniversary Edition, 2.5, 2.5i (Premium, Limited, Touring), 2.5XT, 3.0R, Special Edition, VDC Limited, Sport, L.L. Bean Edition, 3.0R. Premium, 3.6R (Limited, Touring)
48-046	Subaru	BRZ	Premium, Limited, tS
48-047	Subaru	WRX (2015 on; see 038 for prior to 2015.)	Premium, Limited, Sti (Base, Limited, Type RA)
48-398	Subaru	Other (automobile)	
48-399	Subaru	Unknown (automobile)	
48-401	Subaru	Forester	L, S, 2.5X, 2.5XS, 2.5XT, L.L. Bean Edition, Limited (Plus), Sport, Premium, Touring
48-402	Subaru	B9 Tribeca	Base, Limited, Special Edition, Premium, Touring, 3.6R
48-403	Subaru	XV Crosstrek	2.0i Premium/Limited, Hybrid (Premium, Touring)
48-421	Subaru	Ascent	Base, Premium, Limited, Touring
48-499	Subaru	Unknown (light truck)	
48-999	Subaru	Unknown (SUBARU)	
49-031	Toyota	Corona	
49-032	Toyota	Corolla	1100, 1200, 1600, SR-5, LE, DX, CE, Deluxe, Custom, FX, FX16, Sport, GTS, VE, S, XRS, XLE, CE, L, Special Edition, LE Eco`, 50th Anniversary, XSE, iM, SE CVT
49-033	Toyota	Celica	1900, 2000, GT, ST, GTS, VE, GT-S
49-034	Toyota	Supra	
49-035	Toyota	Cressida	
49-036	Toyota	Crown	
49-037	Toyota	Carina	
49-038	Toyota	Tercel	

49-039	Toyota	Starlet	
49-040	Toyota	Camry	LE, Deluxe, XLE, DLX, SE, All-Trac, CE, SE, Limited Edition, L, Hybrid (CVT/LE/XLE/SE), XSE, Special Edition
49-041	Toyota	MR-2/MR Spyder	
49-042	Toyota	Paseo	
49-043	Toyota	Avalon	XL, XLS, Limited, Touring, XLE, Hybrid, Premium, Sport, Plus
49-044	Toyota	Solara	
49-045	Toyota	ECHO	
49-046	Toyota	Prius *	*Electric hybrid, Touring, II, III, IV, V(2/3/4/5), (CVT), 3rd Generation (2/3/4/5), Plug-In (Base/Advanced), c (1/2/3/4,L, LE), Personal Series, Two, Two Eco, Three, Three Touring, Four, Four Touring, Prime (Plus, Premium, Advanced)
49-047	Toyota	Matrix	Base, XR, XRS, STD, S, SD
49-048	Toyota	Scion xA	
49-049	Toyota	Scion xB (2004-2011 only. See Scion for 2012 on.)	1.0, 2.0 Series
49-050	Toyota	Scion tC (2005-2011 only. See Scion for 2012 on.)	1.0 Series
49-051	Toyota	Yaris	Liftback, S, CE, HB, LB, LE, RS, SE, L, iA, XLE
49-052	Toyota	Scion xD (2007-2011 only. See Scion for 2012 on.)	
49-053	Toyota	Venza	LE, XLE, Limited
49-054	Toyota	Scion iQ (2010-2011 only. See Scion for 2012 on.)	
49-055	Toyota	Mirai	
49-056	Toyota	86	Base, GT, TRD Special Edition
49-398	Toyota	Other (automobile)	2000 GT Coupe (1960s), Sports 800, Vipor, Tiara
49-399	Toyota	Unknown (automobile)	
49-401	Toyota	4-Runner	SR5 (Base, Limited), Limited (Base, Nightshade Edition), Sport, Trail, TRD Pro, TRD Off-Road (Base, Premium)
49-402	Toyota	RAV4 *	L, LE, EVs-electric*, Sport, Limited, Hybrid (Limited, SE, XLE, LE), XLE (Base, Premium), Platinum, Adventure, SE
49-403	Toyota	Highlander	Limited, Hybrid (LE, XLE, Limited), Sport, SE, Plus, LE, LE Plus, XLE, Platinum
49-404	Toyota	FJ Cruiser	Baja 1000, FJ, SE, TRD, AT, MT
49-405	Toyota	C-HR	LE, Limited, XLE, XLE Premium
49-421	Toyota	Land Cruiser	4WD

49-422	Toyota	Sequoia	SR5, Limited, Platinum, TRD Sport
49-441	Toyota	Minivan (1984-90)/ Previa (1991 on)	LE, Cargo, DX, XLE
49-442	Toyota	Sienna	CE, LE, XLE, Symphony, Limited, SE, L
49-471	Toyota	Pickup	SR-5,Extra Cab, Sport, LN44, Chinook, Wonder Wagon
49-472	Toyota	Tacoma	SR5, Xtracab, Limited, PreRunner, Side Step, Double Cab, S-Runner, 2.7L, 4.0L, X-Runner, T/X, T/X Pro, Access Cab, TRD (Sport, Pro, Off-Road), SR
49-481	Toyota	T-100	DX, SR5, Limited, Xtracab
49-482	Toyota	Tundra	SR5 (Access Cab), LTD, (Access Cab), Double Cab, Darrell Waltrip Special Edition, CrewMax, 4.0L, 4.6L, 5.7L, Limited, SR, 1794 Edition, Plantinum, TRD Pro
49-498	Toyota	Other (light truck)	
49-499	Toyota	Unknown (light truck)	
49-999	Toyota	Unknown (TOYOTA)	
50-031	Triumph	Spitfire	
50-032	Triumph	GT-6	
50-033	Triumph	TR4	
50-034	Triumph	TR6	
50-035	Triumph	TR7/TR8	
50-036	Triumph	Herald	
50-037	Triumph	Stag	
50-398	Triumph	Other (automobile)	1800,2000,Mayflower, Renown,1200
50-399	Triumph	Unknown (automobile)	
50-701	Triumph	0-50cc	
50-702	Triumph	51-124cc	
50-703	Triumph	125-349cc	
50-704	Triumph	350-449cc	
50-705	Triumph	450-749cc	
50-706	Triumph	750cc or greater	
50-709	Triumph	Unknown cc	
50-799	Triumph	Unknown (motored cycle)	
50-999	Triumph	Unknown (TRIUMPH)	
51-031	Volvo	122	
51-032	Volvo	140/142/144/145 *	

51-033	Volvo	164	
51-034	Volvo	240 series*/DL/GL/GLT	
51-035	Volvo	260 series/GLE	
51-036	Volvo	1800	
51-037	Volvo	PV544	
51-038	Volvo	760/780	
51-039	Volvo	740	
51-040	Volvo	940	
51-041	Volvo	960	
51-042	Volvo	850	
51-043	Volvo	70 Series (For XC70 for 2014 on, use model code 402)	C70 (LT, HT,T5), S70 (GLT, T5, AWD) V70 (R, SC Cross Country, GLT, T5, M, 2.4T, 2.4, 2.5T, T6, R, 3.2) LPT, HPT. XC70
51-044	Volvo	90 Series	
51-045	Volvo	80 Series	S80 (2.9, T-6, Executive, Premier) 2.5T
51-046	Volvo	40 Series	S40, V40, LSE
51-047	Volvo	60 Series	S60 (2.4T, 2.4, 2.5 AWD, T5, Polestar), 2.4M, 2.5T, R, T5, T6, R-Design, Drive-E, Cross Country, Dynamic, Inscription, Polestar, Momentum
51-048	Volvo	V50	
51-049	Volvo	C30	T5
51-050	Volvo	XC60 (For 2008-2018 only. For model years 2019 on, see 51-404.)	3.2, T5 (Dynamic, Inscription), T6 (Dynamic, Inscription, R-Design), R-Design, Drive-E, Momentum, Plug-In Hybrid
51-051	Volvo	V60	T5, T6, R-Design, Drive-E, Cross Country, Polestar, Dynamic, Momentum, Inscription
51-052	Volvo	V90	Cross Country (Volvo Ocean Race, Inscription, R-Design)
51-053	Volvo	S90	T5 (Momentum, Inscription) T6 (Momentum, Inscription)
51-398	Volvo	Other (automobile)	
51-399	Volvo	Unknown (automobile)	
51-401	Volvo	XC90	2.5T(AWD), T6(AWD), V8, 3.2, R-Design, SVR7, First Edition, T5, Plug-In, Excellence, T8, Momentum, Inscription, Excellence
51-402	Volvo	XC70 (For 2014 on. For prior to 2013, use model code 043)	3.2, T6, Drive-E
51-403	Volvo	XC40	Momentum, R-Design, Plug-In Hybrid, Inscription

51-404	Volvo	XC60 (For 2019 on. For model years 2008-2018, see 51-050.)	Momentum, R-Design, Inscription
51-499	Volvo	Unknown (light truck)	3.2, T6
51-881	Volvo	Medium/Heavy – CBE	
51-882	Volvo	Medium/Heavy - COE low entry	
51-883	Volvo	Medium/Heavy - COE high entry	
51-884	Volvo	Medium/Heavy – Unknown engine location	
51-890	Volvo	Medium/Heavy – COE entry position unknown	
51-898	Volvo	Other (medium/heavy truck)	
51-981	Volvo	Bus**: Conventional (Engine out front)	
51-983	Volvo	Bus : Rear engine, Flat front	
51-988	Volvo	Other (bus)	
51-989	Volvo	Unknown (bus)	
51-998	Volvo	Other (Vehicle)	
51-999	Volvo	Unknown (VOLVO)	
52-031	Mitsubishi	Starion	
52-032	Mitsubishi	Tredia	
52-033	Mitsubishi	Cordia	
52-034	Mitsubishi	Galant	ECS, Sigma (thru 88), ES, LS, DE, GTS-V6, I-4, Special Edition, Ralliart, Sport Edition, SE, FE
52-035	Mitsubishi	Mirage (For 1985-2002. For 2014 on use model 048.)	L, Turbo,GS,LS,DS,DE,ES
52-036	Mitsubishi	Precis	
52-037	Mitsubishi	Eclipse	GS, DOHL, Turbo, GS-T, GSX, Spyder, RS, GT, GTS, Remix Edition, SE, Sport, Special Edition
52-038	Mitsubishi	Sigma	
52-039	Mitsubishi	3000 GT	
52-040	Mitsubishi	Diamante	
52-041	Mitsubishi	iMiEV (For 2018 on, code as vehicle model 398)	ES, SE
52-045	Mitsubishi	Expo Wagon	

52-046	Mitsubishi	Lancer/Lancer Sportback/ Lancer Evolution	ES (2.0, 2.4), LS, O-Z, Rally, Evolution VII/VIII/IX/X, Sport, Ralliart LS, MR Edition, DE, GSR, GTS, Touring, SE, GT, SEL, FE
52-047	Mitsubishi	Outlander (For 2003-2018 only. For model years 2019 on, see 52-404.)	ES, LS, SE, XLS, Limited, GT, Sport, SE-S, GT-S, SEL, GT 3.0 S-AWC, Plug-In Hybrid, PHEV
52-048	Mitsubishi	Mirage (2014 on. For 1985-2002 use 52-035.)	DE, ES, LE, RF, SE, GT, G4 (ES, RF, SE)
52-398	Mitsubishi	Other (automobile)	500, 1000, Debonair, Galant (1969), iMEV (2018 on)
52-399	Mitsubishi	Unknown (automobile)	
52-401	Mitsubishi	Montero/Montero Sport	Sport, LS, SR, XLS, ES, LTD, 20th Anniversary Edition, SE
52-402	Mitsubishi	Endeavor	LS, SE, XLS, Limited
52-403	Mitsubishi	Eclipse Cross	ES, LE, SE, SEL
52-404	Mitsubishi	Outlander (For 2019 on. For model years 2003-2018, see 52-047.)	ES, LE, SE, SEL, GT, Sport (ES, LE, SP, SE, GT), PHEV
52-441	Mitsubishi	Mini-Van	LS
52-471	Mitsubishi	Pickup	Mighty Max, SPX, 4x4
52-472	Mitsubishi	Raider	LS, Durocross, XLS
52-498	Mitsubishi	Other (light truck)	
52-499	Mitsubishi	Unknown (light truck)	
52-882	Mitsubishi	Medium/Heavy – COE, low entry	FUSO FE/FG/FH/FK/FM
52-898	Mitsubishi	Other (medium/heavy truck)	
52-981	Mitsubishi	Bus**: Conventional (Engine out front)	
52-982	Mitsubishi	Bus: Front engine, Flat Front	
52-983	Mitsubishi	Bus: Rear engine, Flat front	
52-988	Mitsubishi	Other (bus)	
52-989	Mitsubishi	Unknown (bus)	
52-999	Mitsubishi	Unknown (MITSUBISHI)	
53-031	Suzuki	Swift/SA310	
53-032	Suzuki	Esteem	
53-033	Suzuki	Aerio	S,G,LX,SX (Wagon)
53-034	Suzuki	Forenza	S, LX, EX, Premium
53-035	Suzuki	Verona	S, LX, EX, Luxury
53-036	Suzuki	Reno	S, LX, EX, Premium

53-040	Suzuki	SX4/SX4 Crossover	Base, Sport, Convenience, Touring, L, S, SD, SE, GTS, LE, SportBack, JX, Premium, Tech Value Package
53-041	Suzuki	Kizashi	GTS, S, SE, SLS, Sport
53-398	Suzuki	Other (automobile)	800 Fronte, Alto
53-399	Suzuki	Unknown (automobile)	
53-401	Suzuki	Samurai	Standard, Deluxe, JL
53-402	Suzuki	Sidekick/Vitara/ Vitara V6	JS, JX, JLX, JLS, Sport, Grand Vitara (1999-2002 only; see model 404 for 2003on) (JS,JLX,JLS,Ltd.,)XL-7 (2002 only; see model 405 for 2003 on) LX
53-403	Suzuki	X-90	
53-404	Suzuki	Grand Vitara (2003 on; see model 402 for models prior to 2003)	JS, JLX, JLS, Limited, GX, LX, XV6, Premium, Xsport, Luxury, Special Edition, Ultra Adventure Edition
53-405	Suzuki	XL-7 (2003 on; see 402 for 2002 model year)	Standard, Touring, Limited, GX, LX, Premium, Luxury
53-481	Suzuki	Equator	Comfort, Premium, Sport, RMZ-4
53-498	Suzuki	Other (light truck)	Jimmy
53-499	Suzuki	Unknown (light truck)	
53-701	Suzuki	0-50cc	
53-702	Suzuki	51-124cc	
53-703	Suzuki	125-349cc	
53-704	Suzuki	350-449cc	
53-705	Suzuki	450-749cc	
53-706	Suzuki	750cc-over	
53-709	Suzuki	Unknown cc	
53-731	Suzuki	0-50cc (ATV)	
53-732	Suzuki	51-124cc (ATV)	
53-733	Suzuki	125-349cc (ATV)	
53-734	Suzuki	350cc or greater (ATV)	
53-739	Suzuki	Unknown cc (ATV)	
53-999	Suzuki	Unknown (SUZUKI)	
54-031	Acura	Integra	
54-032	Acura	Legend	
54-033	Acura	NSX (For 1991-2005 only. For 2016 on see model 043.)	NSX-T
54-034	Acura	Vigor	

54-035	Acura	TL	3.2, 3.5, 3.7, SH-AWD (AT/MT)
54-036	Acura	RL/RLX	3.5, 3.7, Hybrid, Sport Hybrid
54-037	Acura	CL	
54-038	Acura	RSX	
54-039	Acura	TSX	2.4, 3.5, Hybrid, Special Edition, V6
54-040	Acura	ZDX	
54-041	Acura	ILX	2.0, 2.4, Hybrid, Premium, A-Spec, Special Edition, AcuraWatch Plus, Technology Plus, Standard
54-043	Acura	NSX (2016 on. For 1991-2005 see model 033.)	Sport, GT3, Sport Hybrid
54-044	Acura	TLX	2.4, 3.6 V-6, Standard, GT Package, A-Spec, Advance Package, Technology Package
54-398	Acura	Other (automobile)	
54-399	Acura	Unknown (automobile)	
54-401	Acura	SLX	
54-402	Acura	RDX	2.3, SH-AWD, Standard, Advance, AcuraWatch Plus, Technology
54-421	Acura	MDX	Standard, Sport Hybrid, Technology/Advance/Entertainment Package
54-499	Acura	Unknown (light truck)	
54-999	Acura	Unknown (ACURA)	
55-031	Hyundai	Pony	
55-032	Hyundai	Excel	
55-033	Hyundai	Sonata	GL, GLS, LX, SE, Limited, Hybrid (SE, Limited), 2.0T (Sport, Limited), Sport, Eco, Plug-In, SEL
55-034	Hyundai	Scoupe	
55-035	Hyundai	Elantra	GLS, GL, GT, Limited, SE, Touring (GLS, SE), GS, Sport, Value Edition, ECO, SEL
55-036	Hyundai	Accent	L, GL, GS, Gsi, GT, GLS, SE, Blue, Sport, Limited, Value Edition, SEL
55-037	Hyundai	Tiburon	FX, GT, GS, SE, Limited
55-038	Hyundai	XG300(2001)/ XG350(2002 on)	
	L		
55-039	Hyundai	Azera (For 2018 on, code as vehicle model 398)	SE, Limited, GLS
55-040	Hyundai	Equus	Signature, Ultimate

55-041	Hyundai	Genesis (For 2009-2016 only. For model years 2017 on, see 55-043, 55-044 and 55-046)	3.8, 4.6, 2.0T, R-Spec, Grand Touring, Premium, Track, 5.0 R-Spec, Ultimate
55-042	Hyundai	Veloster	Base, Turbo, Re-Mix, R-Spec, RE-FLEX Edition, Rally Edition, N, Premium, Turbo (Base, R-Spec, Ultimate), Ultimate, 2.0 (Base, Premium)
55-043	Hyundai	Genesis (G80)	Standard, Premium, Sport,Ultimate (RWD/AWD)
55-044	Hyundai	Genesis (G90)	Premium, Ultimate (RWD/AWD)
55-045	Hyundai	Ioniq	Electric (Base, Limited), Hybrid (Blue, SEL, Limited), Plug-In Hybrid (Base, Limited)
55-046	Hyundai	Genesis (G70)	Standard, Premium
55-398	Hyundai	Other (automobile)	Azera (2018 on)
55-399	Hyundai	Unknown (automobile)	
55-401	Hyundai	Santa Fe	GL, GLS, LX, Limited (Base, Ultimate), SE (Base, Ultimate), Sport (Base, 2.0T, Ultimate), 2.0T, SEL, SEL Plus
55-402	Hyundai	Tucson	GL, GLS, LX, Limited, SE, Fuel Cell, ECO, Sport, SEL, Value, Ultimate
55-403	Hyundai	Veracruz (2007 only)	GLS, Limited, SE
55-404	Hyundai	Kona	EV, Iron Man Special Edition, SE, SEL, Limited, Ultimate, Electric
55-405	Hyundai	Nexo	Fuel Cell
55-421	Hyundai	Veracruz (2008 on; see 403 for 2007 only)	GLS, Limited, SE
55-441	Hyundai	Entourage	GLS, Limited, SE
55-499	Hyundai	Unknown (light truck)	
55-999	Hyundai	Unknown (HYUNDAI)	
56-031	Merkur	XR4Ti	
56-032	Merkur	Scorpio	
56-398	Merkur	Other (automobile)	
56-399	Merkur	Unknown (automobile)	
57-031	Yugo	GV/GVL/GVX	
58-031	Infiniti	M30	
58-032	Infiniti	Q45	
58-033	Infiniti	G20	
58-034	Infiniti	J30	
58-035	Infiniti	I30	

58-036	Infiniti	I35	
58-037	Infiniti	G25/G35/G37	x, 6MT, Journey, Sport, special Edition, IPL
58-038	Infiniti	M35/M37/M45/M56	Sport, x, Hybrid
58-039	Infiniti	FX35/FX37/FX45/FX50	
58-040	Infiniti	EX35/EX37	
58-041	Infiniti	Q50	Base (3.7 Premium/AWD/ Hybrid) S (3.7 Premium/ AWD/Hybrid), Eau Rogue, 2.0t (AWD, Premium, Sport, Pure, Luxe), 3.0t (Premium, Sport, Luxe, AWD), Red Sport 400,Hybrid (Base, Premium, Luxe), Signature Edition
58-042	Infiniti	Q60	Journey, AWD, 6MT, IPL (Base and 6MT), S, Neiman Marcus, 2.0t (Base, AWD, Premium, Pure, Luxe), 3.0t (Premium, AWD, Luxe, Sport), Sport (Base, AWD), Red Sport 400 (Base, AWD)
58-043	Infiniti	Q70	Hybrid, 3.7 (Base, Luxe, AWD), 5.6 (Base, Luxe,AWD), L 3.7 (Base, Luxe, AWD), 5.6 (Base, Luxe, AWD)
58-044	Infiniti	QX50	Base, AWD, Journey, Pure, Luxe, Essential
58-045	Infiniti	Q40	
58-047	Infiniti	QX30	Luxury, Premium, Sport, Pure, Essential
58-398	Infiniti	Other (automobile)	
58-399	Infiniti	Unknown (automobile)	
58-401	Infiniti	QX4	Luxury
58-402	Infiniti	JX35	Luxury, AWD
58-403	Infiniti	QX60	3.5, AWD, Hybrid, Limited, Pure, Luxe
58-404	Infiniti	QX70	3.7, 5.0, AWD
58-421	Infiniti	QX56	
58-422	Infiniti	QX80	Base, AWD, 4WD, Limited, Luxe
58-499	Infiniti	Unknown (Light Truck)	
58-999	Infiniti	Unknown (INFINITI)	
59-031	Lexus	ES-250/300/300h/330/ 350	Black Diamond Edition, Premium Plus, Ultra Luxury, Hybrid, F-Sport
59-032	Lexus	LS-400/430/460/460L/600h/600hL	LS-F, F Sport, Hybrid, Nightfall Edition
59-033	Lexus	SC-400/SC-300	
59-034	Lexus	GS-300/350/400/430/ 450h/460	Hybrid, F Sport, Turbo, F
59-035	Lexus	IS-250/300/350/500/200t	SportCross, Sport, F, C, F Sport, Turbo
59-036	Lexus	SC-430	Special Edition, Pebble Beach
59-037	Lexus	HS 250h	Premium

59-038	Lexus	CT 200h	
59-039	Lexus	LFA	
59-040	Lexus	RC	300, 350, 350h, F Sport, Turbo, F
59-042	Lexus	LC Series	500, 500h
59-043	Lexus	UX	200, Hybrid, F-Sport
59-398	Lexus	Other (automobile)	
59-399	Lexus	Unknown (automobile)	
59-401	Lexus	RX300/350	2WD, 4WD
59-402	Lexus	GX470	Sport, Premium
59-403	Lexus	RX330/350/400h/450h	Hybrid, Thundercloud, Mark Levinson Package, F Sport, L (Base, Hybrid)
59-404	Lexus	GX460	Sport, Premium, Luxury
59-405	Lexus	NX	200t, 300, 300h, F Sport, Hybrid, Turbo
59-421	Lexus	LX450/470/570	
59-499	Lexus	Unknown (light truck)	
59-999	Lexus	Unknown (LEXUS)	
60-031	Daihatsu	Charade	
60-401	Daihatsu	Rocky	
60-999	Daihatsu	Unknown (DAIHATSU)	
61-031	Sterling	827	
61-398	Sterling	Other (automobile)	825, S, SL, Oxford Edition
61-399	Sterling	Unknown (automobile)	
62-401	Land Rover	Discovery (For 2017 on, see model 425)	SD, SE, SE7, LE, LSE, Series II, Kalahari Edition, S, HSE, G-4 Edition
62-402	Land Rover	Defender	90
62-403	Land Rover	Freelander (2004 on; see 422 for 2002-03.)	HSE, SE, S, SE3, G4 Edition
62-404	Land Rover	Range Rover Evoque	Pure (Premium, Plus), Prestige, Dynamic, SE (Base, Premium), HSE (Base, Dynamic), Autobiography, Landmark Edition, S, First Edition, Convertible
62-405	Land Rover	Discovery Sport	HSE (Base, Luxury), SE, Landmark Edition
62-421	Land Rover	Range Rover	County, County SE, Great Divide, Hunter, LSE, County LWB, 4.0SE, 4.6 HSE, S, SE, HSE, Westminster, Limited Edition, Supercharged, Sport [HST, SE, SVR, HSE (Base, Dynamic)], Supercharged, Autobiography), Supercharged, HSE-LUX, Autobiography (Base, Black), Standard Wheelbase (Base, HSE,

			Supercharged, Autobiography, SV Autobiography DYNAMIC), Long Wheelbase (Supercharged, Autobiography, SV Autobiography), PHEV, SV Coupe
62-422	Land Rover	Freelander (2002-03 only; see 403 for 2004 on)	HSE, SE, S, SE3
62-423	Land Rover	LR3/LR4	HSE, SE, LUX, Plus, V8, Limited Edition, HSE Silver Edition, Landmark Edition
62-424	Land Rover	LR2	i6, TD4, HSE, LUX, Plus
62-425	Land Rover	Discovery (For model years 1994-2004, see model 401)	SE, HSE, HSE Luxury, First Edition, Sport (HSE, HSE Luxury, SE)
62-426	Land Rover	Velar	Base, B-Dynamic, First Edition, R-Dynamic (SE, HSE), S
62-498	Land Rover	Other (light truck)	Land Rover (1948-1990), Range Rover (before 1987)
62-499	Land Rover	Unknown (light truck)	
63-031	KIA	Sephia	
63-032	KIA	Rio/Rio5	Cinco (Wagon), LX, SX, EX, S
63-033	KIA	Spectra/Spectra5	
63-034	KIA	Optima	LX, SE, V6, EX, SX, SX Turbo, Hybrid, Limited, SXL, Plug In, S
63-035	KIA	Amanti	
63-036	KIA	Rondo	
63-037	KIA	Soul	Base, sport, +, !, White Tiger, EV, Tarmac, 1 Million, X-Line, GT-Line
63-038	KIA	Forte	2.0 (EX, LX, SX) 2.4 (SX), Koup (EX, LX, SX) 5 (EX, LX, SX), S, FX, EX, LXS
63-039	KIA	Cadenza	Premium, Limited, Technology
63-040	KIA	K900	V6 (Premium, Luxury), V8 (Luxury)
63-041	KIA	Stinger	2.0, Premium, GT, GT1, GT2
63-398	KIA	Other (automobile)	
63-399	KIA	Unknown (automobile)	
63-401	KIA	Sportage	EX, LX, 4WD, Limited, S, SX, Base, Turbo
63-402	KIA	Sorento	EX, EX-V6, L, LX, LX-V6, SX, SX-V6, Limited, Limited-V6, SXL
63-403	KIA	Niro	FE, EX, LX, Touring (Base, Launch Edition, Graphite Edition), Plug-In, S
63-421	KIA	Borrego	EX, LX, LTD
63-441	KIA	Sedona	EX, L, LX, L, SX, Limited, SXL
63-498	KIA	Other (Light Truck)	
63-499	KIA	Unknown (light truck)	

63-999	KIA	Unknown (KIA)	
64-031	Daewoo	Lanos	
64-032	Daewoo	Nubira	
64-033	Daewoo	Leganza	
64-398	Daewoo	Other (automobile)	
64-399	Daewoo	Unknown (automobile)	
65-031	Smart	Fortwo	Pure, Prime, Passion, Proxy, Electric, Brabus, EQ
65-398	Smart	Other (automobile)	
65-399	Smart	Unknown (automobile)	
67-031	Scion	xB (2012 on. See Toyota for 2004-2011)	1.0, 2.0 Series
67-032	Scion	tC (2012 on. See Toyota for 2005-2011)	1.0 Series, Limited Edition, 8.0 Series
67-033	Scion	xD (2012 on. See Toyota for 2007-2011)	
67-034	Scion	iQ (2012 on. See Toyota for 2010-2011)	10 Anniversary
67-035	Scion	FR-S	
67-036	Scion	iA	
67-037	Scion	iM	
67-398	Scion	Other (automobile)	
67-399	Scion	Unknown (automobile)	
69-031	Other Import	Aston Martin	Lagonda, Vantage, Volante, Saloon, DB Mark III, DB4, DB4GT, DB5, DB6, DB7 (Heritage/Vantage/Volante), V12 (Vanquish S/Zagato/ Vantage, Vantage S), V8(Vantage/ Vantage S), DB9 (Carbon Edition, GT), Rapide (S), Cygnet, Carbon Black, One-77, Virage (Coupe/ Volante), DBS (Coupe/ Volante), CC100, Vantage GT, Rapide E, Vulcan, GT12, DB11
69-032	Other Import	Bricklin	
69-033	Other Import	Citroen	
69-034	Other Import	DeLorean	
69-035	Other Import	Ferrari	F355 (Berlinetta, GTS, Spider, F1), F430, F456 (GTA, M, GT, MGTA), F550 (Maranello, Barchetta Pininfarina), 360/430 (Spider, Modena, Challenge) Maranello, Berlinetta, MGT (Vintage), Enzo, Challenge Stradale, 575M, 612 Scaglietti, Superamerica, 599 GTB/GTO, California (T), 418 Italia, FF, SA Aperta, 458 (Spider/Italia/Challenge/ Speciale (A)), F12

			Berlinetta, FF, LaFerrari, 488 GTB/Spider/Pista, GTC4Lusso, F12TDF, F60 America
69-036	Other Import	Hillman	
69-037	Other Import	Jensen	
69-038	Other Import	Lamborghini	Countach, 5000S, Jalpa, Diablo, Miura, Murciélago (LP640), Galladoro, LP 550-2/560-4/570-4/670- 4/700-4, CP, Aventador (J, SV, LP750-4, Roadster), Sesto Elemento, Spyder, Superlegga, Gallardo, Veneo, Huracan (Base, Spyder, EVO), 350GT, Urus
69-039	Other Import	Lotus	Europe, Espirit (V8, GT-3, V8-GT) Elise, Exige, Evora (Range/GTE/400) , California, Club Racer, Sport, 2-Eleven, Black, Bespoke, 3-Elevent (430)
69-040	Other Import	Maserati	Biturbo, Ghibli, 3200 GT, Quattroporte, Spyder GT, Sports GT, Executive GT, 90th Anniversary, MC12, GranSport, GranTurismo, GranCabrio, Stradale, Kubang, Sport, MC, S, GTS, S Q4, MC Centenial Edition, Levante, Alfier, Trofeo
69-041	Other Import	Morris	
69-042	Other Import	Rolls Royce/Bentley	Rolls Royce: Cloud/Shadow series, Silver Spur, Silver Dawn, Silver Spirit, Silver Seraph, Corniche, Park Ward), Phantom (Drophead), Ghost; Bentley: (Arnaze, Azure, Continental (GT, Speed Black Edition), Mulliner), Brooklands, Goodwood, EWB, 4, Mulsanne, Flying Spur, Super Sports, Wraith, Dawn, Cullinan, Black Badge, Bentayga
69-044	Other Import	Simca	
69-045	Other Import	Sunbeam	
69-046	Other Import	TVR	
69-048	Other Import	Desta	
69-049	Other Import	Reliant	
69-052	Other Import	Bertone	
69-053	Other Import	Lada	
69-054	Other Import	Mini-Cooper	Mark I,II,III, S, SE, Sport, MC40, Traveller, John Cooper Works, Clubman, Countryman, Paceman, Coupe, All 4, Roadster, Convertible, Plug-In, Signature, Classic, Iconic, Oxford Edition, International Orange Edition, Ice Blue Edition, Ying Yang Edition, Straight Edition
69-055	Other Import	Morgan (2003 on; Prior to 2003 see 398)	Aero 8, Plus 8, V6, Classic Range, AeroMax, 4/4 Sport, Super Sports Junior, Plus 4, 4 Seater, Aero, Eva GT, 3 Seater, 4/4, Plus 8, SP1, AR Plus 4

69-056	Other Import	Maybach	57, 57S, 62, 62S, Laudualet, Zeppelin, Guard
69-057	Other Import	Spyker	C8, Base, T, Laviolette, Aileron, Spyder, Double 12R, Double 12S, C12 Zagato, L2014 M85, D, B6 Venator
69-058	Other Import	Koenigsegg	CC8S, CCR, CCX, CCXR, CCGT, Trevita, Agera, CC8S, Agera R/S, Special Edition, Regera, One:1, Jesko
69-061	Other Import	Mahindra	Scorpio (Lx, Sle, Vls, Vlx)
69-062	Other Import	Caterhan	Classic, Roadsport, Academy, Superlight (R300/R400/R500), CSR, Seven (270/280/310/360/420/480/620S/R), SP 300R, Aeroseven, Superflight Twenty, 60th Anniversary Edition
69-063	Other Import	McLaren	MP4-12C, P15, 675LT, 540C, 12C GT Spirit, 650S, P1, BP23, 570S, 600LT, 720S
69-064	Other Import	Bugatti	Veyron 164 (Grand Sport, Super Sport), Vitesse, Chiron, Divo
69-398	Other Import	Other (automobile)	Morgan (Prior to 2003; 2003 on see 055), Singer, Gazelle, Fisker, Karma
69-399	Other Import	Unknown (automobile)	
70-701	BSA	0-50cc	
70-702	BSA	51-124cc	
70-703	BSA	125-349cc	
70-704	BSA	350-449cc	
70-705	BSA	450-749cc	
70-706	BSA	750cc or greater	
70-709	BSA	Unknown cc	
71-701	Ducati	0-50cc	
71-702	Ducati	51-124cc	
71-703	Ducati	125-349cc	
71-704	Ducati	350-449cc	
71-705	Ducati	450-749cc	
71-706	Ducati	750cc or greater	
71-709	Ducati	Unknown cc	
72-701	Harley-Davidson	0-50cc	
72-702	Harley-Davidson	51-124cc	
72-703	Harley-Davidson	125-349cc	
72-704	Harley-Davidson	350-449cc	
72-705	Harley-Davidson	450-749cc	
72-706	Harley-Davidson	750cc or greater	

72-709	Harley-Davidson	Unknown cc	
73-701	Kawasaki	0-50cc	
73-702	Kawasaki	51-124cc	
73-703	Kawasaki	125-349cc	
73-704	Kawasaki	350-449cc	
73-705	Kawasaki	450-749cc	
73-706	Kawasaki	750cc or greater	
73-709	Kawasaki	Unknown cc	
73-731	Kawasaki	0-50cc (ATV)	
73-732	Kawasaki	51-124cc (ATV)	includes all ATVs designed solely for off-road use and have 3 or 4 wheels.
73-733	Kawasaki	125-349cc (ATV)	
73-734	Kawasaki	350cc or greater (ATV)	
73-739	Kawasaki	Unknown cc (ATV)	
73-998	Kawasaki	Other (Vehicle)	
74-704	Moto-Guzzi	350-449cc	
74-705	Moto-Guzzi	450-749cc	
74-706	Moto-Guzzi	750cc or greater	
74-709	Moto-Guzzi	Unknown cc	
75-704	Norton	350-449cc	
75-705	Norton	450-749cc	
75-706	Norton	750cc or greater	
75-709	Norton	Unknown cc	
76-701	Yamaha	0-50cc	
76-702	Yamaha	51-124cc	
76-703	Yamaha	125-349cc	
76-704	Yamaha	350-449cc	
76-705	Yamaha	450-749cc	
76-706	Yamaha	750cc or greater	
76-709	Yamaha	Unknown cc	
76-731	Yamaha	0-50cc (ATV)	includes all ATVs designed solely for off-road use and have 3 or 4 wheels.
76-732	Yamaha	51-124cc (ATV)	
76-733	Yamaha	125-349cc (ATV)	

76-734	Yamaha	350cc or greater (ATV)	
76-739	Yamaha	Unknown cc (ATV)	
76-998	Yamaha	Other (Vehicle)	Snowmobiles, Golf Car
77-706	Victory	750cc or greater	
77-707	Victory	Electric Motorcycle	--
77-709	Victory	Unknown cc	
77-998	Victory	Other (Vehicle)	
80-850	Brockway	Motor Home	Truck based
80-881	Brockway	Medium/Heavy – CBE	
80-882	Brockway	Medium/Heavy - COE low entry	
80-883	Brockway	Medium/Heavy - COE high entry	
80-884	Brockway	Medium/Heavy – Unknown engine location	
80-890	Brockway	Medium/Heavy – COE entry position unknown	
80-898	Brockway	Other (medium/heavy truck)	
80-981	Brockway	Bus**: Conventional (Engine out front)	
80-982	Brockway	Bus: Front engine, Flat front	
80-983	Brockway	Bus: Rear engine, Flat front	
80-988	Brockway	Other (bus)	
80-989	Brockway	Unknown (bus)	
80-998	Brockway	Other (vehicle)	
80-999	Brockway	Unknown (BROCKWAY)	
81-850	Diamond Reo/Reo	Motor Home	C054-C088
81-881	Diamond Reo/Reo	Medium/Heavy - CBE	DC101,C116, M35 (A1, A2, A3)
81-882	Diamond Reo/Reo	Medium/Heavy – COE low entry	
81-883	Diamond Reo/Reo	Medium/Heavy – COE high entry	C054-C088
81-884	Diamond Reo/Reo	Medium/Heavy – Unknown engine location	
81-890	Diamond Reo/Reo	Medium/Heavy – COE entry position unknown	
81-898	Diamond Reo/Reo	Other (medium/heavy truck)	
81-981	Diamond Reo/Reo	Bus**: Conventional (Engine out front)	

81-982	Diamond Reo/Reo	Bus: Front engine, Flat front	
81-983	Diamond Reo/Reo	Bus: Rear engine, Flat front	
81-988	Diamond Reo/Reo	Other (bus)	
81-989	Diamond Reo/Reo	Unknown (bus)	
81-998	Diamond Reo/Reo	Other (vehicle)	
81-999	Diamond Reo/Reo	Unknown (DIAMOND REO or REO)	
82-461	Freightliner	Sprinter/Advantage	2500 (HC/SHC), 3500 (HC/SHC)
82-462	Freightliner	MT 35 Chassis	
82-498	Freightliner	Other (light truck)	
82-499	Freightliner	Unknown (light truck)	
82-850	Freightliner	Motor Home	Medium/Heavy Truck-based, Sprinter van-based.
82-870	Freightliner	Medium Heavy Van-Based Vehicle	Sprinter
82-881	Freightliner	Medium/Heavy - CBE	
82-882	Freightliner	Medium/Heavy – COE low entry	
82-883	Freightliner	Medium/Heavy – COE high entry	
82-884	Freightliner	Medium/Heavy – Unknown engine location	
82-890	Freightliner	Medium/Heavy – COE entry position unknown	
82-898	Freightliner	Other (medium/heavy truck)	
82-981	Freightliner	Bus**: Conventional (Engine out front)	
82-982	Freightliner	Bus: Front engine, Flat front	
82-983	Freightliner	Bus: Rear engine, Flat front	
82-988	Freightliner	Other (bus)	
82-989	Freightliner	Unknown (bus)	
82-998	Freightliner	Other (vehicle)	
82-999	Freightliner	Unknown (FREIGHTLINER)	
83-850	FWD	Motor Home	Truck based
83-881	FWD	Medium/Heavy – CBE	
83-882	FWD	Medium/Heavy – COE low entry	
83-883	FWD	Medium/Heavy – COE high entry	

83-884	FWD	Medium/Heavy – Unknown engine location	
83-890	FWD	Medium/Heavy – COE entry position unknown	
83-898	FWD	Other (medium/heavy truck)	
83-981	FWD	Bus**: Conventional (Engine out front)	
83-982	FWD	Bus: Front engine, Flat front	
83-983	FWD	Bus: Rear engine, Flat front	
83-988	FWD	Other (bus)	
83-989	FWD	Unknown (bus)	
83-998	FWD	Other (vehicle)	
83-999	FWD	Unknown (FWD)	
84-421	International Harvester/Navistar	Scout	Scout II, Utility pickup, SS-2, Roadster, 800 series, Traveler, Terra Traveltop,
84-431	International Harvester/Navistar	Travelall	1010-1210, 100-200
84-466	International Harvester/Navistar	Multistop Van	Metro RM, MS1510, 120-160, MS1210
84-481	International Harvester/Navistar	Pickup	R-100-500, 900A-1500C/D, 1010-1510
84-498	International Harvester/Navistar	Other light truck	
84-499	International Harvester/Navistar	Unknown light truck	
84-850	International Harvester/Navistar	Motorhome	Truck based
84-881	International Harvester/Navistar	Medium/Heavy - CBE	Loadstar/Fleetstar, Paystar, CBE Transtar, 4200, S-series Mixer, 8100, 8500, 9100, 9200, 9300, 9400, 9900, CXT, RXT, MXT, Lonestar
84-882	International Harvester/Navistar	Medium/Heavy – COE low entry	CO, VCO, DCO, 190-1950,Cargostar, LFM, 5370 (Garbage), CF500/600
84-883	International Harvester/Navistar	Medium/Heavy – COE high entry	DCO, DCOT, UCO, VCOT,405-series, COE Transtar, Unistar, Conco 707B, 9600
84-884	International Harvester/Navistar	Medium/Heavy – Unknown engine location	
84-890	International Harvester/Navistar	Medium/Heavy – COE entry position unknown	

84-898	International Harvester/Navistar	Other (medium/heavy truck)	Fire truck - R140-R306, CO 8190
84-981	International Harvester/Navistar	Bus**: Conventional (Engine out front)	R153-1853 Loadstar, 1603-1853
84-982	International Harvester/Navistar	Bus: Front engine, Flat front	173FC, 183FC
84-983	International Harvester/Navistar	Bus**: Rear engine, Flat front	183RE, 193RE-transit
84-988	International Harvester/Navistar	Other (bus)	
84-989	International Harvester/Navistar	Unknown (bus)	
84-998	International Harvester/Navistar	Other (vehicle)	
84-999	International Harvester/Navistar	Unknown (INTL. HARVESTER/ NAVISTAR)	
85-850	Kenworth	Motor Home	Truck based
85-881	Kenworth	Medium/Heavy - CBE	520, 540, T400, T600,T800, C500-550, W900, T300
85-882	Kenworth	Medium/Heavy – COE low entry	L700
85-883	Kenworth	Medium/Heavy – COE high entry	K100, K100E, K270, K300, K350
85-884	Kenworth	Medium/Heavy – Unknown engine location	
85-890	Kenworth	Medium/Heavy – COE entry position unknown	
85-898	Kenworth	Other (medium/heavy truck)	
85-981	Kenworth	Bus**: Conventional (Engine out front)	
85-982	Kenworth	Bus: Front engine, Flat front	
85-983	Kenworth	Bus: Rear engine, Flat front	
85-988	Kenworth	Other (bus)	
85-989	Kenworth	Unknown (bus)	
85-998	Kenworth	Other (vehicle)	
85-999	Kenworth	Unknown (KENWORTH)	
86-850	Mack	Motor Home	Truck based
86-881	Mack	Medium/Heavy - CBE	
86-882	Mack	Medium/Heavy – COE low entry	
86-883	Mack	Medium/Heavy – COE high entry	

86-884	Mack	Medium/Heavy – Unknown engine location	
86-890	Mack	Medium/Heavy – COE entry position unknown	
86-898	Mack	Other (medium/heavy truck)	
86-981	Mack	Bus**: Conventional (Engine out front)	
86-982	Mack	Bus: Front engine, Flat front	
86-983	Mack	Bus: Rear engine, Flat front	
86-988	Mack	Other (bus)	
86-989	Mack	Unknown (bus)	
86-998	Mack	Other (vehicle)	
86-999	Mack	Unknown (MACK)	
87-850	Peterbilt	Motor Home	Truck based
87-881	Peterbilt	Medium/Heavy - CBE	357-379, 387, 385
87-882	Peterbilt	Medium/Heavy – COE low entry	270
87-883	Peterbilt	Medium/Heavy – COE high entry	362, 320
87-884	Peterbilt	Medium/Heavy – Unknown engine location	
87-890	Peterbilt	Medium/Heavy – COE entry position unknown	
87-898	Peterbilt	Other (medium/heavy truck)	
87-981	Peterbilt	Bus**: Conventional (Engine out front)	
87-982	Peterbilt	Bus: Front engine, Flat front	
87-983	Peterbilt	Bus: Rear engine, Flat front	
87-988	Peterbilt	Other (bus)	
87-989	Peterbilt	Unknown (bus)	
87-998	Peterbilt	Other (vehicle)	
87-999	Peterbilt	Unknown (PETERBILT)	
88-850	Iveco/Magirus	Motor Home	Truck based
88-881	Iveco/Magirus	Medium/Heavy - CBE	LCF
88-882	Iveco/Magirus	Medium/Heavy – COE low entry	FL, FS
88-883	Iveco/Magirus	Medium/Heavy – COE high entry	
88-884	Iveco/Magirus	Medium/Heavy – Unknown engine location	

88-890	Iveco/Magirus	Medium/Heavy – COE entry position unknown	
88-898	Iveco/Magirus	Other (medium/heavy truck)	
88-981	Iveco/Magirus	Bus**: Conventional (Engine out front)	
88-982	Iveco/Magirus	Bus: Front engine, Flat front	
88-983	Iveco/Magirus	Bus: Rear engine,Flat front	
88-988	Iveco/Magirus	Other (bus)	
88-989	Iveco/Magirus	Unknown (bus)	
88-998	Iveco/Magirus	Other (vehicle)	
88-999	Iveco/Magirus	Unknown (IVECO/MAGIRUS)	
89-850	White/Autocar White/GMC	Motor Home	Truck based
89-881	White/Autocar White/GMC	Medium/Heavy - CBE	
89-882	White/Autocar White/GMC	Medium/Heavy – COE low entry	
89-883	White/Autocar White/GMC	Medium/Heavy – COE high entry	
89-884	White/Autocar White/GMC	Medium/Heavy – Unknown engine location	
89-890	White/Autocar White/GMC	Medium/Heavy – COE entry position unknown	
89-898	White/Autocar White/GMC	Other (medium/heavy truck)	
89-981	White/Autocar White/GMC	Bus**: Conventional (Engine out front)	
89-982	White/Autocar White/GMC	Bus: Front engine, Flat front	
89-983	White/Autocar White/GMC	Bus: Rear engine, Flat front	
89-988	White/Autocar White/GMC	Other (bus)	
89-989	White/Autocar White/GMC	Unknown (bus)	
89-998	White/Autocar White/GMC	Other (vehicle)	

89-999	White/Autocar White/GMC	Unknown (WHITE/AUTOCAR-WHITE/GMC)	
90-461	Bluebird	Van Based	van-based school bus, shuttle bus
90-981	Bluebird	Bus**: Conventional (Engine out front)	
90-982	Bluebird	Bus: Front engine, Flat front	
90-983	Bluebird	Bus: Rear engine, Flat front	
90-988	Bluebird	Other (bus)	
90-989	Bluebird	Unknown (Bus)	
90-999	Bluebird	Unknown (BLUEBIRD)	
91-981	Eagle Coach	Bus**: Conventional (Engine out front)	
91-982	Eagle Coach	Bus: Front engine, Flat front	
91-983	Eagle Coach	Bus: Rear engine, Flat front	
91-988	Eagle Coach	Other (bus)	
91-989	Eagle Coach	Unknown (Bus)	
92-981	Gillig	Bus**: Conventional (Engine out front)	
92-982	Gillig	Bus: Front engine, Flat front	
92-983	Gillig	Bus: Rear engine, Flat front	
92-988	Gillig	Other (bus)	
92-989	Gillig	Unknown (bus)	
93-981	MCI	Bus**: Conventional (Engine out front)	
93-982	MCI	Bus: Front engine, Flat front	
93-983	MCI	Bus: Rear engine, Flat front	
93-988	MCI	Other (bus)	
93-989	MCI	Unknown (bus)	
94-461	Thomas Built	Van Based	
94-981	Thomas Built	Bus**: Conventional (Engine out front)	
94-982	Thomas Built	Bus: Front engine, Flat front	
94-983	Thomas Built	Bus: Rear engine, Flat front	
94-988	Thomas Built	Other (bus)	
94-989	Thomas Built	Unknown (bus)	

94-999	Thomas Built	Unknown(THOMAS BUILT)	
97-997	Not Reported	Not Reported	
98-301	Other Make	Think	City
98-302	Other Make	Meyers Motor	NmG
98-398	Other Make	Other (automobile)	Solectra (electric: Force)
98-498	Other Make	Other (light truck)	Solectra (electric: Citivan Flash)
98-598	Other Make	Other (LSV/NEV)	Tomberlin, Ford, Fly Bo
98-701	Other Make	0-50cc	(Includes: ATK, Beta, Buell,Cagiva, Cobra Trike, Jawa, Husqvarna, KTM, Aprilia,Maely, Riva, Strociek, BMC,MV Agusta, Bimota, Husaberg,Indian Scout, Indian, Laverda, Big Dog, Polaris, Titan, Twin Eagle, Viza, Vespa, Viper)
98-702	Other Make	51-124cc	
98-703	Other Make	125-349cc	
98-704	Other Make	350-449cc	
98-705	Other Make	450-749cc	
98-706	Other Make	750cc or greater	
98-707	Other Make	Electric Motorcycle	Zero
98-709	Other Make	Unknown cc	
98-731	Other Make	0-50cc (ATV)	
98-732	Other Make	51-124cc (ATV)	
98-733	Other Make	125-349cc (ATV)	
98-734	Other Make	350cc or greater (ATV)	
98-739	Other Make	Unknown cc (ATV)	
98-802	Other Make	Auto-Union-DKW	
98-803	Other Make	Divco	
98-804	Other Make	Western Star	
98-805	Other Make	Oshkosh	(includes trucks & buses)
98-806	Other Make	Hino	(includes trucks & buses)
98-807	Other Make	Scania	(includes trucks & buses)
98-808	Other Make	UD	
98-809	Other Make	Sterling	
98-850	Other Make	Motor Home	Truck-based
98-870	Other Make	Medium/Heavy Van-Based Vehicle	
98-881	Other Make	Medium/Heavy – CBE	DINA

98-882	Other Make	Medium/Heavy – COE low entry	DINA
98-883	Other Make	Medium/Heavy – COE high entry	
98-884	Other Make	Medium/Heavy – Unknown engine location	
98-890	Other Make	Medium/Heavy – COE entry position unknown	
98-898	Other Make	Other (medium/heavy truck)**	e.g., Marmon, Ward LaFrance
98-902	Other Make	Neoplan	
98-903	Other Make	Carpenter	
98-904	Other Make	Collins Bus	
98-905	Other Make	DINA	
98-906	Other Make	Mid Bus	
98-907	Other Make	Orion	
98-908	Other Make	Van Hool	
98-981	Other Make	Bus***: Conventional (Engine out front)	
98-982	Other Make	Bus: Front engine, Flat front	
98-983	Other Make	Bus: Rear engine, Flat front	
98-988	Other Make	Other (bus)	
98-998	Other Make	Other (vehicle)	
98-999	Other Make	Unknown (OTHER MAKE)	
99-399	Unknown Make	Unknown (automobile)	
99-499	Unknown Make	Unknown (light truck)	
99-598	Unknown Make	Unknown (LSG/NGV)	
99-599	Unknown Make	Unknown (LSV/NGV)	
99-701	Unknown Make	0-50cc	
99-702	Unknown Make	51-124cc	
99-703	Unknown Make	125-349cc	
99-704	Unknown Make	350-449cc	
99-705	Unknown Make	450-749cc	
99-706	Unknown Make	750cc or greater	
99-707	Unknown Make	Electric Motorcycle	--
99-709	Unknown Make	Unknown cc	
99-731	Unknown Make	0-50cc (ATV)	All ATVs designed solely for off-road use and have 3 or 4 wheels

99-732	Unknown Make	51-124cc (ATV)	
99-733	Unknown Make	125-349cc (ATV)	
99-734	Unknown Make	350cc or greater (ATV)	
99-739	Unknown Make	Unknown cc (ATV)	
99-850	Unknown Make	Motor Home	Truck-based
99-870	Unknown Make	Medium Heavy Van-Based Vehicle	
99-881	Unknown Make	Medium/Heavy – CBE	
99-882	Unknown Make	Medium/Heavy - COE low entry	
99-883	Unknown Make	Medium/Heavy - COE high entry	
99-884	Unknown Make	Medium/Heavy - Unknown engine location	
99-890	Unknown Make	Medium/Heavy – COE entry position unknown	
99-898	Unknown Make	Other (medium/heavy truck)	
99-981	Unknown Make	Bus**: Conventional (Engine out front)	
99-982	Unknown Make	Bus: Front engine. Flat front	
99-983	Unknown Make	Bus: Rear engine, Flat front	
99-988	Unknown Make	Other (bus)	
99-989	Unknown Make	Unknown (bus)	
99-998	Unknown Make	Other (vehicle)	
99-999	Unknown Make	Unknown (as to automobile, motored cycle, light truck or truck)	

APPENDIX C

CDC AND DELTA-V

This section gives an overview of the Collision Deformation Classification (CDC) for cars, vans, and light trucks, per SAE J224 MAR 84 in the current year CISS. The CDC codes contain eight characters. If there is a CDC, these codes are as follows:

Direction of Force (2-character numeric).

Clock Direction is coded as follows:

00	Non-horizontal force	07	7 o'clock
01	1 o'clock	08	8 o'clock
02	2 o'clock	09	9 o'clock
03	3 o'clock	10	10 o'clock
04	4 o'clock	11	11 o'clock
05	5 o'clock	12	12 o'clock
06	6 o'clock	99	Unknown

Deformation Location (1 character alphanumeric) is coded as follows:

F	Front
R	Right side
L	Left side
B	Back (rear)
T	Top
U	Undercarriage
9	Unknown

Specific Longitudinal or Lateral Location (1 character alphanumeric) is coded as follows:

Horizontal Impacts		Top or Undercarriage	
D	Distributed--side or end	D	Distributed (F+P+B)
L	Left--front or rear	F	Front Section
C	Center--front or rear	P	Center Section
R	Right--front or rear	B	Rear Section
F	Side front--left or right	Y	F+P
P	Side center section--L or R	Z	P+B
B	Side rear--left or right	9	Unknown
Y	Side (F + P) or end (L + C)		
Z	Side (P + B) or end (C + R)		
9	Unknown		

Specific Vertical or Lateral Location (1 character alphanumeric) is coded as follows:

Vertical - Front, Rear, or Side Impacts

A	All
H	Top of frame to top
E	Everything below belt line
G	Belt line and above
M	Middle--top of frame to belt line or hood
L	Frame--top of frame, frame, bottom of frame (including undercarriage)
W	Below undercarriage level (wheel and tires only)
9	Unknown

Lateral - Top and Undercarriage Impacts

D	Distributed
L	Left
C	Center
R	Right
Y	Left and Center (L + C)
Z	Right and Center (R + C)
9	Unknown

Type of Damage Distribution (1 character alphanumeric) is coded as follows:

W	Wide impact area	E	Corner
N	Narrow impact area	K	Conversion in impact type
S	Sideswipe	U	No residual deformation
O	Rollover (including side)	9	Unknown
A	Overhanging structure		

Deformation Extent Guide (2 character alphanumeric) is coded as follows:

01	One	06	Six
02	Two	07	Seven
03	Three	08	Eight
04	Four	09	Nine
05	Five	99	Unknown

Delta-V

CISS uses a computer model that provides a measure of crash severity in terms of Delta-V. In vehicle-to-vehicle crashes, the model assumes that the two vehicles approach each other at an impact velocity, reach a common velocity, and then

separate. Delta-V is equal to the impact velocity minus the separation velocity. Other factors being equal, the greater the delta-V during a collision, the greater the potential for occupant injury.

Delta-V = Impact Velocity – Separation Velocity

The direction of the vector is determined by the investigator as the direction of principal force. For each vehicle, the components of its Delta-V are obtained by projecting on the longitudinal and lateral axes of that vehicle.

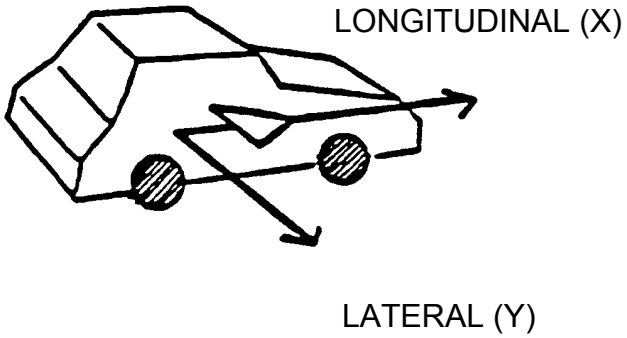


Figure D-1

Figure D-1 shows the positive direction of the longitudinal and lateral components of Delta-V. For example, in a head-on collision, a vehicle is decelerated and the initial high positive longitudinal velocity is reduced; thus it will have a negative longitudinal Delta-V.

APPENDIX D

LOCALIZER DATASET CODES

LC1 CODES

LC1	DESCRIPTION
01	Anterior
02	Central/Middle/Medial
03	Posterior
04	Superior/Upper
05	Inferior/Lower
06	Lamina
07	Pedicle
08	Transverse Process
09	Facet
10	Right
11	Right Anterior
12	Right Central/Middle/Medial
12	Right Central/Middle/Medial
13	Right Posterior
14	Right Superior/Upper
15	Right Inferior/Lower
16	Right Lamina
17	Right Pedicle
18	Right Transverse Process
19	Right Facet
20	Left
21	Left Anterior
22	Left Central/Middle/Medial
22	Left Central/Middle/Medial
23	Left Posterior
24	Left Superior/Upper
25	Left Inferior/Lower
26	Left Lamina
27	Left Pedicle
28	Left Transverse Process
29	Left Facet
30	Right Body/Shaft
31	Right Multiple
32	Right Lateral
33	Right Anterolateral
34	Right Posterolateral
35	Right Spinous Process
40	Left Body/Shaft
41	Left Multiple
42	Left Lateral
43	Left Anterolateral

LC1	DESCRIPTION
44	Left Posterolateral
45	Left Spinous Process
50	Bilateral
51	Bilateral Anterior
52	Bilateral Central/Middle/Medial
53	Bilateral Posterior
54	Bilateral Superior/Upper
55	Bilateral Inferior/Lower
56	Bilateral Lamina
57	Bilateral Pedicle
58	Bilateral Transverse Process
59	Bilateral Facet
90	Body/Shaft
91	Multiple
92	Lateral
93	Anterolateral
94	Posterolateral
95	Spinous Process

LC2 CODES

LC2	DESCRIPTION
00	No Further Specificity
01	Vertebrae C1
02	Vertebrae C2
03	Vertebrae C3
04	Vertebrae C4
05	Vertebrae C5
06	Vertebrae C6
07	Vertebrae C7
08	Vertebrae T1
09	Vertebrae T2
10	Vertebrae T3
11	Vertebrae T4
12	Vertebrae T5
13	Vertebrae T6
14	Vertebrae T7
15	Vertebrae T8
16	Vertebrae T9
17	Vertebrae T10
18	Vertebrae T11
19	Vertebrae T12
20	Vertebrae L1
21	Vertebrae L2
22	Vertebrae L3
23	Vertebrae L4
24	Vertebrae L5
25	1 Finger/Toe
26	2 Finger/Toe
27	3 Finger/Toe
28	4 Finger/Toe
29	5 Finger/Toe
31	Rib 1
32	Rib 2
33	Rib 3
34	Rib 4
35	Rib 5
36	Rib 6
37	Rib 7
38	Rib 8
39	Rib 9
40	Rib 10
41	Rib 11
42	Rib 12
43	Teeth-Central Incisor
44	Teeth-Lateral Incisor
45	Teeth-Canine
46	Teeth-First Premolar
47	Teeth-Second Premolar
48	Teeth-First Molar
49	Teeth-Second Molar
50	Teeth-Third Molar
51	Scalp
52	Forehead
53	Face
54	Eye
55	Eyelid
56	Ear
57	Nose
58	Lip
59	Neck
60	Shoulder
61	Arm
62	Elbow
63	Forearm
64	Wrist
65	Hand
66	Fingers
67	Torso
68	Back
69	Flank
70	Chest
71	Abdomen
72	Buttock
73	Genitalia
74	Perineum
75	Hip
76	Thigh
77	Knee
78	Leg
79	Ankle
80	Foot
81	Toe
82	Metacarpal/Metatarsal
83	Eyebrow
84	Cheek
85	Chin
86	Groin
AA	Frontal
AB	Parietal
AC	Temporal
AD	Occipital
AE	Hard Palate Bone
AF	Lacrimal Bone

LC2	DESCRIPTION
AG	Maxillary Bone
AH	Nasal Bone
AI	Nasal Concha Bone
AJ	Vomer Bone
AK	Zygomatic Bone
AL	Orbital Bone
AM	Mandible Bone
AQ	Pons
BA	Buccinator Muscle
BB	Depressor Anguli Oris Muscle
BC	Depressor Labii Muscle
BD	Digastric Muscle
BE	Frontalis Muscle
BF	Hyoglossus Muscle
BG	Levator Anguli Oris Muscle
BH	Levator Labii Anterior Muscle
BI	Levator Labii Superioris Muscle
BJ	Masseter Muscle
BK	Mentalis Muscle
BL	Mylohyoid Muscle
BN	Orbicularis Oculi Muscle
BO	Orbicularis Oris Muscle
BP	Procerus Muscle
BQ	Risorius Muscle
BR	Stylohyoid Muscle
BS	Temporal Muscle
BT	Zygomaticus Major Muscle
BU	Zygomaticus Minor Muscle
BV	Alveolar Ridge with Teeth
BW	Maxillary Alveolar Ridge
BX	Mandibular Alveolar Ridge
BY	External Carotid
BY	External Carotid
BZ	Nasalis Superior Muscle
CA	Nasalis Inferior Muscle
DA	Levator Scapula Muscle
DB	Omohyoid Muscle
DC	Platysma Muscle
DD	Scalene Anterior Muscle
DE	Scalene Middle Muscle
DF	Scalene Posterior Muscle
DG	Semispinalis Caervicis Muscle
DH	Semispinalis Capitis Muscle
DI	Splenius Capitis Muscle
DJ	Sternocleidomastoid Muscle
DK	Sternohyoid Muscle
DL	Sternothyroid Muscle
DM	Thyrohyoid Muscle

LC2	DESCRIPTION
DN	Trapezius Muscle
DO	Internal Carotid
DP	Common Carotid
DQ	External Carotid
DR	Sublingual Glands
DS	Submandibular Gland
DT	Parotid Gland
DU	Thyroid Gland
DV	Epiglottis
EA	Diaphragm Muscle
EB	Iliocostalis Muscle
EC	Intercostal Large Front Muscle
ED	Intercostal Large Muscle
EE	Intercostal Small Muscle
EF	Latissimus Dorsi Muscle
EG	Longissimus Muscle
EH	Pectoralis Major Muscle
EI	Pectoralis Minor Muscle
EJ	Rhomboid Major Muscle
EK	Rhomboid Minor Muscle
EL	Serratus Anterior Muscle
EM	Spinalis Muscle
EN	Inferior Vena Cava Artery
EO	Superior Vena Cava Artery
EP	Thoracic Veins
EQ	Coronary Vein
ER	Costal Ribs Bones
ES	Lung Lobe 1
ET	Lung Lobe 2
EU	Lung Lobe 3
EV	Sternum
EW	Atria
EX	Ventricle
GA	External Oblique Muscle
GB	Internal Oblique Muscle
GC	Psoas Major Muscle
GD	Psoas Minor Muscle
GE	Quadratus Lumborum Muscle
GF	Rectus Abdominis Muscle
GG	Transverse Abdominis Muscle
GH	Colon
GI	Ascending Colon
GJ	Descending Colon
GK	Transverse Colon
GL	Sigmoid Colon
GM	Gonadal Arteries
GN	Hepatic Arteries
GO	Gonadal Veins

LC2	DESCRIPTION
GP	Hepatic Veins
GQ	Inferior Mesenteric Vein
GR	Portal Veins
GS	Renal Veins
GT	Common Iliac Artery
HA	Biceps Lateral Muscle
HB	Biceps Medial Muscle
HC	Brachialis Muscle
HD	Coracobrachialis Muscle
HE	Triceps Lateral Muscle
HF	Triceps Long Muscle
HG	Triceps Medial Muscle
HH	Abductor Pollicis Longus Muscle
HI	Anconeous Muscle
HJ	Brachioradialis Muscle
HK	Extensor Carpi Radialis Brevis Muscle
HL	Extensor Carpi Radialis Longus Muscle
HM	Abductor Minimi Digiti Muscle
HN	Abductor Pollicis Brevis Muscle
HO	Adductor Pollicis Muscle
HP	Bicep Brachii Muscle
HQ	Extensor Carpi Ulnaris Muscle
HR	Extensor Digiti Minimi Muscle
HS	Extensor Digitorum Muscle
HT	Flexor Carpi Radialis Muscle
HU	Flexor Carpi Ulnaris Muscle
HV	Flexor Digitorum Profundus Muscle
HW	Flexor Digitorum Superficialis Muscle
HX	Flexor Pollicis Longus Muscle
HY	Pronator Quadratus Muscle
HZ	Pronator Teres Muscle
IA	Supinator Muscle
IB	Extensor Indicis Muscle
IC	Extensor Pollicis Brevis Muscle
ID	Extensor Pollicis Longus Muscle
IE	Palm Muscles
IF	Palmaris Longus Muscle
IG	Deltoid Muscle
IH	Infraspinatus Right Muscle
II	Subscapularis Muscle
IJ	Supraspinatus Muscle
IK	Teres Major Muscle
IL	Teres Minor Muscle
IM	Triceps Tendon
IN	Flexor Retinaculum Tendon
IO	Hand Ligaments
IP	Wrist Ligaments
IQ	Sternoclavicular Ligament
IR	Interosseus Membrane of Forearm
IS	Shoulder Ligaments
IT	Capsule Ligament
IU	Elbow Ligaments
IV	Bicipital Aponeurosis
IW	Upper Extremity Arteries
IX	Interosseous Artery
IY	Profunda Arteries
IZ	Radial Artery
JA	Ulnar Artery
JB	Palmer Arch Arteries
JC	Upper Extremity Veins
JD	Forearm Veins
JE	Intersseous Vein
JF	Median Cubital Vein
JG	Radial Vein
JH	Ulnar Vein
JI	Palm Veins
JJ	Axillary Vein
JK	Cephalic Vein
JL	Humerus Bone
JM	Radius Bone
JN	Ulna Bone
JO	Clavicle Bone
JP	Scapula Bone
JQ	Wrist Bone-Pisiform
JR	Wrist Bone-Scaphoid
JS	Wrist Bone-Trapezium
JT	Wrist Bone-Trapezoid
JU	Wrist Bone-Triquetral
JV	Wrist Bone-Capitate
JW	Wrist Bone-Hamate
JX	Wrist Bone-Lunate
LA	Abductor Digiti Minimi Muscle
LB	Abductor Hallucis Muscle
LC	Extensor Digitorium Brevis Muscle
LD	Extensor Hallucis Brevis Muscle
LE	Flexor Digitorium Brevis Muscle
LF	Gluteus Maximus Muscle
LG	Gluteus Medius Muscle
LH	Gluteus Minimus Muscle
LI	Iliacus Muscle
LJ	Inferior Gemellus Muscle
LK	Obturator Externus Muscle
LL	Obturator Internus Muscle
LM	Pisiformis Muscle
LN	Quadratus Femoris Muscle
LO	Superior Gemellus Muscle

LC2	DESCRIPTION
LP	Extensor Digitorium Longus Muscle
LQ	Extensor Hallucis Longus Muscle
LR	Flexor Digitorium Longus Muscle
LS	Flexor Hallucis Muscle
LT	Gastrocnemius Muscle
LU	Peroneus Brevis Muscle
LV	Peroneus Longus Muscle
LW	Soleus Muscle
LX	Tibialis Anterior Muscle
LY	Tibialis Posterior Muscle
LZ	Adductor Brevis Muscle
MA	Adductor Longus Muscle
MB	Adductor Magnus Muscle
MC	Bicep Femoris Muscle
MD	Gracilis Muscle
ME	Pectineus Muscle
MF	Rectus Femoris Muscle
MG	Sartorius Muscle
MH	Semimembranosus Muscle
MI	Semitendinosus Muscle
MJ	Tensor Faciae Latae Muscle
MK	Vastus Intermedius Muscle
ML	Vastus Lateralis Muscle
MM	Vastus Medialis Muscle
MN	Tibial Collateral Ligament
MO	Fibular Collateral Ligament
MP	Achilles Tendon
MQ	Ankle Ligaments
MR	Hip Ligaments
MS	Joints of Lower Extremities Ligaments
MT	Knee Ligaments
MU	Patellar Ligament
MV	Sacrotuberous Ligament
MW	Tibial Anterior Artery
MX	Tibial Posterior Artery
MY	Peroneal Artery
MZ	Plantar Veins
NA	Saphenous Small Vein
NB	Tibial Vein Anterior
NC	Tibial Vein Posterior
ND	Saphenous Vein
NE	Femoral Lateral Nerve
NF	Femoral Posterior Nerve
NG	Femoral Nerve
NH	Gluteal Superior Nerve
NI	Inferior Gluteal Nerve
NJ	Obturator Nerve
NK	Pudendal Nerve

LC2	DESCRIPTION
NL	Sacral Plexus
NM	Sciatic Nerve
NN	SI Joint
NO	Pelvic Bone Back
NP	Pelvic Bone
NQ	Pelvic Bone Front
NR	Sacrum Bone
NS	Symphysis Pubis Bone
NT	Illium Bone
NU	Ischium Bone
NV	Pubic Rami
NW	Coccyx Bone
NX	LE Above Knee
NY	LE Below Knee
OA	Anterior Cruciate Ligament
OB	Posterior Cruciate Ligament
OC	Acetabulofemoral Ligament

APPENDIX E

MAPPING BETWEEN NASS-CDS AND CISS

* Users are warned that CISS does not use the missing values used in CDS (e.g. Unknown = .U), instead, numeric values are used (e.g. Unknown = 999). Please refer to individual variables for their specific values.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
ACCIDENT	AAIS	MAXIMUM KNOWN AIS IN THIS CRASH (AIS98 FORMAT)	CRASH	CAIS	CISS uses AIS '15 while AAIS used AIS '98. CISS does not provide a translation back to AIS '98. While the codes are similar, they are not necessarily equivalent.
ACCIDENT	AAIS08	MAXIMUM KNOWN AIS IN THIS CRASH (AIS08 FORMAT)	CRASH	CAIS	CISS uses AIS '15 while AAIS used AIS '08. CISS does not provide a translation back to AIS '08. While the codes are similar, they are not necessarily equivalent.
ACCIDENT	AINJSER	NUMBER OF SERIOUSLY INJURED OCCUPANTS (AIS98 FORMAT)	CRASH	CINJSEV	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '98. CISS does not provide a translation back to AIS '98. While the codes are similar, they are not necessarily equivalent.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
ACCIDENT	AINJSER8	NUMBER OF SERIOUSLY INJURED OCCUPANTS (AIS08 FORMAT)	CRASH	CINJSEV	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '08. CISS does not provide a translation back to AIS '08. While the codes are similar, they are not necessarily equivalent.
ACCIDENT	AINJURED	TOTAL NUMBER OF INJURED OCCUPANTS (AIS98 FORMAT)	CRASH	CINJURED	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '98. CISS does not provide a translation back to AIS '98. While the codes are similar, they are not necessarily equivalent.
ACCIDENT	AINJURD8	TOTAL NUMBER OF INJURED OCCUPANTS (AIS08 FORMAT)	CRASH	CINJURED	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '08. CISS does not provide a translation back to AIS '08. While the codes are similar, they are not necessarily equivalent.
ACCIDENT	ALCINV	ALCOHOL INVOLVED IN ACCIDENT	CRASH	ALCINV	
ACCIDENT	ATREAT	MAXIMUM TREATMENT IN ACCIDENT	CRASH	CTREAT	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
ACCIDENT	CASEID	CASE NUMBER - STRATUM	N/A	N/A	ACCIDENT.CASEID was a derived field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF that was used in CDS. Also, be aware that CRASH.CASEID is a unique number generated by the CISS data entry which is different from the ACCIDENT.CASEID.
ACCIDENT	CASENO	CASE SEQUENCE NUMBER	CRASH	CASENO	
ACCIDENT	DAYWEEK	DAY OF WEEK OF ACCIDENT	CRASH	DAYOFWEEK	
ACCIDENT	DRGINV	DRUG INVOLVED	CRASH	DRUGINV	
ACCIDENT	EVENTS	NUMBER OF RECORDED EVENTS IN ACCIDENT	CRASH	EVENTS	
ACCIDENT	MANCOLL	MANNER OF COLLISION	CRASH	MANCOLL	
ACCIDENT	MONTH	MONTH OF ACCIDENT	CRASH	CRASHMONTH	
ACCIDENT	NATWGT	NATIONAL INFLATION FACTOR	N/A	N/A	Not part of the CISS PSU profile.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
ACCIDENT	PSU	PRIMARY SAMPLING UNIT NUMBER	CRASH	PSU	
ACCIDENT	PSUSTRAT	PRIMARY SAMPLING UNIT STRATIFICATION	CRASH	PSUSTRAT	
ACCIDENT	RATWGT	RATIO INFLATION FACTOR	CRASH	CASEWGT	
ACCIDENT	STRATIF	CASE STRATUM	CRASH	CATEGORY	
ACCIDENT	TIME	TIME OF ACCIDENT	CRASH	CRASHTIME	
ACCIDENT	VEHFORMS	NUMBER GENERAL VEHICLE FORMS SUBMITTED	CRASH	VEHICLES	The user should be aware that unlike CDS, CISS creates vehicle forms for all vehicles in the crash regardless of transport status.
ACCIDENT	YEAR	YEAR OF ACCIDENT	CRASH	CRASHYEAR	
ACCIDENT	VERSION	VERSION NUMBER	CRASH	VERSION	The user should be aware that the final year of CDS had Version equal to 28. CISS 2017 VERSION equals 2, since CISS 2016 was the first official year, although no SAS files were produced in 2016 due to the small number of cases.
ACCIDENT	ADMINSS	ADMINISTRATIVE USE	N/A	N/A	ADMINSS

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
ACC_DESC	CASEID	CASE NUMBER - STRATUM	CRASH_DESC	N/A	ACC_DESC.CASEID was a derived field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF that was used in CDS. Also, be aware that CISS CASEID is a unique number generated by the CISS data entry which is different from the ACC_DESC.CASEID.
ACC_DESC	CASENO	CASE SEQUENCE NUMBER	CRASH_DESC	CASENO	
ACC_DESC	LINENO	LINE NUMBER	CRASH_DESC	LINENO	
ACC_DESC	PSU	PRIMARY SAMPLING UNIT NUMBER	CRASH_DESC	PSU	
ACC_DESC	STRATIF	CASE STRATUM	CRASH_DESC	CATEGORY	
ACC_DESC	TEXT71	SUMMARY TEXT	CRASH_DESC	SUMMARY	
ACC_DESC	VERSION	VERSION NUMBER	CRASH_DESC	VERSION	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VEH_PRO	CASEID	CASE NUMBER - STRATUM	N/A	N/A	VEH_PRO.CASEID was a derived field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate GV.CASENO and GV.CATEGORY, however please be aware that GV.CATEGORY does not use the same values and definitions which VEH_PRO.STRATIF that was used in CDS. Also, be aware that CISS CASEID is a unique number generated by the CISS data entry which is different from the VEH_PRO.CASEID.
VEH_PRO	CASENO	CASE SEQUENCE NUMBER	GV	CASENO	
VEH_PRO	LINENO	LINE NUMBER	N/A	N/A	
VEH_PRO	PSU	PRIMARY SAMPLING UNIT NUMBER	GV	PSU	
VEH_PRO	STRATIF	CASE STRATUM	GV	CATEGORY	
VEH_PRO	TEXT81	SUMMARY TEXT	GV	MODELYR, MAKETEXT, MODELTEXT, DAMPLANE, DAMSEV	While CISS does not have the VEH_PRO dataset, the data in TEXT81 can be derived by concatenating the fields mentioned in CISS - COLUMNS.
VEH_PRO	VERSION	VERSION NUMBER	GV	VERSION	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
PERS_PRO	CASEID	CASE NUMBER - STRATUM	N/A	N/A	PERS_PRO.CASEID is a derived field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate OA.CASENO and OA.CATEGORY, however please be aware that OA.CATEGORY does not use the same values and definitions which PER_PRO.STRATIF that was used in CDS. Also, be aware that CISS CASEID is a unique number generated by the CISS data entry which is different from the PERS_PRO.CASEID.
PERS_PRO	CASENO	CASE SEQUENCE NUMBER	OA	CASENO	
PERS_PRO	LINENO	LINE NUMBER	N/A	N/A	
PERS_PRO	PSU	PRIMARY SAMPLING UNIT NUMBER	OA	PSU	
PERS_PRO	STRATIF	CASE STRATUM	OA	CATEGORY	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
PERS_PRO	TEXT91	SUMMARY TEXT	N/A	N/A	CISS does not collect the exact information contained in TEXT91, however the data can be partially recreated by concatenating the OCCNO, ROLETEXT, and SEATLOCTEXT fields.
PERS_PRO	VERSION	VERSION NUMBER	OA	VERSION	
EVENT	ACCSEQ	ACCIDENT EVENT SEQUENCE NUMBER	EVENT	CRASHSEQ	
EVENT	CASEID	CASE NUMBER - STRATUM	N/A	N/A	EVENT.CASEID was a derived field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF that was used in CDS. Also, be aware that CISS CASEID is a unique number generated by the CISS data entry which is different from the EVENT.CASEID.
EVENT	CASENO	CASE SEQUENCE NUMBER	EVENT	CASENO	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
EVENT	CLASS1	CLASS OF FIRST VEHICLE	EVENT	CLASS1	
EVENT	CLASS2	CLASS OF OTHER VEHICLE	EVENT	CLASS2	
EVENT	GADEV1	GENERAL AREA OF DAMAGE FIRST VEHICLE	EVENT	GAD1	
EVENT	GADEV2	GENERAL AREA OF DAMAGE OTHER VEHICLE	EVENT	GAD2	
EVENT	OBJCONT	OTHER VEHICLE NUMBER OR OBJECT CONTACTED	EVENT	OBJCONT	
EVENT	NATWGT	NATIONAL INFLATION FACTOR	N/A	N/A	Not part of the CISS PSU profile.
EVENT	PSU	PRIMARY SAMPLING UNIT NUMBER	EVENT	PSU	
EVENT	RATWGT	RATIO INFLATION FACTOR	EVENT	CASEWGT	
EVENT	STRATIF	CASE STRATUM	EVENT	CATEGORY	
EVENT	VEHNUM	VEHICLE NUMBER	EVENT	VEHNO	
EVENT	VERSION	VERSION NUMBER	EVENT	VERSION	
GV	ACCSEQDV	ACCIDENT SEQUENCE NO FOR HIGHEST DELTA V	GV	DVEVENT	
GV	ACCTYPE	ACCIDENT TYPE	GV	CRASHTYPE	
GV	ALCTEST	ALCOHOL TEST RESULT FOR DRIVER	GV	ALCTEST	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	ANGTHIS	HEADING ANGLE FOR THIS VEHICLE	GV	DVANGTHIS	
GV	ANGOTHER	HEADING ANGLE FOR OTHRE VEHICLE	GV	DVANGOTH	
GV	CLIMATE	WEATHER	GV	WEATHER	
GV	BAREQSP	BARRIER EQUIVALENT SPEED	GV	DVBES	
GV	BODYTYPE	VEHICLE BODY TYPE	GV	BODYTYPE	
GV	CARGOWGT	VEHICLE CARGO WEIGHT	GV	CARGOWT	
GV	CASEID	CASENUMBER - STRATUM	N/A	N/A	GV.CASEID was a derived field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF that was used in CDS. Also, be aware that THE CISS GV.CASEID is a unique number generated by the CISS data entry which is different from the CDS GV.CASEID.
GV	CASENO	CASE SEQUENCE NUMBER	GV	CASENO	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	CONDTREE	POST COLLISION CONDITION OF TREE OR POLE	GV	TREEPOLE	
GV	CURBWGT	VEHICLE CURB WEIGHT	GV	CARGOWT	
GV	DVEST	ESTIMATED HIGHEST DELTA V	GV	DVEST	
GV	DOCTRAJ	DOCUMENTATION OF TRAJECTORY DATA	GV	TRAJDOC	
GV	DRIVDIST	DRIVER'S DISTRACTION/INATTENTION TO DRIVING	GV & DISTRACT	GV.DRIVDIST & DISTRACT.DISTRACTN	Since drivers may have multiple distractions, this data was split between two datasets. GV.DRIVDIST will capture the CDS attributes of 00, 01, 02, .U. The other attributes will be captured in DISTRACT.DISTRACTN.
GV	DRINKING	POLICE REPORTED ALCOHOL PRESENCE	GV	PARALCOHOL	
GV	DRPRES	DRIVER PRESENCE IN VEHICLE	GV	DRPRESENT	
GV	DRZIP	DRIVER'S ZIP CODE	GV	ZIP	
GV	DVBASIS	BASIS FOR TOTAL DELTA V (HIGHEST)	GV	DVBASIS	
GV	DVCONFID	CONFIDENCE IN RECONSTRUCTION	GV	DVCONF	
GV	DVLAT	LATERAL COMPONENT OF DELTA V	GV	DVLAT	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	DVLONG	LONGITUDINAL COMPONENT OF DELTA V	GV	DVLONG	
GV	DVTOTAL	TOTAL DELTA V	GV	DVTOTAL	
GV	ENERGY	ENERGY ABSORPTION	GV	DVENERGY	
GV	ETHNICIT	ETHNICITY	GV	ETHNICITY	
GV	FOVERIDE	FRONT OVERRRIDE/UNDERRIDE THIS VEHICLE	N/A	N/A	This derived variable is not in CISS. This data, by event/CDC, can be found in the CDC.OVERUNDER variable.
GV	IMPACTSP	IMPACT SPEED	GV	DVSPEED	
GV	INSPTYPE	TYPE OF VEHICLE INSPECTION	GV	INSPTYPE	
GV	LANES	NUMBER OF LANES	GV	RDLANES	
GV	LGTCOND	LIGHT CONDITIONS	GV	LIGHTCOND	
GV	MAKE	VEHICLE MAKE	GV	MAKE	Users should be aware that CISS has adopted the Make coding scheme used by FARS. As such, there may be slight differences in coding between CDS and CISS.
GV	MANEUVER	ATTEMPTED AVOIDANCE MANEUVER	GV	MANEUVER	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	MODEL	VEHICLE MODEL	GV	MODEL	Users should be aware that CISS has adopted the Model coding scheme used by FARS. As such, there may be slight differences in coding between CDS and CISS.
GV	MODELYR	VEHICLE MODEL YEAR	GV	MODELYR	
GV	NATWGT	NATIONAL INFLATION FACTOR	N/A	N/A	Not part of the CISS PSU profile.
GV	OCCFORMS	NUMBER OF OCCUPATN FORMS SUBMITTED	N/A	N/A	This derived variable is not in CISS. This data can be derived by counting the number of rows in the OCC dataset for this vehicle.
GV	OCUPANTS	NUMBER OF OCCUPANTS THIS VEHICLE	N/A	N/A	This variable is not in CISS. It was derived for 1996-2015 CDS and coded by the coder from 1979-1993 CDS. This data can be derived for in-transport towed CISS applicable vehicles by counting the number of rows in the OCC dataset, however would be unknown for other vehicles.
GV	RATWGT	RATIO INFLATION FACTOR	GV	CASEWGT	
GV	PREEVENT	INITIAL CRITICAL (PRECRASH) EVENT	GV	CRITEVENT	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	PREMOVE	PRE-EVENT MOVEMENT PRIOR REC CRIT EVENT	GV	PREMOVE	
GV	PREILOC	PRE-IMPACT LOCATION	GV	PRELOC	
GV	PREISTAB	PRE-IMPACT STABILITY	GV	PRESTAB	
GV	PSU	PRIMARY SAMPLING UNIT NUMBER	GV	PSU	
GV	ALIGNMNT	ROADWAY ALIGNMENT	GV	ALIGNMENT	
GV	SURCOND	ROADWAY SURFACE CONDITION	GV	SURFCOND	
GV	PROFILE	ROADWAY PROFILE	GV	PROFILE	
GV	SURTYPE	ROADWAY SURFACE TYPE	GV	SURFTYPE	
GV	RACE	RACE	GV	RACE	
GV	RELINTER	RELATION TO JUNCTION	GV	RELTOJUNCT	
GV	ROLINDIR	DIRECTION OF INITIAL ROLL	GV	ROLLTYPE	
GV	ROLINLOC	LOCATION OF ROLLOVER	GV	ROLLINLOC	
GV	ROLINTYP	ROLLOVER INITIATION TYPE	GV	ROLLINITYP	
GV	ROLLOBJ	ROLLOVER INITIATION OBJECT CONTACTED	GV	ROLLOBJ	
GV	PROLLMAN	PRE ROLLOVER MANEUVER	GV	ROLLPREMAN	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	INTEROLL	INTERUPTED ROLLOVER	GV	ROLLINTRPT	
GV	ROLLDIST	ESTIMATED DISTANCE OF ROLLOVER	GV	ROLLDIST	
GV	ROLLOVER	ROLLOVER	GV	ROLLTYPE	
GV	ROVERIDE	REAR OVERRIDE/UNDERRIDE THIS VEHICLE	N/A	N/A	This data is now collected at the vehicle inspection level in the CDC dataset.
GV	SPECOTH	OTHER DRUG: SPECIMEN TEST RESULTS	GV	PARDRUG	
GV	SPLIMIT	SPEED LIMIT	GV	SPEEDLIMIT	
GV	STRATIF	CASE STRATUM	GV	CATEGORY	
GV	TOWHITCH	TOWED TRAILING UNIT	GV	TOWHITCH	
GV	TOWPAR	POLICE REPORTED VEHICLE DISPOSITION	GV	TOWSTAT	Slight differences between NASS-CDS's GV.TOWPAR and CISS's GV.TOWSTAT. GV.TOWSTAT attributes do not address whether the vehicle was disabled or not, merely if the vehicle was towed or not.
GV	TRAFCONT	TRAFFIC CONTROL DEVICE	GV	TRAFDEEV	
GV	TRANSTAT	TRANSPORT STATUS	GV	TRANSTAT	
GV	TRCTLFCT	TRAFFIC CONTROL DEVICE FUNCTIONING	GV	TRAFFUNCT	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	TRAVELSP	POLICE REPORTED TRAVEL SPEED	N/A	N/A	NOT COLLECTED IN CISS
GV	TRAFFLOW	TRAFFICWAY FLOW	GV	TRAFFLOW	
GV	TRIPLOC	LOC. ON VEH. WHERE INIT TRIP FORCE APPL	GV	ROLLTRIP	
GV	VEHNO	VEHICLE NUMBER	GV	VEHNO	
GV	VEHUSE	VEHICLE SPECIAL USE	GV	SPECUSE	
GV	VIN	VEHICLE IDENTIFICATION NUMBER	GV	VIN	
GV	VINLNGTH	VIN LENGTH	GV	VINLENGTH	
GV	VERSION	VERSION NUMBER	GV	VERSION	
GV	DRUGS	REPORTED OTHER DRUG	GV	DRUGTEST	
GV	VAIS	MAXIMUM KNOWN AIS IN THIS VEHICLE (AIS98 FORMAT)	GV	VMAIS	Users should be aware that CISS uses AAAM's AIS 2015 while NASS-CDS used AIS 1998 for this variable. There may be some differences in the calculation of this field.
GV	VAIS08	MAXIMUM KNOWN AIS IN THIS VEHICLE (AIS08 FORMAT)	GV	VMAIS	Users should be aware that CISS uses AAAM's AIS 2015 while NASS-CDS used AIS 2008 for this variable. There may be some differences in the calculation of this field.
GV	VINMODYR	VIN MODEL YEAR	VINDERIVED	MODELYEAR	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	MCYCLDS	MOTORCYCLE ENGINE DISPLACEMENT	VINDERIVED	DISPLACEMENTCC	Users would need to filter the VINDERIVED field on VEHICLETYPE='MOTORCYCLE' in order to properly match to MCYCLDS. Additionally, CISS no longer uses the same derivation application so results may differ.
GV	VEHWGT	VIN VEHICLE WEIGHT	N/A	N/A	Not derived for CISS.
GV	VINMAKE	VIN MAKE	VINDERIVED	MAKE	
GV	VINAMOD	VIN MODEL CARS AND TRUCKS	VINDERIVED	MODEL	
GV	SERTR	VIN SERIES TRUCK	VINDERIVED	SERIES	Users would need to filter the VINDERIVED field on BODYCLASS='Pickup' in order to properly match to SERTR. Additionally, CISS no longer uses the same derivation application so results may differ.
GV	VINBT	VIN BODY TYPE	N/A	N/A	The closest CISS comes to VINBT is VINDERIVED.BODYCLASS, however the values are not a one-to-one match.
GV	ROOF1	ROOF	N/A	N/A	
GV	ROOF2	OPTIONAL ROOF 1	N/A	N/A	
GV	ROOF 3	OPTIONAL ROOF 2	N/A	N/A	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	ANTILOCK	ANTILOCK BRAKES	VINDERIVED	ANTILOCKBRAKESYSTEM	CISS no longer uses the same derivation application so results may differ.
GV	FRTWHLDR	FRONT WHEEL DRIVE	VINDERIVED	DRIVETYPE	Users would need to filter DRIVETYPE by 'FWD/Front Wheel Drive' to determine if the vehicle is front wheel drive.
GV	FOURWHDR	FOUR SHEEL DRIVE	VINDERIVED	DRIVETYPE	Users would need to filter DRIVETYPE by '4WD/4-Wheel Drive/4x4' to determine if the vehicle is four wheel drive.
GV	RESTYPE	RESTRAINT TYPE	VINDERIVED	SEATBELTSTYPE	CISS no longer uses the same derivation application so results may differ in terms of code values and completeness.
GV	CARBUR	CARBURETION	N/A	N/A	
GV	FUELCODE	FUEL CODE	VINDERIVED	FUELTYPEPRIMARY, FUELTYPESECONDARY	CISS no longer uses the same derivation application so results may differ in terms of code values and completeness.
GV	WGTCDTR	TRUCK WEIGHT CODE	VINDERIVED	GROSSVEHICLEWEIGHTRATING	Users would need to filter VEHICLETYPE by 'TRUCK'.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	VEHTYPE	TYPE OF VEHICLE	VINDERIVED	VEHICLETYPE	CISS no longer uses the same derivation application so results may differ in terms of code values and completeness.
GV	WHLDRWHL	NUMBER WHEELS/NUMBER OF DRIVE WHEELS	N/A	N/A	Users may be able to derive this value by using WHEELSCOUNT and/or DRIVETYPE in the VINDERIVED dataset.
GV	DAYRUNLT	DAYTIME RUNNING LIGHTS	N/A	N/A	
GV	OTVEHWGT	WEIGHT OF THE OTHER VEHICLE	N/A	N/A	
GV	OTBDYTYP	BODY TYPE OF THE OTHER VEHICLE	N/A	N/A	
GV	VINJSER	NUMBER SERIOUSLY INJURED IN THIS VEHICLE (AIS98 FORMAT)	GV	VINJSER	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '98. CISS does not provide a translation back to AIS '98. While the codes are similar, they are not necessarily equivalent.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
GV	VINJSER8	NUMBER OF SERIOUSLY INJURED IN THIIS VEHICLE (AIS08 FORMAT)	GV	VINJSER	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '08. CISS does not provide a translation back to AIS '08. While the codes are similar, they are not necessarily equivalent.
GV	VINJURED	NUMBER INJURED IN THIS VEHICLE (AIS98 FORMAT)	GV	VINJURED	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '98. CISS does not provide a translation back to AIS '98. While the codes are similar, they are not necessarily equivalent.
GV	VINJURD8	NUMBER OF INJURED IN THIS VEHICLE (AIS08 FORMAT)	GV	VINJURED	This variable uses the AIS codes found in the data. CISS uses AIS '15 while AAIS used AIS '08. CISS does not provide a translation back to AIS '08. While the codes are similar, they are not necessarily equivalent.
GV	VTREAT	MAXIMUM TREATMENT IN THIS VEHICLE	GV	VTREAT	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	ACCSEQ1	ACCIDENT EVENT SEQUENCE (HIGHEST)	CDC	EVENTNO	Unlike CDS which only provided the two highest delta V CDCs, CISS is providing all documented CDCs, so there is no need to provide a suffix indicating the severity (e.g the "1" in ACCSEQ1). In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	ACCSEQ2	ACCIDENT EVENT SEQUENCE (2ND HIGHEST)	CDC	EVENTNO	Unlike CDS which only provided the two highest delta V CDCs, CISS is providing all documented CDCs, so there is no need to have a 2nd highest delta V event sequence. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	ALTVEH	MULTI-STAGE MANUFACTURED/CERT.ALT .VEH.	VEHSPEC	ALTVEH	
VE	ORIGAVTW	ORIGINAL AVERAGE TRACK WIDTH	VEHSPEC	TRACKWIDTH	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	CASEID	CASE NUMBER - STRATUM	N/A	N/A	VE.CASEID was a derived in CDS field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF used in CDS. Also, be aware that CISS CASEID is a unique number generated by the CISS data entry which is different from the VE.CASEID.
VE	CASENO	CASE SEQUENCE NUMBER	CDC	CASENO	
VE	DIRDAMW	DIRECT DAMAGE WIDTH	CDC	DIRECTL	
VE	DOCCDC	CDCs DOCUMENTED BUT NOT CODED ON FILE?	N/A	N/A	Unlike CDS which only provided the two highest delta V CDCs, CISS is providing all documented CDCs, so there is no need mention if there are undocumented CDCs.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	DVC1	CRUSH PROFILE C1 (HIGHEST)	CDC	CDC	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	DVC2	CRUSH PROFILE C2 (HIGHEST)	CDC	C2	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	DVC3	CRUSH PROFILE C3 (HIGHEST)	CDC	C3	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	DVC4	CRUSH PROFILE C4 (HIGHEST)	CDC	C4	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	DVC5	CRUSH PROFILE C5 (HIGHEST)	CDC	C5	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	DVC6	CRUSH PROFILE C6 (HIGHEST)	CDC	C6	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	DVD	CRUSH PROFILE D (HIGHEST)	CDC	FIELDD	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	DVL	CRUSH PROFILE L (HIGHEST)	CDC	FIELDL	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	DOF1	DIRECTION OF FORCE (HIGHEST)	CDC	OCLOCK	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	DOF2	DIRECTION OF FORCE (HIGHEST)	CDC	OCLOCK	Variable not needed since CISS documents all CDCs. In order to match to NASS CDS, the user should filter on DVRANK=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	UNDENDW	UNDEFORMED END WIDTH	VEHSPEC	UEW	
VE	EXTENT1	DEFORMATION EXTENT (HIGHEST)	CDC	CDCEXTENT	Unlike CDS which only provided the two highest delta V CDCs, CISS is providing all documented CDCs, so there is no need to provide a suffix indicating the severity (e.g the "1" in ACCSEQ1). In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	EXTENT2	DEFORMATION EXTENT (2ND HIGHEST)	CDC	CDCEXTENT	Variable not needed since CISS documents all CDCs. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	FUELCAP1	LOCATION OF FUEL TANK-1 FILLER CAP	FUEL		CISS collects information for all vehicle fuel systems so there is no need to suffix fields with one (1) or two (2). As with CDS in later years, CISS only collects full fuel information when there is fuel leakage, cell damage or vehicle fire. Since there was no priority of entry of fuel systems, there is no way to do a direct match to this variable.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	FUELCAP2	LOCATION OF FUEL TANK-2 FILLER CAP	N/A	N/A	This field is not needed since CISS collects information on all fuel systems.
VE	FUELPRE1	FUEL TANK-1 PRECRASH CONDITIONS	FUEL	FUELCOND	Unlike CDS which only provided information on two fuel systems, CISS reports information for all the vehicle's fuel systems, so there is no need to provide a suffix indicating the fuel system. Since there was no priority of entry of fuel systems, there is
VE	FUELPRE2	FUEL TANK-2 PRECRSASH CONDITIONS	N/A	N/A	This field is not needed since CISS collects information on all fuel systems.
VE	FIRE	FIRE OCCURRENCE	FIRE	FIRE	
VE	FIREORIG	ORIGIN OF FIRE	FIRE	FIREORIGIN	
VE	FUELDAM1	DAMAGE TO FUEL TANK-1	FUEL	CELLDAM	Unlike CDS which only provided information on two fuel systems, CISS reports information for all the vehicle's fuel systems, so there is no need to provide a suffix indicating the fuel system. Since there was no priority of entry of fuel systems, there is no way to do a direct match to this variable.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	FUELDAM2	DAMAGE TO FUEL TANK-2	N/A	N/A	
VE	GAD1	DEFORMATION LOCATION (HIGHEST)	CDC	CDCPLANE	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	GAD2	DEFORMATION LOCATION (2ND HIGHEST)	CDC	CDCPLANE	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	FUELLOC1	LOCATION OF FUELTANK-1	FUEL	FUELLOC	Unlike CDS which only provided information on two fuel systems, CISS reports information for all the vehicle's fuel systems, so there is no need to provide a suffix indicating the fuel system. Since there was no priority of entry of fuel systems, there is no way to do a direct match to this variable.
VE	FUELLOC2	LOCATION OF FUELTANK-2	N/A	N/A	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	FUELTNK1	TYPE OF FUEL TANK-1	FUEL	FUELCELL	Unlike CDS which only provided information on two fuel systems, CISS reports information for all the vehicle's fuel systems, so there is no need to provide a suffix indicating the fuel system.
VE	FUELTNK2	TYPE OF FUEL TANK-2	N/A	N/A	
VE	FUELTYP1	FUEL TYPE-1	FUEL	FUELTYPE	Unlike CDS which only provided information on two fuel systems, CISS reports information for all the vehicle's fuel systems, so there is no need to provide a suffix indicating the fuel system. Since there was no priority of entry of fuel systems, there is no way to do a direct match to this variable.
VE	FUELTYP2	FUEL TYPE-2	N/A	N/A	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	FUELEAK1	LEAKAGE LOCATION OF FUEL SYSTEM-1	FUEL	FUELEAK	Unlike CDS which only provided information on two fuel systems, CISS reports information for all the vehicle's fuel systems, so there is no need to provide a suffix indicating the fuel system. Since there was no priority of entry of fuel systems, there is no way to do a direct match to this variable.
VE	FUELEAK2	LEAKAGE LOCATION OF FUEL SYSTEM-2	N/A	N/A	
VE	NATWGT	NATIONAL INFLATION FACTOR	N/A	N/A	
VE	FUELGT2	EQUIPPED WITH MORE THAN TWO FUEL TANKS	N/A	N/A	This field is not needed since CISS collects information on all fuel systems.
VE	OBJCONT1	OBJECT CONTACTED (HIGHEST)	CDC	OBJCONT	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	OBJCONT2	OBJECT CONTACTED (2ND HIGHEST)	CDC	OBJCONT	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	PDOF1	CLOCK DIRECTION FOR PDOF IN DEGREES (HIGHEST)	CDC	PDOF	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	PDOF2	CLOCK DIRECTION FOR PDOF IN DEGREES (2ND HIGHEST)	CDC	PDOF	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	PSU	PRIMARY SAMPLING UNIT NUMBER	CDC	PSU	
VE	RATWGT	RATIO INFLATION FACTOR	CDC	CASEWGT	
VE	SDVC1	CRUSH PROFILE C1 (2ND HIGHEST)	CDC	CDC	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	SDVC2	CRUSH PROFILE C2 (2ND HIGHEST)	CDC	C2	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	SDVC3	CRUSH PROFILE C3 (2ND HIGHEST)	CDC	C3	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	SDVC4	CRUSH PROFILE C4 (2ND HIGHEST)	CDC	C4	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	SDVC5	CRUSH PROFILE C5 (2ND HIGHEST)	CDC	C5	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	SDVC6	CRUSH PROFILE C6 (2ND HIGHEST)	CDC	C6	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	SDVD	CRUSH PROFILE D (2ND HIGHEST)	CDC	FIELDD	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	SDVL	CRUSH PROFILE L (2ND HIGHEST)	CDC	FIELDL	Since CISS documents all CDCs in the CDC dataset, this variable in CISS refers to this particular CDC Profile and not necessarily the highest delta V. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	SHL1	SPECIFIC LONGITUDINAL LOCATION (HIGHEST)	CDC	CDCLONGLAT	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	SHL2	SPECIFIC LONGITUDINAL LOCATION (2ND HIGHEST)	CDC	CDCLONGLAT	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	STRATIF	CASE STRATUM	CDC	CATEGORY	
VE	SVL1	SPECIFIC VERTICAL LOCATION (HIGHEST)	CDC	CDCVERTLAT	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=1.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VE	SVL2	SPECIFIC VERTICAL LOCATION (2ND HIGHEST)	CDC	CDCVERTLAT	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	TDD1	TYPE OF DAMAGE DISTRIBUTION (HIGHEST)	CDC	CDCDISTRIB	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=1.
VE	TDD2	TYPE OF DAMAGE DISTRIBUTION (2ND HIGHEST)	CDC	CDCDISTRIB	Since CISS documents all CDCs in the CDC dataset, there is no need for a number suffix. In order to match to NASS CDS, the user should filter on DVRANK=2.
VE	VEHNO	VEHICLE NUMBER	CDC	VEHNO	
VE	WHEELBAS	ORIGINAL WHEELBASE	VEHSPEC	WHEELBASE	
VE	VERSION	VERSION NUMBER	CDC	VERSION	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CASEID	CASE NUMBER - STRATUM	N/A	N/A	VI.CASEID was a derived in CDS field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF used in CDS. Also, be aware that the CISS INTERIOR.CASEID is a unique number generated by the CISS data entry which is different from the NASS-CDS VI.CASEID.
VI	CASENO	CASE SEQUENCE NUMBER	INTERIOR	CASENO	
VI	FAILLF	LF DAMAGE/FAILURE ASSOCIATED W	INTERIOR	OPENLF	
VI	FAILLR	LR DAMAGE/FAILURE - OPENING IN COLLISION	INTERIOR	OPENLR	
VI	FAILRF	RF DAMAGE/FAILURE - OPENING IN COLLISION	INTERIOR	OPENRF	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	FAILTG	TG DAMAGE/FAILURE - OPENING IN COLLISION	INTERIOR	OPENTG	
VI	GLIMPBL	BL GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (10, 11, 12).
VI	GLIMPLF	LF GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLIMPLR	LR GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=4.
VI	GLIMPOTH	OTHER GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (5, 6, 8, 9, 98).

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLIMPRF	RF GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=3.
VI	GLIMPRR	RR GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=7.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLIMPRUF	ROOF GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=13.
VI	GLIMPWS	WS GLAZING DAMAGE FROM IMPACT FORCES	GLAZING	GLAZIMP	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=1.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLOCCBL	BL GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (10, 11, 12).
VI	GLOCCLF	LF GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLOCCLR	LR GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=4.
VI	GLOCCOTH	OTHER GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (5, 6, 8, 9, 98).

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLOCCRF	RF GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=3.
VI	GLOCCRR	RR GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=7.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLOCCRUF	ROOF GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=13.
VI	GLOCCWS	WS GLAZING DAMAGE FROM OCCUPANT CONTACT	GLAZING	GLAZOCC	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=1.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLPREBL	GL WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (10, 11, 12).
VI	GLPRELF	LF WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLPRELR	LR WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=4.
VI	GLPREOTH	OTHER WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (5, 6, 8, 9, 98).

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLPRERF	RF WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=3.
VI	GLPRERR	RR WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=7.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLPRERUF	ROOF WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=13.
VI	GLPREWS	WS WINDOW PRECRASH GLAZING STATUS	GLAZING	GLAZPRE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=1.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLTYPBL	BL TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (10, 11, 12).
VI	GLTYPLF	LF TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=2.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLTYPLR	LR TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=4.
VI	GLTYPOTH	OTHER TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC in (5, 6, 8, 9, 98).

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLTYPRF	RF TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=3.
VI	GLTYPRR	RR TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=7.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	GLTYPRUF	ROOF TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=13.
VI	GLTYPWS	WS TYPE OF WINDOW/WINDSHIELD GLAZING	GLAZING	GLAZTYPE	Glazing rules in CISS have changed compared to NASS-CDS. Glazings are only documented when there is suspected occupant contact (only that glazing), or when there is a suspected ejection (all the vehicle's glazings). To map to the GLIMPBL the user will need to filter on GLAZLOC=1.
VI	OPENLF	LF DOOR, TAILGATE OR HATCH OPENING	INTERIOR	OPENLF	
VI	OPENLR	LR DOOR, TAILGATE OR HATCH OPENING	INTERIOR	OPENLR	
VI	OPENRF	RF DOOR, TAILGATE OR HATCH OPENING	INTERIOR	OPENRF	
VI	OPENRR	RR DOOR, TAILGATE OR HATCH OPENING	INTERIOR	OPENRR	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	OPENTG	TG DOOR, TAILGATE OR HATCH OPENING	INTERIOR	OPENTG	
VI	PASINTEG	PASSENGER COMPARTMENT INTEGRITY	INTEGRITY	INTEGRITY	While NASS-CDS only allowed one (1) integrity item to be coded, or a combination code, CISS allows ALL suspected integrity losses to be coded.
VI	PSU	PRIMARY SAMPLING UNIT NUMBER	INTERIOR	PSU	
VI	STRATIF	CASE STRATUM	INTERIOR	CATEGORY	
VI	VEHNO	VEHICLE NUMBER	INTERIOR	VEHNO	
VI	ADAPTEQ	ADAPTIVE (ASSISTIVE) DRIVING EQUIPEMENT	INTERIOR	ADAPTEQUIP	While NASS-CDS only referenced the existence of adaptive equipment (VI.ADAPTEQ), CISS documents the presence of a number different types. To map CISS back to CDS, the user would need to look at INTERIOR.ADAPTEQUIP. Further information regarding the specific type of equipment can be found in the ADAPT dataset.
VI	COLUMTYP	STEERING COLUMN TYPE	INTERIOR	STEERINGTYPE	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR1	1ST DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC1	1ST LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP1	1ST INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG1	1ST MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR2	2ND DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC2	2ND LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP2	2ND INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG2	2ND MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR3	3RD DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC3	3RD LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP3	3RD INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG3	3RD MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR4	4TH DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC4	4TH LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP4	4TH INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG4	4TH MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR5	5TH DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC5	5TH LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP5	5TH INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG5	5TH MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR6	6TH DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC6	6TH LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP6	6TH INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG6	6TH MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR7	7TH DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC7	7TH MAGNITUDE OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP7	7TH INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG7	7TH MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR8	8TH DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC8	8TH LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP8	8TH INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG8	8TH MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR9	9TH DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC9	9TH LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP9	9TH INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG9	9TH MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	CDRIR10	1OTH DOMINANT CRUSH DIRECTION	INTRUSION	INTDIRECT	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INLOC10	10TH LOCATION OF INTRUSION	INTRUSION	INTLOC	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	INCOMP10	10TH INTRUDING COMPONENT	INTRUSION	INTCOMP	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	INMAG10	10TH MAGNITUDE OF INTRUSION	INTRUSION	INTMAG	While NASS-CDS only documented the 10 highest magnitude intrusions, CISS documents all and doesn't order them in any specific order. Considering this, the suffix numbering does not exist in CISS and while individual intrusions can be found, a one-to-one match is not possible unless the CISS intrusions are first ordered by magnitude.
VI	NATWGT	NATIONAL INFLATION FACTOR	N/A	N/A	
VI	ODOMETER	ODOMETER READING	N/A	N/A	This variable is no longer captured.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
VI	RATWGT	RATIO INFLATION FACTOR	INTERIOR	CASEWGT	
VI	RDEFLOC	LOCATION STEERING RIM/SPOOKE DEFORMATION	INTERIOR	RIMDEFLOC	
VI	RIMDEF	STEERING RIM/SPOKE DEFORMATION	INTERIOR	RIMDEF	
VI	COLMTELE	TELESCOPING STEERING COLUMN ADJUSTMENT	INTERIOR	STEERTELEADJ	
VI	COLMTILT	TILT STEERING COLUMN ADJUSTMENT	INTERIOR	STEERTILTADJ	
VI	POSTINT	POST CRASH INTEGRITY LOSS	INTERIOR	POSTINTEGLOSS	
VI	VERSION	VERSION NUMBER	INTERIOR	VERSION	
OA	AGE	AGE OF OCCUPANT	OCC	AGE	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	BAGAVAIL	AIR BAG SYSTEM AVAILABILITY	AIRBAG	BAGSTATUS	Data reporting for air bags has changed between NASS-CDS and CISS. NASS-CDS primarily captured data for "frontal" air bags (e.g. Steering Wheel Hub, Upper Instrument Panel, and Mid Instrument Panel), while all other air bags in the vehicle were captured in BAGAVOTH and BAGDEPOT which could only accommodate one of those air bags. Preference for the "other" documented air bag fell first to a bag which deployed, however if multiple "other" air bags deployed, preference was given to other frontal bags (i.e. lower instrument panel) then door mounted air bags, and then roof side rail air bags. In contrast, CISS reports all the air bags in the vehicle.
OA	BAGAVOTH	OTHER FRONTAL AIR BAG AVAILABILITY/FUNCTION	AIRBAG	BAGSTATUS	***SEE NOTE FOR OA.BAGAVAIL

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	BAGAVRPT	POLICE REPORTED AIRBAG AVAILABILITY/FUNCTION	OA	PARAIRBAG	
OA	BAGCDC	CDC FOR AIR BAG DEPLOYMENT IMPACT	AIRBAG	CDCFORDEPLOY	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGDAMAG	WAS THERE DAMAGE TO THE AIR BAG	AIRBAG	BAGDAMAGE	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGDAMSO	SOURCE OF AIR BAG DAMAGE	AIRBAG	BAGDAMSOURCE	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGDEPLY	AIR BAG SYSTEM DEPLOYED	AIRBAG	BAGDEPLOY	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGDEPOT	OTHER AIR BAG SYSTEM DEPLOYMENT	AIRBAG	BAGDEPLOY	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGEVENT	AIR BAG DEPLOYMENT ACCIDENT EVENT SEQUENCE NUMBER	AIRBAG	DEPLOYEVENT	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGFAIL	AIR BAG SYSTEM FAILURE	AIRBAG	BAGMALFUNCTION	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGFLDAM	WERE AIR BAG MODULE COVER FLAPS DAMAGED	AIRBAG	BAGFLAPSDAM	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGFLOPN	DID AIR BAG MODULE COVER FLAPS OPEN AT DESG TEAR PTS	AIRBAG	BAGFLAPSOPEN	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGMAINT	PRIOR MAINTENANCE/SERVICE ON AIR BAG	AIRBAG	PRIORMAINT	***SEE NOTE FOR OA.BAGAVAIL
OA	BAGTYPE	TYPE OF AIR BAG	AIRBAG	BAGTYPE	***SEE NOTE FOR OA.BAGAVAIL

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	BELTANCH	SHOULDER BELT UPPER ANCHORAGE ADJUSTMENT	OCC	BELTANCHOR	
OA	BELTSOU	PRIMARY SOURCE OF BELT USE DETERMINATION	OCC	BELTUSESRC	
OA	BICARB	ARTERIAL BLOOD GASES (ABG) HCO3	N/A	N/A	NOT COLLECTED IN CISS
OA	BLOOD	WAS THE OCCUPANT GIVEN BLOOD?	N/A	N/A	NOT COLLECTED IN CISS
OA	CASEID	CASE NUMBER - STRATUM	N/A	N/A	OA.CASEID was a derived in CDS field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF used in CDS. Also, be aware that OCC.CASEID is a unique number generated by the CISS data entry which is different from the NASS-CDS OA.CASEID.
OA	CASENO	CASE SEQUENCE NUMBER	OCC	N/A	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	CAUSE1	1ST MEDICALLY REPORTED CAUSE OF DEATH	OCC	CAUSE1	
OA	CAUSE2	2ND MEDICALLY REPORTED CAUSE OF DEATH	OCC	CAUSE2	
OA	CAUSE3	3RD MEDICALLY REPORTED CAUSE OF DEATH	OCC	CAUSE3	
OA	CHHARNES	CHILD SAFETY SEAT HARNESS USAGE	CHILDSEAT	HARNESSDESIGN, HARNESSUSE	CISS has combined the Harness and Shield variables and attributes into the HARNESSDESIGN field. In addition, CISS has also separated the "Design" and "Use" attributes into two fields (HARNESSDESIGN and HARNESSUSE). Users are cautioned to review the attributes for both the CDS and CISS variables before comparing the data from the two data programs.
OA	CHMAKE	CHILD SAFETY SEAT MAKE/MODEL	CHILDSEAT	CHILDMAKE	
OA	CHORIENT	CHILD SAFETY SEAT ORIENTATION	CHILDSEAT	ORIENTATION	
OA	CHOWUSED	HOW CHILD SAFETY SEAT USED	CHILDSEAT	HOWUSED	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	CHSHIELD	CHILD SAFETY SEAT SHIELD USAGE	CHILDSEAT	HARNESSDESIGN, HARNESSUSE	CISS has combined the Harness and Shield variables and attributes into the HARNESSDESIGN field. In addition, CISS has also separated the "Design" and "Use" attributes into two fields (HARNESSDESIGN and HARNESSUSE). Users are cautioned to review the attributes for both the CDS and CISS variables before comparing the data from the two data programs.
OA	CHTETHER	CHILD SAFETY SEAT TETHER USAGE	CHILDSEAT	TETHERDESIGN, TETHERUSE	CISS has separated the "Design" and "Use" attributes into two fields (TETHERDESIGN and TETHERUSE). Users are cautioned to review the attributes for both the CDS and CISS variables before comparing the data from the two data programs.
OA	CHTYPE	TYPE OF CHILD SAFETY SEAT	CHILDSEAT	CHILDSEATTYPE	
OA	CHUSED	WAS CHILD SEAT USED?	OCC	CHILDSEATUSE	
OA	DEATH	TIME TO DEATH	OCC	DEATH	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	DVBAG	LONGITUDINAL COMPONENT OF DELTA V FOR AIR BAG	AIRBAG	BAGDVLONG	Users should be aware that while NASS-CDS limited the air bag delta V information to just the longitudinal delta V, CISS reports all the delta V information, which can be helpful for non-frontal air bags.
OA	EJCTAREA	EJECTION AREA	EJECT	EJECTAREA	
OA	EJCTMED	EJECTION MEDIUM	EJECT	EJECTMED	
OA	EJECTION	EJECTION	EJECT	EJECTTYPE	
OA	ENTRAP	ENTRAPMENT	OCC	ENTRAP	
OA	EYEWEAR	WAS THE OCCUPANT WEARING EYE-WEAR	OCC	EYEWEAR	
OA	FETALDOA	FETAL MORTALITY	OCC	FETALMORT	
OA	GLASGOW	GLASGOW COMA SCALE (GCS) SCORE	OCC	HOSPGCS	
OA	HEADREST	HEAD RESTRAINT TYPE/DAMAGE BY OCCUPANT	SEAT	HEADRESTYPE	
OA	HEIGHT	HEIGHT OF OCCUPANT	OCC	HEIGHT	
OA	HOSPSTAY	HOSPITAL STAY	OCC	HOSPSTAY	
OA	INJNUM	NUMBER OF RECORDED INJURIES (AIS98 FORMAT)	OCC	INJNUM	CISS uses AAAM's AIS2015 where OA.INJNUM was based upon AIS 1998 which may have some slight differences and result in different counts between NASS-CDS and CISS.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	INJNUM08	NUMBER OF RECORDED INJURIES (AIS08 FORMAT)	OCC	INJNUM	CISS uses AAAM's AIS2015 where OA.INJNUM08 was based upon AIS 2008 which may have some slight differences and result in different counts between NASS-CDS and CISS.
OA	INJSEV	INJURY SEVERITY (POLICE RATING)	OCC	PARINJSEV	
OA	INTGREST	INTEGRATED RESTRAINS	SEAT	INTRESTRAINT	
OA	ISS	INJURY SEVERITY SCORE (AIS98 FORMAT)	OCC	ISS	CISS uses AAAM's AIS2015 where OA.ISS was based upon AIS 1998 which may have some slight differences and result in different counts between NASS-CDS and CISS.
OA	ISS08	INJURY SEVERITY SCORE (AIS08 FORMAT)	OCC	ISS	CISS uses AAAM's AIS2015 where OA.ISS08 was based upon AIS 2008 which may have some slight differences and result in different counts between NASS-CDS and CISS.
OA	LATCHDES	CHILD SAFETY SEAT LATCH PRESENCE	CHILDSEAT	LATCHDESIGN	
OA	LATCHUSE	CHILD SAFETY SEAT LATCH USE	CHILDSEAT	LATCHUSE	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	MAIS	MAXIMUM KNOWN OCCUPANT AIS (AIS98 FORMAT)	OCC	MAIS	CISS uses AAAM's AIS2015 where OA.MAIS was based upon AIS 1998 which may have some slight differences and result in different counts between NASS-CDS and CISS.
OA	MAIS08	MAXIMUM KNOWN OCCUPANT AIS (AIS08 FORMAT)	OCC	MAIS	CISS uses AAAM's AIS2015 where OA.MAIS08 was based upon AIS 2008 which may have some slight differences and result in different counts between NASS-CDS and CISS.
OA	MANAVAIL	MANUAL BELT SYSTEM AVAILABILITY	OCC	BELTAVAIL	Users should be aware that NASS-CDS limited MANAVAIL to the coding of manual belt restraints, while CISS OCC.BELTAVAIL will capture both manual and automatic restraints. Additionally, CISS will provide information collected during the vehicle inspection (SEAT dataset) as well as the final determination (OCC dataset).

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	MANFAIL	MANUAL BELT FAILURE MODE DURING ACCIDENT	OCC	BELTMALF	Users should be aware that NASS-CDS limited MANFAIL to the coding of manual belt restraints, while CISS OCC.BELTMALF will capture both manual and automatic restraints. Additionally, CISS will provide information collected during the vehicle inspection (SEAT dataset) as well as the final determination (OCC dataset).
OA	MANUSE	MANUAL BELT SYSTEM USE	OCC	BELTUSE	Users should be aware that NASS-CDS limited MANFAIL to the coding of manual belt restraints, while CISS OCC.BELTMALF will capture both manual and automatic restraints. Additionally, CISS will provide information collected during the vehicle inspection (SEAT dataset) as well as the final determination (OCC dataset).
OA	MEDFACIL	TYPE MEDICAL FACIILLITY INITIAL TREATMENT	OCC	MEDFACILITY	
OA	MEDSTA	MEDIUM STATUS (PRIOR TO IMPACT)	EJECT	EJECTMED	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	NATWGT	NATIONAL INFLATION FACTOR	N/A	N/A	
OA	OCCMOBIL	OCCUPANT MOBILITY	OCC	MOBILITY	
OA	OCCNO	OCCUPANT NUMBER	OCC	OCCNO	
OA	OCCRACE	OCCUPANTS RACE	OCC	RACE	
OA	OCETHNIC	OCCUPANTS ETHNICITY	OCC	ETHNICITY	
OA	PARUSE	POLICE REPORTED RESTRAINT USE	OCC	PARBELTUSE	
OA	POSGUIDE	BELT POSITINING GUIDE ROUTED	OCC	BELTGUIDE	
OA	POSPRES	BELT POSITINING DEVICE PRESENCE	OCC	BELTPOSDEVPRES	
OA	POSTURE	OCCUPANT'S POSTURE	OCC	POSTURE	
OA	POSUSE	BELT POSITIONING DEVICE USE	OCC	BELTPOSDEVUSE	
OA	PREVACC	HAD VEHICLE BEEN IN PREVIOUS ACCIDENTS	AIRBAG	PREVCRASH	
OA	PSU	PRIMARY SAMPLING UNIT NUMBER	OCC	PSU	
OA	RATWGT	RATIO INFLACTION FACTOR	OCC	CASEWGT	
OA	ROLE	OCCUPANT'S ROLE	OCC	ROLE	
OA	ROLLPROT	ROLLOVER PROTECTION	SEAT	ROLLPROTECTION	
OA	SEATPERF	SEAT PERFORMANCE (THIS POSITION)	SEAT	PERFORMANCE	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OA	SEATPOS	OCCUPANT'S SEAT POSITION	OCC	SEATLOC	
OA	SEATRACK	SEAT TRACK ADJUSTED POSITION PRIOR TO IMPACT	SEAT	TRACK	
OA	SEATTYPE	SEAT TYPE (THIS OCCUPANT POSITION)	SEAT	SEATTYPE	
OA	SEX	OCCUPANT'S SEX	OCC	SEX	
OA	STBACINC	SEAT BACK INCLUDE PRIOR AND POST IMPACT	N/A	N/A	NOT COLLECTED IN CISS
OA	STORIENT	SEAT ORIENTATION (THIS OCCUPATN POS.)	N/A	N/A	NOT COLLECTED IN CISS
OA	STRATIF	CASE STRATUM	OCC	CATEGORY	Users are cautioned that there is no one to one match between STRATIF and CATEGORY.
OA	TREATMNT	TREATMENT - MORTALITY	OCC	MORTALITY, TREATMENT	CISS has separated the Mortality (MORTALITY) attributes from the treatment (TREATMENT) attributes.
OA	VEHNO	VEHICLE NUMBER	OCC	VEHNO	
OA	VERSION	VERSION NUMBER	OCC	VERSION	
OA	WEIGHT	OCCUPANT'S WEIGHT	OCC	WEIGHT	
OA	WORKDAYS	WORKING DAYS LOST	OCC	WORKDAYS	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OI	AIS	A.I.S. SEVERITY (AIS98 FORMAT)	INJURY	AIS	To match OI.AIS to CISS INJURY.AIS, a user needs to extract the seventh digit of INJURY.AIS. Users are cautioned that there are differences between AIS 1998 which OI.AIS is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.
OI	AIS08	A.I.S. SEVERITY (AIS08 FORMAT)	INJURY	AIS	To match OI.AIS08 to CISS INJURY.AIS, a user needs to extract the seventh digit of INJURY.AIS. Users are cautioned that there are differences between AIS 2008 which OI.AIS08 is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.
OI	ASPECT90	ASPECT90	LOCALIZER	L1	Users are cautioned that ASPECT90 doesn't not easily map to L1. Users should use caution when comparing.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OI	BODYREG	BODY REGION (O.I.C. - A.I.S.)	INJURY	BRI	Although CISS does not translate back to OIC, it does provide a body region field which closely approximates the old OIC. Users should compare the attributes and numeric BRI codes to properly match the attributes from OIC.
OI	CASEID	CASE NUMBER - STRATUM	N/A	N/A	OA.CASEID was a derived in CDS field which concatenated CASENO and STRATIF. To recreate this field, the user needs to concatenate CRASH.CASENO and CRASH.CATEGORY, however please be aware that CRASH.CATEGORY does not use the same values and definitions which ACCIDENT.STRATIF used in CDS. Also, be aware that CISS INJURY.CASEID is a unique number generated by the CISS data entry which is different from the NASS-CDS OI.CASEID.
OI	CASENO	CASE SEQUENCE NUMBER	INJURY	CASENO	

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OI	DIRINJ	DIRECT/INDIRECT INJURY	N/A	N/A	Not collected in CISS.
OI	INJLEVEL	INJURY LEVEL (AIS98 FORMAT)	INJURY	AIS	INJLEVEL in NASS-CDS can be obtained by extracting the fifth and sixth positions of CISS's INJURY.AIS field. Users should note that CISS uses AAAM's AIS2015 version of AIS codes, so exact matches may not be possible.
OI	INJLVL08	INJURY LEVEL (AIS08 FORMAT)	INJURY	AIS	INJLEVEL in NASS-CDS can be obtained by extracting the fifth and sixth positions of CISS's INJURY.AIS field. Users should note that CISS uses AAAM's AIS2015 version of AIS codes, so exact matches may not be possible.
OI	INJNO	INJURY NUMBER	INJURY	INJNO	
OI	INJSOU	INJURY SOURCE	ICS	IPC1, IPC2, IPC3, IPC1_ALT, IPC2_ALT, IPC3_ALT	Users should refer to the ICS dataset description in this manual as well as NHTSA Injury Coding Manual for more information.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OI	INTRUNO	OCCUPANT AREA INTRUSION NO.	ICS	FACTOR1, FACTOR2, FACTOR3, FACTOR4, FACTOR5	CISS only reports the presence of an intrusion as a contributing factor, not the specific intrusion as in NASS-CDS. Users would filter on all the factor fields equal to 3/Intrusion.
OI	LESION	LESION (O.I.C. - A.I.S.)	N/A	N/A	CISS does not translate back to OIC.
OI	NATWGT	NATIONAL INFLATION FACTOR	N/A	N/A	Not collected in CISS.
OI	OCCNO	OCCUPANT NUMBER	INJURY	OCCNO	
OI	PSU	PRIMARY SAMPLING UNIT NUMBER	INJURY	PSU	
OI	RATWGT	RATION INFLATION FACTOR	INJURY	CASEWGT	
OI	REGION08	BODY REGION (AIS08 FORMAT)	INJURY	AIS	To match OI.REGION08 to CISS INJURY.AIS, a user needs to extract the first digit of INJURY.AIS. Users are cautioned that there are differences between AIS 1998 which OI.AIS is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OI	REGION90	BODY REGION (AIS98 FORMAT)	INJURY	AIS	To match OI.REGION90 to CISS INJURY.AIS, a user needs to extract the seventh digit of INJURY.AIS. Users are cautioned that there are differences between AIS 1998 which OI.REGION90 is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.
OI	SOUCON	INJURY SOURCE CONFIDENCE LEVEL	INJURY		
OI	SOUDAT	SOURCE OF INJURY DATA	N/A	N/A	This data is not captured by CISS.
OI	STRATIF	CASE STRATUM	INJURY	CATEGORY	
OI	STRSPC08	SPECIFIC ANATOMIC STRUCTURE (AIS08 FORMAT)	INJURY	AIS	To match OI.STRSPC08 to CISS INJURY.AIS, a user needs to extract the third and fourth digits of INJURY.AIS. Users are cautioned that there are differences between AIS 2008 which OI.STRSPC08 is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.

NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OI	STRTYP08	TYPE OF ANATOMIC STRUCTURE (AIS08 FORMAT)	INJURY	AIS	To match OI.STRTYP08 to CISS INJURY.AIS, a user needs to extract the second digit of INJURY.AIS. Users are cautioned that there are differences between AIS 2008 which OI.STRTYP08 is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.
OI	STRUSPEC	SPECIFIC ANATOMIC STRUCTURE (AIS98 FORMAT)	INJURY	AIS	To match OI.STRUSPEC to CISS INJURY.AIS, a user needs to extract the third and fourth digits of INJURY.AIS. Users are cautioned that there are differences between AIS 1998 which OI.STRUSPEC is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.

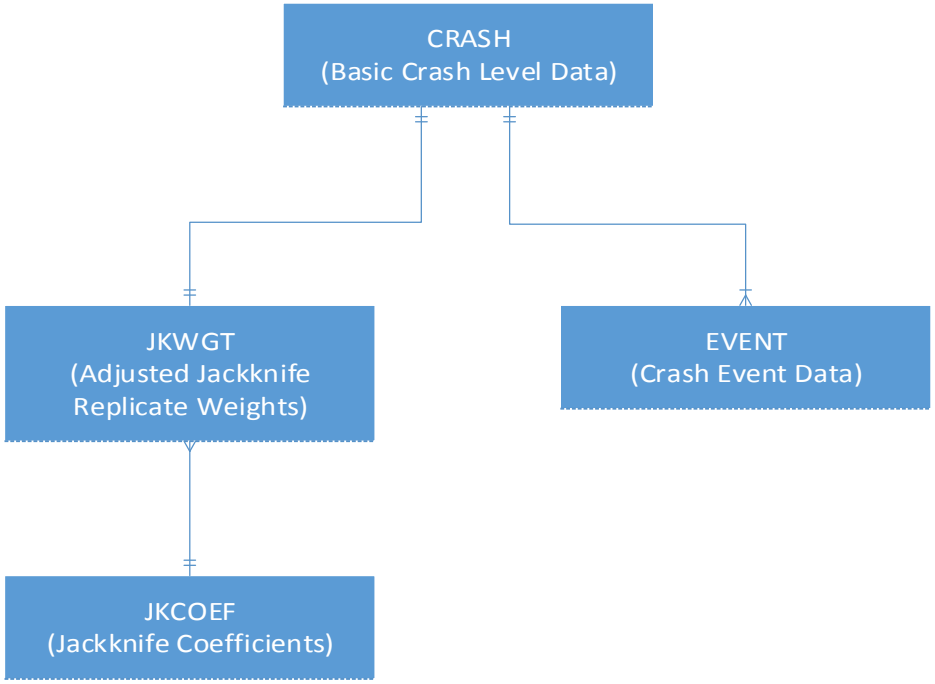
NASS-CDS DATASET	COLUMN	LABEL	CISS DATASET	COLUMN	NOTES
OI	STRUTYPE	TYPE OF ANATOMIC STRUCTURE (AIS98 FORMAT)	INJURY	AIS	To match OI.STRUTYPE to CISS INJURY.AIS, a user needs to extract the second digit of INJURY.AIS. Users are cautioned that there are differences between AIS 1998 which OI.STRUTYPE is based vs AIS 2015 which CISS uses. In some situations there may not be a one-to-one match.
OI	SYSORG	SYSTEM/ORGAN (O.I.C. - A.I.S.)	N/A	N/A	CISS does not translate back to OIC.
OI	VEHNO	VEHICLE NUMBER	INJURY	VEHNO	
OI	VERSION	VERSION NUMBER	INJURY	VERSION	

APPENDIX F

ENTITY RELATIONSHIP DIAGRAM OF CISS DATASETS

(SEE FOLLOWING PAGES)

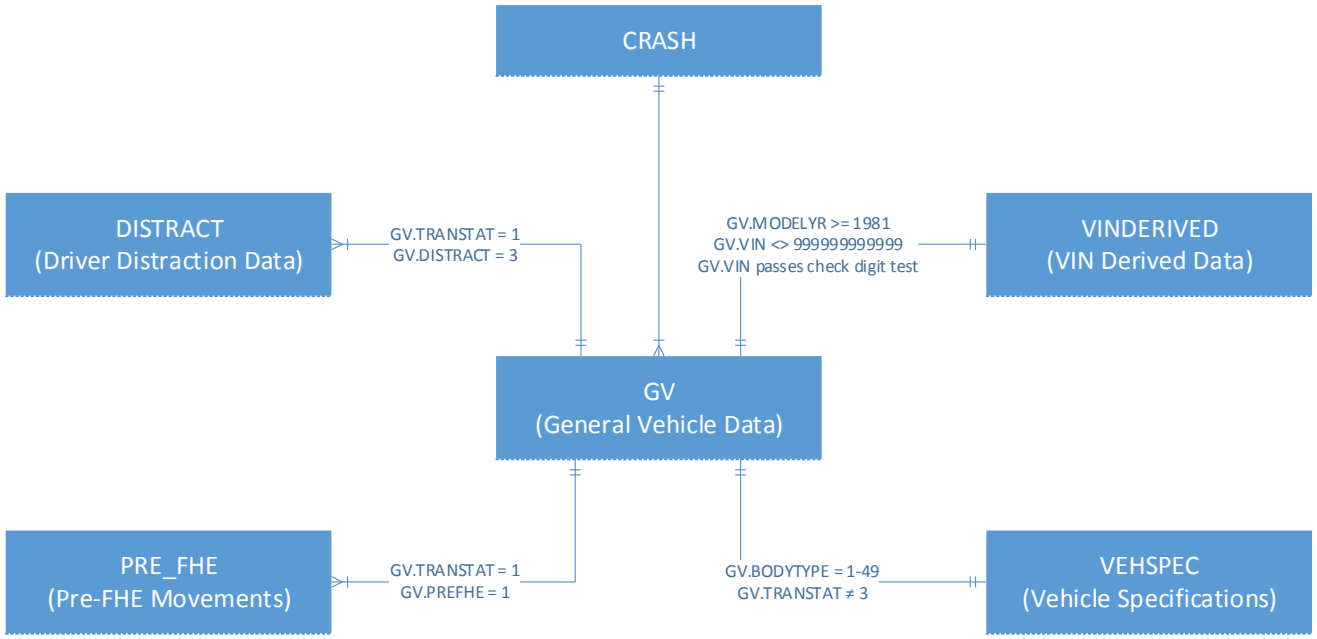
CRASH DATA FILES



LEGEND

- ONE and ONLY ONE
- MANY
- ONE or MANY
- ZERO, ONE, or MANY
- ZERO or ONE

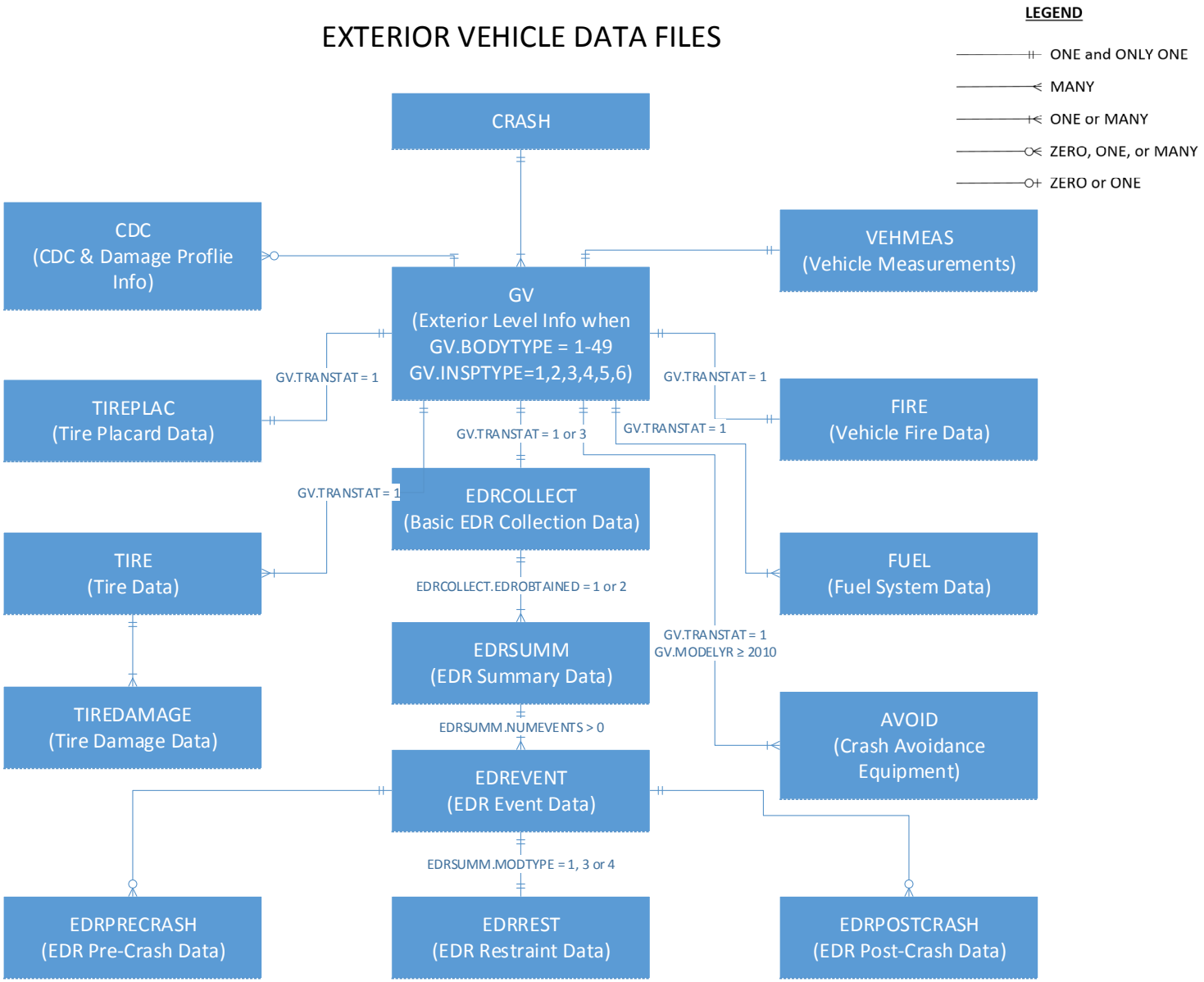
GENERAL VEHICLE DATA FILES



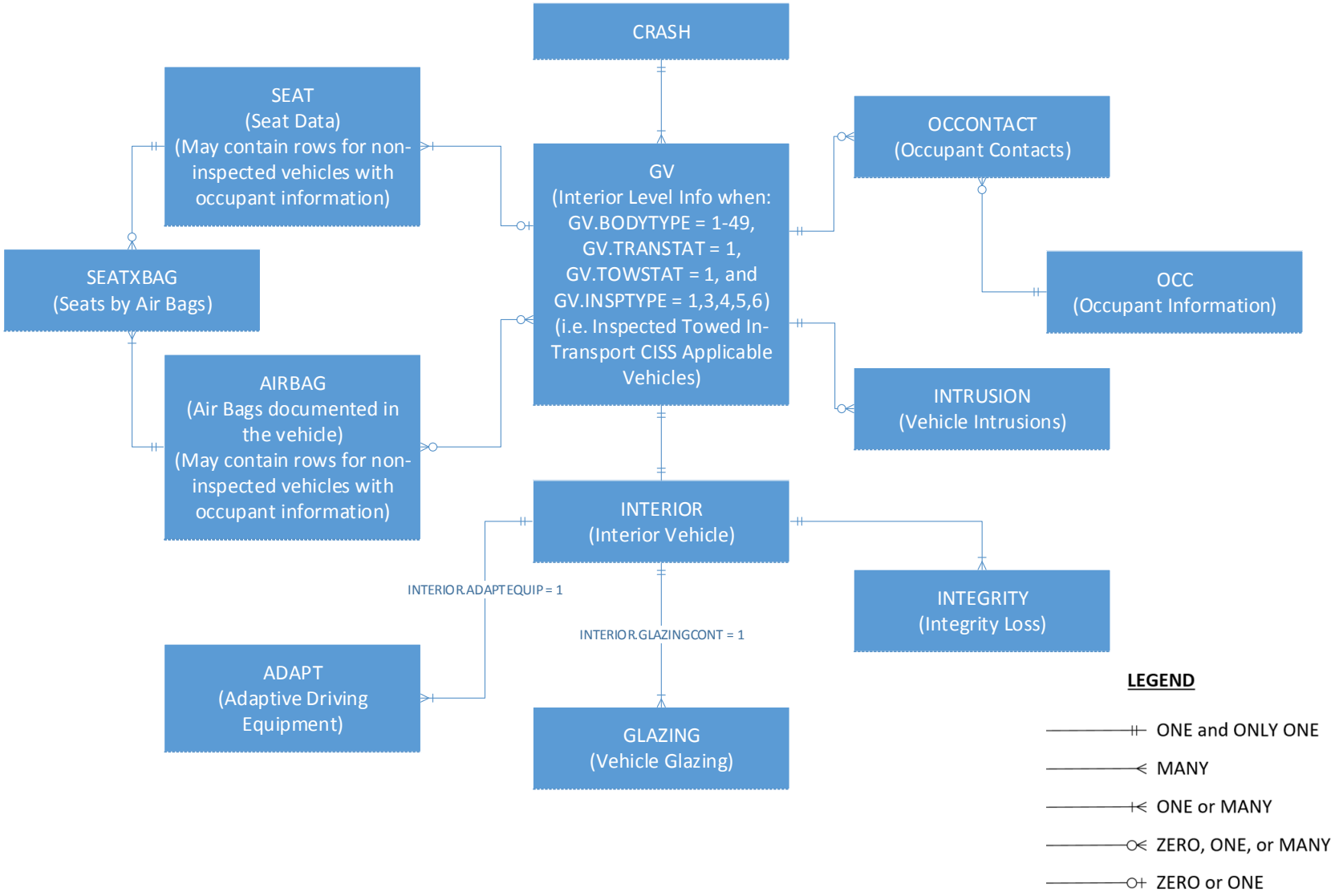
LEGEND

- ONE and ONLY ONE
- MANY
- ONE or MANY
- ZERO, ONE, or MANY
- ZERO or ONE

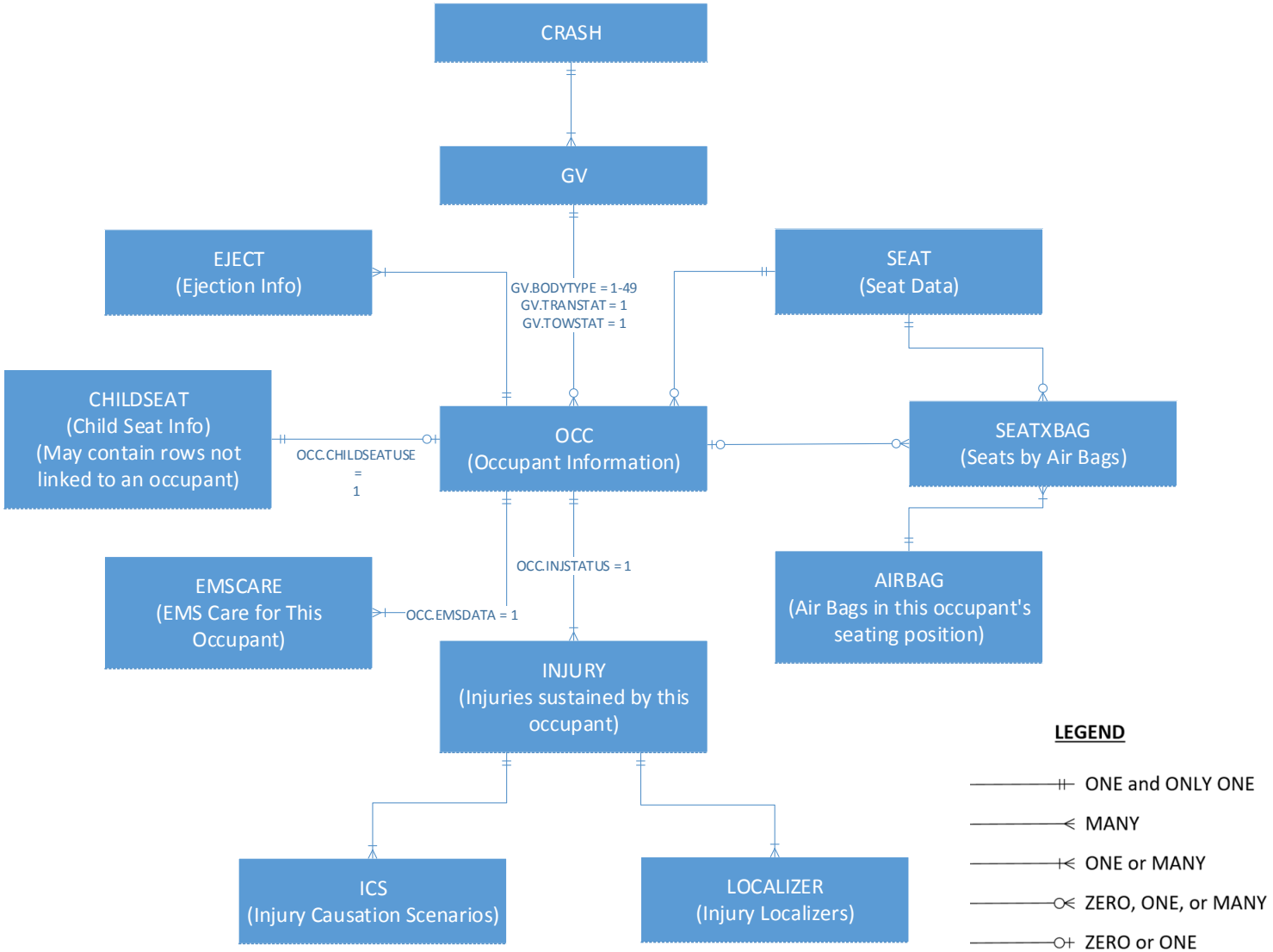
EXTERIOR VEHICLE DATA FILES



INTERIOR VEHICLE DATA FILES



PERSON DATA FILES



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U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

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