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National Motor Vehicle Crash Causation Survey (NMVCCS)

SAS Analytical Users Manual

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16. Abstract <p>NHTSA's National Center for Statistics and Analysis has completed the National Motor Vehicle Crash Causation Survey. It was a Congressionally required nationwide survey of crashes involving light passenger vehicles, with a focus on the factors related to pre-crash events. A total of 6,949 crashes were investigated between January 1, 2005, and December 31, 2007. Of these, 5,470 cases comprise a nationally representative sample. The remaining 1,479 cases are suitable for clinical study.</p> <p>The data collected through the investigated crashes will better assist NHTSA and other safety advocates in evaluating and developing vehicle-related crash avoidance technologies. Each investigated crash involved at least one light passenger vehicle that was towed due to damage. Data was collected on-scene for at least 600 data elements in the crash to capture information related to the drivers, vehicles, roadways, and environment. In addition, the NMVCCS database includes crash narratives, photographs, schematic diagrams, vehicle information, as well as event data recorder data when available.</p> <p>This document describes the SAS analysis file that is available.</p>			
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Introduction

The U.S. Congress authorized the National Highway Traffic Safety Administration (NHTSA) of the U. S. Department of Transportation to conduct a National Motor Vehicle Crash Causation Survey (NMVCCS). NHTSA's National Center for Statistics and Analysis (NCSA) has completed a nationwide survey of crashes involving light passenger vehicles, with a focus on the factors related to pre-crash events. A sound methodology, reviewed by a panel of experts, was used for this purpose. A nationally representative sample of crashes was investigated from January 1, 2005 to December 31, 2007. The data collected through the investigated crashes will better equip NHTSA and other safety advocates to evaluate and develop vehicle-related crash avoidance technologies.

Each investigated crash involved at least one light passenger vehicle that was towed due to damage. Data was collected on at least 600 data elements to capture information related to the drivers, vehicles, roadways, and environment. In addition, the NMVCCS database includes crash narratives, photographs, schematic diagrams, vehicle information, as well as event data recorder (EDR) data, when available. This additional information will be vital to researchers seeking to perform in-depth clinical reviews of crashes.

During the data collection process, the NMVCCS researchers had the advantage of a unique arrangement with local law enforcement and emergency responders who granted them timely permission to be on the scene of the crash. Arriving on the scene before the crash was cleared by the law enforcement gave the researchers (1) access to relatively undisturbed information pertaining to the events and factors that led up to the crash, (2) the opportunity to discuss the circumstances of the crash with the drivers, passengers and witnesses while it was still fresh in their minds, and (3) the opportunity to immediately and accurately reconcile the physical evidence with the witnesses' descriptions. The researchers on the scene were in an ideal position to gather first-hand information related to the vehicle, the roadway, the environmental conditions, and the human behavioral factors.

Several quality control checks have been applied at different stages of data compilation. Case coding on each crash was reviewed and computer-generated edit checks were applied during data entry to verify valid ranges and data consistency. Subsequently, the NMVCCS cases were reviewed at one of the two quality control NASS Zone Centers. These centers oversaw the field data collection, maintenance of field research quality, technical guidance, and served as resource centers.

The NMVCCS data embodies pre-crash assessment of crashes in terms of the critical event, critical reasons, and associated factors. However, none of these is suggestive of the cause of the crash or an assignment of the fault to the driver, vehicle, or environment. Therefore, care needs to be taken in interpreting the results of the exploratory and descriptive analyses of the data or of the clinical investigation. NMVCCS only collected data on crashes that met certain criteria. For this reason, estimates obtained from NMVCCS should not be compared with those from other databases such as NHTSA's NASS (National Automotive Sampling System) General Estimates System or the NASS Crashworthiness Data System (CDS).

NMVCCS Sampling and Analytical Issues

Scope of NMVCCS

The population of interest in NMVCCS consisted of crashes that result in a harmful event and involve at least one light vehicle weighing less than 10,000 pounds that was towed due to damage. However, due to operational challenges resulting from the on-scene requirements of the survey and other constraints, the target population was restricted to crashes that had a completed police accident report (PAR), occurred between 6 a.m. and midnight, and to which EMS had been dispatched. Also, since the NMVCCS researcher was required to be at the crash scene before it was cleared, as an additional requirement, at least one of the first three crash-involved vehicles and the police must have been present at the crash scene when the NMVCCS researcher arrived.

Sample Design

The selection of crashes for the NMVCCS was accomplished through a multistage sampling procedure. At each stage, samples were drawn with unequal probability based on the size of the sampling unit (e.g., PSU, time intervals, etc.), as estimated from the historical data.

- **First Stage:** Geographic areas called primary sampling units (PSUs) were selected. The United States has been divided into 1,195 PSUs where each PSU is comprised on a central city, a large county, or a group of contiguous counties. The PSUs are grouped into 12 categories or strata described by a combination of geographic region (northeast, midwest, south, west) and the extent of urbanization (central city, large county, and group of counties). Two PSUs were selected from each stratum (category) with a probability proportional to the 1983 population of the PSU. In order to use the NASS infrastructure, the same set of PSUs was selected as in the CDS of NASS.

Table: Sampled PSUs in NMVCCS

Geographic Region	Urbanization Type		
	Central City	Large County	Group of Counties
Northeast	Kings County (Brooklyn) – New York Philadelphia – Pennsylvania	Montgomery County – Pennsylvania Allegheny County (except Pittsburgh) – Pennsylvania	Ulster County – New York Ocean County – New Jersey
Midwest	Chicago – Illinois Douglas County – Nebraska	Genesee County – Michigan Lake County – Indiana	Washtenaw County – Michigan Muskegon County – Michigan
South	Fort Lauderdale & Hollywood – Florida Dallas City – Texas	Charles & Prince George Counties – Maryland Knox County – Tennessee	Wake County – North Carolina Bibb & Tuscaloosa Counties – Alabama
West	Los Angeles – California Seattle – Washington	Gilpin & Jefferson Counties – Colorado King County (except Seattle) – Washington	Gila, Graham, & Greenlee Counties – Arizona Yuma and La Paz Counties – Arizona

- **Second Stage:** A six-hour time interval was selected between 6 a.m. and midnight during which the researchers in a selected PSU monitored the EMS/police radio frequencies to be able to reach the crash scene before it was cleared. The selection at this stage was done according to the sampling procedure, “systematic probability proportional to size,” where the size was the number of crashes that occurred during the same time interval in the previous year as coded in NASS-CDS.
- **Third Stage:** Each week four days were selected from the selected time interval during which the researchers in the PSU responded to crashes. This selection used the same procedure as the second stage, although the size was the number of crashes that occurred on the same day in the previous year as coded in NASS-CDS.
- **Fourth Stage:** A crash was selected. Once a time interval and day of the week combination (i.e., time block) was selected, the researcher responded to every crash during this time block until the first qualifying crash for NMVCCS occurred.

In order to handle special situations, such as larger volume of transmissions or very large geographical area in a PSU, sub-sampling was implemented in certain PSUs. In addition, due to operational issues, some other local adjustments such as longer or shorter time blocks, etc. were made in certain PSUs. For a more detailed description of the sampling and weighting procedure used in NMVCCS, refer to the NHTSA technical report¹ on the NMVCCS sample design (DOT HS 810 930).

Sampling Weights

Each NMVCCS case has a value in the variable CASEWGT (“Case Weight”). This variable gives the statistical sampling weight of the case for national representation. CASEWGT should be used as the weighting variable in all statistical analyses. The NMVCCS case weights sum to 2,188,970, the estimated total number of NMVCCS qualifying crashes from July 3, 2005, to December 31, 2007.

The weights were derived through the procedure consisting of mainly two phases, the design weight and its appropriate adjustment. The design weight is calculated by taking the reciprocal of the probability of inclusion of a crash, which is the product of the selection probabilities at all stages of the sampling procedure. The design weights are further adjusted to compensate for the crashes that could not be collected due to operational issues and other challenges. As a result, the design weights of time blocks with missing crashes are distributed to other time blocks that have a sampled crash in the same PSU.

Cases with Weight Zero

Of the 6,949 cases in the NMVCCS files, 5,470 cases have weights greater than zero. These 5,470 cases are the nationally representative sample of NMVCCS between July 3, 2005 and December 31, 2007. The remaining 1,479 cases have weights of zero. Zero-weight cases have **not** been removed from the NMVCCS database so they are suitable for clinical, case-by-case evaluation. However, they should not be included in statistical analyses for national representation. Note that in any software package with a weight statement, using the weighted data will result in omission of any cases with weight zero. Zero-weight cases fall into the following categories:

Cases Occurring Before July 3, 2005

832 cases were investigated during the transition period from January 1, 2005 to July 2, 2005, when the data collection effort was being phased in.

¹ Choi, Eun-Ha, et. al. (2008) A Sampling Design Used in the National Motor Vehicle Crash Causation Survey, DOT HS 810 930, April 2008. Washington, DC: National Highway Traffic Safety Administration.

Cases Occurring from July 3, 2005 but not to meet NMVCCS criteria

647 cases were investigated after the phase-in period, but ultimately were determined not to meet the requisite sample selection criteria as follows:

- 281 cases have invalid PAR information (includes no PAR generated/lavailable)
- 359 cases have no PAR reported light vehicle towed due to damage
- 6 cases have dispatched time outside sampled time block
- 1 case did not occur within a traffic way

Statistical Analysis Issues

Since the NMVCCS employs a complex sampling design, in all statistical analysis, the case weight (CASEWGT) assigned to each NMVCCS case should be used to generate nationally representative estimates.

Standard Errors

Statistical analyses involving variances or standard errors (or procedures that use them, such as hypothesis testing and confidence intervals) should be conducted using a software product that takes the sampling stages into account, such as SAS9 and RTI's Survey Data Analysis (SUDAAN). Two variables, PSUSTRAT and PSU are also used along with CASEWGT for statistical analysis. See sample codes below for SAS and SUDAAN users.

/ 1. Using SAS 9 */*

```
PROC SURVEYFREQ DATA=nmvccs.crash;  
STRATUM PSUSTRAT;  
CLUSTER PSU;  
WEIGHT CASEWGT;  
TABLES dayweek;  
Run;
```

/ 2. Using SUDAAN */*

```
PROC CROSSTAB DATA= nmvccs.crash;  
NEST PSUSTRAT PSU;  
WEIGHT CASEWGT;  
SUBGROUP dayweek;  
LEVELS 7; /* (specify the number of classes for categorical variables) */  
TABLES dayweek;  
RUN;
```

Time Period

Due to the small sample size, it is strongly recommended that the crash sample be used as a whole rather than broken down into years, months, weeks, days of the week or time of day. Estimates or trends based on years, months, weeks, day of the week or time of day may not be statistically valid.

NMVCCS SAS Data Sets

NMVCCS data are available to the public in Statistical Analysis System (SAS) data sets. There are 22 data sets. Four of the data sets contain data retrieved from the vehicle's event data recorder (EDR).

- The *CDC (Collision Deformation Classification)* data set contains details about the crush profile for each impact coded to a vehicle damaged in the crash. There is one record for each CDC/TDC of each crash event for CDC/TDC applicable case vehicles.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
 - Vehicle must be CDC/TDC applicable (GV.BODYTYPE=1-49, 6-79, 39462).
 - Vehicle must be inspected (CV.INSPTYPE=1-5).
- The *CRASH* data set contains general information related to the crash itself, and not individual vehicles involved in the crash. The fields contained in this data set cover the higher-level aspects of each case, such as when the crash occurred, how many vehicles were involved, and the injury severity of the crash. There is one record for each crash.
- The *CRSH_DESC (Crash Description)* data set provides a narrative summary of the crash. There is one record for each crash.
- The *CV (Case Vehicle)* data set contains general vehicle and driver information for the case vehicles in the crash. Case vehicles are the first in-transport vehicles involved in the crash and up to three vehicles may be designated as case vehicles. Most of the detailed vehicle and driver data in the NMVCCS data sets are provided for case vehicles only. There is one record for each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *DRUGS* data set contains the specific drugs or medications taken by driver. There is one record for each drug taken by the driver of a case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
 - Medications must be present (PCA.MEDS=1).
- The *EDRABAG (EDR – Airbags)* data set contains data retrieved from the EDR regarding the deployment of driver and passenger airbags. There is one record for each EDR reading of an airbag (deployed or non-deployed).
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
 - EDR must have been read (CV.EDRINFO=1).
- The *EDRCRASH (EDR – Crash)* data set contains data retrieved from the EDR regarding the force of the crash (i.e., Delta V). There is one record for every 10 milliseconds of Delta V data reported for each Delta V component, for each EDR reading of a case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
 - EDR must have been read (CV.EDRINFO=1).
- The *EDRDATA (EDR – Data)* data set contains high-level data retrieved from the EDR regarding the type of EDR and software version, as well as the status of occupant restraints and air bags. There is one record for each EDR reading of a case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
 - EDR must have been read (CV.EDRINFO=1).
- The *EDRPRECR (EDR – Pre-Crash)* data set contains data retrieved from the EDR regarding the precrash speed and braking. There is one record for each of five seconds of pre-event data recorded by the EDR.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
 - EDR must have been read (CV.EDRINFO=1).

- The *ENV (Environment/Roadway)* data set contains details on the physical composition of the roadway and the vicinity of the crash, any adverse weather conditions, and any restrictions to the flow of traffic. There is one record for each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *EQUIP (Equipment)* data set contains information regarding the availability and use of equipment on-board the vehicle, both OEM and after-market. There is one record for each type of pre-listed equipment (which may or may not be present on-board) for each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *EVENT* data set contains details that describe the events occurring during the crash. There is one record for each crash event.
- The *GLAZING* data set contains information regarding the location and condition of the vehicle glazing. There is one record for each pre-listed glazing location (which may or may not be present) for each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *GV (General Vehicle)* data set contains general information about the vehicle. There is one record for each vehicle.
- The *MANSEQ (Maneuver Sequence)* data set contains details on the vehicle's sequence of maneuvers (i.e., lateral movements) prior to the first harmful event. There is one record for each maneuver performed by the driver of each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *NONMOT (Non-Motorist)* data set contains information on the nonmotorist (e.g., pedestrian, cyclist) involved in the crash. There is one record for each non-motorist in a crash.
- The *OCC (Occupants)* data set contains information on the occupants in the vehicles involved in the crash. There is one record for each occupant of a vehicle in the crash.
- The *PCA (Precrash Assessment)* data set contains assessments based on data available in this and other NMVCCS data sets. The data focus on the precrash circumstances related to the driver, the vehicle, and the roadway environment. There is one record for each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *PCAEXT (Precrash Assessment – Extended)* data set contains expanded information (i.e., details) on data provided in the PCA data set. There is one record for each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *TCD (Traffic Control Device)* data set contains the specific traffic control devices regulating vehicular traffic on the vehicle's roadway. There is one record for each traffic control device in the direction of travel of each case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *TIRE* data set contains details on the type and condition of all tires on the vehicle. There is one record for each of the four tire locations of a case vehicle.
 - Vehicle must be a case vehicle (GV.CASEVEH=1).
- The *VEVENT (Vehicle Events)* data set contains information on the events of the crash relevant to this vehicle. There is one record for each crash event in which each vehicle is involved.

NMVCCS Variable List

The following variables are contained in all of the data sets (except the CRSH_DESC data set):

SCASEID

The *SCASEID* number is the identifier for the case. This variable is a unique number assigned to each crash. It appears on each data set and is used to merge the various information from the data sets together.

PSU

The *PSU* number refers to the geographic location of the Primary Sampling Unit investigating the case. There are 25 possible values ranging from 2 to 82. A PSU is either a large central city, a county surrounding a city, or a group of counties. This variable appears on each data set.

PSUSTRAT

The *PSUSTRAT* refers to the number assigned to a crash during the first stage of sample selection. Analysts use the *PSUSTRAT* number to calculate variance. This variable appears on each data set.

CASEWGT

The *CASEWEIGHT* is the multiplier used to produce national estimates from the data. This variable appears on each data set.

The following variable is found on all vehicle-level data sets:

VEHNO

The *VEHNO* is the number assigned to each vehicle in the case. This variable appears on each vehicle level data set and is used in conjunction with the *SCASEID* variable to merge information from vehicle level data sets together.

VARIABLE LIST

CDC Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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General Area of Deformation	GAD	26
Specific Longitudinal Or Lateral Location	SHL	27
Specific Vertical Or Lateral Location	SVL	27
Type of Damage Distribution	TDD	28
Deformation Extent	EXTENT	29
Collision Deformation Classification / Truck Deformation Classification (CDC/TDC)	CDCTDC	29

CRASH Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
Year Of Crash	YEAR	30
Month of Crash	MONTH	30
Day Of Week	DAYWEEK	30
Time Of Crash	TIME	31
Maximum Known Police Reported Injury in Crash	INJSEVA	31
Total Number Of Vehicles In Crash	NUMTOTV	31
Number Of Case Vehicles In Crash	NUMCASEV	32

CRSH_DESC Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
Crash Summary	SUMMARY	33

CV Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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Location of Rollover Initiation	ROLINLOC	37
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Right Side Mirror Origin	MIR_RORIG	44
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DRUGS Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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EDRABAG Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
Air Bag Deployment Type/Location	EBAGLOC	61
Air Bag Deployment Position	POSITION	61
Air Bag Deployment Stage 1 Time	STAGE1	62
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EDRCRASH Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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EDRDATA Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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Passenger Pretensioner Time	PASPRTEN	66
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EDRPRECR Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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MANSEQ Data Set

<u>Variable Name</u>	<u>SAS Name</u>	<u>Page</u>
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NONMOT Data Set

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Variable Definitions and Codes

Variable definitions and attributes for all of the NMVCCS data sets are provided in the following pages. This section is organized alphabetically by data set. Within each data set, the variables are ordered as they appear in the SAS data sets. Each variable listing contains the variable's name, SAS name, attributes and a brief description of the variable. A sample variable listing is provided below.

(Sample variable listing)

Vehicle Inspection Type

Definition: This variable describes the level of documentation on the vehicle, including the completeness and timeliness of the inspection.

SAS Name: INSPTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Completed at scene
2	Complete - started at scene/completed later
3	Complete - not at scene
4	Partial inspection - started at scene
5	Partial inspection - started later
6	Refusal
7	Not inspected

Variable Definitions and Codes - CDC Data Set

CDC Data Set

The CDC (Collision Deformation Classification) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO, ACCSEQ and CDCNUM. ACCSEQ is the event sequence number which identifies a particular event in the crash sequence. CDCNUM identifies each particular impact in the crush profile for a vehicle. SCASEID, VEHNO, ACCSEQ and CDCNUM uniquely identify each record in this data set. SCASEID and ACCSEQ should be used to merge the CDC data set with the EVENT data set. SCASEID and VEHNO should be used to merge the CDC data set with vehicle level data sets. This data set also contains the following variables:

Clock Direction of Force

Definition: This variable identifies the direction from which the principal force is applied for a particular impact. The direction of force is based on the face of a clock (e.g. an impact to the front bumper is classified as "12") and is the first two columns of each impact's CDC/TDC.

SAS Name: CLOCK

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Non-horizontal
1	1 o'clock
2	2 o'clock
3	3 o'clock
4	4 o'clock
5	5 o'clock
6	6 o'clock
7	7 o'clock
8	8 o'clock
9	9 o'clock
10	10 o'clock
11	11 o'clock
12	12 o'clock
13	Intra unit damage (TDC only)
99	Unknown

General Area of Deformation

Definition: This variable documents the initial plane of contact to the vehicle and represents the general area of damage to the vehicle. This is the third column in a coded CDC/TDC.

SAS Name: GAD

Attribute Codes

<u>Code</u>	<u>Description</u>
B	Back
C	Rear of cab
D	Rear of tractor
F	Front

Variable Definitions and Codes - CDC Data Set

L	Left Side
R	Right Side
T	Top
U	Undercarriage
V	Front of cargo area
9	Unknown

Specific Longitudinal Or Lateral Location

Definition: This variable documents the lateral or longitudinal area of the vehicle that contains the contact deformation. This is the fourth column in a coded CDC/TDC.

SAS Name: SHL

Attribute Codes

<u>Code</u>	<u>Description</u>
9	Unknown
B	Side rear of cab to rear of trailer/cargo area
B	Rear Section
C	Center - front or rear
D	Distributed - side or end
D	Distributed - (F+P+B)
F	Side Front - front of windshield
F	Front Section
K	Side(P + W)
L	Left - front or rear
P	Side cab
P	Center Section
R	Right - front or rear
S	Side(F + P + W)
T	Trailer
W	Side rear of cab to rear of tractor
Y	Side (F + P) OR End (L + C)
Y	Side Front/Center Section (F+P)
Z	Side (P + B) OR End (C + R)
Z	Side Center/Rear Section(P+B)

Specific Vertical Or Lateral Location

Definition: This variable documents either the vertical or lateral area of the vehicle that contains the contact deformation. The vertical location is used for vertical planes (F, B, L, R) and the lateral location is used for horizontal planes (T, U). This is the fifth column in a coded CDC/TDC.

SAS Name: SVL

Attribute Codes

<u>Code</u>	<u>Description</u>
9	Unknown
A	Top to Bottom of vehicle / no wheels

Variable Definitions and Codes - CDC Data Set

B	Belt Line and above
C	Center
D	Distributed
E	Belt line and below
F	Belt line/below on trailer
G	Belt line and above
H	Top of frame to top of vehicle
L	Low - top of frame, frame, and bottom of frame
L	Left
M	Middle -- top of frame to belt line or hood
R	Right
T	Everything above cab
T	Trailer
W	Below undercarriage level (wheels and tires only)
Y	Left and Center (L+C)
Z	Right and Center(R+C)

Type of Damage Distribution

Definition: This variable documents the general type of damage distribution for the impact. This classification provides a qualitative description of the type of damage sustained by the vehicle. This is the sixth column of a coded CDC/TDC.

SAS Name: TDD

Attribute Codes

<u>Code</u>	<u>Description</u>
9	Unknown
A	Overhanging Structure
E	Corner
K	Conversion
N	Narrow
O	Rollover
R	Override
S	Sideswipe
U	No residual deformation
W	Wide

Variable Definitions and Codes - CDC Data Set

Deformation Extent

Definition: This variable documents the extent of damage for the impact. The extent of residual deformation is classified using a nine-zone extent system. Extent is a mathematical determination of which zone the crush extends into, beginning with Zone 1. This comprises the seventh and eighth columns of a coded CDC/TDC.

SAS Name: EXTENT

Attribute Codes

<u>Code</u>	<u>Description</u>
01	Zone 1
02	Zone 2
03	Zone 3
04	Zone 4
05	Zone 5
06	Zone 6
07	Zone 7
08	Zone 8
09	Zone 9
0A	TDC vehicle, minor
0B	TDC vehicle, moderate
0C	TDC vehicle, severe
0D	TDC vehicle, extremely severe
0X	TDC vehicle, cargo only
99	Unknown

Collision Deformation Classification / Truck Deformation Classification (CDC/TDC)

Definition: This variable represents a three-dimensional vehicle damage classification system. The classification system consists of eight columns (six variables) that when combined expresses a vehicle damage profile. The following variables are combined in series to create the CDC/TDC: Clock Direction Of Force; General Area of Deformation; Specific Longitudinal Or Lateral Location; Specific Vertical Or Lateral Location; Type of Damage Distribution; and Deformation Extent. These variables are provided individually in this data set and are described above.

SAS Name: CDCTDC

Attribute Codes

<u>Code</u>	<u>Description</u>
*	CDC/TDC (text)

Variable Definitions and Codes - CRASH Data Set

CRASH Data Set

The CRASH (Crash) data set contains the variables SCASEID, PSU, PSUSTRAT and CASEWGT. SCASEID uniquely identifies each record in this data set and should be used to merge the CRASH data set with other data sets. This data set also contains the following variables:

Year Of Crash

Definition: This variable identifies the year of the crash. Crashes studied occurred in 2005, 2006 and 2007.

SAS Name: YEAR

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Crash year (in YYYY format)

Month of Crash

Definition: This variable identifies the month of the crash.

SAS Name: MONTH

Attribute Codes

<u>Code</u>	<u>Description</u>
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

Definition: This variable identifies the day of the week that the crash occurred.

SAS Name: DAYWEEK

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Sunday
2	Monday
3	Tuesday

Variable Definitions and Codes - CRASH Data Set

4	Wednesday
5	Thursday
6	Friday
7	Saturday

Time Of Crash

Definition: This variable identifies the time of day of the crash.

SAS Name: TIME

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Crash time (in HHMM, 24-hour clock)

Maximum Known Police Reported Injury in Crash

Definition: This variable represents the highest injury severity rating in the case, as determined by police on the Police Accident Report (PAR) using the KABCOU rating scale.

SAS Name: INJSEVA

Attribute Codes

<u>Code</u>	<u>Description</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown if injured
10	No person in crash
11	No PAR obtained

Total Number Of Vehicles In Crash

Definition: This variable documents the total number of vehicles that were involved in the crash. This includes all case vehicles and non-case vehicles.

SAS Name: NUMTOTV

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Number of vehicles involved

Variable Definitions and Codes - CRASH Data Set

Number Of Case Vehicles In Crash

Definition: This variable documents the total number of case vehicles involved in the crash. Case vehicles are the first in-transport vehicles involved in the crash and up to three vehicles may be designated as case vehicles. Most of the detailed vehicle data in the NMVCCS data sets are provided for case vehicles only.

SAS Name: NUMCASEV

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Number of case vehicles

CRSH_DESC Data Set

The CRSH_DESC (Crash Description) data set contains the variables SCASEID and SUMMARY. SCASEID uniquely identifies each record in this data set and should be used to merge the CRSH_DESC data set with the CRASH data set. This SUMMARY variable is described below:

Crash Summary

Definition: This variable provides a narrative description of the crash.

SAS Name: SUMMARY

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Crash summary

Variable Definitions and Codes - CV Data Set

CV Data Set

The CV (Case Vehicle) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT and VEHNO. SCASEID and VEHNO uniquely identify each record in this data set and should be used to merge the CV data set with other vehicle level data sets. SCASEID should be used to merge the CV data set with the CRASH data set. This data set also contains the following variables:

Vehicle Inspection Type

Definition: This variable describes the level of documentation on the vehicle, including the completeness and timeliness of the inspection.

SAS Name: INSPTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Completed at scene
2	Complete - started at scene/completed later
3	Complete - not at scene
4	Partial inspection - started at scene
5	Partial inspection - started later
6	Refusal
7	Not inspected

Cargo Weight

Definition: This variable documents the weight of cargo in and/or on the vehicle, excluding occupants. Cargo may be located in the passenger compartment area, cargo area, trunk bed of a truck, or may be located in a trailing unit towed by the vehicle.

SAS Name: CARGOWGT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Cargo weight (kg)
99999	Unknown

Variable Definitions and Codes - CV Data Set

Towed Trailing Unit

Definition: This variable establishes if a trailing unit attached by a fixed linkage was present. Towed trailing units include horse trailers, fifth wheel trailers, travel trailers, camper trailers, boat trailers, truck trailers, towed motor vehicles or any other trailer.

SAS Name: TOWHITCH

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
7774	Not collected in this study year
9999	Unknown

Special Use

Definition: This variable documents specific other uses for the vehicle in addition to personal use.

SAS Name: SPECUSE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No Special Use
2	Taxi
3	Vehicle used as a school bus
4	Vehicle used as other bus
5	Military
6	Police
7	Ambulance
8	Fire truck or car
9999	Unknown

Odometer Reading

Definition: This variable records the post-crash odometer reading.

SAS Name: ODOMETER

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Odometer reading (km)
9999998	Unknown-Electronic Odometer
9999999	Unknown

Variable Definitions and Codes - CV Data Set

State Periodic Inspection Sticker

Definition: This variable documents the presence of a state inspection sticker on the vehicle and whether it is current.

SAS Name: STINSP

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Current
2	Not current
3	Not present
9997	Not applicable
9999	Unknown

Rollover Quarter Turns

Definition: This variable documents the number of quarter turns that the vehicle rolled during the crash sequence. 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.

SAS Name: ROLLTURNS

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Number of quarter turns
8865	End over end
8866	No rollover
9999	Unknown

Direction of Initial Roll

Definition: This variable establishes the direction in which the vehicle initially rolled.

SAS Name: ROLLDIR

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No rollover
2	Roll right - primarily about the longitudinal axis
3	Roll left - primarily about the longitudinal axis
4	Rollover - end-over-end
9999	Unknown

Variable Definitions and Codes - CV Data Set

Type of Rollover Initiation

Definition: This variable describes the type of rollover event in terms of how the rollover was initiated. The attributes mainly applied to rollovers initiated about the longitudinal axis. Rollovers in which the vehicle rotated primarily about the lateral axis were coded as Rollover--end-over-end (i.e., primarily about the lateral axis).

SAS Name: ROLINTYP

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No rollover
2	Trip-over
3	Flip-over
4	Turn-over
5	Climb-over
6	Fall-over
7	Bounce-over
8	Collision with another vehicle
9	Other rollover initiation type
10	Cargo shift
11	Rollover--end-over-end (i.e., primarily about the lateral axis)
9999	Unknown rollover initiation type

Location of Rollover Initiation

Definition: This variable establishes the location of the trip point or start of the vehicle's roll.

SAS Name: ROLINLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No rollover
2	On roadway
3	On shoulder -paved
4	On shoulder - unpaved
5	On roadside or divided trafficway median
6	Rollover - end-over-end
9999	Unknown

Variable Definitions and Codes - CV Data Set

Rollover Initiation Type Of Object Contacted

Definition: This variable provides broader categories for describing the force that acted upon the vehicle resulting in the rollover.

SAS Name: ROLLOBJTYP

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Vehicle
2	Noncollision
3	Collision with Fixed Object
5	Collision with Nonfixed Object
6	Unknown event or object
7	Other event
8866	No rollover

Rollover Initiation Object Contacted

Definition: This variable identifies the source of the force that acted upon the vehicle, which resulted in the rollover.

SAS Name: ROLLOBJ

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Vehicle#1
2	Vehicle#2
3	Vehicle#3
4	Vehicle#4
5	Vehicle#5
6	Vehicle#6
7	Vehicle#7
8	Vehicle#8
9	Vehicle#9
10	Vehicle#10
11	Vehicle#11
12	Vehicle#12
13	Vehicle#13
14	Vehicle#14
15	Vehicle#15
16	Vehicle#16
17	Vehicle#17
18	Vehicle#18
19	Vehicle#19
20	Vehicle#20
21	Vehicle#21
22	Vehicle#22
23	Vehicle#23

Variable Definitions and Codes - CV Data Set

24	Vehicle#24
25	Vehicle#25
26	Vehicle#26
27	Vehicle#27
28	Vehicle#28
29	Vehicle#29
30	Vehicle#30
31	Overturn->rollover(excludes end-over-end)
32	Rollover->end-over-end
33	Fire or explosion
34	Jackknife
35	Other intraunit damage
36	Noncollision injury
38	Other noncollision
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)
50	Nonbreakaway pole or post (<=10cm 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(includes guardrail)
57	Fence
58	Wall
59	Building
60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object
69	Unknown fixed object
72	Pedestrian
73	Cyclist or cycle
74	Other nonmotorist or conveyance
75	Vehicle occupant
76	Animal
77	Train
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object
89	Unknown nonfixed object
98	Other event

Variable Definitions and Codes - CV Data Set

99	Unknown event or object
8866	No rollover

Location On Vehicle Where Initial Tripping Force Is Applied

Definition: This variable establishes the specific point on the vehicle where the tripping force was applied.

SAS Name: TRIPLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No rollover
2	Wheels
3	Tires
4	Side plane
5	End plane
6	Undercarriage
7	Other location on vehicle
8	Non-contact rollover forces
9	Rollover - end-over-end
9999	Unknown

Interrupted Roll

Definition: This variable determines if the vehicle's rollover sequence was interrupted by another impact (other than the ground), thereby reducing the rollover distance.

SAS Name: ROLLINTR

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes
2	No
8866	No rollover
9997	Rollover - end-over-end
9999	Unknown

Variable Definitions and Codes - CV Data Set

Estimated Distance of Rollover

Definition: This variable estimates the distance the vehicle rolled from tripping point to final rest position.

SAS Name: ROLLDIST

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Rollover distance (m)
8866	No rollover
9997	Rollover - end-over-end
9999	Unknown

Presence Of Fire

Definition: This variable documents the presence of fire that occurred at any point in the crash sequence including the pre-crash segment.

SAS Name: FIRE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
9999	Unknown

Fire Ignition Time

Definition: This variable documents if the fire occurred before or after impact.

SAS Name: FIREIGTIME

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Pre-impact ignition
2	Post-impact ignition
9	Fire presence, unknown time of ignition
9997	No Fire
9999	Unknown

Variable Definitions and Codes - CV Data Set

Fire Origin

Definition: This variable identifies the location of fire initiation.

SAS Name: FIREORGN

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No fire
2	Vehicle interior
3	Exhaust system
4	Fuel tank (and other fuel retention system parts)
5	Engine compartment
8	Other
9999	Unknown

Left Side Mirror Precrash Presence

Definition: This variable documents if the left side mirror was present just prior to the crash.

SAS Name: MIR_LPRES

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes, side mirror(s) present
2	No, side mirror(s) not present
9999	Unknown if side mirrors present

Left Side Mirror Location

Definition: This variable provides the specific location on the vehicle of the left side mirror.

SAS Name: MIR_LLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Mounted on door
2	Mounted on fender
9	Multiple mirror locations
10	Unknown location of mirror
8888	Other location
9997	Not applicable (No mirrors)
9999	Unknown if side mirror present

Variable Definitions and Codes - CV Data Set

Left Side Mirror Type

Definition: This variable identifies the type of left side mirror on the vehicle.

SAS Name: MIR_LTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Flat Mirror
2	Convex Mirror
3	Convex/Plain combination
4	Other
9	Mirror present, type unknown
10	Multiple mirror types
9997	Not applicable (No mirrors)
9999	Unknown if mirror present

Left Side Mirror Origin

Definition: This variable documents if the left side mirror is original equipment (OEM) or an aftermarket addition to the vehicle.

SAS Name: MIR_LORIG

Attribute Codes

<u>Code</u>	<u>Description</u>
1	OEM side mirror
2	After market side mirror
3	OEM and after market mirrors
9	Unknown OEM/after market
9997	Not applicable (No mirrors)
9999	Unknown if mirror present

Right Side Mirror Precrash Presence

Definition: This variable documents if the right side mirror was present just prior to the crash.

SAS Name: MIR_RPRES

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes, side mirror(s) present
2	No, side mirror(s) not present
9999	Unknown if side mirrors present

Variable Definitions and Codes - CV Data Set

Right Side Mirror Location

Definition: This variable provides the specific location on the vehicle of the right side mirror.

SAS Name: MIR_RLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Mounted on door
2	Mounted on fender
9	Multiple mirror locations
10	Unknown location of mirror
8888	Other location
9997	Not applicable (No mirrors)
9999	Unknown if side mirror present

Right Side Mirror Type

Definition: This variable identifies the type of right side mirror on the vehicle.

SAS Name: MIR_RTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Flat Mirror
2	Convex Mirror
3	Convex/Plain combination
4	Other
9	Mirror present, type unknown
10	Multiple mirror types
9997	Not applicable (No mirrors)
9999	Unknown if mirror present

Right Side Mirror Origin

Definition: This variable documents if the right side mirror is original equipment (OEM) or an aftermarket addition to the vehicle.

SAS Name: MIR_RORIG

Attribute Codes

<u>Code</u>	<u>Description</u>
1	OEM side mirror
2	After market side mirror
3	OEM and after market mirrors
9	Unknown OEM/after market
9997	Not applicable (No mirrors)
9999	Unknown if mirror present

Variable Definitions and Codes - CV Data Set

Tire Damage Prior To First Harmful Event

Definition: This variable documents whether the vehicle's tires were flawed or damaged prior to the crash. Specific damage to tires is contained in the TIRE data set.

SAS Name: TIREDAM

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No tires damaged
1	At least one tire damaged
9997	Vehicle not designed with tires
9999	Unknown if tires damaged

Police Reported Alcohol Presence

Definition: This variable establishes the presence of alcohol for the driver as reported by police on the Police Accident Report (PAR).

SAS Name: ALCOHOL

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No alcohol present
2	Yes - alcohol present
3	Not reported
11	No PAR obtained (created)
8888	No driver present
9999	Unknown

Police Reported Drug Presence

Definition: This variable documents the presence of illegal drugs in the driver's system as recorded by police on the Police Accident Report (PAR).

SAS Name: DRUGS

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No drugs present
2	Yes – drugs present
4	Not reported
11	No PAR obtained (created)
8888	No driver present
9999	Unknown

Variable Definitions and Codes - CV Data Set

Police Reported Belt Use (Driver)

Definition: This variable documents the driver's use of available vehicle restraints as determined by police on the Police Accident Report (PAR).

SAS Name: BELTUSE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	None Used
2	Police did not indicate belt use
3	Shoulder Belt
4	Lap Belt
5	Lap and shoulder belt
6	Belt used, type not specified
8	Automatic belt
9	Other type belt
10	Police indicated 'unknown'
11	No PAR obtained (created)
8888	No driver present
9999	Unknown

Police Reported Travel Speed

Definition: This variable documents the travel speed of the vehicle as reported by police on the Police Accident Report (PAR).

SAS Name: TRAVELSP

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Travel speed (km/h)
11	No PAR obtained (created)
8879	Not reported
9999	Unknown

BAC Test Source

Definition: This variable documents the source of the BAC test results.

SAS Name: BACSRC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No BAC test
2	Medical Record
3	Police Reported
4	Other
8888	No driver present

Variable Definitions and Codes - CV Data Set

9995	Test refused
9999	Unknown if tested

BAC Test Result

Definition: This variable records the results of an alcohol test (either a blood alcohol test or a Breathalyzer test).

SAS Name: BACTEST

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Test result value
8888	No driver present
9995	Test refused
9996	No BAC test
9997	BAC test performed, results unknown
9999	Unknown if tested

BAC Test Time

Definition: This variable documents the time that blood was drawn or a breath test was administered.

SAS Name: BACTIME

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Test time (in HHMM, 24-hour clock)
8888	No driver present
9995	Test refused
9996	No BAC test
9997	BAC test performed, results or time unknown
9999	Unknown if tested

BAC Test Delay

Definition: This variable calculates the time between the time of the crash and the time blood was drawn or a breath test was administered.

SAS Name: BACDELAY

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Delay Time (in hours)
8888	No driver present
9995	Test refused
9996	No BAC test
9997	BAC test performed, results or time unknown
9999	Unknown if tested

Variable Definitions and Codes - CV Data Set

Driver License Status

Definition: This variable records the status of the driver's (driving) license.

SAS Name: DLSTATUS

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Current and valid
2	Suspended
3	Revoked
4	License permit
5	Other - not valid
7777	Not licensed
8888	No driver present
9999	Unknown

Driver License Endorsements

Definition: This variable documents the driver's compliance with license endorsements at the time of the crash.

SAS Name: DLENDOR

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No endorsements
2	Endorsements complied with
3	Endorsements, not complied with
4	Endorsements, compliance unknown
7777	Not licensed
8888	No driver present
9999	Unknown

Variable Definitions and Codes - CV Data Set

Driver License Restrictions

Definition: This variable documents the driver's compliance with license restrictions at the time of the crash.

SAS Name: DLREST

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No restrictions
2	Restrictions complied with
3	Restrictions not complied with
4	Restrictions, compliance unknown
7777	Not licensed
8888	No driver present
9999	Unknown

Driver Race/Ethnic Origin

Definition: This variable represents a self-classification by the driver of the race/ethnicity with which the driver identifies.

SAS Name: DETHN

Attribute Codes

<u>Code</u>	<u>Description</u>
1	White (non-Hispanic)
2	Black (non-Hispanic)
3	White (Hispanic)
4	Black (Hispanic)
5	American Indian, Eskimo or Aleut
6	Asian or Pacific Islander
7	Other
7774	Not collected during this study year
8888	No driver present
9999	Unknown

Driver Race

Definition: This variable represents a self-classification by the driver of the race with which the driver identifies.

SAS Name: DRACE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	White
2	Black or African American
3	Asian

Variable Definitions and Codes - CV Data Set

4	Native Hawaiian or Other Pacific Islander
5	American Indian or Alaska Native
7	Other
7774	Not collected during this study year
8888	No driver present
9999	Unknown

Driver Ethnicity

Definition: This variable represents a self-classification by the driver of the ethnicity with which the driver identifies.

SAS Name: DETH

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Hispanic or Latino
2	Not Hispanic or Latino
7774	Not collected during this study year
8888	No driver present
9999	Unknown

EDR Information Obtained

Definition: This variable establishes if data from the vehicle's Event Data Recorder (EDR) was obtained.

SAS Name: EDRINFO

Attribute Codes

<u>Code</u>	<u>Description</u>
1	EDR information obtained
2	EDR information not obtained
9999	Unknown

CDC/TDC Information Available

Definition: This variable documents if a vehicle is CDC or TDC applicable, based on the vehicle's bodytype and the level of vehicle inspection, and whether a CDC was completed.

SAS Name: CDCVEH

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes

Variable Definitions and Codes - DRUGS Data Set

DRUGS Data Set

The DRUGS (Drugs/Medications) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO and DRUGNO. DRUGNO is a unique number which identifies each particular drug taken by a driver. SCASEID, VEHNO and DRUGNO uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the DRUGS data set with vehicle level data sets.

Medications Present

Definition: This variable identifies the specific medications/drugs taken by the driver.

SAS Name: DRUG

Attribute Codes

<u>Code</u>	<u>Description</u>
2	Accupril-BP
3	Albuterol
4	Allegra-D
5	Azolphazine
6	Bixion
7	Buteral
8	Calan Effexor
9	Captopril
10	Claritin-D
11	Cortef
12	Coumadin
13	Cylert
14	Diabet
15	Diovan
16	Darvocet
17	Dylantin
18	Fastin
19	Flexeril
20	Glynase
21	Glucophage
22	Lexxel
23	Lipitor
24	Lotrel
25	Mevacor
26	Naprosyn
27	Norvasc
28	Orudus
30	Penicillin
31	Pravachol
32	Premarin
33	Prozac
34	Sular Prylosac
35	Tenorin

Variable Definitions and Codes - DRUGS Data Set

36	Tinormin
37	Topoxol
38	Tylenol/Codeine
39	Vasotec
40	Zaick
41	Ziac
42	Zesterol
44	Other
47	Advil
48	Advil cold medicine
49	Aspirin - all brands
51	Laxative
52	Meijer Aspirin free
53	Motrin
54	Nodoze
55	Perrigo
56	Sudafed
57	Travis D
58	Tylenol
59	Tylenol PM
60	Nyquil
61	Vitamins
66	Amphetamine
67	Cocaine
68	Crack cocaine
69	Hashish
70	Heroin
71	Lysergic Acid Diethylamide (LSD)
72	Marijuana
74	Methamphetamine
75	Morphine
76	Opium
77	Phencyclidine(PCP)
78	Pentobarbital/Secobarbital
79	Tetrahydrocannabinol(THC)
102	Amoxicillin
103	Augmentin
104	Celebrex
105	Claritin
106	Furosemide
107	Hydrocodone w/ APAP
108	Lanoxin
109	Levoxyl
110	Paxil
111	Prevacid
112	Prilosec
113	Synthroid
114	Zestril

Variable Definitions and Codes - DRUGS Data Set

115	Zithromax (Z-Pack)
118	Zocor
119	Zoloft
121	Cephalexin
123	Cipro
124	K-Dur
125	Prednisone
126	Amoxil
127	Trimethoprim/Sulfa
128	Biaxin
129	Ortho Tri-Cyclen
130	Acetaminophen/ Codeine
131	Atenolol
132	Zyrtec
133	Ambien
134	Propoxyphene N/APAP
135	Alprazolam
136	Ultram
137	Accupril
138	Prinivil
139	Cardizem CD
140	Glucotrol XL
141	Toprol - XL
142	Triamterene / HCTZ
143	Flonase
144	Cardura
145	Fosamax
146	Lotensin
147	Procardia XL
148	Viagra
149	Depakote
150	Dilantin
151	Pepcid
153	Wellbutrin SR
154	Neurontin
155	Hydrochlorothiazide
156	Cozaar
157	Diflucan
160	Hytrin
161	Adalat CC
162	Lorazepam
163	Relafen
164	Monopril
165	Levaquin
166	Risperdal
167	Xalatan
168	Cefzil
169	Verapamil SR

Variable Definitions and Codes - DRUGS Data Set

170	Clonazepam
171	Triphasil
172	Propulsid
173	Serevent
174	Amitriptyline
176	BuSpar
177	Lescol
179	Ortho-Novum 7/7/7
180	Veetids
181	Imitrex
182	Glyburide
184	Flovent
185	Ceftin
186	Atrovent
187	Celexa
188	Metoprolol Tartrate
189	Effexor XR
190	Lotrisone
191	Zyprexa
192	Nasonex
193	Warfarin
200	Ranitidine
201	Cyclobenzaprine
202	Singulair
204	Rezulin
205	Vioxx
206	Medroxyprogesterone
207	Roxicet
208	Plavix
209	Amaryl
210	Potassium Chloride
211	Diazepam (Valium)
212	Hyzaar
213	Lo/Ovral
214	Serzone
215	Bactroban
216	Zestoretic
217	Ortho-Cyclen
218	Evista
219	Miacalcin
220	Vancenase AQ DS
221	Adderall
222	Carisoprodol
223	Detrol
224	Imdur
225	Azmacort
226	Clonidine
227	Neomycin/Polymx/HC

Variable Definitions and Codes - DRUGS Data Set

228	Desogen
229	Daypro
230	Propranolol
231	Combivent
232	Macrobid
233	Alesse
234	Nitrostat
235	Temazepam
236	Ery-Tab
237	Avapro
238	Necon
239	Estrace
240	Plendil
241	Oxycontin
242	Klor-Con
244	Isosorbide Mononitrate
245	Axid
246	Phenergan Supp
247	Tamoxifen
248	Gemfibrozil
249	Aricept
250	Oxycodone / Acetaminophen
251	Methylprednisolone
252	Tiazac
253	Levothroid
254	Cycrin
255	Arthrotec
256	Tobradex
257	Proventil
258	Lamisil
259	Alphagan
260	Climara
261	Trazodone
262	Folic Acid
263	Altace
264	Flomax
265	Contuss-XT
266	Allopurinol
267	Claritin Reditabs
268	Trimox
270	Prempro
271	Allegra
272	Zithromax
273	Ibuprofen
275	Claritin D 12 HR
276	Claritin D 24 HR
277	Penicillin VK
278	Accolate

Variable Definitions and Codes - DRUGS Data Set

279	Cimetidine
280	Deltasone
281	Dyazide
283	Elocon
284	Endocet
285	Estraderm
286	Estradiol
288	Glipizide
289	Guaifenesin/PPA
290	Humulin 70/30
291	Humulin N
293	K-Dur-20
294	Lasix
295	Lo/Ovral 28
296	Loestrin-FE 1.5/30
297	Loestrin-FE 1/20
298	Lorabid
300	Miacalcin Nasal
301	Necon 1/35
302	Ortho-Cept
303	Promethazine tabs
304	Propacet 100
305	Propranolol LA
306	Provera
307	Retin-A
308	Rhinocort
310	Timoptic XE
311	Tri-Levlen
312	Xanax
313	Zantac
314	Zithromax Susp
315	Zyban
316	Albuterol Aerosol
317	Albuterol Neb Soln
318	Alesse 28
320	Aciphex
321	Actos
322	Acyclovir
323	Albuterol (Liquid)
324	Baycol
325	Benzonatate
326	Butalbital / APAP / Caffiene
327	Cartia XT
328	Clindamycin
329	Diclofenac Sodium
330	Digoxin
331	Diovan HCT
332	Doxepin

Variable Definitions and Codes - DRUGS Data Set

333	Doxycycline
335	Hydroxyzine
336	Hyoscyamine
337	Meclizine
338	Methocarbamol
339	Methylphenidate
340	Metronidazole
341	Minocycline
342	Mircette
343	Naproxen Sodium
344	Nitroglycerin
345	Nortriptyline
346	Oxycodone / APAP
347	Phenazopyridine
348	Phenobarbital
349	Prednisone (oral)
350	Promethazine / Codeine
351	Proventil HFA
352	Remeron
353	Spirolactone
354	Terazosin
355	Theophylline SR
357	Triamcinolone (topical)
358	Valtrex
360	Vicoprofen
361	Zyrtec Syrup
362	Naproxen
376	Nitrazepam
377	Flunitrazepam
378	Flurazepam
379	Loprazolam
380	Lormetazepam
381	Benzodiazepines - not specific
382	Barbiturates - not specific
383	Nardil
384	Librium
385	Tegretol
386	Tricyclic Antidepressants
387	Lithium - all types
388	Rocaltrol
389	Codeine
390	Avandia
391	N-desmethylochlordiazepoxide - Librium metabolite
392	Norchlordiazepoxide - Librium metabolite
393	Percocet
394	Percoden
395	Bactrim
396	Pyridium

Variable Definitions and Codes - DRUGS Data Set

397	Methadone
398	Rabeprazole
399	Benadryl (Di-Phenhydramine
400	Nexium
401	Lopressor
402	Lisinopril
403	Opiate, not specified
404	Vicodin
405	Indomethacin
406	Insulin, not specified
407	Birth control, not specified
408	Clonapin
410	Actifed
412	Aleve
413	High Blood Pressure medication, not specified
414	Bumetanide
415	Dayquil
416	Metformin
417	Lovastatin
418	Doxazosin
419	Humalog
420	Mavik
422	Nadolol
423	PCP
424	Diuretic, Not specified
425	Diabetes, oral medication, Not specified
426	Cold medicine, Not specified
427	Antacid, Not specified
428	Sinus/Allergy med, Not specified
429	Tylenol Sinus
430	Asthma Inhaler, not specified
431	Antibiotic, not specified
432	Glucosamine/Chondroitin
434	Sulfasalazine
435	Tricor
436	Loprol
437	Glaucoma med, not specified
438	Cholesterol med, not specified
439	Topomax
440	Blood Thinner, not specified
441	Diltiazem
442	Seroquel
443	Xopenex
444	Advair
445	Ativan
446	Maxalt
447	Carafate
448	Zovirax

Variable Definitions and Codes - DRUGS Data Set

449	Enalapril
450	Theo-Dur
451	Protonix
452	Pantoprazole
453	Abilify
454	Asacol
455	Atacand
456	Baclofen
457	Benicar
458	CellCept
459	Cialis
460	Colchicine
461	Coreg
462	Crestor
463	Cymbalta
464	Digitek
465	Ditropan
466	Elavil
467	Geodon
468	Glucovance
469	Keppra
470	Klonopin
471	Lamictal
472	Lantus
473	Lexapro
474	Lorcet/Lortab
475	Lunesta
476	Micardis
477	Mirapex
478	Mobic
479	Mucinex
480	Niaspan
481	Novolog
482	Pentasa
483	Phentermine
484	Piroxicam
485	Plaquenil
486	Rozeram
487	Soma
488	Spiriva
489	Tramadol
490	Trileptal
491	Vytorin
492	Yasmin
493	Zetia
494	Zonegran
495	Estrogen medication - not specified
496	Arthritis medication - not specified

Variable Definitions and Codes - DRUGS Data Set

497	Thyroid medication - not specified
498	Chlor-Trimeton
499	Pro-hist-8
500	Chlor-phen
501	Chlorpheniramine Maleate
502	Potassium Supplement (unspecified)
503	Clorazepate
9999	Unknown

Variable Definitions and Codes - EDRABAG Data Set

EDRABAG Data Set

The EDRABAG (Event Data Recorder – Air Bag) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO, READINGNO, EBAGLOC and POSITION. READINGNO is a consecutive number that identifies each reading of the EDR. EBAGLOC and POSITION identify the location and position, respectively, of each airbag and are both further described below. SCASEID, VEHNO, READINGNO, EBAGLOC and POSITION uniquely identify each record in this data set. SCASEID, VEHNO and READINGNO should be used to merge the EDRABAG data set with other EDR data sets. SCASEID and VEHNO should be used to merge the EDRABAG data set with vehicle level data sets. This data set also contains the following variables:

Air Bag Deployment Type/Location

Definition: This variable describes the type of airbag in terms of its location in the vehicle.

SAS Name: EBAGLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Steering Wheel Hub
2	Top Instrument Panel
3	Mid Instrument Panel
4	Bottom Instrument Panel
5	Seat Back
6	Door
7	Roof Side Rail
98	Other
99	Unknown

Air Bag Deployment Position

Definition: This variable identifies the air bags location as either a driver or passenger seat position.

SAS Name: POSITION

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Driver
2	Passenger

Variable Definitions and Codes - EDRABAG Data Set

Air Bag Deployment Stage 1 Time

Definition: This variable is the time in milliseconds when the first stage of the air bag deployed as recorded by the EDR.

SAS Name: STAGE1

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Deployment time (milliseconds)
8883	Disposal
8885	Not deployed
8886	Not reported

Air Bag Deployment Stage 2 Time

Definition: This variable is the time in milliseconds when the second stage of the air bag deployed as recorded by the EDR.

SAS Name: STAGE2

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Deployment time (milliseconds)
8883	Disposal
8885	Not deployed
8886	Not reported

EDRCRASH Data Set

The EDRCRASH (Event Data Recorder – Crash) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO, READINGNO, MSECONDS and DVCLASS. READINGNO is a consecutive number that identifies each reading of the EDR. MSECONDS is the number of milliseconds (at 10 millisecond intervals) after the crash for a particular Delta V recording by the EDR. DVCLASS is the component of the Delta V, longitudinal or lateral, recorded by the EDR. SCASEID, VEHNO, READINGNO, MSECONDS and DVCLASS uniquely identify each record in this data set. SCASEID, VEHNO and READINGNO should be used to merge the EDRCRASH data set with other EDR data sets. SCASEID and VEHNO should be used to merge the EDRCRASH data set with vehicle level data sets. This data set also contains the following variables:

Component of Delta V

Definition: This variable provides the component of the Delta V, longitudinal or longitudinal and lateral, as recorded by the EDR.

SAS Name: DVCLASS

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Longitudinal
2	Lateral

Delta V

Definition: This variable provides the crash Delta V (change in velocity) as recorded by the EDR.

SAS Name: DELTAV

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Delta V (mph)

Variable Definitions and Codes - EDRDATA Data Set

EDRDATA Data Set

The EDRDATA (Event Data Recorder – Data) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO, and READINGNO. READINGNO is a consecutive number that identifies each reading of the EDR. SCASEID, VEHNO and READINGNO uniquely identify each record in this data set and should be used to merge the EDRDATA data set with other EDR data sets. SCASEID and VEHNO should be used to merge the EDRDATA data set with vehicle level data sets. This data set also contains the following variables:

EDR Version

Definition: This variable identifies the version of software that was used to read the EDR.

SAS Name: EDRVER

Attribute Codes

<u>Code</u>	<u>Description</u>
	EDR version (text)

EDR Type

Definition: This variable documents the type of type of the Delta V reading reported by the event data recorder (EDR) in the vehicle.

SAS Name: EDRTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Longitudinal
2	Longitudinal and lateral delta V
9999	Unknown

Deployment Status

Definition: This variable documents any airbag deployment in the vehicle as recorded by the EDR.

SAS Name: DPLYSTAT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Non-deployment
2	Deployment
3	Not reported

Variable Definitions and Codes - EDRDATA Data Set

Event Ignition Cycles

Definition: This variable documents the number of times the ignition has been cycled on and off at the time of the event as recorded by the EDR.

SAS Name: EVCYCLES

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Number of ignition cycles
999998	Not reported

Investigation Ignition Cycles

Definition: This variable documents the number of times the ignition has been cycled on and off at the time of the investigation as recorded by the EDR.

SAS Name: INVCYCLE

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Number of ignition cycles
999998	Not reported

Driver Belt Status

Definition: This variable documents whether the driver's restraint buckle was engaged in the latch as recorded by the EDR.

SAS Name: DRVBELT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Buckled
2	Not buckled
8886	Not reported

Driver Pretensioner Time

Definition: This variable documents the time in milliseconds when the driver's pretensioner activated as recorded by the EDR.

SAS Name: DRPRTEN

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Pretensioner activation time (milliseconds)
8879	Not reported
8885	Not deployed

Variable Definitions and Codes - EDRDATA Data Set

Passenger Belt Status

Definition: This variable documents whether the passenger's restraint buckle was engaged in the latch as recorded by the EDR.

SAS Name: PASBELT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Buckled
2	Not buckled
8886	Not reported

Passenger Pretensioner Time

Definition: This variable documents the time in milliseconds when the passenger's pretensioner activated as recorded by the EDR.

SAS Name: PASPRTEN

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Pretensioner activation time (milliseconds)
8879	Not reported
8885	Not deployed

Suppression Switch Status

Definition: This variable documents the presence of a passenger's air bag suppression switch and its position as recorded by the EDR.

SAS Name: PSWSTAT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	On
2	Off
8886	Not reported

Variable Definitions and Codes - EDRPRECR Data Set

EDRPRECR Data Set

The EDRPRECR (Event Data Recorder – Precrash) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO, READINGNO and PRESEC. READINGNO is a consecutive number that identifies each reading of the EDR. PRESEC is the number of seconds prior to the crash for a particular recording by the EDR. SCASEID, VEHNO, READINGNO and PRESEC uniquely identify each record in this data set. SCASEID, VEHNO and READINGNO should be used to merge the EDRPRECR data set with other EDR data sets. SCASEID and VEHNO should be used to merge the EDRPRECR data set with vehicle level data sets. This data set also contains the following variables:

Brake Switch Activation

Definition: This variable documents the status of the brake switch activation prior to the crash as recorded by the EDR.

SAS Name: BRKSWTCH

Attribute Codes

<u>Code</u>	<u>Description</u>
1	On
2	Off
8879	Not reported

Precrash Speed

Definition: This variable documents the precrash vehicle speed as recorded by the EDR.

SAS Name: SPEED

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Vehicle speed (mph)
8879	Not reported

Precrash Throttle Percentage

Definition: This variable documents the precrash throttle percentage as recorded by the EDR.

SAS Name: THROT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Throttle (percent)
8879	Not reported

Variable Definitions and Codes - EDRPRECR Data Set

Revolutions Per Minute

Definition: This variable documents the precrash engine speed as recorded by the EDR.

SAS Name: RPM

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Engine speed (rpm)
8879	Not reported

ENV Data Set

The ENV (Environment) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT and VEHNO. SCASEID and VEHNO uniquely identify each record in this data set and should be used to merge the ENV data set with other vehicle level data sets. This data set also contains the following variables:

Posted Speed Limit

Definition: This variable documents the posted speed limit for the roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: SPLIMIT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Posted speed limit (km/h)
8841	No statutory limit
9999	Unknown

Advisory Speed Limit

Definition: This variable documents the advised speed limit as posted on the vehicle's roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: AVSPLIMIT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Advisory speed limit (km/h)
7776	No advisory limit
9999	Unknown

Travel Lane

Definition: This variable describes the predominant lane of the vehicle with lane numbers counting up from right to left. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: TRAVELAN

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Lane one (right curb lane)
2	Lane two
3	Lane three
4	Lane four
5	Other
8888	No driver present

Variable Definitions and Codes - ENV Data Set

9997	Not applicable
9999	Unknown

Relation To Junction

Definition: This variable describes the roadway in terms of the vehicle's proximity to a junction and/or interchange. A junction is, in general, the area formed by the connection of two roadways. An interchange is an area around a grade separation that involves at least two trafficways. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: RELJNCT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Non-junction
2	Intersection
3	Intersection related
4	Driveway, alley access, etc.
5	Entrance/exit ramp related
6	Rail grade crossing
7	In crossover
8	Unknown, non interchange
9	Interchange-Intersection
10	Interchange-Intersection related
11	Interchange-Driveway, alley access, etc.
12	Interchange-Entrance/exit ramp related
13	Interchange-In crossover
14	Interchange-Other location in interchange
15	Unknown, interchange area
9999	Unknown

Natural Lighting

Definition: This variable represents the lighting conditions at the time of the crash based on ambient and artificial sources.

SAS Name: NATLGT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Daylight
2	Dark
3	Dark, but lighted
4	Dawn
5	Dusk
9999	Unknown

Variable Definitions and Codes - ENV Data Set

Atmospheric Condition: Cloudy

Definition: This variable documents if the sky was cloudy just prior to the critical event.

SAS Name: WEATHER1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Atmospheric Condition: Snow

Definition: This variable documents if snow was falling just prior to the critical event.

SAS Name: WEATHER2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Atmospheric Condition: Fog, Smog, Smoke

Definition: This variable documents if fog, smog or smoke were present just prior to the critical event.

SAS Name: WEATHER3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Atmospheric Condition: Rain

Definition: This variable documents if rain was falling just prior to the critical event.

SAS Name: WEATHER4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Variable Definitions and Codes - ENV Data Set

Atmospheric Condition: Sleet, Hail

Definition: This variable documents if sleet, hail, freezing rain or freezing drizzle were falling just prior to the critical event.

SAS Name: WEATHER5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Atmospheric Condition: Blowing Snow

Definition: This variable documents if snow was blowing just prior to the critical event.

SAS Name: WEATHER6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Atmospheric Condition: Severe Crosswinds

Definition: This variable documents if severe crosswinds were present just prior to the critical event.

SAS Name: WEATHER7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Atmospheric Condition: Other

Definition: This variable documents if other adverse atmospheric conditions were present just prior to the critical event that were not captured by the other Atmospheric Condition variables.

SAS Name: WEATHER8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
9999	Unknown if present

Variable Definitions and Codes - ENV Data Set

Trafficway Flow Restriction(s) Presence

Definition: This variable identifies if any preexisting trafficway flow restrictions hindered the general flow of traffic in some way. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.) Specific trafficway flow restrictions are also contained in this data set.

SAS Name: TRFWAY

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Work Zone

Definition: This variable establishes if the flow of traffic was hindered due to a work zone.

SAS Name: TRFWAY1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Roadway Immersed

Definition: This variable establishes if the flow of traffic was hindered due to the roadway being immersed in water.

SAS Name: TRFWAY2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - ENV Data Set

Trafficway Flow Restriction: Prior Crash

Definition: This variable establishes if the flow of traffic was hindered due to a prior crash.

SAS Name: TRFWAY3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Congestion

Definition: This variable establishes if the flow of traffic was hindered due to traffic congestion.

SAS Name: TRFWAY4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Fog

Definition: This variable establishes if the flow of traffic was hindered due to fog.

SAS Name: TRFWAY5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Heavy Snow

Definition: This variable establishes if the flow of traffic was hindered due to heavy snow.

SAS Name: TRFWAY6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present

Variable Definitions and Codes - ENV Data Set

8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Heavy Rain

Definition: This variable establishes if the flow of traffic was hindered due to heavy rain.

SAS Name: TRFWAY7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Dust Storm

Definition: This variable establishes if the flow of traffic was hindered due to a dust storm.

SAS Name: TRFWAY8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Trafficway Flow Restriction: Other

Definition: This variable establishes if the flow of traffic was hindered due to another factor not captured by the other Trafficway Flow Restriction variables.

SAS Name: TRFWAY9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - ENV Data Set

Roadway Design Deficiencies

Definition: This variable identifies design deficiencies of the roadway based on established AASHTO standards. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: ROADDEF

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No deficiencies noted
2	Inappropriate signage speeds
3	Insufficient crown
4	Excessive crown
5	Insufficient superelevation
6	Excessive superelevation
7	Excessive curvature
8	No shoulder/ Breakdown lane
9998	Other
9999	Unknown

Trafficway Flow

Definition: This variable describes the flow of traffic as specified by the design of the roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: TRAFFLOW

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Not physically divided (two way traffic)
2	Divided trafficway-median strip without positive barrier
3	Divided trafficway-median strip with positive barrier
4	One way traffic
5	Not physically divided with two-way left turn lane
9999	Unknown

Variable Definitions and Codes - ENV Data Set

Number of Travel Lanes

Definition: This variable describes the number of travel lanes for the roadway. The total number of travel lanes are counted for undivided roadways but only the travel lanes in the vehicle's direction of travel are counted for divided roadways. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: NUMLANES

Attribute Codes

<u>Code</u>	<u>Description</u>
1	One
2	Two
3	Three
4	Four
5	Five
6	Six
7	Seven or more
9999	Unknown

Rumble Strip Presence

Definition: This variable determines if a rumble strip was present on the roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: RUMBSTRP

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No rumble strip present
2	Right roadside rumble strip present
3	Left roadside rumble strip present
4	Both roadsides rumble strip present
8	Other
9999	Unknown

Type of Road Surface

Definition: This variable describes the surface type of the roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: SURTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Concrete
2	Bituminous (asphalt)
3	Brick or block
4	Slag, gravel, or stone

Variable Definitions and Codes - ENV Data Set

5	Dirt
9998	Other
9999	Unknown

Condition of Road Surface

Definition: This variable captures the surface condition of the roadway in the precrash area. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: SURCOND

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Dry
2	Wet
3	Standing water (1/4 inch or deeper)
4	Snow covered
5	Slush
6	Ice
7	Sand, dirt
8	Other
9999	Unknown

Roadway Horizontal Alignment

Definition: This variable describes any perceptually determined curvature of the roadway. The vehicle's direction of travel determines whether the curvature is right or left. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: ALIGN

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Straight
2	Curve right
3	Curve left
9999	Unknown

Variable Definitions and Codes - ENV Data Set

Roadway Vertical Profile

Definition: This variable is the measured and calculated percentage of the roadway's grade generated from the vertical and horizontal measurements of the roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: PROFILE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Level
2	Uphill grade (>2%)
3	Hill crest
4	Downhill grade (>2%)
5	Sag
9999	Unknown

Roadway Access Control

Definition: This variable describes the level of control maintained for vehicles attempting to enter/exit the roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: ACCSCNTL

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Full control
2	No control
3	Other
9999	Unknown

Radius Of Curvature

Definition: This variable is the measured and calculated radius of the roadway's curve generated from the length of chord and middle ordinate values. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: RADCURV

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Radius of curvature (meters)
999997	Not applicable
999999	Unknown

Variable Definitions and Codes - ENV Data Set

Superelevation

Definition: This variable is the measured and calculated cross slope of the roadway. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.)

SAS Name: SUPRELEV

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Superelevation (cm)
9997	Not applicable
9999	Unknown

Traffic Control Device(s) Presence

Definition: This variable establishes the presence of above-ground traffic controls which regulate vehicular traffic in this vehicle's direction of travel. (The vehicle's roadway is the one most representative of the vehicle's environment just prior to the critical precrash event.) Specific traffic control devices regulating the vehicle are captured in the TCD data set.

SAS Name: TCDPRES

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown if present

Traffic Control Device Functioning

Definition: This variable establishes if the traffic control device was functioning properly.

SAS Name: TCDFCTN

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No traffic signs or signals
2	One or more traffic signs/signals not functioning
3	All traffic signs/signals functioning properly
8888	No driver present
9999	Unknown

EQUIP Data Set

The EQUIP (Equipment) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO and EQUIPTYPE. EQUIPTYPE is the type of equipment in the vehicle and this variable is detailed below. SCASEID, VEHNO and EQUIPTYPE uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the EQUIP data set with vehicle level data sets. This data set also contains the following variables:

Equipment Type

Definition: This variable documents the type of equipment in or on the vehicle.

SAS Name: EQUIPTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Rear crash avoidance (other than camera)
2	ABS
3	Navigation system-installed in vehicle
4	Mirror mounted turn signals
5	DVD player - 1st row
6	Variable suspension
7	Radar or laser detector
8	Run-flat tires
9	Navigation system - portable
10	DVD player - 2nd row
12	Electronic stability control
14	Tire pressure monitoring system
16	Traction control
17	Headlight wiper/washer
18	Wide angle mirror
20	Electronic brake assist
21	Adjustable pedals
22	Clothes rod
23	Cellular/mobile phone
24	Pet/cargo barrier
25	Auto dimming rearview mirror(s)
26	4WD/AWD
27	ITS (intelligent communication system)
28	Sport shift transmission
29	Steering wheel mounted radio/climate controls
30	Window wind deflector
31	Collision warning system
32	Rear spoiler
33	Bug shield/hood protector
34	Lane or roadway-departure warning system
35	Satellite radio
36	Cruise control-adaptive/intelligent

Variable Definitions and Codes - EQUIP Data Set

37	Sunroof
38	Drowsy driver sensing system
39	Child mirror
40	Altered suspension (raised, lowered, etc.)
41	Hands free cell phone kit
42	Tires (oversized, low profile, etc.)
43	Non-standard steering wheel
44	Voice activated controls
45	Custom (non-OEM) wheels
46	Cargo holder - roof mounted
47	Cargo holder - rear mounted
48	Bike rack - hitch mounted
49	Bike rack - roof mounted
50	Large speakers
52	Rear view camera
54	Front object sensor
55	Heads-up display
57	Night vision display
90	Cruise control-conventional
91	Power hand controls
92	Manual hand controls
93	Other adaptive equipment
100	Adaptive Front-Light System (AFS)
101	Integrated hands free communication system
102	Bi-Xenon headlamps
103	Daytime running lights
1088	Other safety equipment
2088	Other braking and handling
3088	Other advanced equipment
4088	Other convenience

Equipment Availability and Location

Definition: This variable documents the availability and location of the equipment.

SAS Name: EQUIPAVALOC

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not Available
1	Available, Exterior - Front
2	Available, Exterior - Rear
3	Available, Exterior - Right
4	Available, Exterior - Left
5	Available, Exterior - Top
6	Available, Exterior - undercarriage
7	Available, Position 11
8	Available, Position 12

Variable Definitions and Codes - EQUIP Data Set

9	Available, Position 13
10	Available, Rear Seat
11	Available, Exterior - Bilateral
7774	Not collected during this study year
9998	Available, Unknown location
9999	Unknown

Equipment In Use

Definition: This variable documents whether the equipment was in use immediately prior to the crash.

SAS Name: EQUIPUSE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
7774	Not collected during this study year
9998	Not equipped
9999	Unknown if available/used

After Market Equipment

Definition: This variable identifies if the equipment was installed after the time of manufacture (not OEM) and was present at the time of the crash.

SAS Name: AFTERMKT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
7774	Not collected during this study year
9998	Not equipped
9999	Unknown if available/used

Variable Definitions and Codes - EVENT Data Set

EVENT Data Set

The EVENT (Event) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, and ACCSEQ. ACCSEQ is the event sequence number which identifies a particular event in the crash sequence. SCASEID and ACCSEQ uniquely identify each record in this data set and should be used to merge the EVENT data set with the VEVENT data set and the CDC data set. SCASEID should be used to merge the EVENT data set with the CRASH data set. This data set also contains the following variables:

Striking Vehicle Number

Definition: This variable identifies the number of the striking vehicle in this event. Vehicle numbers are assigned to vehicles as they become involved in the crash.

SAS Name: VEHNUM

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Number assigned to vehicle

Class Of Striking Vehicle

Definition: This variable documents the class of the striking motor vehicle in this event.

SAS Name: CLASS1

Attribute Codes

<u>Code</u>	<u>Description</u>
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 type (<= 4,536 kgs GVWR)
39	Unknown pick up truck (<=4,536 kgs GVWR)
45	Other light truck (<= 4,536 kgs GVWR)
48	Unknown light truck type (<= 4,536 kgs GVWR)

Variable Definitions and Codes - EVENT Data Set

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 Of Striking Vehicle

Definition: This variable documents the general area of damage for the striking motor vehicle in this event.

SAS Name: GADEV1

Attribute Codes

<u>Code</u>	<u>Description</u>
9	Unknown
B	Back
C	TDC applicable vehicles, rear of cab
D	TDC applicable vehicles, rear of tractor
F	Front
L	Left side
N	Noncollision
R	Right side
T	Top
U	Undercarriage
V	TDC applicable vehicles, front of cargo area

Vehicle Number Or Object Contacted

Definition: This variable documents the motor vehicle or object contacted by the striking vehicle in this event.

SAS Name: OBJCONT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Vehicle#1
2	Vehicle#2
3	Vehicle#3
4	Vehicle#4
5	Vehicle#5

Variable Definitions and Codes - EVENT Data Set

6	Vehicle#6
7	Vehicle#7
8	Vehicle#8
9	Vehicle#9
10	Vehicle#10
11	Vehicle#11
12	Vehicle#12
13	Vehicle#13
14	Vehicle#14
15	Vehicle#15
16	Vehicle#16
17	Vehicle#17
18	Vehicle#18
19	Vehicle#19
20	Vehicle#20
21	Vehicle#21
22	Vehicle#22
23	Vehicle#23
24	Vehicle#24
25	Vehicle#25
26	Vehicle#26
27	Vehicle#27
28	Vehicle#28
29	Vehicle#29
30	Vehicle#30
31	Overturn->rollover(excludes end-over-end)
32	Rollover->end-over-end
33	Fire or explosion
34	Jackknife
35	Other intraunit damage
36	Noncollision injury
38	Other noncollision
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)
50	Nonbreakaway pole or post (<=10cm 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(includes guardrail)
57	Fence
58	Wall
59	Building

Variable Definitions and Codes - EVENT Data Set

60	Ditch or culvert
61	Ground
62	Fire hydrant
63	Curb
64	Bridge
68	Other fixed object
69	Unknown fixed object
72	Pedestrian
73	Cyclist or cycle
74	Other nonmotorist or conveyance
75	Vehicle occupant
76	Animal
77	Train
78	Trailer, disconnected in transport
79	Object fell from vehicle in-transport
88	Other nonfixed object
89	Unknown nonfixed object
98	Other event
99	Unknown event or object

Class Of Contacted Vehicle

Definition: This variable documents the class of the motor vehicle that was contacted, if a motor vehicle was contacted, in this event.

SAS Name: CLASS2

Attribute Codes

<u>Code</u>	<u>Description</u>
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 type (<= 4,536 kgs GVWR)

Variable Definitions and Codes - EVENT Data Set

39	Unknown pick up truck (<=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 Of Contacted Vehicle

Definition: This variable documents the general area of damage for the contacted motor vehicle, if a motor vehicle was contacted, in this event.

SAS Name: GADEV2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not a motor vehicle
9	Unknown
B	Back
C	TDC applicable vehicles, rear of cab
D	TDC applicable vehicles, rear of tractor
F	Front
L	Left side
N	Noncollision
R	Right side
T	Top
U	Undercarriage
V	TDC applicable vehicles, front of cargo area

Variable Definitions and Codes - GLAZING Data Set

GLAZING Data Set

The GLAZING (Glazing) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO and GLOC. GLOC is the glazing location on the vehicle and this variable is detailed below. SCASEID, VEHNO and GLOC uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the GLAZING data set with vehicle level data sets. This data set also contains the following variables:

Glazing Location

Definition: This variable specifies the location of the vehicle's glazing.

SAS Name: GLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Windshield
2	Left front
3	Right front
4	Left rear
5	Second window left rear
6	Right rear
7	Second window right rear
10	Backlight
15	Roof
20	Other

Glazing Condition

Definition: This variable describes the precrash condition of the vehicle's glazing.

SAS Name: GLAZING_COND

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Intact
2	Cracked not related to impact
3	Broken not related to impact
4	Cracked due to impact
5	Broken due to impact
8887	No glazing at this location
9999	Unknown

Variable Definitions and Codes - GLAZING Data Set

Glazing Clarity

Definition: This variable describes the precrash clarity and cleanliness of the vehicle's glazing.

SAS Name: GLAZING_CLARITY

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Clear
2	Hazy
3	Slightly dirty
4	Very dirty
8887	No glazing at this location
9999	Unknown

Glazing Tint

Definition: This variable indicates if the vehicle's glazing was tinted.

SAS Name: GLAZING_TINT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes
2	No
8887	No glazing at this location
9999	Unknown

Variable Definitions and Codes - GV Data Set

GV Data Set

The GV (General Vehicle) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT and VEHNO. SCASEID and VEHNO uniquely identify each record in this data set and should be used to merge the GV data set with other vehicle level data sets. SCASEID should be used to merge the GV data set with the CRASH data set. This data set also contains the following variables:

Case Vehicle

Definition: This variable identifies if the vehicle is a case vehicle, one of the first three in-transport vehicles involved in the crash. Most of the detailed vehicle data in the study were collected for case vehicles only.

SAS Name: CASEVEH

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes
2	No

Vehicle Model Year

Definition: This variable identifies the vehicle's model year.

SAS Name: MODEL YR

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Model year
9999	Unknown

Vehicle Make

Definition: This variable identifies the vehicle's make.

SAS Name: MAKE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	AMC
2	JEEP / KAISER-JEEP
3	AM GENERAL
6	CHRYSLER
7	DODGE
8	IMPERIAL
9	PLYMOUTH
10	EAGLE
12	FORD
13	LINCOLN

Variable Definitions and Codes - GV Data Set

14	MERCURY
18	BUICK
19	CADILLAC
20	CHEVROLET
21	OLDSMOBILE
22	PONTIAC
23	GMC
24	SATURN
25	GRUMMAN
29	OTHER DOMESTIC MANUFACTURER (light vehicles)
30	VOLKSWAGEN
31	ALFA ROMEO
32	AUDI
33	AUSTIN / AUSTIN HEALEY
34	BMW
35	NISSAN / DATSUN
36	FIAT
37	HONDA
38	ISUZU
39	JAGUAR
40	LANCIA
41	MAZDA
42	MERCEDES BENZ
43	MG
44	PEUGEOT
45	PORSCHE
46	RENAULT/AMC
47	SAAB
48	SUBARU
49	TOYOTA
50	TRIUMPH
51	VOLVO
52	MITSUBISHI
53	SUZUKI
54	ACURA
55	HYUNDAI
56	MERKUR
57	YUGO
58	INFINITI
59	LEXUS
60	DAIHATSU
61	STERLING
62	LAND ROVER
63	KIA
64	DAEWOO
65	MINI
69	OTHER FOREIGN MANUFACTURER (light vehicles)
70	BSA

Variable Definitions and Codes - GV Data Set

71	DUCATI
72	HARLEY-DAVIDSON
73	KAWASAKI
74	MOTO-GUZZI
75	NORTON
76	YAMAHA
78	OTHER MAKE MOPED
79	OTHER MAKE MOTORED CYCLE
80	BROCKWAY
81	DIAMOND REO/REO
82	FREIGHTLINER/WHITE
83	FWD
84	INTERNATIONAL HARVESTER/NAVISTAR
85	KENWORTH
86	MACK
87	PETERBILT
88	IVECO/MAGIRUS
98	OTHER MAKE (med/heavy truck/bus or "other")
99	UNKNOWN MANUFACTURER

Vehicle Model (listed with Vehicle Make)

Definition: This variable identifies the vehicle's model.

SAS Name: MODEL

Attribute Codes

<u>MAKE</u>		<u>MODEL</u>	
<u>Code</u>	<u>Meaning</u>	<u>Code</u>	<u>Meaning</u>
1	AMC	1	RAMBLER/AMERICAN
1	AMC	2	REBEL/MATADOR
1	AMC	3	AMBASSADOR
1	AMC	4	PACER
1	AMC	5	AMX
1	AMC	6	JAVELIN
1	AMC	7	HORNET/CONCORD
1	AMC	8	SPIRIT/GREMLIN
1	AMC	9	EAGLE
1	AMC	10	EAGLE SX-4
1	AMC	398	OTHER AUTOMOBILE
1	AMC	399	UNKNOWN AUTOMOBILE
1	AMC	999	UNKNOWN VEHICLE
2	JEEP / KAISER-JEEP	401	CJ-2/CJ-3/CJ-4
2	JEEP / KAISER-JEEP	402	CJ-5/CJ-6/CH-7/CH-8
2	JEEP / KAISER-JEEP	403	YJ-SERIES
2	JEEP / KAISER-JEEP	404	CHEROKEE (1984 ON)
2	JEEP / KAISER-JEEP	405	LIBERTY
2	JEEP / KAISER-JEEP	421	CHEROKEE (1963 - 1983)
2	JEEP / KAISER-JEEP	431	GRAND WAGONEER
2	JEEP / KAISER-JEEP	481	PICKUP
2	JEEP / KAISER-JEEP	482	COMANCHE
2	JEEP / KAISER-JEEP	498	OTHER LIGHT TRUCK

Variable Definitions and Codes - GV Data Set

2	JEEP / KAISER-JEEP	499	UNKNOWN LIGHT TRUCK
2	JEEP / KAISER-JEEP	999	UNKNOWN VEHICLE
3	AM GENERAL	401	DISPATCHER
3	AM GENERAL	421	HUMMER
3	AM GENERAL	466	DISPATCHER
3	AM GENERAL	498	OTHER LIGHT TRUCK
3	AM GENERAL	499	UNKNOWN LIGHT TRUCK
3	AM GENERAL	884	MEDIUM/HEAVY TRUCK
3	AM GENERAL	898	OTHER MEDIUM/HEAVY TRUCK
3	AM GENERAL	899	UNKNOWN MEDIUM/HEAVY TRUCK
3	AM GENERAL	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
3	AM GENERAL	983	BUS - REAR ENGINE/FLAT FRONT
3	AM GENERAL	988	OTHER BUS
3	AM GENERAL	989	UNKNOWN BUS TYPE
3	AM GENERAL	999	UNKNOWN VEHICLE
6	CHRYSLER	9	CORDOBA
6	CHRYSLER	10	NEW YORKER FIFTH AVENUE ('89)
6	CHRYSLER	10	NEWPORT
6	CHRYSLER	13	RAMPAGE 2.2 (CAR BASED PICKUP)
6	CHRYSLER	14	RWD ONLY-NEW YORKER/NEWPORT/5TH AVENUE/IMPERIAL
6	CHRYSLER	14	NEW YORKER ('83-'90)
6	CHRYSLER	14	NEW YORKER SALON
6	CHRYSLER	14	NEW YORKER/E CLASS/IMPERIAL/5TH AVENUE
6	CHRYSLER	15	LASER
6	CHRYSLER	16	LEBARON
6	CHRYSLER	17	LEBARON GTS/GTC
6	CHRYSLER	18	INTREPID (CANADIAN)
6	CHRYSLER	19	NEON (EXPORT)
6	CHRYSLER	31	TC (MASERATI SPORT)
6	CHRYSLER	35	CONQUEST
6	CHRYSLER	41	CONCORDE
6	CHRYSLER	42	LHS
6	CHRYSLER	43	SEBRING
6	CHRYSLER	44	CIRRUS
6	CHRYSLER	51	300M
6	CHRYSLER	52	PT CRUISER
6	CHRYSLER	53	PROWLER
6	CHRYSLER	54	PACIFICA
6	CHRYSLER	55	CROSSFIRE
6	CHRYSLER	398	OTHER AUTOMOBILE
6	CHRYSLER	399	UNKNOWN AUTOMOBILE
6	CHRYSLER	441	TOWN AND COUNTRY
6	CHRYSLER	442	VOYAGER
6	CHRYSLER	498	OTHER LIGHT TRUCK
6	CHRYSLER	499	UNKNOWN LIGHT TRUCK
6	CHRYSLER	999	UNKNOWN VEHICLE
7	DODGE	1	DART
7	DODGE	2	CORONET/CHARGER/MAGNUM
7	DODGE	3	POLARA/MONACO/ROYAL MONACO
7	DODGE	4	VIPER
7	DODGE	5	CHALLENGER
7	DODGE	6	ASPEN
7	DODGE	7	DIPLOMAT
7	DODGE	8	OMNI/CHARGER
7	DODGE	9	MIRADA
7	DODGE	10	ST REGIS
7	DODGE	11	ARIES (K)

Variable Definitions and Codes - GV Data Set

7	DODGE	12	400
7	DODGE	13	RAMPAGE 2.2, GT, SPORT
7	DODGE	14	600
7	DODGE	15	DAYTONA
7	DODGE	16	LANCER
7	DODGE	17	SHADOW
7	DODGE	18	DYNASTY
7	DODGE	19	SPIRIT
7	DODGE	20	NEON
7	DODGE	33	CHALLENGER (ALL IMPORTED)
7	DODGE	34	COLT (EXCLUDES VISTA)
7	DODGE	35	CONQUEST
7	DODGE	39	STEALTH
7	DODGE	40	MONACO
7	DODGE	41	INTREPID
7	DODGE	42	AVENGER
7	DODGE	43	STRATUS
7	DODGE	398	OTHER AUTOMOBILE
7	DODGE	399	UNKNOWN AUTOMOBILE
7	DODGE	401	RAIDER
7	DODGE	421	RAMCHARGER
7	DODGE	422	DURANGO
7	DODGE	441	VISTA
7	DODGE	442	CARAVAN
7	DODGE	461	B-SERIES VANS
7	DODGE	462	SPRINTER
7	DODGE	470	VAN DERIVATIVE
7	DODGE	471	D50, COLT P/U, RAM 50/RAM 100
7	DODGE	472	DAKOTA
7	DODGE	481	D, W-SERIES PICKUP, W100-W350
7	DODGE	482	RAM
7	DODGE	498	OTHER LIGHT TRUCK
7	DODGE	499	UNKNOWN LIGHT TRUCK
7	DODGE	881	MEDIUM/HEAVY: CBE
7	DODGE	882	MEDIUM/HEAVY: COE LOW ENGRY
7	DODGE	883	MEDIUM/HEAVY: COE HIGH ENTRY
7	DODGE	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
7	DODGE	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
7	DODGE	898	OTHER MEDIUM/HEAVY TRUCK
7	DODGE	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
7	DODGE	899	UNKNOWN MEDIUM/HEAVY TRUCK
7	DODGE	981	MEDIUM BUS
7	DODGE	988	OTHER BUS
7	DODGE	989	UNKNOWN BUS TYPE
7	DODGE	998	OTHER VEHICLE
7	DODGE	999	UNKNOWN VEHICLE
8	IMPERIAL	10	IMPERIAL
8	IMPERIAL	398	OTHER AUTOMOBILE
8	IMPERIAL	399	UNKNOWN AUTOMOBILE
8	IMPERIAL	999	UNKNOWN VEHICLE
9	PLYMOUTH	1	VALIANT/DUSTER/SCAMP
9	PLYMOUTH	2	SATELLITE/BELVEDERE
9	PLYMOUTH	3	FURY
9	PLYMOUTH	4	GRAN FURY
9	PLYMOUTH	5	BARRACUDA
9	PLYMOUTH	6	VOLARE
9	PLYMOUTH	7	CARAVELLE
9	PLYMOUTH	8	HORIZON

Variable Definitions and Codes - GV Data Set

9	PLYMOUTH	11	RELIANT (K)
9	PLYMOUTH	13	SCAMP (CAR BASED PICKUP)
9	PLYMOUTH	17	SUNDANCE
9	PLYMOUTH	19	ACCLAIM
9	PLYMOUTH	20	NEON
9	PLYMOUTH	31	CRICKET
9	PLYMOUTH	32	ARROW
9	PLYMOUTH	33	SAPPORO
9	PLYMOUTH	34	CHAMP/COLT (EXCLUDES VISTA)
9	PLYMOUTH	35	CONQUEST
9	PLYMOUTH	37	LASER
9	PLYMOUTH	38	BREEZE
9	PLYMOUTH	39	PROWLER
9	PLYMOUTH	398	OTHER AUTOMOBILE
9	PLYMOUTH	399	UNKNOWN AUTOMOBILE
9	PLYMOUTH	421	TRAILDUSTER
9	PLYMOUTH	441	COLT VISTA
9	PLYMOUTH	442	VOYAGER (MINIVAN)
9	PLYMOUTH	461	VAN-FULLSIZE (B-SERIES)
9	PLYMOUTH	471	ARROW PICKUP (FOREIGN)
9	PLYMOUTH	498	OTHER LIGHT TRUCK
9	PLYMOUTH	499	UNKNOWN LIGHT TRUCK
9	PLYMOUTH	999	UNKNOWN VEHICLE
10	EAGLE	34	SUMMIT
10	EAGLE	37	TALON
10	EAGLE	40	PREMIER
10	EAGLE	41	VISION
10	EAGLE	44	MEDALLION
10	EAGLE	398	OTHER AUTOMOBILE
10	EAGLE	399	UNKNOWN AUTOMOBILE
10	EAGLE	441	SUMMIT WAGON
10	EAGLE	498	OTHER LIGHT TRUCK
10	EAGLE	499	UNKNOWN LIGHT TRUCK
10	EAGLE	999	UNKNOWN VEHICLE
12	FORD	1	FALCON
12	FORD	2	FAIRLANE
12	FORD	3	MUSTANG/MUSTANG II
12	FORD	4	THUNDERBIRD (ALL SIZES)
12	FORD	5	LTD II
12	FORD	6	LTD/CUSTOM/GALAXIE (ALL SIZES)
12	FORD	7	RANCHERO
12	FORD	8	MAVERICK
12	FORD	9	PINTO
12	FORD	10	TORINO/GRAN TORINO/ELITE
12	FORD	11	GRANADA
12	FORD	12	FAIRMONT
12	FORD	13	ESCORT/EXP
12	FORD	15	TEMPO
12	FORD	16	CROWN VICTORIA
12	FORD	17	TAURUS
12	FORD	18	PROBE
12	FORD	31	ENGLISH FORD
12	FORD	32	FIESTA
12	FORD	33	FESTIVA
12	FORD	34	LASER
12	FORD	35	CONTOUR
12	FORD	36	ASPIRE
12	FORD	37	FOCUS

Variable Definitions and Codes - GV Data Set

12	FORD	38	GT
12	FORD	398	OTHER AUTOMOBILE
12	FORD	399	UNKNOWN AUTOMOBILE
12	FORD	401	EXPLORER/BRONCO ii/BRONCO (-77)
12	FORD	402	ESCAPE
12	FORD	421	BRONCO-FULLSIZE
12	FORD	422	EXPEDITION
12	FORD	431	EXCURSION
12	FORD	441	AEROSTAR
12	FORD	442	WINDSTAR
12	FORD	443	FREESTAR
12	FORD	461	E-SERIES VANS
12	FORD	470	VAN DERIVATIVE
12	FORD	471	RANGER
12	FORD	472	COURIER
12	FORD	473	SPORT TRAC
12	FORD	481	F-SERIES PICKUP
12	FORD	498	OTHER LIGHT TRUCK
12	FORD	499	UNKNOWN LIGHT TRUCK
12	FORD	880	F450/550 PICKUP >4536 GVWR
12	FORD	881	MEDIUM/HEAVY CBE
12	FORD	882	MEDIUM/HEAVY COE LOW ENGRY
12	FORD	883	MEDIUM/HEAVY COE HIGH ENTRY
12	FORD	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
12	FORD	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
12	FORD	898	OTHER MEDIUM/HEAVY TRUCK
12	FORD	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
12	FORD	899	UNKNOWN MEDIUM/HEAVY TRUCK
12	FORD	981	MEDIUM BUS
12	FORD	988	OTHER BUS
12	FORD	989	UNKNOWN BUS TYPE
12	FORD	998	OTHER VEHICLE
12	FORD	999	UNKNOWN VEHICLE
13	LINCOLN	1	CONTINENTAL/TOWN CAR
13	LINCOLN	2	MARK
13	LINCOLN	5	CONTINENTAL (82-ON)
13	LINCOLN	11	VERSAILLES
13	LINCOLN	12	LS
13	LINCOLN	398	OTHER AUTOMOBILE
13	LINCOLN	399	UNKNOWN AUTOMOBILE
13	LINCOLN	401	AVIATOR
13	LINCOLN	421	NAVIGATOR
13	LINCOLN	481	BLACKWOOD
13	LINCOLN	498	OTHER LIGHT TRUCK
13	LINCOLN	499	UNKNOWN LIGHT TRUCK
13	LINCOLN	999	UNKNOWN VEHICLE
14	MERCURY	2	CYCLONE
14	MERCURY	3	CAPRI-DOMESTIC
14	MERCURY	4	COUGAR/XR7
14	MERCURY	6	MARQUIS/MONTEREY
14	MERCURY	8	COMET
14	MERCURY	9	BOBCAT
14	MERCURY	10	MONTEGO
14	MERCURY	11	MONARCH
14	MERCURY	12	ZEPHYR
14	MERCURY	13	LYNX/LN-7 (82-83)
14	MERCURY	15	TOPAZ
14	MERCURY	17	SABLE

Variable Definitions and Codes - GV Data Set

14	MERCURY	31	CAPRI-FOREIGN
14	MERCURY	33	PANTERA
14	MERCURY	36	TRACER
14	MERCURY	37	MYSTIQUE
14	MERCURY	38	COUGAR
14	MERCURY	39	MARAUDER
14	MERCURY	398	OTHER AUTOMOBILE
14	MERCURY	399	UNKNOWN AUTOMOBILE
14	MERCURY	401	MOUNTAINEER
14	MERCURY	443	VILLAGER
14	MERCURY	444	MONTEREY (2004+)
14	MERCURY	498	OTHER LIGHT TRUCK
14	MERCURY	499	UNKNOWN LIGHT TRUCK
14	MERCURY	999	UNKNOWN VEHICLE
18	BUICK	1	SPECIAL/SKYLARK (thru 1972)
18	BUICK	2	LESABRE/CENTURION/WILDCAT
18	BUICK	3	ELECTRA/ELECTRA 225/PARK AVENUE (91-ON)
18	BUICK	4	ROADMASTER
18	BUICK	5	RIVIERA
18	BUICK	7	CENTURY
18	BUICK	8	APOLLO/SKYLARK (73-76)
18	BUICK	10	REGAL
18	BUICK	12	SKYHAWK
18	BUICK	15	SKYLARK (76-85)
18	BUICK	18	SOMERSET(85-87)/SKYLARK(86-ON)
18	BUICK	20	REGAL (FWD)
18	BUICK	21	REATA
18	BUICK	31	OPEL KADETT
18	BUICK	32	OPEL MANTA
18	BUICK	33	OPEL GT
18	BUICK	34	OPEL ISUZU
18	BUICK	398	OTHER AUTOMOBILE
18	BUICK	399	UNKNOWN AUTOMOBILE
18	BUICK	401	RENDEZVOUS
18	BUICK	402	RAINIER
18	BUICK	498	OTHER LIGHT TRUCK
18	BUICK	499	UNKNOWN LIGHT TRUCK
18	BUICK	999	UNKNOWN VEHICLE
19	CADILLAC	3	DEVILLE/FLEETWOOD
19	CADILLAC	4	LIMOUSINE
19	CADILLAC	5	ELDORADO
19	CADILLAC	6	COMMERCIAL SERIES
19	CADILLAC	9	ALLANTE
19	CADILLAC	14	SEVILLE
19	CADILLAC	16	CIMARRON
19	CADILLAC	17	CATERA
19	CADILLAC	18	CTS
19	CADILLAC	19	XLR
19	CADILLAC	20	SRX
19	CADILLAC	398	OTHER AUTOMOBILE
19	CADILLAC	399	UNKNOWN AUTOMOBILE
19	CADILLAC	421	ESCALADE
19	CADILLAC	431	ESCALADE ESV
19	CADILLAC	480	ESCALADE EXT
19	CADILLAC	498	OTHER LIGHT TRUCK
19	CADILLAC	498	UNKNOWN LIGHT TRUCK
19	CADILLAC	999	UNKNOWN VEHICLE
20	CHEVROLET	1	CHEVELLE/MALIBU (83-)

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20	CHEVROLET	2	IMPALA/CAPRICE
20	CHEVROLET	4	CORVETTE
20	CHEVROLET	6	CORVAIR
20	CHEVROLET	7	EL CAMINO
20	CHEVROLET	8	NOVA (-79)
20	CHEVROLET	9	CAMARO
20	CHEVROLET	10	MONTE CARLO ('70-'88) (RWD ONLY)
20	CHEVROLET	11	VEGA
20	CHEVROLET	12	MONZA
20	CHEVROLET	13	CHEVETTE
20	CHEVROLET	15	CITATION
20	CHEVROLET	16	CAVALIER
20	CHEVROLET	17	CELEBRITY
20	CHEVROLET	19	BERETTA/CORSICA
20	CHEVROLET	20	LUMINA
20	CHEVROLET	31	SPECTRUM
20	CHEVROLET	32	NOVA/GEO PRIZM
20	CHEVROLET	33	SPRINT/GEO SPRINT
20	CHEVROLET	34	GEO METRO
20	CHEVROLET	35	GEO STORM
20	CHEVROLET	36	MONTE CARLO (1995+) (FWD ONLY)
20	CHEVROLET	37	MALIBU (1997+)
20	CHEVROLET	38	SSR
20	CHEVROLET	39	AVEO
20	CHEVROLET	398	OTHER AUTOMOBILE
20	CHEVROLET	399	UNKNOWN AUTOMOBILE
20	CHEVROLET	401	S-10 BLAZER, BLAZER
20	CHEVROLET	402	GEO TRACKER
20	CHEVROLET	403	TRAILBLAZER (2002 and later)
20	CHEVROLET	404	EQUINOX
20	CHEVROLET	421	FULLSIZE BLAZER (K, Tahoe)
20	CHEVROLET	431	SUBURBAN
20	CHEVROLET	441	ASTRO VAN
20	CHEVROLET	442	LUMINA APV/VENTURE
20	CHEVROLET	461	G-SERIES VAN
20	CHEVROLET	466	P-SERIES VAN
20	CHEVROLET	470	VAN DERIVATIVE
20	CHEVROLET	471	S-10/T-10
20	CHEVROLET	472	LUV
20	CHEVROLET	473	COLORADO
20	CHEVROLET	481	C, K, R, V-SERIES PICKUP
20	CHEVROLET	482	AVALANCHE
20	CHEVROLET	498	OTHER LIGHT TRUCK
20	CHEVROLET	499	UNKNOWN LIGHT TRUCK
20	CHEVROLET	881	MEDIUM/HEAVY CBE
20	CHEVROLET	882	MEDIUM/HEAVY COE LOW ENTRY
20	CHEVROLET	883	MEDIUM/HEAVY COE HIGH ENTRY
20	CHEVROLET	884	MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION
20	CHEVROLET	890	MEDIUM/HEAVY; UNKNOWN ENGINE LOCAITON
20	CHEVROLET	898	OTHER MEDIUM/HEAVY TRUCK
20	CHEVROLET	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
20	CHEVROLET	899	UNKNOWN MEDIUM/HEAVY TRUCK
20	CHEVROLET	981	BUS
20	CHEVROLET	988	OTHER BUS
20	CHEVROLET	989	UNKNOWN BUS TYPE
20	CHEVROLET	998	OTHER VEHICLE
20	CHEVROLET	999	UNKNOWN VEHICLE
21	OLDSMOBILE	1	CUTLASS (RWD-ONLY)

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21	OLDSMOBILE	2	DELTA 88
21	OLDSMOBILE	3	NINETY-EIGHT
21	OLDSMOBILE	5	TORONADO-TROFEO
21	OLDSMOBILE	6	COMMERCIAL SERIES
21	OLDSMOBILE	12	STARFIRE
21	OLDSMOBILE	15	OMEGA
21	OLDSMOBILE	16	FIRENZA
21	OLDSMOBILE	17	CIERA
21	OLDSMOBILE	18	CALAIS
21	OLDSMOBILE	20	CUTLASS (FWD)
21	OLDSMOBILE	21	ACHIEVA
21	OLDSMOBILE	22	AURORA
21	OLDSMOBILE	23	INTRIGUE
21	OLDSMOBILE	24	ALERO
21	OLDSMOBILE	398	OTHER AUTOMOBILE
21	OLDSMOBILE	399	UNKNOWN AUTOMOBILE
21	OLDSMOBILE	401	BRAVADA
21	OLDSMOBILE	441	SILHOUETTE
21	OLDSMOBILE	498	OTHER LIGHT TRUCK
21	OLDSMOBILE	499	UNKNOWN LIGHT TRUCK
21	OLDSMOBILE	998	OTHER VEHICLE
21	OLDSMOBILE	999	UNKNOWN VEHICLE
22	PONTIAC	1	LEMANS/TEMPEST (THRU 79)
22	PONTIAC	2	BONNEVILLE/CATALINA/PARISIENNE
22	PONTIAC	5	FIERO
22	PONTIAC	8	VENTURA
22	PONTIAC	9	FIREBIRD/TRANS AM
22	PONTIAC	10	GRAND PRIX (RWD)
22	PONTIAC	11	ASTRE
22	PONTIAC	12	SUNBIRD (THRU 80)
22	PONTIAC	13	T1000/1000
22	PONTIAC	15	PHOENIX
22	PONTIAC	16	J2000/SUNBIRD/SUNFIRE
22	PONTIAC	17	6000
22	PONTIAC	18	GRAND AM
22	PONTIAC	20	GRAND PRIX (FWD)
22	PONTIAC	31	LEMANS (88-on)
22	PONTIAC	398	OTHER AUTOMOBILE
22	PONTIAC	399	UNKNOWN AUTOMOBILE
22	PONTIAC	401	AZTEK
22	PONTIAC	402	VIBE
22	PONTIAC	441	TRANS SPORT/MONTANA
22	PONTIAC	498	OTHER LIGHT TRUCK
22	PONTIAC	499	UNKNOWN LIGHT TRUCK
22	PONTIAC	999	UNKNOWN VEHICLE
22	PONTIAC		OTHER LIGHT
23	GMC	7	CABALLERO/SPRINT
23	GMC	398	OTHER AUTOMOBILE
23	GMC	399	UNKNOWN AUTOMOBILE
23	GMC	401	JIMMY/TYPHOON/ENVOY
23	GMC	421	FULLSIZE JIMMY/YUKON
23	GMC	431	SUBURBAN
23	GMC	441	SAFARI (MINIVAN)
23	GMC	461	G-SERIES VAN
23	GMC	466	P-SERIES VAN
23	GMC	470	VAN DERIVATIVE
23	GMC	471	S15/T15/SONOMA
23	GMC	472	CANYON

Variable Definitions and Codes - GV Data Set

23	GMC	481	C, K, R, V-SERIES PICKUP
23	GMC	498	OTHER LIGHT TRUCK
23	GMC	499	UNKNOWN LIGHT TRUCK
23	GMC	881	MEDIUM/HEAVY CBE
23	GMC	882	MEDIUM/HDAVY COE LOW ENTRY
23	GMC	883	MEDIUM/HEAVY COE HIGH ENTRY
23	GMC	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
23	GMC	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
23	GMC	898	OTHER MEDIUM/HEAVY TRUCK
23	GMC	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
23	GMC	899	UNKNOWN MEDIUM/HEAVY TRUCK
23	GMC	981	MEDIUM BUS
23	GMC	988	OTHER BUS
23	GMC	989	UNKNOWN BUS TYPE
23	GMC	999	UNKNOWN VEHICLE
24	SATURN	1	SL
24	SATURN	2	SC
24	SATURN	3	SW
24	SATURN	4	EV
24	SATURN	5	LS/ LS1/ LS2/L100/L200/L300
24	SATURN	6	LW/LW1/ LW2/ LW200/300
24	SATURN	7	ION
24	SATURN	398	OTHER AUTOMOBILE
24	SATURN	399	UNKNOWN AUTOMOBILE
24	SATURN	401	VUE
24	SATURN	498	OTHER LIGHT TRUCK
24	SATURN	499	UNKNOWN LIGHT TRUCK
24	SATURN	999	UNKNOWN VEHICLE
25	GRUMMAN	441	LLV
25	GRUMMAN	442	STEP-IN VAN
25	GRUMMAN	498	OTHER LIGHT TRUCK
25	GRUMMAN	499	UNKNOWN LIGHT TRUCK
25	GRUMMAN	881	MEDIUM/HEAVY TRUCK - CBE
25	GRUMMAN	882	MEDIUM/HEAVY TRUCK - COE LOW ENTRY
25	GRUMMAN	883	MEDIUM/HEAVY TRUCK - COE HIGH ENTRY
25	GRUMMAN	884	MEDIUM/HEAVY TRUCK UNKNOWN ENGINE LOCATION
25	GRUMMAN	890	MEDIUM/HEAVY TRUCK ENTRY POSITION UNKNOWN
25	GRUMMAN	898	OTHER MEDIUM/HEAVY TRUCK
25	GRUMMAN	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
25	GRUMMAN	899	UNKNOWN MEDIUM/HEAVY TRUCK
25	GRUMMAN	983	BUS-FLAT FRONT, REAR ENGINE
25	GRUMMAN	988	OTHER BUS
25	GRUMMAN	989	UNKNOWN BUS TYPE
25	GRUMMAN	999	UNKNOWN VEHICLE
29	STUDEBAKER	1	LARK
29	STUDEBAKER	1	GRAN TURISMO
29	STUDEBAKER	1	CRUISER
29	STUDEBAKER	1	HAWK
29	STUDEBAKER	1	OTHER AUTOMOBILE
29	AVANTI	1	OTHER AUTOMOBILE
29	AVANTI	1	UNKNOWN AUTOMOBILE
29	STUDEBAKER	1	UNKNOWN AUTOMOBILE
29	CHECKER	2	MARATHON
29	CHECKER	2	TAXI
29	CHECKER	2	AEROBUS
29	CHECKER	2	SUPERBA
29	CHECKER	2	UNKNOWN AUTOMOBILE

Variable Definitions and Codes - GV Data Set

29	CHECKER	2	OTHER AUTOMOBILE
29	EXCALIBER	398	OTHER AUTOMOBILE
29	CONSULIER	398	OTHER AUTOMOBILE
29	CONSULIER	398	UNKNOWN AUTOMOBILE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	398	OTHER MAKE
29	EXCALIBER	398	UNKNOWN AUTOMOBILE
29	HUDSON	398	UNKNOWN AUTOMOBILE
29	DESOTO	398	UNKNOWN AUTOMOBILE
29	STUTZ	398	OTHER AUTOMOBILE
29	HUDSON	398	OTHER AUTOMOBILE
29	STUTZ	398	UNKNOWN AUTOMOBILE
29	DESOTO	398	OTHER AUTOMOBILE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	399	UNKNOWN MAKE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	498	OTHER LIGHT TRUCK
29	INDIAN	701	MOTORCYCLE (000-050CC)
29	BUELL	701	MOTORCYCLE (000-051CC)
29	INDIAN	702	MOTORCYCLE (051-124CC)
29	BUELL	702	MOTORCYCLE (051-124CC)
29	INDIAN	703	MOTORCYCLE (125-349CC)
29	BUELL	703	MOTORCYCLE (125-349CC)
29	INDIAN	704	MOTORCYCLE (350-449CC)
29	BUELL	704	MOTORCYCLE (350-449CC)
29	INDIAN	705	MOTORCYCLE (450-749CC)
29	BUELL	705	MOTORCYCLE (450-749CC)
29	INDIAN	706	MOTORCYCLE (750CC OR GREATER)
29	BUELL	706	MOTORCYCLE (750CC OR GREATER)
29	INDIAN	709	MOTORCYCLE (UNKNOWN CC)
29	BUELL	709	MOTORCYCLE (UNKNOWN CC)
29	INDIAN	798	OTHER MOTORED CYCLE
29	BUELL	798	OTHER MOTORED CYCLE
29	INDIAN	799	UNKNOWN MOTORED CYCLE
29	BUELL	799	UNKNOWN MOTORED CYCLE
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	898	OTHER MEDIUM/HEAVY TRUCK
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	988	OTHER BUS
29	OTHER DOMESTIC MANUFACTURER (light vehicles)	998	OTHER VEHICLE
30	VOLKSWAGEN	31	KARMANN GHIA
30	VOLKSWAGEN	32	BETLE 1300/1500
30	VOLKSWAGEN	33	SUPER BEETLE
30	VOLKSWAGEN	34	411/412
30	VOLKSWAGEN	35	SQUAREBACK/FASTBACK
30	VOLKSWAGEN	36	RABBIT
30	VOLKSWAGEN	37	DASHER
30	VOLKSWAGEN	38	SCIROCCO
30	VOLKSWAGEN	40	JETTA
30	VOLKSWAGEN	41	QUANTUM
30	VOLKSWAGEN	42	GOLF/CABRIOLET/GTI
30	VOLKSWAGEN	43	RABBIT PICKUP
30	VOLKSWAGEN	44	FOX
30	VOLKSWAGEN	45	CORRADO
30	VOLKSWAGEN	46	PASSAT
30	VOLKSWAGEN	47	JETTA III
30	VOLKSWAGEN	48	GOLF III

Variable Definitions and Codes - GV Data Set

30	VOLKSWAGEN	49	NEW BEETLE
30	VOLKSWAGEN	50	PHAETON
30	VOLKSWAGEN	398	OTHER AUTOMOBILE
30	VOLKSWAGEN	399	UNKNOWN AUTOMOBILE
30	VOLKSWAGEN	401	THE THING (181)
30	VOLKSWAGEN	421	TOUAREG
30	VOLKSWAGEN	441	VANAGON/CAMPER
30	VOLKSWAGEN	442	EUROVAN
30	VOLKSWAGEN	498	OTHER LIGHT TRUCK
30	VOLKSWAGEN	499	UNKNOWN LIGHT TRUCK
30	VOLKSWAGEN	998	OTHER VEHICLE
30	VOLKSWAGEN	999	UNKNOWN VEHICLE
31	ALFA ROMEO	31	SPIDER
31	ALFA ROMEO	32	SPORTS SEDAN
31	ALFA ROMEO	33	SPRINT SPECIAL
31	ALFA ROMEO	34	GTV-6
31	ALFA ROMEO	35	164
31	ALFA ROMEO	398	OTHER AUTOMOBILE
31	ALFA ROMEO	399	UNKNOWN AUTOMOBILE
31	ALFA ROMEO	999	UNKNOWN VEHICLE
32	AUDI	31	SUPER 90
32	AUDI	32	100/A6
32	AUDI	33	FOX
32	AUDI	34	4000
32	AUDI	35	5000
32	AUDI	36	80/90
32	AUDI	37	200
32	AUDI	38	V8 QUATTRO
32	AUDI	39	COUPE QUATTRO
32	AUDI	40	S4/S6
32	AUDI	41	CABRIOLET
32	AUDI	42	A4
32	AUDI	43	A3
32	AUDI	44	A8
32	AUDI	45	TT
32	AUDI	46	S8
32	AUDI	47	ALLROAD
32	AUDI	398	OTHER AUTOMOBILE
32	AUDI	399	UNKNOWN AUTOMOBILE
32	AUDI	999	UNKNOWN VEHICLE
33	AUSTIN / AUSTIN HEALEY	31	MARINA
33	AUSTIN / AUSTIN HEALEY	32	AMERICA
33	AUSTIN / AUSTIN HEALEY	33	HEALEY SPRITE
33	AUSTIN / AUSTIN HEALEY	34	HEALY 3000
33	AUSTIN / AUSTIN HEALEY	35	MINI
33	AUSTIN / AUSTIN HEALEY	398	OTHER AUTOMOBILE
33	AUSTIN / AUSTIN HEALEY	399	UNKNOWN AUTOMOBILE
33	AUSTIN / AUSTIN HEALEY	999	UNKNOWN VEHICLE
34	BMW	31	1600, 2002
34	BMW	32	COUPE
34	BMW	33	BAVARIA SEDAN
34	BMW	34	3 SERIES
34	BMW	35	5 SERIES
34	BMW	36	6 SERIES
34	BMW	37	7 SERIES
34	BMW	38	8 SERIES
34	BMW	39	Z3
34	BMW	40	Z8

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34	BMW	42	Z4
34	BMW	398	OTHER AUTOMOBILE
34	BMW	399	UNKNOWN AUTOMOBILE
34	BMW	401	X5
34	BMW	402	X3
34	BMW	498	OTHER LIGHT TRUCK
34	BMW	499	UNKNOWN LIGHT TRUCK
34	BMW	701	MOTORCYCLE (000-050CC)
34	BMW	702	MOTORCYCLE (051-124CC)
34	BMW	703	MOTORCYCLE (125-349CC)
34	BMW	704	MOTORCYCLE (350-449CC)
34	BMW	705	MOTORCYCLE (450-749CC)
34	BMW	706	MOTORCYCLE (750CC-OVER)
34	BMW	709	MOTORCYCLE (UNKNOWN CC)
34	BMW	799	UNKNOWN MOTORED CYCLE
34	BMW	999	UNKNOWN VEHICLE
35	NISSAN / DATSUN	31	F10
35	NISSAN / DATSUN	32	200/240 SX
35	NISSAN / DATSUN	33	1200/210/B210
35	NISSAN / DATSUN	34	Z-CAR, ZX
35	NISSAN / DATSUN	35	310
35	NISSAN / DATSUN	36	510
35	NISSAN / DATSUN	37	610
35	NISSAN / DATSUN	38	710
35	NISSAN / DATSUN	39	810/MAXIMA
35	NISSAN / DATSUN	40	ROADSTER
35	NISSAN / DATSUN	41	PL411, RL411
35	NISSAN / DATSUN	42	STANZA
35	NISSAN / DATSUN	43	SENTRA
35	NISSAN / DATSUN	44	PULSAR
35	NISSAN / DATSUN	45	MICRA
35	NISSAN / DATSUN	46	NX 1600/2000
35	NISSAN / DATSUN	47	ALTIMA
35	NISSAN / DATSUN	48	350Z
35	NISSAN / DATSUN	49	MURANO
35	NISSAN / DATSUN	398	OTHER AUTOMOBILE
35	NISSAN / DATSUN	399	UNKNOWN AUTOMOBILE
35	NISSAN / DATSUN	401	PATHFINDER
35	NISSAN / DATSUN	402	XTERRA
35	NISSAN / DATSUN	421	PATHFINDER ARMADA
35	NISSAN / DATSUN	441	VAN
35	NISSAN / DATSUN	442	AXXESS
35	NISSAN / DATSUN	443	QUEST
35	NISSAN / DATSUN	471	DATSUN/NISSAN PU/FRONTIER
35	NISSAN / DATSUN	473	TITAN
35	NISSAN / DATSUN	498	OTHER LIGHT TRUCK
35	NISSAN / DATSUN	499	UNKNOWN LIGHT TRUCK
35	NISSAN / DATSUN	883	MEDIUM/HEAVY COE HIGH ENTRY
35	NISSAN / DATSUN	898	OTHER MEDIUM/HEAVY TRUCK
35	NISSAN / DATSUN	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
35	NISSAN / DATSUN	899	UNKNOWN MEDIUM/HEAVY TRUCK
35	NISSAN / DATSUN	999	UNKNOWN VEHICLE
36	FIAT	31	124 (COUPE/SEDAN)
36	FIAT	32	124 SPIDER/RACER
36	FIAT	33	BRAVA - 131
36	FIAT	34	850 (COUPE/SPYDER)
36	FIAT	35	128
36	FIAT	36	X-1/9

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36	FIAT	37	STRADA
36	FIAT	398	OTHER AUTOMOBILE
36	FIAT	399	UNKNOWN AUTOMOBILE
36	FIAT	882	MEDIUM/HEAVY COE LOW ENTRY
36	FIAT	883	MEDIUM/HEAVY COE HIGH ENTRY
36	FIAT	890	MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN
36	FIAT	898	OTHER MEDIUM/HEAVY TRUCK
36	FIAT	899	UNKNOWN MEDIUM/HEAVY TRUCK
36	FIAT	999	UNKNOWN VEHICLE
37	HONDA	31	CIVIC/CRX/DEL SOL
37	HONDA	32	ACCORD
37	HONDA	33	PRELUDE
37	HONDA	34	600
37	HONDA	35	S2000
37	HONDA	37	INSIGHT
37	HONDA	38	FCX
37	HONDA	398	OTHER AUTOMOBILE
37	HONDA	399	UNKNOWN AUTOMOBILE
37	HONDA	401	PASSPORT
37	HONDA	402	CR-V
37	HONDA	403	ELEMENT
37	HONDA	421	PILOT
37	HONDA	441	ODYSSEY
37	HONDA	498	OTHER LIGHT TRUCK
37	HONDA	499	UNKNOWN LIGHT TRUCK
37	HONDA	701	MOTORCYCLE (000-050CC)
37	HONDA	702	MOTORCYCLE (051-124CC)
37	HONDA	703	MOTORCYCLE (125-349CC)
37	HONDA	704	MOTORCYCLE (350-449CC)
37	HONDA	705	MOTORCYCLE (450-749CC)
37	HONDA	706	MOTORCYCLE (750CC-OVER)
37	HONDA	709	MOTORCYCLE (UNKNOWN CC)
37	HONDA	731	ATC/ATV (000-050CC)
37	HONDA	732	ATC/ATV (051-124CC)
37	HONDA	733	ATC/ATV (125-349CC)
37	HONDA	734	ATC/ATV (350CC-OVER)
37	HONDA	739	ATC/ATV (UNKNOWN CC)
37	HONDA	798	OTHER MOTORED CYCLE
37	HONDA	999	UNKNOWN VEHICLE
38	ISUZU	31	I-MARK
38	ISUZU	32	IMPULSE
38	ISUZU	33	STYLUS
38	ISUZU	398	OTHER AUTOMOBILE
38	ISUZU	399	UNKNOWN AUTOMOBILE
38	ISUZU	401	TROOPER/TROOPER II
38	ISUZU	402	RODEO
38	ISUZU	403	AMIGO
38	ISUZU	404	VEHICROSS
38	ISUZU	405	AXIOM
38	ISUZU	421	ASCENDER
38	ISUZU	441	OASIS
38	ISUZU	471	P'UP (PICKUP) HOMBRE
38	ISUZU	498	OTHER LIGHT TRUCK
38	ISUZU	499	UNKNOWN LIGHT TRUCK
38	ISUZU	881	MEDIUM/HEAVY - CBE
38	ISUZU	882	MEDIUM/HEAVY COE LOW ENTRY
38	ISUZU	883	MEDIUM/HEAVY COE HIGH ENTRY
38	ISUZU	884	MEDIUM/HEAVY UNKNOWN ENGINE LOCATION

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38	ISUZU	890	MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN
38	ISUZU	898	OTHER MEDIUM/HEAVY TRUCK
38	ISUZU	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
38	ISUZU	899	UNKNOWN MEDIUM/HEAVY TRUCK
38	ISUZU	981	CONVENTIONAL FRONT ENGINE
38	ISUZU	982	FRONT ENGINE/FLAT FRONT
38	ISUZU	983	REAR ENGINE/FLAT FRONT
38	ISUZU	988	OTHER BUS
38	ISUZU	989	UNKNOWN BUS TYPE
38	ISUZU	999	UNKNOWN VEHICLE
39	JAGUAR	31	XJ-S COUPE
39	JAGUAR	32	VANDEN PLAS
39	JAGUAR	32	XJ6/12 SEDAN/COUPE/XJ8/
39	JAGUAR	33	XKE
39	JAGUAR	34	S-TYPE
39	JAGUAR	34	X100
39	JAGUAR	35	X-TYPE
39	JAGUAR	398	OTHER AUTOMOBILE
39	JAGUAR	399	UNKNOWN AUTOMOBILE
39	JAGUAR	999	UNKNOWN VEHICLE
40	LANCIA	31	BETA SEDAN-HPE
40	LANCIA	32	BETA COUPE - ZAGATO
40	LANCIA	33	SCORPION
40	LANCIA	398	OTHER AUTOMOBILE
40	LANCIA	399	UNKNOWN AUTOMOBILE
40	LANCIA	999	UNKNOWN VEHICLE
41	MAZDA	31	RX2
41	MAZDA	32	RX3
41	MAZDA	33	RX4
41	MAZDA	34	RX7
41	MAZDA	35	GLC/PROTEGE/323
41	MAZDA	36	COSMO
41	MAZDA	37	626
41	MAZDA	38	808
41	MAZDA	39	MIZER
41	MAZDA	40	R-100
41	MAZDA	41	616/618
41	MAZDA	42	1800
41	MAZDA	43	929
41	MAZDA	44	MX-6
41	MAZDA	45	MIATA
41	MAZDA	46	MX-3
41	MAZDA	47	MILLENIA
41	MAZDA	48	MP3
41	MAZDA	49	RX-8
41	MAZDA	50	MAZDA 6
41	MAZDA	51	MAZDA3
41	MAZDA	398	OTHER AUTOMOBILE
41	MAZDA	399	UNKNOWN AUTOMOBILE
41	MAZDA	401	NAVAJO
41	MAZDA	402	TRIBUTE
41	MAZDA	441	MPV
41	MAZDA	471	MAZDA PICKUP
41	MAZDA	498	OTHER LIGHT TRUCK
41	MAZDA	499	UNKNOWN LIGHT TRUCK
41	MAZDA	999	UNKNOWN VEHICLE
42	MERCEDES BENZ	31	200/220/230/240/250/260/280/300/320 SE,CD,D,SD,ETC
42	MERCEDES BENZ	32	230/280 SL

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42	MERCEDES BENZ	33	300/350/380/450/500SL/560SL
42	MERCEDES BENZ	34	350/380/420/450/560/ SLC
42	MERCEDES BENZ	35	280/300SEL
42	MERCEDES BENZ	36	380/420/450/500/560SEL/500SEC/ 560SEC/350SDL/300SDL
42	MERCEDES BENZ	37	300 SE/380/450 SE
42	MERCEDES BENZ	38	600, 6.9 SEDAB
42	MERCEDES BENZ	39	190
42	MERCEDES BENZ	40	300
42	MERCEDES BENZ	41	400/500 E
42	MERCEDES BENZ	42	220/280 C
42	MERCEDES BENZ	43	S CLASS
42	MERCEDES BENZ	44	SL CLASS
42	MERCEDES BENZ	45	SLK
42	MERCEDES BENZ	46	CL
42	MERCEDES BENZ	47	CLK
42	MERCEDES BENZ	48	E
42	MERCEDES BENZ	398	OTHER AUTOMOBILE
42	MERCEDES BENZ	399	UNKNOWN AUTOMOBILE
42	MERCEDES BENZ	401	M
42	MERCEDES BENZ	402	G CLASS
42	MERCEDES BENZ	470	VAN DERIVATIVE
42	MERCEDES BENZ	498	OTHER LIGHT TRUCK
42	MERCEDES BENZ	499	UNKNOWN LIGHT TRUCK
42	MERCEDES BENZ	881	MEDIUM/HEAVE - CBE
42	MERCEDES BENZ	882	MEDIUM/HEAVY - COE LOW ENTRY
42	MERCEDES BENZ	883	MEDIUM/HEAVY - COE HIGH ENTRY
42	MERCEDES BENZ	884	MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION
42	MERCEDES BENZ	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
42	MERCEDES BENZ	898	OTHER MEDIUM/HEAVY TRUCK
42	MERCEDES BENZ	899	UNKNOWN MEDIUM/HEAVY TRUCK
42	MERCEDES BENZ	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
42	MERCEDES BENZ	981	MEDIUM BUS
42	MERCEDES BENZ	988	OTHER BUS
42	MERCEDES BENZ	989	UNKNOWN BUS TYPE
42	MERCEDES BENZ	999	UNKNOWN VEHICLE
43	MG	31	MIDGET
43	MG	32	MGB ('76-'79)
43	MG	33	MGB ('67-'75)
43	MG	34	MGA
43	MG	35	TA/TC/TD/TF
43	MG	36	MGC
43	MG	398	OTHER AUTOMOBILE
43	MG	399	UNKNOWN AUTOMOBILE
43	MG	999	UNKNOWN VEHICLE
44	PEUGEOT	31	304
44	PEUGEOT	32	403
44	PEUGEOT	33	404
44	PEUGEOT	34	504/505
44	PEUGEOT	35	604
44	PEUGEOT	36	405
44	PEUGEOT	398	OTHER AUTOMOBILE
44	PEUGEOT	399	UNKNOWN AUTOMOBILE
44	PEUGEOT	701	MOTORCYCLE (000-050CC)
44	PEUGEOT	702	MOTORCYCLE (051-124CC)
44	PEUGEOT	709	MOTORCYCLE (UNKNOWN CC)
44	PEUGEOT	799	UNKNOWN MOTORED CYCLE
44	PEUGEOT	999	UNKNOWN VEHICLE

Variable Definitions and Codes - GV Data Set

45	PORSCHE	31	911
45	PORSCHE	32	912
45	PORSCHE	33	914
45	PORSCHE	34	924
45	PORSCHE	35	928
45	PORSCHE	36	930
45	PORSCHE	37	944
45	PORSCHE	38	959
45	PORSCHE	39	968
45	PORSCHE	40	986 BOXSTER
45	PORSCHE	398	OTHER AUTOMOBILE
45	PORSCHE	399	UNKNOWN AUTOMOBILE
45	PORSCHE	421	CAYENNE
45	PORSCHE	999	UNKNOWN VEHICLE
46	RENAULT/AMC	31	LECAR
46	RENAULT/AMC	32	DAUPHINE/10/R-8/CARAVELLE
46	RENAULT/AMC	33	12
46	RENAULT/AMC	34	15
46	RENAULT/AMC	35	16
46	RENAULT/AMC	36	17
46	RENAULT/AMC	37	R18I
46	RENAULT/AMC	38	FUEGO
46	RENAULT/AMC	39	ALLIANCE/ENCORE/GTA, CONVERTIBLE
46	RENAULT/AMC	41	ALPINE
46	RENAULT/AMC	44	MEDALLION
46	RENAULT/AMC	45	PREMIER
46	RENAULT/AMC	398	OTHER AUTOMOBILE
46	RENAULT/AMC	399	UNKNOWN AUTOMOBILE
46	RENAULT/AMC	999	UNKNOWN VEHICLE
47	SAAB	31	99/99E/900
47	SAAB	32	SONNETT
47	SAAB	33	95/96/97
47	SAAB	34	9000, CS
47	SAAB	35	9 - 3
47	SAAB	36	9 - 5
47	SAAB	398	OTHER AUTOMOBILE
47	SAAB	399	UNKNOWN AUTOMOBILE
47	SAAB	999	UNKNOWN VEHICLE
48	SUBARU	31	DL/FE/G/GF/GL/GLF/STD/LOYALE
48	SUBARU	32	STAR
48	SUBARU	33	360
48	SUBARU	34	LEGACY
48	SUBARU	35	XT/XT6
48	SUBARU	36	JUSTY
48	SUBARU	37	SVX
48	SUBARU	38	IMPREZA
48	SUBARU	43	BRAT DL, GL
48	SUBARU	44	BAJA
48	SUBARU	45	OUTBACK
48	SUBARU	398	OTHER AUTOMOBILE
48	SUBARU	399	UNKNOWN AUTOMOBILE
48	SUBARU	401	FORESTER
48	SUBARU	498	OTHER LIGHT TRUCK
48	SUBARU	499	UNKNOWN LIGHT TRUCK
48	SUBARU	999	UNKNOWN VEHICLE
49	TOYOTA	31	CORONA
49	TOYOTA	32	COROLLA
49	TOYOTA	33	CELICA

Variable Definitions and Codes - GV Data Set

49	TOYOTA	34	SUPRA
49	TOYOTA	35	CRESSIDA
49	TOYOTA	36	CROWN
49	TOYOTA	37	CARINA
49	TOYOTA	38	TERCEL
49	TOYOTA	39	STARLET
49	TOYOTA	40	CAMRY
49	TOYOTA	41	MR-2
49	TOYOTA	42	PASEO
49	TOYOTA	43	AVALON
49	TOYOTA	44	SOLARA
49	TOYOTA	45	ECHO
49	TOYOTA	46	PRIUS
49	TOYOTA	48	SCION XA
49	TOYOTA	49	SCION XB
49	TOYOTA	398	OTHER AUTOMOBILE
49	TOYOTA	399	UNKNOWN AUTOMOBILE
49	TOYOTA	401	4-RUNNER
49	TOYOTA	402	RAV-4
49	TOYOTA	403	HIGHLANDER
49	TOYOTA	403	HIGHLANDER
49	TOYOTA	404	MATRIX
49	TOYOTA	421	LANDCRUISER
49	TOYOTA	422	SEQUOIA
49	TOYOTA	441	MINVAN/PREVIA
49	TOYOTA	442	SIENNA
49	TOYOTA	471	PICKUP
49	TOYOTA	472	TACOMA
49	TOYOTA	481	T-100
49	TOYOTA	482	TUNDRA
49	TOYOTA	498	OTHER LIGHT TRUCK
49	TOYOTA	499	UNKNOWN LIGHT TRUCK
49	TOYOTA	999	UNKNOWN VEHICLE
50	TRIUMPH	31	SPITFIRE
50	TRIUMPH	32	GT-6
50	TRIUMPH	33	TR4
50	TRIUMPH	34	TR6
50	TRIUMPH	35	TR7/8
50	TRIUMPH	36	HERALD
50	TRIUMPH	37	STAG
50	TRIUMPH	398	OTHER AUTOMOBILE
50	TRIUMPH	399	UNKNOWN AUTOMOBILE
50	TRIUMPH	701	MOTORCYCLE (000-050CC)
50	TRIUMPH	702	MOTORCYCLE (051-124CC)
50	TRIUMPH	703	MOTORCYCLE (125-349CC)
50	TRIUMPH	704	MOTORCYCLE (350-449CC)
50	TRIUMPH	705	MOTORCYCLE (450-749CC)
50	TRIUMPH	706	MOTORCYCLE (750CC-OVER)
50	TRIUMPH	709	MOTORCYCLE (UNKNOWN CC)
50	TRIUMPH	799	UNKNOWN MOTORED CYCLE
50	TRIUMPH	999	UNKNOWN VEHICLE
51	VOLVO	31	122
51	VOLVO	32	142/144/145
51	VOLVO	33	164
51	VOLVO	34	240/242/244/245
51	VOLVO	35	262/264/265
51	VOLVO	36	1800
51	VOLVO	38	760/780

Variable Definitions and Codes - GV Data Set

51	VOLVO	39	740
51	VOLVO	40	940
51	VOLVO	41	960
51	VOLVO	42	850
51	VOLVO	43	70 SERIES
51	VOLVO	44	90 SERIES
51	VOLVO	45	80 SERIES
51	VOLVO	46	40 SERIES
51	VOLVO	47	60 SERIES
51	VOLVO	398	OTHER AUTOMOBILE
51	VOLVO	399	UNKNOWN AUTOMOBILE
51	VOLVO	401	XC90
51	VOLVO	881	MEDIUM/HEAVY CBE
51	VOLVO	882	MEDIUM/HEAVY COE LOW ENTRY
51	VOLVO	883	MEDIUM/HEAVY COE HIGH ENTRY
51	VOLVO	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
51	VOLVO	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
51	VOLVO	898	OTHER MEDIUM/HEAVY TRUCK
51	VOLVO	899	UNKNOWN MEDIUM/HEAVY TRUCK
51	VOLVO	981	MEDIUM BUS
51	VOLVO	988	OTHER BUS
51	VOLVO	989	UNKNOWN TYPE BUS
51	VOLVO	999	UNKNOWN VEHICLE
52	MITSUBISHI	31	STARION
52	MITSUBISHI	32	TREDIA
52	MITSUBISHI	33	CORDIA
52	MITSUBISHI	34	GALANT
52	MITSUBISHI	35	MIRAGE
52	MITSUBISHI	36	PRECIS
52	MITSUBISHI	37	ECLIPSE
52	MITSUBISHI	38	SIGMA
52	MITSUBISHI	39	3000GT
52	MITSUBISHI	40	DIAMANTE
52	MITSUBISHI	46	LANCER
52	MITSUBISHI	398	OTHER AUTOMOBILE
52	MITSUBISHI	399	UNKNOWN AUTOMOBILE
52	MITSUBISHI	401	MONTERO
52	MITSUBISHI	402	OUTLANDER
52	MITSUBISHI	403	ENDEAVOR
52	MITSUBISHI	441	MINIVAN
52	MITSUBISHI	442	EXPO WAGON
52	MITSUBISHI	471	PICKUP
52	MITSUBISHI	498	OTHER LIGHT TRUCK
52	MITSUBISHI	499	UNKNOWN LIGHT TRUCK
52	MITSUBISHI	882	MEDIUM/HEAVY - COE LOW ENTRY
52	MITSUBISHI	898	OTHER MEDIUM/HEAVY TRUCK
52	MITSUBISHI	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
52	MITSUBISHI	899	UNKNOWN MEDIUM/HEAVY TRUCK
52	MITSUBISHI	981	CONVENTIONAL FRONT ENGINE
52	MITSUBISHI	982	FRONT ENGINE/FLAT FRONT
52	MITSUBISHI	983	REAR ENGINE/FLAT FRONT
52	MITSUBISHI	988	OTHER BUS
52	MITSUBISHI	989	UNKNOWN TYPE BUS
52	MITSUBISHI	999	UNKNOWN VEHICLE
53	SUZUKI	31	SA310
53	SUZUKI	34	SWIFT
53	SUZUKI	35	ESTEEM
53	SUZUKI	36	AERIO

Variable Definitions and Codes - GV Data Set

53	SUZUKI	37	FORENZA
53	SUZUKI	38	VERONA
53	SUZUKI	398	OTHER AUTOMOBILE
53	SUZUKI	399	UNKNOWN AUTOMOBILE
53	SUZUKI	401	SAMURAI
53	SUZUKI	402	SIDEKICK/GRAND VITARA
53	SUZUKI	403	X-90/VITARA
53	SUZUKI	404	GRAND VITARA
53	SUZUKI	405	XL7
53	SUZUKI	498	OTHER LIGHT TRUCK
53	SUZUKI	499	UNKNOWN LIGHT TRUCK
53	SUZUKI	701	MOTORCYCLE (000-050CC)
53	SUZUKI	702	MOTORCYCLE (051-124CC)
53	SUZUKI	703	MOTORCYCLE (125-349CC)
53	SUZUKI	704	MOTORCYCLE (350-449CC)
53	SUZUKI	705	MOTORCYCLE (450-749CC)
53	SUZUKI	706	MOTORCYCLE (750CC-OVER)
53	SUZUKI	709	MOTORCYCLE (UNKNOWN CC)
53	SUZUKI	731	ATC/ATV (000-050CC)
53	SUZUKI	732	ATC/ATV (051-124CC)
53	SUZUKI	733	ATC/ATV (125-349CC)
53	SUZUKI	734	ATC/ATV (350CC-OVER)
53	SUZUKI	739	ATC/ATV (UNKNOWN CC)
53	SUZUKI	799	UNKNOWN MOTORED CYCLE
53	SUZUKI	999	UNKNOWN VEHICLE
54	ACURA	31	INTEGRA
54	ACURA	32	LEGEND
54	ACURA	32	RL
54	ACURA	33	NSX
54	ACURA	34	VIGOR
54	ACURA	35	TL
54	ACURA	35	CL
54	ACURA	38	RSX
54	ACURA	39	TSX
54	ACURA	398	OTHER AUTOMOBILE
54	ACURA	399	UNKNOWN AUTOMOBILE
54	ACURA	401	SLX
54	ACURA	421	MDX
54	ACURA	498	OTHER LIGHT TRUCK
54	ACURA	499	UNKNOWN TYPE LIGHT TRUCK
54	ACURA	999	UNKNOWN VEHICLE
55	HYUNDAI	31	PONY
55	HYUNDAI	32	EXCEL
55	HYUNDAI	33	SONATA
55	HYUNDAI	34	SCOUPE
55	HYUNDAI	35	ELANTRA
55	HYUNDAI	36	ACCENT
55	HYUNDAI	37	TIBURON
55	HYUNDAI	38	XG300/350
55	HYUNDAI	398	OTHER AUTOMOBILE
55	HYUNDAI	399	UNKNOWN AUTOMOBILE
55	HYUNDAI	401	SANTA FE
55	HYUNDAI	498	OTHER LIGHT TRUCK
55	HYUNDAI	499	UNKNOWN LIGHT TRUCK
55	HYUNDAI	999	UNKNOWN VEHICLE
56	MERKUR	31	XR4Ti
56	MERKUR	32	SCORPIO
56	MERKUR	398	OTHER AUTOMOBILE

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56	MERKUR	399	UNKNOWN AUTOMOBILE
56	MERKUR	999	UNKNOWN VEHICLE
57	YUGO	31	GV
57	YUGO	398	OTHER AUTOMOBILE
57	YUGO	399	UNKNOWN AUTOMOBILE
57	YUGO	999	UNKNOWN VEHICLE
58	INFINITI	31	M30
58	INFINITI	32	Q45
58	INFINITI	33	G20
58	INFINITI	34	J30
58	INFINITI	35	I30
58	INFINITI	36	I35
58	INFINITI	37	G35
58	INFINITI	38	M45
58	INFINITI	39	FX35/45
58	INFINITI	398	OTHER AUTOMOBILE
58	INFINITI	399	UNKNOWN AUTOMOBILE
58	INFINITI	401	QX4
58	INFINITI	421	QX56
58	INFINITI	498	OTHER LIGHT TRUCK
58	INFINITI	499	UNKNOWN LIGHT TRUCK
58	INFINITI	999	UNKNOWN VEHICLE
59	LEXUS	31	ES250/ES-300
59	LEXUS	32	LS400
59	LEXUS	33	SC-300/SC-400
59	LEXUS	34	GS300/GS400
59	LEXUS	35	IS-300
59	LEXUS	36	SC 430
59	LEXUS	398	OTHER AUTOMOBILE
59	LEXUS	399	UNKNOWN AUTOMOBILE
59	LEXUS	401	RX300
59	LEXUS	402	GX470
59	LEXUS	421	LX 450/470
59	LEXUS	498	OTHER LIGHT TRUCK
59	LEXUS	499	UNKNOWN LIGHT TRUCK
59	LEXUS	999	UNKNOWN VEHICLE
60	DAIHATSU	31	CHARADE
60	DAIHATSU	398	OTHER AUTOMOBILE
60	DAIHATSU	399	UNKNOWN AUTOMOBILE
60	DAIHATSU	401	ROCKY
60	DAIHATSU	498	OTHER LIGHT TRUCK
60	DAIHATSU	499	UNKNOWN LIGHT TRUCK
60	DAIHATSU	999	UNKNOWN VEHICLE
61	STERLING	31	827S
61	STERLING	398	OTHER AUTOMOBILE
61	STERLING	399	UNKNOWN AUTOMOBILE
61	STERLING	999	UNKNOWN VEHICLE
62	LAND ROVER	401	DISCOVERY (LR)
62	LAND ROVER	421	COUNTY LWB (RR) / COUNT CLASSIC (RR)
62	LAND ROVER	422	FREELANDER
62	LAND ROVER	422	4.0 SE (RR)
62	LAND ROVER	422	DEFENDER 90 (LR)
62	LAND ROVER	498	OTHER LIGHT TRUCK
62	LAND ROVER	499	UNKNOWN LIGHT TRUCK
62	LAND ROVER	999	UNKNOWN VEHICLE
63	KIA	31	SEPHIA
63	KIA	32	SPECTRA
63	KIA	33	RIO

Variable Definitions and Codes - GV Data Set

63	KIA	34	OPTIMA
63	KIA	35	AMANTI
63	KIA	398	OTHER AUTOMOBILE
63	KIA	399	UNKNOWN AUTOMOBILE
63	KIA	401	SPORTAGE
63	KIA	402	SORRENTO
63	KIA	441	SEDONA
63	KIA	498	OTHER LIGHT TRUCK
63	KIA	499	UNKNOWN LIGHT TRUCK
63	KIA	999	UNKNOWN VEHICLE
64	DAEWOO	31	LANOS
64	DAEWOO	32	NUBIRA
64	DAEWOO	33	LEGANZA
64	DAEWOO	398	OTHER AUTOMOBILE
64	DAEWOO	399	UNKNOWN AUTOMOBILE
64	DAEWOO	999	UNKNOWN VEHICLE
65	MINI	31	COOPER,COOPER S
69	ASTON MARTIN	31	LAGONDA
69	ASTON MARTIN	31	OTHER AUTOMOBILE
69	ASTON MARTIN	31	UNKNOWN AUTOMOBILE
69	ASTON MARTIN	31	VOLANTE
69	ASTON MARTIN	31	SALOON
69	ASTON MARTIN	31	VANTAGE
69	BRICKLIN	32	OTHER AUTOMOBILE
69	BRICKLIN	32	UNKNOWN AUTOMOBILE
69	CITROEN	33	UNKNOWN AUTOMOBILE
69	CITROEN	33	OTHER AUTOMOBILE
69	DELOREAN	34	OTHER AUTOMOBILE
69	DELOREAN	34	UNKNOWN AUTOMOBILE
69	FERRARI	35	OTHER AUTOMOBILE
69	FERRARI	35	UNKNOWN AUTOMOBILE
69	HILLMAN	36	OTHER AUTOMOBILE
69	HILLMAN	36	UNKNOWN AUTOMOBILE
69	JENSEN	37	HEALY
69	JENSEN	37	UNKNOWN AUTOMOBILE
69	JENSEN	37	OTHER AUTOMOBILE
69	LAMBORGHINI	38	UNKNOWN AUTOMOBILE
69	LAMBORGHINI	38	JALPA
69	LAMBORGHINI	38	OTHER AUTOMOBILE
69	LAMBORGHINI	38	COUNTACH 500S
69	LOTUS	39	EUROPE
69	LOTUS	39	ESPRIT
69	LOTUS	39	UNKNOWN AUTOMOBILE
69	LOTUS	39	OTHER AUTOMOBILE
69	MASERATI	40	BITURBO
69	MASERATI	40	OTHER AUTOMOBILE
69	MASERATI	40	UNKNOWN AUTOMOBILE
69	MORRIS	41	MINOR
69	MORRIS	41	UNKNOWN AUTOMOBILE
69	MORRIS	41	OTHER AUTOMOBILE
69	ROLLS ROYCE/BENTLEY	42	CLOUD/SHADOW SERIES
69	ROLLS ROYCE/BENTLEY	42	UNKNOWN AUTOMOBILE
69	ROLLS ROYCE/BENTLEY	42	OTHER AUTOMOBILE
69	SIMCA	44	UNKNOWN AUTOMOBILE
69	SIMCA	44	OTHER AUTOMOBILE
69	SUNBEAM	45	OTHER AUTOMOBILE
69	SUNBEAM	45	UNKNOWN AUTOMOBILE
69	TVR	46	OTHER AUTOMOBILE

Variable Definitions and Codes - GV Data Set

69	TVR	46	UNKNOWN AUTOMOBILE
69	DESTA	48	OTHER AUTOMOBILE
69	DESTA	48	UNKNOWN AUTOMOBILE
69	RELIANT	49	OTHER AUTOMOBILE
69	RELIANT	49	UNKNOWN AUTOMOBILE
69	BERTONE	52	OTHER AUTOMOBILE
69	BERTONE	52	UNKNOWN AUTOMOBILE
69	LADA	53	OTHER AUTOMOBILE
69	LADA	53	UNKNOWN AUTOMOBILE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	398	OTHER MAKE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	399	UNKOWN MAKE
69	OTHER FOREIGN MANUFACTURER (light vehicles)	498	OTHER LIGHT TRUCK
69	OTHER FOREIGN MANUFACTURER (light vehicles)	898	OTHER MEDIUM/HEAVY TRUCK
69	OTHER FOREIGN MANUFACTURER (light vehicles)	988	OTHER BUS
69	OTHER FOREIGN MANUFACTURER (light vehicles)	998	OTHER VEHICLE
70	BSA	701	MOTORCYCLE (000-050CC)
70	BSA	702	MOTORCYCLE (051-124CC)
70	BSA	703	MOTORCYCLE (125-349CC)
70	BSA	704	MOTORCYCLE (350-449CC)
70	BSA	705	MOTORCYCLE (450-749CC)
70	BSA	706	MOTORCYCLE (750CC-OVER)
70	BSA	709	MOTORCYCLE (UNKNOWN CC)
70	BSA	798	OTHER MOTORED CYCLE
70	BSA	799	UNKNOWN MOTORED CYCLE
71	DUCATI	701	MOTORCYCLE (000-050CC)
71	DUCATI	702	MOTORCYCLE (051-124CC)
71	DUCATI	703	MOTORCYCLE (125-349CC)
71	DUCATI	704	MOTORCYCLE (350-449CC)
71	DUCATI	705	MOTORCYCLE (450-749CC)
71	DUCATI	706	MOTORCYCLE (750CC-OVER)
71	DUCATI	709	MOTORCYCLE (UNKNOWN CC)
71	DUCATI	798	OTHER MOTORED CYCLE
71	DUCATI	799	UNKNOWN MOTORED CYCLE
72	HARLEY-DAVIDSON	701	MOTORCYCLE (000-050CC)
72	HARLEY-DAVIDSON	702	MOTORCYCLE (051-124CC)
72	HARLEY-DAVIDSON	703	MOTORCYCLE (125-349CC)
72	HARLEY-DAVIDSON	704	MOTORCYCLE (350-449CC)
72	HARLEY-DAVIDSON	705	MOTORCYCLE (450-749CC)
72	HARLEY-DAVIDSON	706	MOTORCYCLE (750CC-OVER)
72	HARLEY-DAVIDSON	709	MOTORCYCLE (UNKNOWN CC)
72	HARLEY-DAVIDSON	798	OTHER MOTORED CYCLE
72	HARLEY-DAVIDSON	799	UNKNOWN MOTORED CYCLE
73	KAWASAKI	701	MOTORCYCLE (000-050CC)
73	KAWASAKI	702	MOTORCYCLE (051-124CC)
73	KAWASAKI	703	MOTORCYCLE (125-349CC)
73	KAWASAKI	704	MOTORCYCLE (350-449CC)
73	KAWASAKI	705	MOTORCYCLE (450-749CC)
73	KAWASAKI	706	MOTORCYCLE (750CC-OVER)
73	KAWASAKI	709	MOTORCYCLE (UNKNOWN CC)
73	KAWASAKI	731	ATC/ATV (000-050CC)
73	KAWASAKI	732	ATC/ATV (051-124CC)
73	KAWASAKI	733	ATC/ATV (125-349CC)

Variable Definitions and Codes - GV Data Set

73	KAWASAKI	734	ATC/ATV (350CC-OVER)
73	KAWASAKI	739	ATC/ATV (UNKNOWN CC)
73	KAWASAKI	798	OTHER MOTORED CYCLE
73	KAWASAKI	799	UNKNOWN MOTORED CYCLE
74	MOTO-GUZZI	701	MOTORCYCLE (000-050CC)
74	MOTO-GUZZI	702	MOTORCYCLE (051-124CC)
74	MOTO-GUZZI	703	MOTORCYCLE (125-349CC)
74	MOTO-GUZZI	704	MOTORCYCLE (350-449CC)
74	MOTO-GUZZI	705	MOTORCYCLE (450-749CC)
74	MOTO-GUZZI	706	MOTORCYCLE (750CC-OVER)
74	MOTO-GUZZI	709	MOTORCYCLE (UNKNOWN CC)
74	MOTO-GUZZI	731	ATC/ATV (000-050CC)
74	MOTO-GUZZI	732	ATC/ATV (051-124CC)
74	MOTO-GUZZI	733	ATC/ATV (125-349CC)
74	MOTO-GUZZI	734	ATC/ATV (350CC-OVER)
74	MOTO-GUZZI	739	ATC/ATV (UNKNOWN CC)
74	MOTO-GUZZI	798	OTHER MOTORED CYCLE
74	MOTO-GUZZI	799	UNKNOWN MOTORED CYCLE
75	NORTON	701	MOTORCYCLE (000-050CC)
75	NORTON	702	MOTORCYCLE (051-124CC)
75	NORTON	703	MOTORCYCLE (125-349CC)
75	NORTON	704	MOTORCYCLE (350-449CC)
75	NORTON	705	MOTORCYCLE (450-749CC)
75	NORTON	706	MOTORCYCLE (750CC-OVER)
75	NORTON	709	MOTORCYCLE (UNKNOWN CC)
75	NORTON	798	OTHER MOTORED CYCLE
75	NORTON	799	UNKNOWN MOTORED CYCLE
76	YAMAHA	701	MOTORCYCLE (000-050CC)
76	YAMAHA	702	MOTORCYCLE (051-124CC)
76	YAMAHA	703	MOTORCYCLE (125-349CC)
76	YAMAHA	704	MOTORCYCLE (350-449CC)
76	YAMAHA	705	MOTORCYCLE (450-749CC)
76	YAMAHA	706	MOTORCYCLE (750CC-OVER)
76	YAMAHA	709	MOTORCYCLE (UNKNOWN CC)
76	YAMAHA	731	ATC/ATV (000-050CC)
76	YAMAHA	732	ATC/ATV (051-124CC)
76	YAMAHA	733	ATC/ATV (125-349CC)
76	YAMAHA	734	ATC/ATV (350CC-OVER)
76	YAMAHA	739	ATC/ATV (UNKNOWN CC)
76	YAMAHA	798	OTHER MOTORED CYCLE
76	YAMAHA	799	UNKNOWN MOTORED CYCLE
76	YAMAHA	998	OTHER VEHICLE
78	OTHER MAKE MOPED	701	0-50cc
78	OTHER MAKE MOPED	702	51-124cc
78	OTHER MAKE MOPED	709	UNKNOWN cc
78	OTHER MAKE MOPED	798	OTHER MOTORED CYCLE
78	OTHER MAKE MOPED	799	UNKNOWN MOTORED CYCLE
79	OTHER MAKE MOTORED CYCLE	701	0-50cc
79	OTHER MAKE MOTORED CYCLE	702	51-124cc
79	OTHER MAKE MOTORED CYCLE	703	125-349cc
79	OTHER MAKE MOTORED CYCLE	704	350-449cc
79	OTHER MAKE MOTORED CYCLE	705	450-749cc
79	OTHER MAKE MOTORED CYCLE	706	750c or greater
79	OTHER MAKE MOTORED CYCLE	709	Unknown cc
79	OTHER MAKE MOTORED CYCLE	731	ATC/ATV 0-50cc
79	OTHER MAKE MOTORED CYCLE	732	ATC/ATV 51-124cc
79	OTHER MAKE MOTORED CYCLE	733	ATC/ATV 125-349cc
79	OTHER MAKE MOTORED CYCLE	734	ATC/ATV 350cc OR GREATER

Variable Definitions and Codes - GV Data Set

79	OTHER MAKE MOTORED CYCLE	739	ATV/ATC UNKNOWN cc
79	OTHER MAKE MOTORED CYCLE	798	OTHER MOTORED CYCLE
79	OTHER MAKE MOTORED CYCLE	799	UNKNOWN MOTORED CYCLE
80	BROCKWAY	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
80	BROCKWAY	881	MEDIUM/HEAVY - CBE
80	BROCKWAY	882	MEDIUM/HEAVE - COE/LOW ENTRY
80	BROCKWAY	883	MEDIUM/HEAVY - COE HIGH ENTRY
80	BROCKWAY	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
80	BROCKWAY	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
80	BROCKWAY	898	MEDIUM/HEAVY - OTHER
80	BROCKWAY	899	UNKNOWN MEDIUM/HEAVY TRUCK
81	DIAMOND REO/REO	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
81	DIAMOND REO/REO	881	MEDIUM/HEAVY - CBE
81	DIAMOND REO/REO	882	MEDIUM/HEAVY - COE/LOW ENTRY
81	DIAMOND REO/REO	883	MEDIUM/HEAVY - COE/HIGH ENTRY
81	DIAMOND REO/REO	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
81	DIAMOND REO/REO	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
81	DIAMOND REO/REO	898	MEDIUM/HEAVY - OTHER
81	DIAMOND REO/REO	899	UNKNOWN MEDIUM/HEAVY TRUCK
82	FREIGHTLINER/WHITE	461	SPRINTER/ADVANTAGE
82	FREIGHTLINER/WHITE	470	M-LINE WALK IN VAN
82	FREIGHTLINER/WHITE	498	OTHER LIGHT TRUCK
82	FREIGHTLINER/WHITE	499	UNKNOWN LIGHT TRUCK
82	FREIGHTLINER/WHITE	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
82	FREIGHTLINER/WHITE	881	MEDIUM/HEAVY - CBE
82	FREIGHTLINER/WHITE	882	MEDIUM/HEAVY - COE/LOW ENTRY
82	FREIGHTLINER/WHITE	883	MEDIUM/HEAVY - COE/HIGH ENTRY
82	FREIGHTLINER/WHITE	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
82	FREIGHTLINER/WHITE	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
82	FREIGHTLINER/WHITE	898	MEDIUM/HEAVY - OTHER
82	FREIGHTLINER/WHITE	899	UNKNOWN LIGHT/MEDIUM/HEAVY TRUCK
82	FREIGHTLINER/WHITE	981	BUS CONVENTIONAL ENGINE OUT FRONT
82	FREIGHTLINER/WHITE	982	BUS FRONT ENGINE/FLAT FRONT
82	FREIGHTLINER/WHITE	983	BUS REAR ENGINE/FLAT FRONT
82	FREIGHTLINER/WHITE	988	OTHER BUS
82	FREIGHTLINER/WHITE	989	UNKNOWN BUS TYPE
82	FREIGHTLINER/WHITE	999	UNKNOWN VEHICLE
83	FWD	850	MEIDUM/HEAVY TRUCK BASED MOTORHOME
83	FWD	881	MEDIUM/HEAVY - CBE
83	FWD	882	MEDIUM/HEAVY - COE/LOW ENTRY
83	FWD	883	MEDIUM/HEAVY - COE/HIGH ENTRY
83	FWD	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
83	FWD	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
83	FWD	898	MEDIUM/HEAVY - OTHER
83	FWD	899	UNKNOWN MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	421	SCOUT
84	INTERNATIONAL HARVESTER/NAVISTAR	431	TRAVELALL
84	INTERNATIONAL HARVESTER/NAVISTAR	466	MULTISTOP VAN
84	INTERNATIONAL HARVESTER/NAVISTAR	481	PICKUP
84	INTERNATIONAL HARVESTER/NAVISTAR	498	OTHER LIGHT TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	499	UNKNOWN LIGHT TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	850	TRUCK BASED MOTORHOME
84	INTERNATIONAL HARVESTER/NAVISTAR	881	MEDIUM HEAVY - CBE
84	INTERNATIONAL HARVESTER/NAVISTAR	882	MEDIUM/HEAVY - COE LOW ENTRY
84	INTERNATIONAL HARVESTER/NAVISTAR	883	MEDIUM/HEAVY - COE HIGH ENTRY
84	INTERNATIONAL HARVESTER/NAVISTAR	884	MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION
84	INTERNATIONAL HARVESTER/NAVISTAR	890	MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN
84	INTERNATIONAL HARVESTER/NAVISTAR	898	OTHER MEDIUM/HEAVY TRUCK

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84	INTERNATIONAL HARVESTER/NAVISTAR	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
84	INTERNATIONAL HARVESTER/NAVISTAR	899	UNKNOWN MEDIUM/HEAVY TRUCK
84	INTERNATIONAL HARVESTER/NAVISTAR	950	BUS BASED MOTOHOME
84	INTERNATIONAL HARVESTER/NAVISTAR	981	CONVENTIONAL BUS
84	INTERNATIONAL HARVESTER/NAVISTAR	982	BUS-FLAT FRONT, FRONT ENGINE
84	INTERNATIONAL HARVESTER/NAVISTAR	983	BUS-FLAT FRONT, REAR ENGINE
84	INTERNATIONAL HARVESTER/NAVISTAR	988	OTHER BUS
84	INTERNATIONAL HARVESTER/NAVISTAR	989	UNKNOWN BUS TYPE
84	INTERNATIONAL HARVESTER/NAVISTAR	998	OTHER VEHICLE
84	INTERNATIONAL HARVESTER/NAVISTAR	999	UNKNOWN VEHICLE
85	KENWORTH	850	MEDIUM/HEAVY TRUCK BASED MOTORHOME
85	KENWORTH	881	MEDIUM/HEAVY - CBE
85	KENWORTH	882	MEDIUM/HEAVY - COE/LOW ENTRY
85	KENWORTH	883	MEDIUM/HEAVY - COE/HIGH ENTRY
85	KENWORTH	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
85	KENWORTH	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
85	KENWORTH	898	MEDIUM/HEAVY - OTHER
85	KENWORTH	899	UNKNOWN MEDIUM/HEAVY TRUCK
86	MACK	850	MEDIUM/HEAVY BASED MOTORHOME
86	MACK	881	MEDIUM/HEAVY - CBE
86	MACK	882	MEDIUM/HEAVY - COE/LOW ENTRY
86	MACK	883	MEDIUM/HEAVY - COE/HIGH ENTRY
86	MACK	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
86	MACK	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
86	MACK	898	MEDIUM/HEAVY - OTHER
86	MACK	899	UNKNOWN MEDIUM/HEAVY TRUCK
87	PETERBILT	850	MEDIUM/HEAVY BASED MOTORHOME
87	PETERBILT	881	MEDIUM/HEAVY - CBE
87	PETERBILT	882	MEDIUM/HEAVY - COE/LOW ENTRY
87	PETERBILT	883	MEDIUM/HEAVY - COE/HIGH ENTRY
87	PETERBILT	884	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
87	PETERBILT	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
87	PETERBILT	898	MEDIUM/HEAVY - OTHER
87	PETERBILT	899	UNKNOWN MEDIUM/HEAVY TRUCK
88	IVECO/MAGIRUS	850	MEDIUM/HEAVY BASED MOTORHOME
88	IVECO/MAGIRUS	881	MEDIUM/HEAVY - CBE
88	IVECO/MAGIRUS	882	MEDIUM/HEAVY - COE/LOW ENTRY
88	IVECO/MAGIRUS	883	MEDIUM/HEAVY - COE/HIGH ENTRY
88	IVECO/MAGIRUS	884	MEDIUM/HEAVY - UNKOWN ENGINE LOCATION
88	IVECO/MAGIRUS	890	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
88	IVECO/MAGIRUS	898	MEDIUM/HEAVY - OTHER
88	IVECO/MAGIRUS	899	UNKNOWN MEDIUM/HEAVY TRUCK
98	OTHER MAKE (med/heavy truck/bus or "other")	398	OTHER AUTOMOBILE
98	WINNEBAGO	470	VAN BASED MOTORHOME
98	OTHER MAKE (med/heavy truck/bus or "other")	498	OTHER LIGHT TRUCK
98	WINNEBAGO	498	LIGHT TRUCK BASED MOTORHOME
98	WINNEBAGO	499	UNKNOWN TYPE LIGHT MOTORHOME
98	AUTOCAR	801	MEDIUM/HEAVY BASED MOTORHOME
98	AUTOCAR	801	MEDIUM/HEAVY - CBE
98	AUTOCAR	801	MEDIUM/HEAVY - COE/HIGH ENTRY
98	AUTOCAR	801	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTOCAR	801	MEDIUM/HEAVY - UNKOWN ENGINE LOCATION
98	AUTOCAR	801	MEDIUM/HEAVY - OTHER
98	AUTOCAR	801	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY BASED MOTORHOME
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/HIGH ENTRY
98	AUTOCAR	802	MEDIUM/HEAVY - COE/LOW ENTRY

Variable Definitions and Codes - GV Data Set

98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - CBE
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - COE/LOW ENTRY
98	AUTO-UNION-DKW	802	MEDIUM/HEAVY - OTHER
98	DIVCO	803	MEDIUM/HEAVY BASED MOTORHOME
98	DIVCO	803	MEDIUM/HEAVY - COE/LOW ENTRY
98	DIVCO	803	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	DIVCO	803	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	DIVCO	803	MEDIUM/HEAVY - COE/HIGH ENTRY
98	DIVCO	803	MEDIUM/HEAVY - CBE
98	DIVCO	803	MEDIUM/HEAVY - OTHER
98	WESTERN STAR	804	MEDIUM/HEAVY BASED MOTORHOME
98	WESTERN STAR	804	MEDIUM/HEAVY - CBE
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WESTERN STAR	804	MEDIUM/HEAVY - OTHER
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	WESTERN STAR	804	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	WESTERN STAR	804	MEDIUM/HEAVY - COE/LOW ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY BASED MOTORHOME
98	OSHKOSH	805	MEDIUM/HEAVY - OTHER
98	OSHKOSH	805	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	OSHKOSH	805	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	OSHKOSH	805	MEDIUM/HEAVY - COE/HIGH ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY - COE/LOW ENTRY
98	OSHKOSH	805	MEDIUM/HEAVY - CBE
98	HINO	806	MEDIUM/HEAVY BASED MOTORHOME
98	HINO	806	MEDIUM/HEAVY - CBE
98	HINO	806	MEDIUM/HEAVY - OTHER
98	HINO	806	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	HINO	806	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	HINO	806	MEDIUM/HEAVY - COE/HIGH ENTRY
98	HINO	806	MEDIUM/HEAVY - COE/LOW ENTRY
98	SCANIA	807	MEDIUM/HEAVY BASED MOTORHOME
98	SCANIA	807	MEDIUM/HEAVY - CBE
98	SCANIA	807	MEDIUM/HEAVY - COE/LOW ENTRY
98	SCANIA	807	MEDIUM/HEAVY - OTHER
98	SCANIA	807	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	SCANIA	807	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	SCANIA	807	MEDIUM/HEAVY - COE/HIGH ENTRY
98	STERLING TRUCKS	808	MEDIUM/HEAVY - CBE
98	STERLING TRUCKS	808	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	STERLING TRUCKS	808	MEDIUM/HEAVY - OTHER
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/HIGH ENTRY
98	STERLING TRUCKS	808	MEDIUM/HEAVY - COE/LOW ENTRY
98	OTHER MAKE (med/heavy truck/bus or "other")	850	TRUCK BASED MOTORHOME
98	WINNEBAGO	850	MOTOR HOME
98	MARMON	898	MEDIUM/HEAVY - OTHER
98	MARMON	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	MARMON	898	MEDIUM/HEAVY - CBE
98	MARMON	898	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WINNEBAGO	898	MEDIUM / HEAVY OTHER
98	OTHER MAKE (med/heavy truck/bus or "other")	898	OTHER MEDIUM/HEAVY TRUCK
98	WARD LAFRANCE	898	MEDIUM/HEAVY - OTHER
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN
98	WARD LAFRANCE	898	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/HIGH ENTRY
98	WARD LAFRANCE	898	MEDIUM/HEAVY - COE/LOW ENTRY

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98	WARD LAFRANCE	898	MEDIUM/HEAVY - CBE
98	WARD LAFRANCE	898	MEDIUM/HEAVY BASED MOTORHOME
98	MARMON	898	MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION
98	MARMON	898	MEDIUM/HEAVY - COE/LOW ENTRY
98	MARMON	898	MEDIUM/HEAVY BASED MOTORHOME
98	WINNEBAGO	899	MEDIUM / HEAVY UNKNOWN
98	NEOPLAN	902	BUS - CONVENTIONAL FRONT ENGINE
98	NEOPLAN	902	BUS BASED MOTORHOME
98	NEOPLAN	902	BUS - FRONT ENGINE/FLAT FRONT
98	NEOPLAN	902	BUS - REAR ENGINE/FLAT FRONT
98	NEOPLAN	902	OTHER BUS
98	OTHER MAKE (med/heavy truck/bus or "other")	950	BUS BASED MOTORHOME
98	OTHER MAKE (med/heavy truck/bus or "other")	988	OTHER BUS
98	OTHER MAKE (med/heavy truck/bus or "other")	998	OTHER VEHICLE
98	WINNEBAGO	999	UNKNOWN VEHICLE
99	UNKNOWN MANUFACTURER	399	UNKNOWN AUTOMOBILE
99	UNKNOWN FOREIGN MANUFACTURER	399	UNKNOWN AUTOMOBILE
99	UNKNOWN DOMESTIC MANUFACTURER	399	UNKNOWN AUTOMOBILE
99	UNKNOWN MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN DOMESTIC MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN FOREIGN MANUFACTURER	499	UNKNOWN LIGHT TRUCK
99	UNKNOWN FOREIGN MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN DOMESTIC MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN MANUFACTURER	799	UNKNOWN MOTORED CYCLE
99	UNKNOWN MEDIUM/HEAVY TRUCKS AND BUSES MANUFACTURER	899	Unknown medium/heavy truck
99	UNKNOWN FOREIGN MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MANUFACTURER	899	UNK TYPE TRUCK (LIGHT/MED/HEAVY)
99	UNKNOWN DOMESTIC MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MANUFACTURER	899	UNKNOWN MEDIUM/HEAVY TRUCK
99	UNKNOWN MEDIUM/HEAVY TRUCKS AND BUSES MANUFACTURER	988	Unknown bus type
99	UNKNOWN MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN FOREIGN MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN DOMESTIC MANUFACTURER	989	UNKNOWN BUS TYPE
99	UNKNOWN MANUFACTURER	999	UNKNOWN VEHICLE
99	UNKNOWN DOMESTIC MANUFACTURER	999	UNKNOWN VEHICLE
99	UNKNOWN FOREIGN MANUFACTURER	999	UNKNOWN VEHICLE

Vehicle Body Type

Definition: This variable identifies the vehicle's body type. It describes the general configuration/shape and distinguishing characteristics of the motor vehicle.

SAS Name: BODYTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Convertible
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
7	Hatchback, number of doors unknown

Variable Definitions and Codes - GV Data Set

8	Other automobile type
9	Unknown automobile type
10	Auto based pickup
11	Auto based panel
12	Large limousine
13	Three-wheel automobile or automobile derivative
14	Compact utility
15	Large utility
16	Utility station wagon
17	3-door coupe
19	Utility, unknown body type
20	Minivan
21	Large van
22	Step van or walk-in van
23	Van based motor home
24	Van based school bus
25	Van based other bus
28	Other van type
29	Unknown van type
30	Compact pickup
31	Large pickup
32	Pickup with slide-in camper
33	Convertible pickup
39	Unknown pickup style light conventional truck type
40	Cab chassis based
41	Truck based panel
42	Light truck based motor home (chassis mounted)
45	Other light conventional truck type
48	Unknown light truck type
49	Unknown light vehicle type
50	School bus
58	Other bus type
59	Unknown bus type
60	Step van
61	Single unit straight truck(4500kg<GVWR<=8850kg)
62	Single unit straight truck(8850kg<GVWR<=12000kg)
63	Single unit straight truck (GVWR > 12,000kg)
64	Single unit straight truck (GVWR unknown)
65	Medium/heavy truck based motor home
66	Truck-tractor (Cab Only, or any trailing units)
67	Truck-tractor with no cargo trailer
68	Truck-tractor pulling one trailer
69	Truck-tractor pulling two or more trailers
70	Truck-tractor (unknown if pulling trailer)
74	Medium/heavy Pickup (>=4,536kg)
78	Unknown medium/heavy truck type
79	Unknown truck type (light/medium/heavy)
80	Motorcycle

Variable Definitions and Codes - GV Data Set

81	Moped
82	Three-wheel motorcycle or moped
88	Other motored cycle (mini-bike, motor scooter)
89	Unknown motored cycle type
90	ATV (All-Terrain Vehicle) & ATC (All-Terrain Cycle)
91	Snowmobile
92	Farm equipment other than trucks
93	Construction equipment other than trucks
97	Other vehicle type
99	Unknown body type

Class Of Vehicle

Definition: This variable identifies the class of the vehicle.

SAS Name: CLASS

Attribute Codes

<u>Code</u>	<u>Description</u>
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 type (<= 4,536 kgs GVWR)
39	Unknown pick up truck (<=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)

Variable Definitions and Codes - GV Data Set

78	Unknown medium/heavy truck type
79	Unknown light/medium/heavy truck type
80	Motored cycle
90	Other vehicle
99	Unknown

Vehicle Identification Number (VIN)

Definition: This variable provides the automotive industry's Vehicle Identification Number (VIN) for the vehicle, a serial number for identifying individual motor vehicles.

SAS Name: VIN

Attribute Codes

<u>Code</u>	<u>Description</u>
0000000000	Vehicle not reported to have a VIN
*	VIN (text)
9999999999	Unknown

Dominant Color

Definition: This variable describes the dominant color of the vehicle.

SAS Name: COLOR

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Black
2	Charcoal gray
3	Light gray/silver
4	Brown
5	Gold/tan/copper
6	Purple
7	Dark blue
8	Light blue
9	Dark green
10	Light green
11	Maroon
12	Red
13	Orange
14	Yellow
15	White
16	Other
9999	Unknown

Variable Definitions and Codes - GV Data Set

In-Transport Vehicle Status

Definition: This variable identifies if the vehicle was in transport (i.e., the vehicle was in motion on the trafficway or any part of it was within the boundaries of the roadway) at the time of the crash.

SAS Name: INTRANSP

Attribute Codes

<u>Code</u>	<u>Description</u>
1	In transport
2	Not in transport
3	Working motor vehicle
9999	Unknown

Location of Not-In-Transport Vehicle

Definition: This variable describes the location of a not-in-transport vehicle, if any.

SAS Name: NIT_LOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	On roadway
2	On shoulder
3	On median
4	On roadside
5	Outside trafficway
6	In parking lane
7	Gore
8	Separator
9	Continuous left turn lane
10	Off roadway - location unknown
9997	Not a parked vehicle
9999	Unknown

Maximum Known Police Reported Injury in Vehicle

Definition: This variable documents the highest injury severity rating in the vehicle, as reported by police on the Police Accident Report (PAR) using the KABCOU rating scale.

SAS Name: INJSEVV

Attribute Codes

<u>Code</u>	<u>Description</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed

Variable Definitions and Codes - GV Data Set

5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown if injured
10	No person in vehicle
11	No PAR obtained

Police Reported Tow Status

Definition: This variable establishes if the vehicle was towed due to disabling damage as reported by police on the Police Accident Report (PAR).

SAS Name: TOWPAR

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not towed
1	Towed
11	No PAR obtained (created)
9999	Unknown

MANSEQ Data Set

The MANSEQ (Maneuver Sequence) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO and MOVESEQ. MOVESEQ is a sequential number which identifies a particular maneuver in the maneuver sequence. SCASEID, VEHNO and MOVESEQ uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the MANSEQ data set with vehicle level data sets. This data set also contains the following variable:

Pre-First Harmful Event Lateral Movement

Definition: This variable describes lateral vehicle movements made along the vehicle's trajectory between the end of the pre-event movement phase and the first harmful event.

SAS Name: LATMOVE

Attribute Codes

1	No pre-first harmful event maneuver 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
10	Non-contact power unit jackknife
11	Non-contact trailer swing
12	Other
8888	No driver present
9999	Unknown

Variable Definitions and Codes - NONMOT Data Set

NONMOT Data Set

The NONMOT data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT and NMNO. NMNO is a unique number assigned to each non-motorist in a crash. SCASEID and NMNO uniquely identify each record in this data set. SCASEID should be used to merge the NONMOT data set with the CRASH data set. This data set also contains the following variables:

Type of Nonmotorist

Definition: This variable identifies the type of nonmotorist involved in the crash.

SAS Name: TYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Pedestrian
2	Bicyclist
3	Skater
4	Other cyclist
5	Other nonmotorist
9999	Unknown

Nonmotorist Age in Months

Definition: This variable provides the nonmotorist's age in months.

SAS Name: AGEMONTH_NM

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Age (in months)
9999	Unknown

Nonmotorist Age in Years

Definition: This variable provides the nonmotorist's age in years.

SAS Name: AGEYEAR_NM

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Age (in years)
0	Less than 12 months
9999	Unknown

Variable Definitions and Codes - NONMOT Data Set

Nonmotorist Sex

Definition: This variable identifies the gender of the nonmotorist.

SAS Name: SEX_NM

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Male
2	Female
9999	Unknown

Nonmotorist Posture

Definition: This variable describes the nonmotorist's posture prior to avoidance actions.

SAS Name: POSTURE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Standing
2	Crouching
3	Kneeling
4	Bending at waist
5	Moving on skates/skate board
6	Other
9999	Unknown

Nonmotorist Motion

Definition: This variable describes the motion of the nonmotorist prior to avoidance actions.

SAS Name: MOTION

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Not moving
2	Walking slowly
3	Walking rapidly
4	Running or jogging
5	Moving on skates/skate board
6	Cycling
7	Other
9999	Unknown

Variable Definitions and Codes - NONMOT Data Set

Nonmotorist Action

Definition: This variable describes the direction of the nonmotorist's motion with respect to the roadway, prior to the nonmotorist's first avoidance action.

SAS Name: ACTION

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Stopped
2	Crossing road, straight
3	Crossing road, diagonally
4	Moving in road, with traffic
5	Moving in road, against traffic
6	Off road, approaching road
7	Off road, going away from road
8	Off road, moving parallel with traffic
9	Off road, moving parallel against traffic
10	Off road, crossing driveway
11	Off road, moving along driveway
12	Other
9999	Unknown

Nonmotorist Body Orientation

Definition: This variable describes the nonmotorist's body orientation with respect to the striking vehicle prior to avoidance actions.

SAS Name: ORIENTATION

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Facing vehicle
2	Facing away from vehicle
3	Left side of body toward vehicle
4	Right side of body toward vehicle
5	Other
9999	Unknown

Variable Definitions and Codes - NONMOT Data Set

Nonmotorist Police Reported Drug Presence

Definition: This variable documents the presence of illegal drugs in the nonmotorist's system as recorded by police on the Police Accident Report (PAR).

SAS Name: DRUGS_NM

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
9999	Unknown

Nonmotorist Police Reported Alcohol Presence

Definition: This variable documents the presence of alcohol for the nonmotorist as reported by police on the Police Accident Report (PAR).

SAS Name: ALCOHOL_NM

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
9999	Unknown

Nonmotorist Illness

Definition: This variable documents if the nonmotorist experienced a medically verified illness during the precrash phase.

SAS Name: ILLNESS_NM

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
9999	Unknown

Variable Definitions and Codes - NONMOT Data Set

Nonmotorist Critical Reason

Definition: This variable establishes if the critical reason for the critical precrash event was assigned to the nonmotorist. The Critical Reason For The Critical Precrash Event variable and a description are provided in the PCA data set.

SAS Name: CRITREASON_YN

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No critical reason assigned to this person
2	Critical reason for critical event assigned to this person

Nonmotorist Precrash Cell Phone Use

Definition: This variable documents the nonmotorist's use of a cell phone during the precrash phase.

SAS Name: CELLTALK

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes
2	No
9999	Unknown

Nonmotorist Injury Severity (KABKOU Rating)

Definition: This variable documents the highest severity of the nonmotorist's injuries, as reported by police on the Police Accident Report (PAR) using the KABCOU rating scale.

SAS Name: INJSEV_NM

Attribute Codes

<u>Code</u>	<u>Description</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown if injured

Variable Definitions and Codes - OCC Data Set

OCC Data Set

The OCC (Occupant) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO and OCCNO. OCCNO is a unique number assigned to each occupant in a vehicle. SCASEID, VEHNO and OCCNO uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the OCC data set with vehicle level data sets. This data set also contains the following variables:

Occupant Age in Months

Definition: This variable provides the occupant's age in months.

SAS Name: AGEMONTH

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Age (in months)
9999	Unknown

Occupant Age in Years

Definition: This variable provides the occupant's age in years.

SAS Name: AGEYEAR

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Age (in years)
0	Less than 12 months
9999	Unknown

Occupant Seat Position

Definition: This variable identifies in which seat position and row of the vehicle the occupant was located.

SAS Name: SEATPOS

Attribute Codes

<u>Code</u>	<u>Description</u>
11	Front row, left position
12	Front row, center position
13	Front row, right position
14	Front row, other
15	Front row, on lap of another occupant
21	Second row, left position
22	Second row, center position
23	Second row, right position
24	Second row, other position
25	Second row, on lap of another occupant

Variable Definitions and Codes - OCC Data Set

31	Third row, left position
32	Third row, center position
33	Third row, right position
34	Third row, other position
35	Third row, on lap of another occupant
41	Fourth row, left position
42	Fourth row, center position
43	Fourth row, right position
44	Fourth row, other position
45	Fourth row, on lap of another occupant
51	Fifth row, left position
52	Fifth row, center position
53	Fifth row, right position
54	Fifth row, other position
55	Fifth row, on lap of another occupant
96	Other enclosed area
97	Other unenclosed area
9999	Unknown

Occupant Role

Definition: This variable describes the role of the occupant, driver or passenger, within the vehicle.

SAS Name: ROLE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Driver
2	Passenger
9999	Unknown

Occupant Height

Definition: This variable provides the occupant's height recorded in centimeters..

SAS Name: HEIGHT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Height (cm)
8888	No driver present
9999	Unknown

Variable Definitions and Codes - OCC Data Set

Occupant Sex

Definition: This variable identifies the gender of the occupant.

SAS Name: SEX

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Male
2	Female
9999	Unknown

Occupant Injury Severity (KABKOU Rating)

Definition: This variable documents the highest severity of the occupant's injuries, as reported by police on the Police Accident Report (PAR) using the KABCOU rating scale.

SAS Name: INJSEV

Attribute Codes

<u>Code</u>	<u>Description</u>
0	O - No injury
1	C - Possible injury
2	B - Non-incapacitating injury
3	A - Incapacitating injury
4	K - Killed
5	U - Injury, severity unknown
6	Died prior to crash
9	Unknown if injured
11	No PAR obtained

Occupant Transport To Treatment Facility

Definition: This variable determines if the occupant was transported to a treatment facility directly from the scene. Treatment facilities include trauma centers, hospitals, emergency clinics and doctor's offices.

SAS Name: TRANSPORT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes
2	No
9999	Unknown

Variable Definitions and Codes - OCC Data Set

Occupant Weight

Definition: This variable provides the occupant's weight recorded in kilograms.

SAS Name: WEIGHT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Weight (kg)
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

PCA Data Set

The PCA (Pre-Crash Assessment) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT and VEHNO. SCASEID and VEHNO uniquely identify each record in this data set and should be used to merge the PCA data set with other vehicle level data sets. This data set also contains the following variables:

Movement Prior To Critical Crash Envelope

Definition: This variable describes the vehicle's movement pattern prior to the critical event. The pre-event movement pattern is usually described as the point that both precedes the critical precrash envelope and that precedes vehicle motions that place the involved vehicle(s) on an imminent collision path.

SAS Name: REMOVE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Going straight
2	Decelerating in traffic lane
3	Accelerating in traffic lane
4	Starting in traffic lane
5	Stopped in traffic lane
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	Avoidance maneuver to a previous critical event
18	Other
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Critical Precrash Event

Definition: This variable identifies the event which made the crash imminent (i.e. something occurred which made the collision inevitable). A precrash critical event is coded for each vehicle in the crash and documents the circumstances leading to this vehicle's first impact in the crash sequence.

SAS Name: PREEVENT

Attribute Codes

<u>Code</u>	<u>Description</u>
<i>This Vehicle Loss of Control Due To</i>	
1	Blow out/flat tire
2	Stalled engine
3	Disabling vehicle failure (e.g., wheel fell off)
4	Non-disabling vehicle problem (e.g., hood flew up)
5	Poor road conditions (puddle, pot hole, ice, etc.)
6	Traveling too fast for conditions
7	Jackknife Event
8	Cargo Shift
9	Other cause of control loss
19	Unknown cause of control loss
<i>This Vehicle Traveling</i>	
20	Over the lane line on left side of travel lane
21	Over the lane line on right side of travel lane
22	Off the edge of the road on the left side
23	Off the edge of the road on the right side
24	End departure
25	Turning left at intersection
26	Turning right at intersection
27	Crossing over (passing through) intersection
28	This vehicle decelerating
29	Unknown travel direction
<i>Other Motor Vehicle in Lane</i>	
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 other motor vehicle in lane
<i>Other Motor Vehicle Encroaching into lane</i>	
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

Variable Definitions and Codes - PCA Data Set

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
69	From driveway, turning into same direction
70	From driveway, across path
71	From driveway, turning into opposite direction
72	From driveway, intended path not known
73	From entrance to limited access highway
79	Encroachment by other vehicle - details unknown

Pedestrian, Pedalcyclist, or Other Non-Motorist

80	Pedestrian in roadway
81	Pedestrian approaching roadway
82	Pedestrian - unknown location
83	Pedalcyclist or other nonmotorist in roadway
84	Pedalcyclist or other nonmotorist approaching roadway
85	Pedalcyclist or other nonmotorist - unknown location

Object or Animal

87	Animal in roadway
88	Animal approaching roadway
89	Animal - unknown location
90	Object in roadway
91	Object approaching roadway
92	Object - unknown location

Other

93	Other
94	Not involved first harmful event
8888	No driver present
9999	Unknown

Critical Reason For The Critical Precrash Event

Definition: This variable establishes the critical reason for the occurrence of the critical precrash event. The critical reason is the immediate reason for this event and is often the last failure in the causal chain (i.e. closest in time to the critical precrash event). Although the critical reason is an important part of the description of crash events, it is not the cause of the crash nor does it imply the assignment of fault.

SAS Name: CRITREASON

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Critical reason not coded to this vehicle
2	Critical reason assigned to non-motorist
100	Sleeping, that is, actually asleep
101	Heart attack or other physical impairment of the ability to act
102	Other critical non-performance
109	Unknown critical non-performance

Variable Definitions and Codes - PCA Data Set

110	Inattention (i.e., daydreaming)
111	Internal distraction
112	External distraction
113	Inadequate surveillance (e.g., failed to look, looked but did not see)
114	Other recognition error
119	Unknown recognition error
120	Too fast for conditions
121	Too fast to be able to respond to unexpected actions of others
122	Too fast for curve/turn
123	Too slow for traffic stream
124	Misjudgment of gap or other's speed
125	Following too closely to respond to unexpected actions
126	False assumption of other's actions
127	Illegal maneuver
129	Inadequate evasive action, e.g. braking only, not braking and steering
130	Incorrect evasive action
131	Aggressive driving behavior
132	Other decision error
133	Turned with obstructed view
139	Unknown decision error
141	Panic/freezing
142	Overcompensation
143	Poor directional control (e.g., failing to control vehicle with skill ordinarily expected)
144	Other performance error
149	Unknown performance error
199	Type of driver error unknown
200	Brakes failed
201	Degraded braking capability
202	Tires/wheels failed
203	Other tire degradation
204	Steering failed
205	Suspension failed
206	Transmission/engine failure
207	Lights failed
208	Vehicle related vision obstructions
209	Body, doors, hood failed
210	Cargo shifted
211	Trailer attachment failed
212	Jackknifed
213	Other vehicle failure
299	Unknown vehicle failures
500	Signs/signals missing
501	Signs/signals erroneous/defective
502	Signs/signals inadequate
503	View obstructed by roadway design/furniture
504	View obstructed by other vehicles
505	Road design - roadway geometry (e.g., ramp curvature)
506	Road design - sight distance

Variable Definitions and Codes - PCA Data Set

507	Road design - other
508	Maintenance problems (potholes, etc.)
509	Slick roads (low friction road surface due to ice, loose debris, any other cause)
510	Other highway-related condition
520	Rain, snow
521	Fog
522	Wind gust
523	Other weather-related condition
525	Glare
526	Blowing debris
527	Other sudden ambience change
8888	No driver present
9999	Unknown reason for critical event

Attempted Avoidance Maneuvers

Definition: This variable establishes if the driver attempted any avoidance maneuvers in response to the critical precrash event. Specific avoidance maneuvers that were attempted are contained in the PCAEXT data set.

SAS Name: AVMAN

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None attempted
1	One or more attempted
8888	No driver present
9999	Unknown if any attempted

Pre-Impact Stability Of Vehicle

Definition: This variable provides an assessment of the vehicle's stability and dynamics after the critical event.

SAS Name: PREISTAB

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Tracking/stationary
2	Skidding longitudinally->rotation less than 30 degrees
3	Skidding laterally->clockwise rotation
4	Skidding laterally->counterclockwise rotation
5	Other control loss
8888	No driver present
9999	Precrash stability unknown

Variable Definitions and Codes - PCA Data Set

Pre-Impact Location On Trafficway

Definition: This variable identifies the location of the vehicle at the point where its pre-impact stability is determined.

SAS Name: PREILOC

Attribute Codes

<u>Code</u>	<u>Description</u>
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
8888	No driver present
9999	Unknown

First Harmful Event Crash Type

Definition: This variable categorizes the collisions of drivers involved in crashes. A collision is defined here as the first harmful event in a crash between a vehicle and some object, accompanied by property damage or human injury. The object may be another vehicle, a person, an animal, a fixed object, the road surface, or the ground.

SAS Name: ACCTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	1: Right roadside departure, drive off road
2	2: Right roadside departure, control/traction loss
3	3: Right roadside departure; avoid collision with vehicle, pedestrian, animal
4	4: Right roadside departure, specific other
5	5: Specifics Unknown
6	6: Left roadside departure, drive off road
7	7: Left roadside departure, control/traction loss
8	8: Left roadside departure; avoid collision with vehicle, pedestrian, animal
9	9: Left roadside departure, specifics other
10	10: Specifics Unknown
11	11: Forward Impact, parked vehicle
12	12: Forward impact, stationary object
13	13: Forward Impact, pedestrian/animal
14	14: End Departure
15	15: Forward Impact, Specifics Other
16	16: Specifics Unknown
20	20: Rear-end: Stopped
21	21: Rear-end: Stopped, Straight
22	22: Rear-end: Stopped, Left

Variable Definitions and Codes - PCA Data Set

23	23: Rear-end: Stopped, Right
24	24: Rear-end: Slower
25	25: Rear-end: Slower, Going Straight
26	26: Rear-end: Slower, Going Left
27	27: Rear-end: Slower, Going Right
28	28: Rear-end: Decelerating (Slowing)
29	29: Rear-end: Decelerating (Slowing), Going Straight
30	30: Rear-end: Decelerating (Slowing), Going Left
31	31: Rear-end: Decelerating (Slowing), Going Right
32	32: Rear-end: Specifics Other
33	33: Rear-end: Specifics Unknown
34	34: Forward Impact: Control/Traction Loss
35	35: Forward Impact: Control/Traction Loss
36	36: Forward Impact: Control/Traction Loss
37	37: Forward Impact: Control/Traction Loss
38	38: Forward Impact: Avoid Collision with Vehicle.
39	39: Forward Impact: Avoid Collision with Vehicle
40	40: Forward Impact: Avoid Collision with Object
41	41: Forward Impact: Avoid Collision with Object
42	42: Forward Impact: Specifics Other
43	43: Forward Impact: Specifics Unknown
44	44: Sideswipe/Angle: Straight Ahead on Left
45	45: Sideswipe/Angle: Straight Ahead on Left/Right
46	46: Sideswipe/Angle: Changing Lanes to the Right
47	47: Sideswipe/Angle: Changing Lanes to the Left
48	48: Sideswipe/Angle: Specifics Other
49	49: Sideswipe/Angle: Specifics Unknown
50	50: Head-On: Lateral Move (Left/Right)
51	51: Head-On: Lateral Move (Going Straight)
52	52: Head-On: Specifics Other
53	53: Head-On: Specifics Unknown
54	54: Forward Impact: Control/Traction Loss
55	55: Forward Impact: Control/Traction Loss
56	56: Forward Impact: Control/Traction Loss
57	57: Forward Impact: Control/Traction Loss
58	58: Forward Impact: Avoid Collision with Vehicle
59	59: Forward Impact: Avoid Collision with Vehicle
60	60: Forward Impact: Avoid Collision with Object
61	61: Forward Impact: Avoid Collision with Object
62	62: Forward Impact: Specifics Other
63	63: Forward Impact: Specifics Unknown
64	64: Sideswipe/Angle: Lateral Move (Left/Right)
65	65: Sideswipe/Angle: Lateral Move (Going Straight)
66	66: Sideswipe/Angle: Specifics Other
67	67: Sideswipe/Angle: Specifics Unknown
68	68: Turn Across Path: Initial Opposite Directions (Left/Right)
69	69: Turn Across Path: Initial Opposite Directions (Going Straight)
70	70: Turn Across Path: Initial Same Directions (Turning Right)

Variable Definitions and Codes - PCA Data Set

71	71: Turn Across Path: Initial Same Directions (Going Straight)
72	72: Turn Across Path: Initial Same Directions (Turning Left)
73	73: Turn Across Path: Initial Same Directions (Going Straight)
74	74: Turn Across Path: Specifics Other
75	75: Turn Across Path: Specifics Unknown
76	76: Turn Into Same Direction (Turning Left)
77	77: Turn Into Same Direction (Going Straight)
78	78: Turn Into Same Direction (Turning Right)
79	79: Turn Into Same Direction (Going Straight)
80	80: Turn Into Opposite Directions (Turning Right)
81	81: Turn Into Opposite Directions (Going Straight)
82	82: Turn Into Opposite Directions (Turning Left)
83	83: Turn Into Opposite Directions (Going Straight)
84	84: Turn Into Path: Specifics Other
85	85: Turn Into Path: Specifics Unknown
86	86: Straight Paths: Striking from the Right
87	87: Straight Paths: Struck on the Right
88	88: Straight Paths: Striking from the Left
89	89: Straight Paths: Struck on the Left
90	90: Straight Paths: Specifics Other
91	91: Straight Paths: Specifics Unknown
92	92: Miscellaneous: Backing Vehicle
93	93: Miscellaneous: Other Vehicle or Object
98	98: Miscellaneous: Other Accident Type
99	99: Miscellaneous: Unknown Crash Type
100	100: No Impact

Right-Of-Way

Definition: This variable establishes if the vehicle had the right-of-way, from a legal perspective.

SAS Name: RIGHTOFWAY

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
8888	No driver present
9997	Not applicable
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Vehicle Maneuvers During Precrash Cargo Shift

Definition: This variable captures if the driver was performing any vehicle maneuvers when the cargo began to shift. Cargo is defined as any object in the vehicle that can shift the vehicle's center of gravity and affect handling characteristics. This variable is applicable to all classes of vehicles. Specific vehicle maneuvers that were performed are contained in the PCAEXT data set.

SAS Name: CARGOSMAN

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No cargo or No cargo shift
1	One or more maneuvers
8888	No driver present
9999	Unknown

Precrash Cargo Spillage

Definition: This variable documents whether cargo spilled during the precrash phase.

SAS Name: CARGSPIL

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No cargo
2	No precrash cargo spillage
3	Yes
8888	No driver present
9999	Unknown

Vehicle Location At Start Of Precrash Cargo Shift

Definition: This variable documents the location of the vehicle prior to the crash when the cargo began to shift.

SAS Name: CARGOSHFTLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No cargo
2	No cargo shift
3	On roadway
4	On shoulder
5	On roadside
6	On median
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Length Of Time Driving This Portion Of Trip

Definition: This variable provides the approximate length of time the driver had been driving this leg of the trip in one-half hour increments.

SAS Name: TIMEDRIVING

Attribute Codes

<u>Code</u>	<u>Description</u>
1	< half hour
2	30-59 minutes
3	60-89 minutes
4	90-119 minutes
5	2 to < 2 1/2 hours
6	2 1/2 to <3 hours
7	3 to <3 1/2 hours
8	3 1/2 to <4 hours
9	=> 4 hours
8888	No driver present
9999	Unknown

Trip Start Time

Definition: This variable establishes the start time of the trip.

SAS Name: TRIPSTARTTIME

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Start time (HHMM – 24-hour clock)
8888	No driver present
9999	Unknown

Trip Duration

Definition: This variable represents the amount of time from the start of the trip to the time of the crash.

SAS Name: TRIPHOURS

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Trip duration (hours)
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Last Sleep Period - Start Date

Definition: This variable provides the date for the start of the driver's last sleep period.

SAS Name: SLEEPSTARTD

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Start date (YYYY-MM-DD)
8888-88-88	No driver present
9999-99-99	Unknown

Last Sleep Period - Start Time

Definition: This variable provides the time for the start of the driver's last sleep period.

SAS Name: SLEEPSTARTT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Start time (HHMM – 24-hour clock)
8888	No driver present
9999	Unknown

Last Sleep Period - End Date

Definition: This variable provides the date for the end of the driver's last sleep period.

SAS Name: SLEEPENDD

Attribute Codes

<u>Code</u>	<u>Description</u>
*	End date (YYYY-MM-DD)
8888-88-88	No driver present
9999-99-99	Unknown

Last Sleep Period - End Time

Definition: This variable provides the time for the end of the driver's last sleep period.

SAS Name: SLEEPENDT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	End time (HHMM – 24-hour clock)
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Duration of Last Sleep

Definition: This variable provides the number of hours the driver slept prior to the crash.

SAS Name: LASTSLEEP

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Amount of sleep (hours)
8888	No driver present
9999	Unknown

Total Sleep In Last 24 Hours

Definition: This variable provides the driver's total hours of sleep in the last 24 hours.

SAS Name: SLEEP24HRS

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Amount of sleep (hours)
8888	No driver present
9999	Unknown

Time Since Last Sleep

Definition: This variable documents the amount of time the driver had been awake preceding the crash (i.e., the amount of time since the driver slept).

SAS Name: HRSAWAKE

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Amount of time (hours)
8888	No driver present
9999	Unknown

Driver's Normal Average Daily Sleep Interval

Definition: This variable records the driver's typical interval of sleep each day.

SAS Name: AVGSLEEPINT

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Daily sleep interval (hours)
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Rotating Sleep/Work Schedule

Definition: This variable documents if the driver's sleep and/or work schedule changed during the seven day period preceding the crash.

SAS Name: SLEEPROTATE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
8888	No driver present
9999	Unknown

Shortest Hours Worked

Definition: This variable records the shortest period worked by the driver during the seven day interval preceding the crash. This is a continuous period and includes lunch and break times but not commuting time.

SAS Name: WORKSHORTEST

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Shortest hours worked
8888	No driver present
9997	Not applicable
9999	Unknown

Longest Hours Worked

Definition: This variable records the longest period worked by the driver during the seven day interval preceding the crash. This is a continuous period and includes lunch and break times but not commuting time.

SAS Name: WORKLONGEST

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Longest hours worked
8888	No driver present
9997	Not applicable
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Average Hours Worked

Definition: This variable records the average hours worked by the driver during the seven day period preceding the crash.

SAS Name: WORKAVG

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Average hours worked
8888	No driver present
9997	Not applicable
9999	Unknown

Total Hours Worked

Definition: This variable records the total number of hours worked by the driver during the seven day interval preceding the crash.

SAS Name: WORKTOTAL

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Total hours worked
8888	No driver present
9997	Not applicable
9999	Unknown

Driver Fatigue

Definition: This variable assesses if the driver was fatigued at the time of the crash based on an evaluation of the driver's current and preceding sleep schedules, current and preceding work schedules, and a variety of other fatigue related factors including recreational and non-work activities.

SAS Name: FATIGUE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Driver fatigued
2	Driver not fatigued
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Other Driver Physical Factors

Definition: This variable documents the presence of any driver physical conditions that are not captured by other variables that deal with driver physical factors (e.g., Driver Illness). Specific driver physical factors are contained in the PCAEXT data set.

SAS Name: OTPHYFACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	One or more present
8888	No driver present
9999	Unknown if present

Drugs Taken In Last 24 Hours

Definition: This variable captures if the driver reported taking any drugs/medications in the 24 hours preceding the crash.

SAS Name: MEDS

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes
2	No
8888	No driver present
9999	Unknown

Driver Illness

Definition: This variable documents if the driver experienced a medically verified illness during the precrash phase.

SAS Name: ILLNESS

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Hearing Impairment

Definition: This variable documents the existence of a hearing impairment for the driver.

SAS Name: HEARING

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
8888	No driver present
9999	Unknown

Hearing Aid

Definition: This variable documents the use of a hearing aid by the driver at the time of the crash.

SAS Name: HEARINGAID

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
8888	No driver present
9997	Not applicable
9999	Unknown

Driver Inattention

Definition: This variable documents if the driver was inattentive due to focusing on concerns and the nature of those concerns.

SAS Name: INATTEN

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No inattention factors
2	Personal problem
3	Family problem
4	Financial problem
5	Preceding argument
6	Future event (e.g. vacation, wedding, etc.)
7	Inattentive, thought focus unknown
8	Other
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Driver Conversing

Definition: This variable establishes if the driver was participating in conversation during the precrash phase.

SAS Name: CONVERSE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Not conversing
2	Conversing with passenger
3	Talking on phone
4	Talking on CB radio
5	Other
8888	No driver present
9999	Unknown

Driver's Relationship To Conversant

Definition: This variable identifies the driver's relationship to the conversant.

SAS Name: CONVERSEREL

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Business
2	Social (friend)
3	Boy/girlfriend
4	Husband/wife
5	Parent/child
6	No relationship/stranger
7	Other
8	Other relative
8888	No driver present
9997	Not applicable
9999	Unknown

Nature of Conversation

Definition: This variable describes the nature of the conversation during the precrash phase.

SAS Name: CONVERSESUB

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Business
2	Social
3	Family matter
4	Argument

Variable Definitions and Codes - PCA Data Set

5	Disciplinary
6	Other
8888	No driver present
9997	Not applicable
9999	Unknown

Inadequate Surveillance

Definition: This variable identifies inadequate surveillance actions on the part of the driver.

SAS Name: SURVEIL

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No inadequate surveillance factors
2	Failed to look far enough ahead
3	Failed to look either side ahead
4	Failed to look to side
5	Failed to look to rear (mirrors)
6	Failed to look-other
7	Looked, but did not see
8	Other
9	Failed to see traffic control device
8888	No driver present
9999	Unknown

Other Driver Recognition Factors

Definition: This variable establishes the occurrence of other recognition factors related to this driver.

SAS Name: OTRECOG

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No other recognition factors
2	Impending problem masked by traffic flow pattern
3	Driver focused on extraneous vehicle
4	Other recognition error
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Other Non-Driving Activities

Definition: This variable establishes if any activities inside of the vehicle, other than conversing with a passenger, interfered with the driver's attention to the driving task. Information regarding the driver's conversing with a passenger is captured by other variables (e.g., Driver Conversing). Specific non-driving activities are contained in the PCAEXT data set.

SAS Name: OTDRACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown if present

Exterior Factors

Definition: This variable establishes if the driver was focusing on anything exterior to the vehicle that may have influenced the driver's focus away from the driving task. Specific exterior factors are contained in the PCAEXT data set.

SAS Name: EXTFA

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown

Exterior Factor Locations With Respect To Driver

Definition: This variable establishes if any locations of the exterior factors were known. The locations of the exterior factors are contained in the PCAEXT data set.

SAS Name: EXTFALOC

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No exterior factors present
1	Location(s) of exterior factors known
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Variable Definitions and Codes - PCA Data Set

Rearward Tracking Of Exterior Factor

Definition: This variable explains how the driver tracked exterior factors located behind the vehicle.

SAS Name: EXTFATRACK

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Turned head
2	Used rearview mirror
3	Used side mirror
4	Other
8888	No driver present
9997	Not applicable
9999	Unknown

Following Too Closely

Definition: This variable documents reasons given by the driver for traveling with less than the recommended gap interval to traffic forward of the driver's position.

SAS Name: TOOCLOSE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No following too closely factors
2	Congested traffic
3	Keeping up with traffic
4	Did not realize he/she was too close to forward vehicle
5	Always drive at this gap distance
6	Other
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Misjudgment Of Distance Or Speed Of Other Vehicle

Definition: This variable identifies the involvement of a decision error in which the driver either misjudged the gap distance to the other vehicle or misjudged the velocity of the other vehicle.

SAS Name: MISJUDGE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No misjudgment factors
2	Misjudgment of gap distance
3	Misjudgment of velocity of other vehicle
4	Misjudgment of both factors
8888	No driver present
9999	Unknown

Misjudged Vehicle's Direction Of Approach

Definition: This variable establishes the direction from which the misjudged vehicle was approaching the driver's position.

SAS Name: MISJUGDIR

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No misjudgment factors
2	Left
3	Right
4	Forward direction (170-190 deg opposed)
5	Left forward direction (120 - 169 deg opposed)
6	Right forward direction (191 - 240 deg opposed)
7	Rear
8888	No driver present
9999	Unknown

False Assumption Of Other Road User's Actions

Definition: This variable establishes if and how the driver made a false assumption about the other driver's action.

SAS Name: FALSEASMPT

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No false assumption factors
2	Assumed that other driver would merge without stopping
3	Assumed that other driver would turn without stopping
4	Assumed that other driver would continue to proceed
5	Assumed that other driver would yield right-of-way

Variable Definitions and Codes - PCA Data Set

6	Other false assumption
7	Assumed that other driver would turn
8888	No driver present
9999	Unknown

Illegal Maneuvers

Definition: This variable establishes if the driver performed any illegal maneuvers. Specific illegal maneuvers are contained in the PCAEXT data set.

SAS Name: ILLMAN

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None
1	One or more
8888	No driver present
9999	Unknown

Driver Aggressive Acts

Definition: This variable establishes if the driver performed any aggressive acts. Specific aggressive acts that were performed are contained in the PCAEXT data set.

SAS Name: AGGRACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None
1	One or more
8888	No driver present
9999	Unknown if any present

Reasons For Aggressive Driving Behavior

Definition: This variable documents if the driver provided any reasons for driving aggressively. Specific reasons for the aggressive driving behavior are contained in the PCAEXT data set.

SAS Name: REASONAGG

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No aggressive acts
1	One or more reasons known
8888	No Driver Present
9999	Unknown reason or unknown if aggressive

Variable Definitions and Codes - PCA Data Set

Inadequate/Incorrect Evasive Action

Definition: This variable identifies inadequate evasive actions on the part of the driver. This variable does not deal with legal requirements and the final assessment may be subjective.

SAS Name: INEVASION

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No inadequate evasive action factors
2	Insufficient steering inputs
3	Insufficient braking inputs
4	Combination of insufficient steering and braking inputs
5	Chose inappropriate/unsuccessful evasive action
6	Other insufficient evasive action
8888	No driver present
9999	Unknown

Other Driver Decision Factor

Definition: This variable identifies driver decision errors relevant to the crash that are not captured by other variables that deal with driver decision factors (e.g., Following Too Closely).

SAS Name: OTDECISION

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No other decision factors
2	Crossed with obstructed view
3	Turned with obstructed view
4	Stopped when not required
5	Proceeded with insufficient clearance
6	Turned without signaling
7	Other decision error
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Driver Performance Errors

Definition: This variable establishes if the driver performed any driving errors. Specific driver performance errors are contained in the PCAEXT data set.

SAS Name: DRPERROR

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown

Driver Upset

Definition: This variable establishes if the driver was upset prior to the crash.

SAS Name: UPSET

Attribute Codes

<u>Code</u>	<u>Description</u>
1	No
2	Yes
8888	No driver present
9999	Unknown

Work Related Stress/Pressure

Definition: This variable identifies work related pressures experienced by the driver in the days leading up to the crash.

SAS Name: WORKSTRESS

Attribute Codes

1	No employer relation factors
2	Required to work extended work shifts
3	Required to work rotating shift schedule
4	Required to fill in for other workers
5	Learning new position
6	Tight/unrealistic production/delivery schedule
7	Adversarial work relationship (management)
8	Adversarial work relationship (fellow workers)
9	Other
10	Unemployment related
11	General work-related stress
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Driver Hurry

Definition: This variable establishes if the driver was in a hurry and provides the driver's reason.

SAS Name: HURRY

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Not in a hurry
2	Late for start of work shift/start of school classes
3	Late for business appointment
4	Due to work related delivery schedule
5	Late for social appointment
6	Normal driving pattern
7	Other
8	Pursuing/fleeing
8888	No driver present
9999	Unknown

Other Driver Emotional Factor

Definition: This variable documents the presence of emotional factors for the driver that are not captured by other variables that deal with driver emotional factors (e.g., Work Related Stress).

SAS Name: OTEMOTIONS

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Yes
2	No
8888	No driver present
9999	Unknown

Recent Experience Driving This Vehicle

Definition: This variable indicates driver familiarity with the vehicle in terms of the number of times driven by the driver.

SAS Name: RECENTEXP

Attribute Codes

<u>Code</u>	<u>Description</u>
1	More than 10 times in the past three months
2	6-10 times in the last three months
3	2-5 times in the last three months
4	Less than 2 times in the past three months
5	First time driving this vehicle
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCA Data Set

Frequency Of Driving Road

Definition: This variable indicates driver comfort with the roadway in terms of the frequency of driving the roadway on which the crash occurred.

SAS Name: ROUTEFREQ

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Daily
2	Weekly
3	Several times a month
4	Monthly
5	Rarely
6	First time on road
7	Other
8888	No driver present
9999	Unknown

Other Driver Related Experience Factors

Definition: This variable documents the presence of any driver experience factors that are not captured by other variables that deal with driver experience (e.g., Frequency of Driving Road). Specific driver-related experience factors are contained in the PCAEXT data set.

SAS Name: OTEXPFACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factors

Definition: This variable documents if any factors related to the vehicle's condition were present that may have been relevant to the crash. Specific vehicle-related factors are contained in the PCAEXT data set.

SAS Name: VCONFACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCA Data Set

Traffic Flow Interruption Factors

Definition: This variable establishes if any circumstances interrupted the flow of traffic. Specific factors that interrupted the flow of traffic are contained in the PCAEXT data set.

SAS Name: FLOWFACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown

Roadway Related Factors

Definition: This variable documents if any roadway related factors were present that were relevant to the crash. Specific roadway-related factors are contained in the PCAEXT data set.

SAS Name: RWAYFACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown if present

Atmospheric Conditions

Definition: This variable documents if any factors related to the weather were present at the time of the crash. Specific weather-related factors are contained in the PCAEXT data set.

SAS Name: WEATHER

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
9999	Unknown if present

Variable Definitions and Codes - PCA Data Set

Other Environmental Crash Factors

Definition: This variable documents the presence of any environmental factors, other than the weather, that may have affected the crash events. Specific environmental crash factors are contained in the PCAEXT data set.

SAS Name: OTENVFACT

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present
1	One or more present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

PCAEXT Data Set

The PCAEXT (Pre-Crash Assessment – Extended) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT and VEHNO. SCASEID and VEHNO uniquely identify each record in this data set and should be used to merge the PCAEXT data set with other vehicle level data sets. This data set also contains the following variables:

Attempted Avoidance Maneuver: Full ABS Application

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by fully applying the brakes and felt the pulsing of the ABS.

SAS Name: AVMAN1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Attempted Avoidance Maneuver: Braking Without Lock-Up

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by braking without lock-up.

SAS Name: AVMAN2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Attempted Avoidance Maneuver: Braking With Lock-Up

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by braking with lock-up.

SAS Name: AVMAN3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Variable Definitions and Codes - PCAEXT Data Set

Attempted Avoidance Maneuver: Braking (Lock-Up Unknown)

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by braking but lock-up was unknown.

SAS Name: AVMAN4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Attempted Avoidance Maneuver: Releasing Brakes

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by releasing the brakes.

SAS Name: AVMAN5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Attempted Avoidance Maneuver: Steering Left

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by steering left.

SAS Name: AVMAN6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Variable Definitions and Codes - PCAEXT Data Set

Attempted Avoidance Maneuver: Steering Right

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by steering right.

SAS Name: AVMAN7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Attempted Avoidance Maneuver: Accelerating

Definition: This variable establishes if the driver attempted an avoidance maneuver in response to the critical precrash event by accelerating.

SAS Name: AVMAN8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Attempted Avoidance Maneuver: Other

Definition: This variable establishes if the driver attempted another type of avoidance maneuver in response to the critical precrash event that is not captured by the other Attempted Avoidance Maneuver variables.

SAS Name: AVMAN9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not attempted
1	Attempted
8888	No Driver Present
9999	Unknown if attempted

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Action During Precrash Cargo Shift: Traversing Curve

Definition: This variable captures if the driver was traversing a curve at the time the cargo shift began.

SAS Name: CARGOSMAN1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Vehicle Action During Precrash Cargo Shift: Completing Turn

Definition: This variable captures if the driver was turning at the time the cargo shift began.

SAS Name: CARGOSMAN2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Vehicle Action During Precrash Cargo Shift: Traversing Straight Section

Definition: This variable captures if the driver was traversing a straight roadway segment at the time the cargo shift began.

SAS Name: CARGOSMAN3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Action During Precrash Cargo Shift: Completing Avoidance Maneuver

Definition: This variable captures if the driver was performing an avoidance maneuver prior to or at the time the cargo shift began.

SAS Name: CARGOSMAN4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Vehicle Action During Precrash Cargo Shift: Driving At Constant Velocity

Definition: This variable captures if the driver was maintaining a constant speed at the time the cargo shift began.

SAS Name: CARGOSMAN5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Vehicle Action During Precrash Cargo Shift: Accelerating

Definition: This variable captures if the driver was accelerating at the time the cargo shift began.

SAS Name: CARGOSMAN6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Action During Precrash Cargo Shift: Decelerating Using Throttle Input Only

Definition: This variable captures if the driver was decelerating solely by reducing the throttle input at the time the cargo shift began.

SAS Name: CARGOSMAN7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Vehicle Action During Precrash Cargo Shift: Decelerating Using Light Braking

Definition: This variable captures if the driver was decelerating by applying a light level of braking effort at the time the cargo shift began.

SAS Name: CARGOSMAN8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Vehicle Action During Precrash Cargo Shift: Decelerating Using Moderate Braking

Definition: This variable captures if the driver was decelerating by applying a moderate level of braking effort at the time the cargo shift began.

SAS Name: CARGOSMAN9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Action During Precrash Cargo Shift: Decelerating Using Heavy Braking

Definition: This variable captures if the driver was decelerating by using a heavy level of braking effort at the time the cargo shift began.

SAS Name: CARGOSMAN10

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Vehicle Action During Precrash Cargo Shift: Other

Definition: This variable captures if the driver was performing a vehicle action that is not captured by the other Vehicle Maneuver During Precrash Cargo Shift variables at the time the cargo shift began.

SAS Name: CARGOSMAN11

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
2	No cargo/No cargo shift
8888	No driver present
9999	Unknown

Other Driver Physical Factor: Hearing Impairment

Definition: This variable establishes if the driver had a diagnosed hearing impairment that may have been relevant to the driver's precrash driving performance.

SAS Name: OTPHYFACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Driver Physical Factor: Vision Impairment

Definition: This variable establishes if the driver had a diagnosed vision impairment that may have been relevant to the driver's precrash driving performance.

SAS Name: OTPHYFACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Physical Factor: Prosthesis

Definition: This variable establishes if the driver was wearing a prosthesis.

SAS Name: OTPHYFACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Physical Factor: Paraplegia

Definition: This variable establishes if the driver had paralysis of the lower limbs.

SAS Name: OTPHYFACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Driver Physical Factor: Strenuous Recreational Activities

Definition: This variable establishes if the driver participated in strenuous recreational activities during the seven days preceding the crash.

SAS Name: OTPHYFACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Physical Factor: Strenuous Non-Work Activities

Definition: This variable establishes if the driver engaged in strenuous non-work activities (e.g., household chores) during the seven days preceding the crash.

SAS Name: OTPHYFACT6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Physical Factor: Sleep Apnea

Definition: This variable establishes if the driver had been diagnosed with an obstructive sleep apnea disorder.

SAS Name: OTPHYFACT7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Driver Physical Factor: Quadriplegia

Definition: This variable establishes if the driver had partial paralysis of all limbs.

SAS Name: OTPHYFACT8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Physical Factor: Short Term Physical Condition

Definition: This variable establishes if the driver had a diagnosed short term physical condition that may have been relevant to the driver's precrash driving performance.

SAS Name: OTPHYFACT10

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Physical Factor: Chronic Condition

Definition: This variable establishes if the driver had a diagnosed chronic condition that may have been relevant to the driver's precrash driving performance.

SAS Name: OTPHYFACT11

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Driver Physical Factor: Other

Definition: This variable establishes if the driver had a physical condition that may have been relevant to the driver's precrash driving performance and is not captured by the other Other Physical Factor variables.

SAS Name: OTPHYFACT9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Looking At Movement/Actions Of Other Occupants

Definition: This variable establishes if the driver was distracted from the driving task by looking at the movement or actions of other occupants in the vehicle.

SAS Name: OTDRACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Dialing/Hanging Up Phone

Definition: This variable establishes if the driver was distracted from the driving task as a result of dialing or hanging up a phone, adjusting phone controls, or attempting to retrieve voicemail messages during the precrash phase.

SAS Name: OTDRACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Non-Driving Activity: Adjusting Radio/CD Player

Definition: This variable establishes if the driver was distracted from the driving task as a result of attempting to adjust the sound system controls during the precrash phase.

SAS Name: OTDRACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Adjusting Other Vehicle Controls

Definition: This variable establishes if the driver was distracted from the driving task as a result of attempting to adjust the heat, vent, or air conditioning controls during the precrash phase. This category also includes attempted adjustments to other OEM and after market controls.

SAS Name: OTDRACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Retrieving Object From Floor And/Or Seat

Definition: This variable establishes if the driver was distracted from the driving task as a result of attempting to retrieve an object from the floor or seat during the precrash phase. This variable does not include items related to smoking or eating which are addressed by other variables.

SAS Name: OTDRACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Non-Driving Activity: Retrieving Object From Other Location

Definition: This variable establishes if the driver was distracted from the driving task as a result of attempting to retrieve an object from a location other than the floor or seat during the precrash phase. This variable does not include items related to smoking or eating which are addressed by other variables.

SAS Name: OTDRACT6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Eating Or Drinking

Definition: This variable establishes if the driver was distracted from the driving task as a result of activities related to eating or drinking during the precrash phase.

SAS Name: OTDRACT8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Smoking

Definition: This variable establishes if the driver was distracted from the driving task as a result of activities related to smoking during the precrash phase.

SAS Name: OTDRACT9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Non-Driving Activity: Reading Map/Directions/Newspaper

Definition: This variable establishes if the driver was distracted from the driving task as a result of looking at a map, reading directions or a newspaper, or reading some other type of material during the precrash phase.

SAS Name: OTDRACT10

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Focused On Other Internal Object

Definition: This variable establishes if the driver was distracted from the driving task as a result of focusing on an object inside the vehicle during the precrash phase that is not captured by the other Other Non-Driving Activity variables.

SAS Name: OTDRACT11

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Non-Driving Activity: Text Messaging

Definition: This variable establishes if the driver was distracted from the driving task as a result of sending text messages (short electronically transmitted messages typically sent to a handheld device such as a pager, PDA, or cell phone) during the precrash phase.

SAS Name: OTDRACT12

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Exterior Factor: Looking At Previous Crash

Definition: This variable establishes if the driver removed his/her focus from the driving task to look at a previous crash.

SAS Name: EXTFA1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Exterior Factor: Looking At Other Traffic

Definition: This variable establishes if the driver removed his/her focus from the driving task to look at traffic.

SAS Name: EXTFA2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Exterior Factor: Looking For Street Address

Definition: This variable establishes if the driver removed his/her focus from the driving task to look for a street address.

SAS Name: EXTFA3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Exterior Factor: Looking At Outside Person

Definition: This variable establishes if the driver removed his/her focus from the driving task to look at a person exterior to the vehicle.

SAS Name: EXTFA4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Exterior Factor: Looking At Building

Definition: This variable establishes if the driver removed his/her focus from the driving task to look at a building.

SAS Name: EXTFA5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Exterior Factor: Unspecified Outside Focus

Definition: This variable establishes if the driver removed his/her focus from the driving task to look at something exterior to the vehicle but the specific object is unknown.

SAS Name: EXTFA6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Exterior Factor: Other

Definition: This variable establishes if the driver removed his/her focus from the driving task to look at something that is not captured by the other Exterior Factor variables.

SAS Name: EXTFA7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Exterior Factor: Looking At Animal

Definition: This variable establishes if the driver removed his/her focus from the driving task to look at an animal.

SAS Name: EXTFA8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Exterior Factor Location: Forward

Definition: This variable establishes if the location of the exterior factor(s) was forward of the driver's position.

SAS Name: EXTFALOC1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present at this location
1	One or more present at this location
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Variable Definitions and Codes - PCAEXT Data Set

Exterior Factor Location: Forward, Left

Definition: This variable establishes if the location of the exterior factor(s) was forward and left of the driver's position.

SAS Name: EXTFALOC2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present at this location
1	One or more present at this location
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Exterior Factor Location: Forward, Right

Definition: This variable establishes if the location of the exterior factor(s) was forward and right of the driver's position.

SAS Name: EXTFALOC3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present at this location
1	One or more present at this location
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Exterior Factor Location: Left

Definition: This variable establishes if the location of the exterior factor(s) was to the left of the driver's position.

SAS Name: EXTFALOC4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present at this location
1	One or more present at this location
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Variable Definitions and Codes - PCAEXT Data Set

Exterior Factor Location: Right

Definition: This variable establishes if the location of the exterior factor(s) was to the right of the driver's position.

SAS Name: EXTFALOC5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present at this location
1	One or more present at this location
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Exterior Factor Location: Rearward

Definition: This variable establishes if the location of the exterior factor was rearward of the driver's position.

SAS Name: EXTFALOC6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present at this location
1	One or more present at this location
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Exterior Factor Location: Other

Definition: This variable establishes if the location of the exterior factor was somewhere that is not captured by the other Exterior Factor Location variables.

SAS Name: EXTFALOC7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	None present at this location
1	One or more present at this location
8888	No driver present
9999	Unknown if exterior factor present or unknown location

Variable Definitions and Codes - PCAEXT Data Set

Illegal Maneuver: Crossed Full Barrier Lines While Passing

Definition: This variable identifies if the driver performed an illegal maneuver by crossing full barrier lines while passing.

SAS Name: ILLMAN1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown

Illegal Maneuver: Passed On Right

Definition: This variable identifies if the driver performed an illegal maneuver by passing on the right (i.e., drove off pavement to pass).

SAS Name: ILLMAN2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown

Illegal Maneuver: Turned From Wrong Lane

Definition: This variable identifies if the driver performed an illegal maneuver by turning from the wrong lane (i.e., turned left from the right lane or turned right from the left lane of a multilane roadway).

SAS Name: ILLMAN3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCAEXT Data Set

Illegal Maneuver: Initiated Illegal U-Turn

Definition: This variable identifies if the driver performed an illegal maneuver by performing a prohibited U-turn.

SAS Name: ILLMAN4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown

Illegal Maneuver: Failed To Obey Traffic Control Device

Definition: This variable identifies if the driver performed an illegal maneuver by not obeying the traffic control device (i.e., did not stop for a displayed red traffic signal phase or did not stop for a stop sign).

SAS Name: ILLMAN5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown

Illegal Maneuver: Drove Wrong Way On Roadway

Definition: This variable identifies if the driver performed an illegal maneuver by traveling the wrong way on a one-way roadway.

SAS Name: ILLMAN6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown

Variable Definitions and Codes - PCAEXT Data Set

Illegal Maneuver: Other Illegal Maneuver

Definition: This variable identifies if the driver performed an illegal maneuver that is not captured by the other Illegal Maneuver variables.

SAS Name: ILLMAN7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown

Aggressive Driving Act: Speeding

Definition: This variable documents if the driver exhibited aggressive behavior in terms of exceeding the speed limit by a minimum of 5 MPH (8.05 km/h) and the vehicle's speed has a bearing on subsequent crash events.

SAS Name: AGGRACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Aggressive Driving Act: Tailgating

Definition: This variable documents if the driver exhibited aggressive behavior in terms of traveling in close proximity to a vehicle forward of his/her vehicle's position.

SAS Name: AGGRACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Aggressive Driving Act: Rapid/Frequent Lane Changes/Weaving

Definition: This variable documents if the driver exhibited aggressive behavior in terms of weaving in and out of traffic to pass slower-moving vehicles.

SAS Name: AGGRACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Aggressive Driving Act: Ignoring Traffic Control Devices

Definition: This variable documents if the driver exhibited aggressive behavior in terms of violating a displayed red signal phase (includes stopping, then running red light) or stop sign.

SAS Name: AGGRACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Aggressive Driving Act: Accelerating Rapidly From Stop

Definition: This variable documents if the driver exhibited aggressive behavior in terms of repeatedly accelerating rapidly from a stop (often involving squealing tires).

SAS Name: AGGRACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Aggressive Driving Act: Stopping Suddenly

Definition: This variable documents if the driver exhibited aggressive behavior in terms of repeatedly braking late for a traffic control device and accelerating rapidly away from that location (repeating this behavior at the next TCD).

SAS Name: AGGRACT6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Aggressive Driving Act: Honking Horn

Definition: This variable documents if the driver exhibited aggressive behavior in terms of repeatedly honking the vehicle's horn at surrounding traffic to gain a time/space advantage.

SAS Name: AGGRACT7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Aggressive Driving Act: Flashing Lights

Definition: This variable documents if the driver exhibited aggressive behavior in terms of repeatedly flashing the vehicle's lights in an attempt to have traffic forward of this vehicle's position move either to the right or left so that this vehicle could "get by".

SAS Name: AGGRACT8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Aggressive Driving Act: Obscene Gestures

Definition: This variable documents if the driver exhibited aggressive behavior in terms of making obscene gestures at other drivers to indicate displeasure.

SAS Name: AGGRACT9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Aggressive Driving Act: Obstructing The Paths Of Others

Definition: This variable documents if the driver exhibited aggressive behavior in terms of physically obstructing the path of another vehicle by pulling in front of that vehicle.

SAS Name: AGGRACT10

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Aggressive Driving Act: Other

Definition: This variable documents if the driver exhibited aggressive behavior that is not captured by the other Aggressive Driving Act variables.

SAS Name: AGGRACT11

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Reason For Aggressive Driving Behavior: Anger

Definition: This variable documents if anger was the reason provided by the driver for driving aggressively. Drivers typically become angry with respect to the actions of other drivers.

SAS Name: REASONAGG1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown reason or if there was aggressive behavior

Reason For Aggressive Driving Behavior: Frustration

Definition: This variable documents if frustration was the reason provided by the driver for driving aggressively. Drivers typically exhibit frustration in response to situations or events.

SAS Name: REASONAGG2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown reason or if there was aggressive behavior

Reason For Aggressive Driving Behavior: Always Drive This Way

Definition: This variable documents if the driver indicated that the displayed driving behavior is his/her normal driving pattern.

SAS Name: REASONAGG3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown reason or if there was aggressive behavior

Variable Definitions and Codes - PCAEXT Data Set

Reason For Aggressive Driving Behavior: Other

Definition: This variable documents if the reason provided by the driver for driving aggressively is not captured by the other Reason For Aggressive Driving Behavior variables.

SAS Name: REASONAGG4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown reason or if there was aggressive behavior

Reason For Aggressive Driving Behavior: In A Hurry/Late

Definition: This variable documents if being late or in a hurry was the reason provided by the driver for driving aggressively.

SAS Name: REASONAGG5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown reason or if there was aggressive behavior

Reason For Aggressive Driving Behavior: Fleeing

Definition: This variable documents if fleeing was the reason provided by the driver for driving aggressively.

SAS Name: REASONAGG6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown reason or if there was aggressive behavior

Variable Definitions and Codes - PCAEXT Data Set

Reason For Aggressive Driving Behavior: Racing

Definition: This variable documents if racing other vehicles was the reason provided by the driver for driving aggressively.

SAS Name: REASONAGG7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No
1	Yes
8888	No driver present
9999	Unknown reason or if there was aggressive behavior

Driver Performance Error: Panic/Freezing

Definition: This variable identifies if the driver failed to initiate evasive action as a result of panicking or freezing. Panic refers to the irrational and impulsive actions that do not assist the effort of crash avoidance. Freezing refers to drivers who cannot move or cannot think of an evasive maneuver and, therefore, do nothing.

SAS Name: DRPERROR1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Driver Performance Error: Overcompensation

Definition: This variable identifies if the driver performed a driving error by overcompensating. Overcompensating refers to the driver's overreaction to a situation requiring some adjustment in the velocity or path of the vehicle.

SAS Name: DRPERROR2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Driver Performance Error: Poor Directional Control

Definition: This variable identifies if the driver failed to control the vehicle with skill ordinarily expected.

SAS Name: DRPERROR3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Driver Performance Error: Other

Definition: This variable identifies if the driver performed a driving error that is not captured by the other Driver Performance Error variables.

SAS Name: DRPERROR4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Related Experience Factor: Uncomfortable With Surrounding Traffic Densities

Definition: This variable establishes if the driver was uncomfortable with surrounding traffic densities. In this circumstance the densities are typically higher as might be associated with rush hour traffic.

SAS Name: OTEXPFACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Driver Related Experience Factor: Uncomfortable With General Traffic Speeds

Definition: This variable establishes if the driver was uncomfortable with the general speed of surrounding traffic. In this circumstance traffic is typically too fast for the driver's comfort.

SAS Name: OTEXPFACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Related Experience Factor: Uncomfortable With General Traffic Flow

Definition: This variable establishes if the driver was uncomfortable with some other aspect of the general traffic flow. In this circumstance traffic is typically starting/stopping suddenly, however other conditions also apply.

SAS Name: OTEXPFACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Related Experience Factor: Uncomfortable With Some Aspect Of Vehicle/Load

Definition: This variable establishes if the driver was uncomfortable with some aspect of the vehicle or the load.

SAS Name: OTEXPFACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Driver Related Experience Factor: Inexperienced Driver

Definition: This variable establishes if the driver had a lack of training or a lack of experience driving.

SAS Name: OTEXPFACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Driver Related Experience Factor: Other

Definition: This variable establishes if the driver was uncomfortable with an aspect of the traffic pattern that is not captured by the other Other Driver Related Experience Factor variables.

SAS Name: OTEXPFACT6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factor: View Obstruction - Related To Load

Definition: This variable documents if the driver experienced a view obstruction related to the vehicle's load (e.g., bunch of balloons blocked rear windows).

SAS Name: VCONFACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Condition Related Factor: View Obstruction - Related To Vehicle Design

Definition: This variable documents if the driver experienced a view obstruction related to the vehicle's design (e.g., view blocked by right upper A-pillar).

SAS Name: VCONFACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factor: View Obstruction - Related To Other

Definition: This variable documents if the driver experienced a view obstruction that is not captured by other Vehicle Condition Related Factor variables.

SAS Name: VCONFACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factor: Tire/Wheel Deficiency

Definition: This variable documents if the vehicle experienced a tire deficiency/malfunction (e.g., blowout, airout, etc.) during the precrash phase.

SAS Name: VCONFACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Condition Related Factor: Braking System Deficiency

Definition: This variable documents if the vehicle experienced a braking system deficiency or malfunction during the precrash phase.

SAS Name: VCONFACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factor: Engine Deficiency

Definition: This variable documents if the vehicle experienced an engine related problem during the precrash phase. Examples of engine related problems include stalling, missing, and throttle problems.

SAS Name: VCONFACT6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factor: Transmission Deficiency

Definition: This variable documents if the vehicle experienced a transmission deficiency or malfunction during the precrash phase.

SAS Name: VCONFACT7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Condition Related Factor: Suspension Deficiency

Definition: This variable documents if a suspension component (shock absorber, strut, etc.) was relevant or contributed to a loss of stability or control during the critical precrash phase.

SAS Name: VCONFACT8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factor: Lighting Deficiency

Definition: This variable documents if a lighting component (headlights, taillights etc.) was relevant or contributed to an event during the critical precrash phase.

SAS Name: VCONFACT9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Vehicle Condition Related Factor: Steering Deficiency

Definition: This variable documents if any steering component deficiency or malfunction was relevant or contributed to an event during the critical precrash phase.

SAS Name: VCONFACT10

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Vehicle Condition Related Factor: Other

Definition: This variable documents if a vehicle condition problem occurred during the precrash phase that was relevant to the crash occurrence and is not captured by other Vehicle Condition Related Factor variables.

SAS Name: VCONFACT11

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Traffic Flow Interruption Factor: Previous Crash Nearby

Definition: This variable documents if a previous nearby crash interrupted the flow of traffic.

SAS Name: FLOWFACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Traffic Flow Interruption Factor: Construction Work Zone

Definition: This variable documents if a construction work zone interrupted the flow of traffic.

SAS Name: FLOWFACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Traffic Flow Interruption Factor: Emergency Vehicle Approaching

Definition: This variable documents if an approaching emergency vehicle interrupted the flow of traffic.

SAS Name: FLOWFACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Traffic Flow Interruption Factor: Congested Traffic

Definition: This variable documents if traffic congestion interrupted the flow of traffic.

SAS Name: FLOWFACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Traffic Flow Interruption Factor: Other

Definition: This variable documents if the flow of traffic was interrupted by a factor that is not captured by one of the other Traffic Flow Interruption Factor variables.

SAS Name: FLOWFACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Traffic Flow Interruption Factor: Disabled Vehicle/Object In Roadway

Definition: This variable documents if a disabled vehicle or an object in the roadway interrupted the flow of traffic.

SAS Name: FLOWFACT6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Traffic Signs/Signal Missing/Defective

Definition: This variable documents if traffic signs were missing or if traffic signals were defective.

SAS Name: RWYFACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Roadway View Obstructions

Definition: This variable documents if there was a view obstruction associated with roadway design including such added devices as signal boxes, signal light support poles, guardrails, and crash cushions.

SAS Name: RWYFACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Roadway Related Factor: View Obstructed By Other Vehicle

Definition: This variable documents if the driver's view was obstructed by another vehicle.

SAS Name: RWYFACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Roadway Geometry (Crossover)

Definition: This variable documents if the roadway geometry, in the form of a crossover, was relevant to the crash.

SAS Name: RWYFACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Roadway Geometry (Curve)

Definition: This variable documents if the roadway geometry, in the form of a curve, was relevant to this crash.

SAS Name: RWYFACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Roadway Related Factor: Lane Delineation Problem

Definition: This variable documents if the driver encountered difficulty as a result of a lane delineation problem. The delineation markings in this circumstance may not be present, may be worn (i.e., reduced visibility), or may be covered in some manner (i.e., gravel, debris, etc.).

SAS Name: RWYFACT6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Narrow/No Shoulders

Definition: This variable documents if the driver experienced difficulty as a result of the shoulder which is not sufficiently wide.

SAS Name: RWYFACT7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Narrow Road

Definition: This variable documents if the driver experienced difficulty as a result of an insufficient roadway width.

SAS Name: RWYFACT8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Roadway Related Factor: Ramp Speed

Definition: This variable documents if the posted ramp entrance/exit speed was inappropriate. This includes circumstances where the posted speed is adequate for one class of vehicle, but is too high for another class of vehicle (e.g., adequate for automobiles, but too high for large trucks).

SAS Name: RWYFACT9

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Roadway Condition

Definition: This variable documents if the driver encountered difficulty as a result of a roadway maintenance condition. Specific areas of concern include potholes, deteriorated/broken road edges, washboard areas, and depressions where a localized area of the surface has sunk several inches or more.

SAS Name: RWYFACT10

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Wet Roads

Definition: This variable documents if the roads were wet from rain or other water source. This variable does not include slick or flooded roadways which are addressed by other variables.

SAS Name: RWYFACT11

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Roadway Related Factor: Road Under Water

Definition: This variable documents if at least one travel lane was completely covered with water. The depth of the water must have been greater than 1/4 of one inch.

SAS Name: RWYFACT12

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Slick Surface

Definition: This variable documents if the driver encountered a low friction surface due to an icy condition, loose debris, loose gravel/sand spread over a paved surface, oil build-up, or any other cause. (Wet surfaces are not included in this designation unless the moisture adds to an existing condition such as an oil build-up.)

SAS Name: RWYFACT13

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Roadway Related Factor: Road Washed Out

Definition: This variable documents if a portion of the roadway collapsed or was washed away as a result of exposure to running water.

SAS Name: RWYFACT14

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Roadway Related Factor: Other Roadway Problem

Definition: This variable documents if a roadway problem existed that is not captured by other Roadway Related Factor variables.

SAS Name: RWYFACT15

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Atmospheric Condition: Cloudy

Definition: This variable documents if the sky was cloudy just prior to the critical event.

SAS Name: WEATHER1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Atmospheric Condition: Snow

Definition: This variable documents if snow was falling just prior to the critical event.

SAS Name: WEATHER2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Atmospheric Condition: Fog, Smog, Smoke

Definition: This variable documents if fog, smog or smoke were present just prior to the critical event.

SAS Name: WEATHER3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Atmospheric Condition: Rain

Definition: This variable documents if rain was falling just prior to the critical event.

SAS Name: WEATHER4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Atmospheric Condition: Sleet, Hail

Definition: This variable documents if sleet, hail, freezing rain or freezing drizzle were falling just prior to the critical event

SAS Name: WEATHER5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Atmospheric Condition: Blowing Snow

Definition: This variable documents if snow was blowing just prior to the critical event.

SAS Name: WEATHER6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Atmospheric Condition: Severe Crosswinds

Definition: This variable documents if severe crosswinds were present just prior to the critical event.

SAS Name: WEATHER7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Atmospheric Condition: Other

Definition: This variable documents if other adverse atmospheric conditions were present just prior to the critical event that are not captured by the other Atmospheric Condition variables.

SAS Name: WEATHER8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Environmental Crash Factor: Sun Glare

Definition: This variable establishes if the driver's view of the roadway, environment, or other vehicles was obscured by sun glare.

SAS Name: OTENVFACT1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Environmental Crash Factor: Headlight Glare

Definition: This variable establishes if the driver's view of the roadway, environment, or other vehicles was obscured by headlight glare.

SAS Name: OTENVFACT2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Environmental Crash Factor: Blowing Debris

Definition: This variable establishes if the driver's view of the roadway, environment, or other vehicles was obscured by some form of blowing debris. Examples include paper, cardboard boxes, and tree limbs.

SAS Name: OTENVFACT3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - PCAEXT Data Set

Other Environmental Crash Factor: Smoke

Definition: This variable establishes if the driver's view of the roadway, environment or other vehicles was obscured by smoke. Examples include smoke from a grass fire, house fire, or forest fire.

SAS Name: OTENVFACT4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Other Environmental Crash Factor: Other Sudden Change In Ambient Conditions

Definition: This variable establishes if the driver's view of the roadway, environment or other vehicles was obscured by a sudden change in the ambient conditions that is not captured by the other Other Environmental Crash Factor variables.

SAS Name: OTENVFACT5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present
1	Present
8888	No driver present
9999	Unknown if present

Variable Definitions and Codes - TCD Data Set

TCD Data Set

The TCD (Traffic Control Device) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO and TCD. TCD is the type of traffic control device in the vehicle's direction of travel and this variable is detailed below. SCASEID, VEHNO and TCD uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the TCD data set with vehicle level data sets.

Traffic Control Device

Definition: This variable establishes the type of above-ground traffic controls regulating traffic in this vehicle's direction of travel.

SAS Name: TCD

Attribute Codes

<u>Code</u>	<u>Description</u>
0	No control devices
2	Control signal (on colors) w/ pedestrian signal
3	Control signal (on colors) w/o pedestrian signal
4	Control signal (on colors) unknown pedestrian signal
5	Flashing control signal
6	Flashing beacon
7	Flashing highway signal, unknown or other
8	Lane use control signal
9	Other highway signal
10	Highway signal, type unknown
11	Stop sign
12	Yield sign
13	Other regulatory sign
14	Unknown type of regulatory sign
15	School zone speed limit
16	School advance or crossing sign
17	Other school related sign
18	Warning sign
19	Officer, crossing guard, flagman, etc
20	Gates (active)
21	Flashing lights (active)
22	Traffic control signal (active)
23	Wigwags (active)
24	Bells (active)
25	Other train activated device
26	Active device, type unknown
27	Cross-bucks (passive)
28	Stop sign (passive)
29	Special warning device (passive)
30	Other passive railroad crossing device
31	Passive device, type unknown
32	Grade crossing controlled, type unknown

Variable Definitions and Codes - TCD Data Set

33	Other
9999	Unknown

TIRE Data Set

The TIRE (Tire) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO and TLOC. TLOC identifies the location of each tire on the vehicle and is further described below. SCASEID, VEHNO and TLOC uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the TIRE data set with vehicle level data sets. This data set also contains the following variables:

Tire Location

Definition: This variable identifies the tire location.

SAS Name: TLOC

Attribute Codes

<u>Code</u>	<u>Description</u>
1	Right front
2	Left front
3	Right rear
4	Left rear

Recommended Tire Type

Definition: This variable documents the manufacturer recommended tire type.

SAS Name: RECTIRE1

Attribute Codes

<u>Code</u>	<u>Description</u>
1	P metric
2	Light Truck Metric
3	Light Truck High Flootation
4	Light Truck Numeric
8	Other
7777	No OEM wheel at this location
9999	Unknown

Recommended Tire Size

Definition: This variable documents the manufacturer recommended tire size.

SAS Name: RECSIZE1

Attribute Codes

<u>Code</u>	<u>Description</u>
	Recommended tire size (text)
no wheel	No OEM wheel at this location
unknown	Unknown

Variable Definitions and Codes - TIRE Data Set

Recommended Tire Pressure

Definition: This variable documents the manufacturer recommended tire pressure.

SAS Name: RECPRES1

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Tire pressure (kPa)
7777	No OEM wheel at this location
9999	Unknown

Tire Manufacturer

Definition: This variable identifies the manufacturer of the tire.

SAS Name: TMAKE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	AKURET
2	AMERICAN
3	AMERICAN RADIAL
4	APACHE
5	ARIZONIAN
6	ARMSTRONG
7	ASTRO
8	ATLAS
9	AURORA
10	AVON
11	BARUM
12	BFGOODRICH
13	BIG O
14	BILT-MOR
15	BRADLEY
16	BRIDGESTONE
17	BRIGADIER
18	BRUNSWICK
19	CARQUEST
20	CASCADE
21	CAVALIER
22	CEAT
23	CENTENNIAL
24	CHENG SHIN
25	CONCORDE
26	CONTENTAL/TAG
27	CONTINENTAL
28	CO-OP

Variable Definitions and Codes - TIRE Data Set

29	COOPER
30	COOPER-EXPORT
31	CORDOVAN
32	CORNELL
33	COSMO
34	CRESTWOOD
35	CROWN
36	DANZIG
37	DAYTON
38	DEAN
39	DELTA
40	DENMAN
41	DIAMOND
42	DOMINATOR
43	DORAL
44	DOUBLE COIN
45	DOUGLAS
46	DUNLOP
47	DURALON
48	DYNASTAR
49	ELDORADO
50	ELECTRA
51	EMBASSY
52	ESCORT
53	EUROTECH
54	EXXON
55	FALKEN
56	FEDERAL
57	FIRESTONE
58	FISK
59	FORMULA
60	FRONTIER
61	FULDA
62	FUTURA
63	GENERAL
64	GILLETE
65	GISLAVED
66	GOODRICH
67	GOODYEAR
68	GT TIRE
69	GT TIRE US
70	GUARDIAN
71	GUARDSMAN
72	HALLMARK
73	HANKOOK
74	HERCULES
75	HIGH COUNTRY
76	HOOD

Variable Definitions and Codes - TIRE Data Set

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

Variable Definitions and Codes - TIRE Data Set

125	POS-A-TRACTION
126	REGUL
127	RELIANT
128	REMINGTON
129	REPUBLIC
130	REYNOLDS
131	RIKEN
132	ROAD KING
133	ROADMASTER
134	ROADPRO
135	RUNWAY
136	SEARS
137	SEMPERIT
138	SHELL
139	SIDEWINDER
140	SIEBERLING
141	SIGMA
142	SOLO-TECH
143	SONIC
144	SPARTAN
145	SPORT IV
146	STAR
147	STARFIRE
148	SUMITOMO
149	SUMMIT
150	SUPER SPORT
151	TACOMA
152	TBC
153	TELSTAR
154	TEMCO
155	TIGAR
156	TNT
157	TOSCO 76
158	TOURING SUPREME
159	TOYO
160	TREDTECH
161	TRIBUNE
162	TURNPIKE USA
163	ULTRA-TECH
164	UNION 76
165	UNIROYAL
166	UNIVERSAL
167	VANDERBILT
168	VIKING
169	VISA
170	VOGUE
171	VREDESTEIN
172	WESTERN AUTO

Variable Definitions and Codes - TIRE Data Set

173	WINSTON
174	WOOSUNG
175	YKS
176	YOKOHAMA
177	Allegiance IV
178	Lemans
179	Liberator
180	Wynstar
181	Pathfinder
7777	No OEM wheel at this location
8887	TIRE MISSING
8888	Other
9999	Unknown

Tire Model

Definition: This variable identifies the name of the model of the tire.

SAS Name: TMODEL

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Tire model (text)
no wheel	No OEM wheel at this location
unknown1	Unable to determine/tire destroyed
unknown	Unknown

Tire Type Used

Definition: This variable records the type of tire used.

SAS Name: TTYPE

Attribute Codes

<u>Code</u>	<u>Description</u>
1	P metric
2	Light Truck Metric
3	Light Truck High Floatation
4	Light Truck Numeric
7777	No OEM wheel at this location
8888	Other
9999	Unknown

Variable Definitions and Codes - TIRE Data Set

Tire Size Used

Definition: This variable records the size of tire used.

SAS Name: TSIZE

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Actual tire size (text)
no wheel	No OEM wheel at this location
unknown	Unknown

Tire Identification Number (TIN)

Definition: This variable provides the Tire Identification Number (VIN) for the tire, the tire industry's serial number for identifying tires.

SAS Name: TIN

Attribute Codes

<u>Code</u>	<u>Description</u>
*	TIN (text)
no wheel	No OEM wheel at this location
no number visible	No number visible
unknown	Unknown

Tread Depth

Definition: This variable provides the tread depth to the nearest millimeter measured on the shallowest groove of the tread.

SAS Name: TDEPTH

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Tire tread depth (mm)
7777	No OEM wheel at this location
9997	Unable to measure
9998	Tire destroyed
9999	Unknown

Variable Definitions and Codes - TIRE Data Set

Measured Tire Pressure

Definition: This variable documents the measured tire pressure.

SAS Name: TPRES

Attribute Codes

<u>Code</u>	<u>Description</u>
*	Tire pressure (kPa)
7777	No OEM wheel at this location
8882	Tire flat
9999	Unknown

Complete Tread Separation Prior To First Harmful Event

Definition: This variable documents if the entire tread separated from the tire body prior to the first harmful event.

SAS Name: TIREDAM1

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Partial Tread Separation Prior To First Harmful Event

Definition: This variable documents if any piece of tread separated from the tire body prior to the first harmful event.

SAS Name: TIREDAM2

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Variable Definitions and Codes - TIRE Data Set

Sidewall Separation Prior To First Harmful Event

Definition: This variable documents if the sidewall of the tire lost a piece(s) of the outer layer(s) but was not deflated prior to the first harmful event.

SAS Name: TIREDAM3

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Cuts/Tears In Sidewall Prior To First Harmful Event

Definition: This variable documents if pre-existing cuts and tears were visible in the tire sidewall prior to the first harmful event.

SAS Name: TIREDAM4

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Sidewall Blowout Prior To First Harmful Event

Definition: This variable documents if a blowout above the tread level or a combination of tread and sidewall blowout occurred prior to the first harmful event.

SAS Name: TIREDAM5

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Variable Definitions and Codes - TIRE Data Set

Tread Cut/Torn Prior To First Harmful Event

Definition: This variable documents if pre-crash cuts or tears in the tread of the tire were present prior to the first harmful event.

SAS Name: TIREDAM6

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Bubble Or Bulge Prior To First Harmful Event

Definition: This variable documents if a separation occurred in the layers of the tire prior to the first harmful event but did not form a flap.

SAS Name: TIREDAM7

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Sidewall Scuff Prior To First Harmful Event

Definition: This variable documents if precrash abrasions or brush marks were visible on the sidewall of the tire prior to the first harmful event.

SAS Name: TIREDAM8

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Variable Definitions and Codes - TIRE Data Set

Tire Rotted Prior To First Harmful Event

Definition: This variable documents if the tire appeared to be aged with cracks in the tread and sidewalls or the rubber appeared grayish or powdery prior to the first harmful event.

SAS Name: TIREDAM10

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Bead/Rim Separation Prior To First Harmful Event

Definition: This variable documents if the bead separated from the wheel rim due to cornering at high speeds, underinflation, or some other cause prior to the first harmful event.

SAS Name: TIREDAM11

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Tread Blowout Prior To First Harmful Event

Definition: This variable documents if a blowout in the tread or a combination of tread and sidewall blowout occurred prior to the first harmful event.

SAS Name: TIREDAM12

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Variable Definitions and Codes - TIRE Data Set

Puncture In Tread Prior To First Harmful Event

Definition: This variable documents if holes in the tread, usually caused by sharp objects, were present prior to the first harmful event.

SAS Name: TIREDAM13

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Deflated Unknown Reason Prior To First Harmful Event

Definition: This variable documents if the tire became deflated before or during the critical crash envelope and the reason for the deflation is not known.

SAS Name: TIREDAM14

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Puncture In Sidewall Prior To First Harmful Event

Definition: This variable documents if holes in the sidewall, usually caused by sharp objects, were present prior to the first harmful event.

SAS Name: TIREDAM15

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

Variable Definitions and Codes - TIRE Data Set

Other Tire Damage Prior To First Harmful Event

Definition: This variable documents if other tire damage was present prior to the first harmful event that is not captured by other variables dealing with precrash tire damage.

SAS Name: TIRE DAM16

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not present prior to first harmful event
1	Present prior to first harmful event
7777	No OEM wheel at this location
9999	Unknown

VEVENT Data Set

The VEVENT (Vehicle Events) data set contains the variables SCASEID, PSU, PSUSTRAT, CASEWGT, VEHNO, ACCSEQ and VEHSEQ. ACCSEQ is the event sequence number which identifies a particular event in the crash sequence. VEHSEQ is the event sequence number which identifies a particular vehicle's events in the crash sequence. SCASEID, VEHNO and VEHSEQ uniquely identify each record in this data set. SCASEID and VEHNO should be used to merge the VEVENT data set with vehicle level data sets. SCASEID and ACCSEQ should be used to merge the VEVENT data set with the EVENT data set. This data set also contains the following variables:

Vehicle Class, This Vehicle

Definition: This variable identifies the class of the vehicle.

SAS Name: VCLASS

Attribute Codes

<u>Code</u>	<u>Description</u>
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 type (<= 4,536 kgs GVWR)
39	Unknown pick up truck (<=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

Variable Definitions and Codes - VEVENT Data Set

90	Other vehicle
99	Unknown

General Area of Deformation, This Vehicle

Definition: This variable documents the plane of contact to the vehicle and represents the general area of the vehicle.

SAS Name: GADEV

Attribute Codes

<u>Code</u>	<u>Description</u>
9	Unknown
B	Back
C	TDC applicable vehicles, rear of cab
D	TDC applicable vehicles, rear of tractor
F	Front
L	Left side
N	Noncollision
R	Right side
T	Top
U	Undercarriage
V	TDC applicable vehicles, front of cargo area

Vehicle Class, Other Vehicle

Definition: This variable identifies the class of the other vehicle.

SAS Name: OTHCLASS

Attribute Codes

<u>Code</u>	<u>Description</u>
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)

Variable Definitions and Codes - VEVENT Data Set

30	Compact pickup truck (<= 4,536 kgs GVWR)
31	Large pickup truck (<= 4,536 kgs GVWR)
38	Other pickup truck type (<= 4,536 kgs GVWR)
39	Unknown pick up truck (<=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 Deformation, Other Vehicle

Definition: This variable documents the plane of contact to the other vehicle and represents the general area of the other vehicle.

SAS Name: OTHGADEV

Attribute Codes

<u>Code</u>	<u>Description</u>
0	Not a motor vehicle
9	Unknown
B	Back
C	TDC applicable vehicles, rear of cab
D	TDC applicable vehicles, rear of tractor
F	Front
L	Left side
N	Noncollision
R	Right side
T	Top
U	Undercarriage
V	TDC applicable vehicles, front of cargo area

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