U.S. Department of Transportation
National Highway Traffic Safety Administration

NHTSA

DOT HS 813 580

January 2025

Non-Traffic Surveillance Analytical User's Manual, 2016-2021

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Suggested APA Format Citation:

National Center for Statistics and Analysis. (2025, January). *Non-traffic surveillance analytical user's manual, 2016-2021* (Report No. DOT HS 813 580). National Highway Traffic Safety Administration.

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.	
DOT HS 813 580			
4. Title and Subtitle Non-Traffic Surveillance Analytical User's Manual, 2016-2021		**5. Report Date** January 2025 **6. Performing Organization Code**	
7. Authors National Center for Statistics and Analysis		**8. Performing Organization Report No.** DOT-VNTSC-NHTSA-xx- xx	
9. Performing Organization Name National Center for Statistics and Analysis National Highway Traffic Safety Administration 1200 New Jersey Avenue SE Washington, DC 20590		**10. Work Unit No. (TRAIS)** **11. Contract or Grant No.**	
12. Sponsoring Agency Name and Address National Highway Traffic Safety Administration 1200 New Jersey Avenue SE Washington, DC 20590		**13. Type of Report and Period Covered** **14. Sponsoring Agency Code**	
15. Supplementary Notes			
16. Abstract This is the updated and revised Non-Traffic Surveillance (NTS) Analytical User's Manual for the period 2016 to 2021.			
17. Key Words NTS; Non-Traffic Surveillance (NTS); Analytical User's Manual; 2016-2021		**18. Distribution Statement** Document is available to the public from the DOT, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, https://crashstats.nhtsa.dot.gov.	
19. Security Classif. (of this report) Unclassified	**20. Security Classif. (of this page)** Unclassified	**21. No. of Pages** 175	**22. Price**

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

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Introduction

One of the primary objectives of the National Highway Traffic Safety Administration (NHTSA) is to reduce the human toll and property damage that motor vehicle traffic crashes inflict on our society. Crashes each year result in thousands of lives lost, hundreds of thousands of injured victims, and billions of dollars in property damage. Accurate data are required to support the development, implementation, and assessment of highway safety programs aimed at reducing this toll. NHTSA uses data from many sources, including the Non-Traffic Surveillance (NTS) Non-Traffic Crash system.

The Non-Traffic Surveillance (NTS) data provide counts and details regarding fatalities and injuries that occur in non-traffic crashes as well as in non-crash incidents. The NTS non-traffic crash data are obtained through NHTSA's data collection efforts for the Crash Report Sampling System (CRSS), the Crash Investigation Sampling System (CISS), and the Fatality Analysis Reporting System (FARS). A non-traffic crash is a road vehicle crash in which no harmful events occur on a trafficway. The non-traffic crash injuries and fatalities data are coded cases which describe the crash, vehicle, precrash, and person level characteristics of each crash. Examples of non-traffic crashes include—but are not limited to—driveway backovers and crashes that occur in parking lots and on private roads.

NTS also includes data outside of NHTSA's own data collections. NTS non-crash events include both injuries and fatalities. NTS non-crash injury data is based upon emergency department records from a special study conducted by the Consumer Product Safety Commission's National Electronic Injury Surveillance System (NEISS) All Injury Program (AIP). Some types of non-crash injury events include—but are not limited to—injuries while entering or exiting vehicles (boarding or alighting), poisonings, burns, heat exhaustion (hyperthermia), and aspiration. NTS non-crash fatality data is derived from death certificate information from the Centers for Disease Control's National Vital Statistics System and from other non-crash events.

This multi-year analytical user's manual provides documentation on the evolution of coding practices of the NTS Non-Traffic Crash Data and the weighting methodology. The manual will continue to grow each year and present the historical coding from inception through present. It includes documentation on the data elements and other useful information that will enable the users to become familiar with the data system. The NTS Non-Traffic Crash Coding and Validation Manual provides more detailed definitions and coding rules for each data element and attribute. This manual is available at NCSA Publications — Manuals and Documentation — NTS.

The compilation of NTS Non-Traffic Crash data is a priority for NHTSA. These data store valuable information that will be preserved over time and are available for present and future use. This analytical user's manual should help improve the usefulness and accessibility of the NTS data. With the exception of personal notes, there is no reason to keep older versions of this reference manual. All information in earlier editions has been retained in this newer version.

New in 2021 NTS

New and Noteworthy

The Analytical User's Manual is updated annually to reflect necessary revisions and ensure quality data collection and analysis. NTS data elements evolve based on any number of factors including the needs of end-users. Changes are made with careful consideration and collaboration among key stakeholders. Below are the notable changes, challenges, reclassifications, or other issues the analyst should be aware of for this year.

New PERSON_ADJ Data File

Beginning in 2021, the Person_adj was added. This file contains the data element ADJUST which is an adjustment factor for weighting the data. For more information on this data element, see NTS Weights and Estimation. The data element was previously in the Accident data file and has been discontinued there. These changes are new in 2021, and have been retroactively instated in previous years' data files.

Data Elements With Changes

Below is a list of NTS data elements that have substantial changes for 2021. Changes are denoted in ***bold/italics*** for additions and strikethrough for deletions. More detailed information on each data element can be found in the NTS Coding and Validation Manual. NHTSA's National Center for Statistics and Analysis (NCSA) publishes these manuals for each year of data collection and they can be found at: NCSA Publications — Manuals and Documentation-NTS

Data Element ID	Data Element Name	SAS Table.NAME	Comments
V9	Vehicle Identification Number	Vehicle.VIN, Parkwork.PVIN	▪ Revised attribute label: 0s (No VIN Required, ***Not a Vehicle for Road Use***)
V13	vPIC Body Class	Vehicle.VPICBODYCLASS, Parkwork.PVPICBODYCLASS	▪ New attributes: ○ ***128 (Ambulance)*** ○ ***129 (Street Sweeper)*** ○ ***130 (Fire Apparatus)***
V17	Final Stage Body Class	Vehicle.ICFINALBODY, Parkwork.PICFINALBODY	▪ New attributes: ○ ***128 (Ambulance)*** ○ ***129 (Street Sweeper)*** ○ ***130 (Fire Apparatus)***
V20	Trailer VIN	Vehicle.TRLR1VIN, Vehicle.TRLR2VIN, Vehicle.TRLR3VIN, Parkwork.PTRLR1VIN,	▪ Revised attribute label: 0s (No VIN Required, ***Not a Vehicle for Road Use***)

Data Element ID	Data Element Name	SAS Table.NAME	Comments
		Parkwork.PTRLR2VIN, Parkwork.PTRLR3VIN	
NM7A	Non-Motorist Conveyance Type	Person.NMCNVTYP	▪ Revised attribute labels: o 21 (Skateboard~~***s***~~) o 23 (Scooter~~***s***~~) o 24 (Toy Wagon~~***s***~~) o 25 (Toy *C*ar~~***s***~~) o 26 (Two-***W***heeled ***S***elf-balancing ***P***ersonal *T*ransportation ***D***evice) o 27 (Wheelchair~~***s***~~) o 28 **(~~*Handicapped*~~ *S*cooter~~***s***~~ *for Person with a Disability*)** ▪ New attribute and remarks: o ***97 (Other Non-Motorist Conveyance Type)*** o ***99 (Unknown Non-Motorist Conveyance Type)*** ▪ Removed attribute: ~~***29 (Unknown Non-Motorist Conveyance Type)***~~

NTS Weights and Estimation

In this section, we describe what records of NTS are weighted, the NTS estimation method, the NTS weights calculation, and the proper usage of NTS weights.

The United States Congress asked NHTSA to collect data and make estimates about

- Non-traffic crash fatality and injury, and
- Non-crash fatality and injury.

This was made mandatory under Public Law Number 109-59, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and under Public Law Number 110-189, the Cameron Gulbransen Kids Transportation Safety Act of 2007 (K.T. Safety Act).

Both non-traffic crashes and non-crash incidents have motor vehicle-related injuries and fatalities that occur off the public trafficway. Non-traffic crashes involve motor vehicles in-transport, while the non-crash incidents involve motor vehicles not in-transport. Non-traffic crashes are mostly single-vehicle crashes on private roads, two-vehicle crashes in parking facilities, or collisions with pedestrians in driveways.

NHTSA has been using the National Electronic Injury Surveillance System–All Injury Program (NEISS–AIP) data to make the non-crash injury estimates. NHTSA had used the General Estimates System (NASS–GES) non-traffic crash data and the Fatality Analysis Reporting System (FARS) non-traffic crash data to make the non-traffic crash fatality and injury estimates up to 2015.

In 2016 NHTSA implemented a new annual survey, the Crash Report Sampling System (CRSS), to replace the GES. Accordingly, from 2016 NHTSA started using the CRSS non-traffic crash data to make the non-traffic crash fatality and injury estimates. In this section we describe the CRSS and the FARS data systems, the NTS estimation method, the weighting methodology for the NTS injuries and fatalities, and how to use the weights to make the non-traffic crash injury and fatality estimates. The 2016–2021 NTS used the same weighting methodology as 2015 and previous years.

CRSS was designed independent of other NHTSA surveys. The target population for the CRSS is the same as the GES target population: all police-reported motor vehicle crashes on trafficways. Some of these crashes occur outside of trafficways and hence are not within the scope of CRSS. Such crashes are set aside for the NTS.

Like the GES, CRSS also has a multi-stage, stratified, unequal selection, probability sample design. The primary sampling unit (PSU) is either a county or a group of counties. Sixty PSUs were selected using a stratified, multi-phase, systematic sampling method. Within each sampled PSU, one or more police jurisdictions (PJ) were selected using the stratified Pareto sampling method. From each sampled PJ, police crash reports (PCRs) were systematically listed and sampled. The associated systematic sampling interval is called the sub-listing factor. During this listing process, if a PCR is about a non-traffic crash, then it is set aside for NTS coding.

Otherwise, if it is about a CRSS in-scope crash then it is further stratified into one of the nine CRSS PCR strata for further CRSS PCR sample selection. Based on this sample design, the base weight for a NTS non-traffic crash record is the product of its PSU weight, PJ weight, and sub-listing factor. In addition, the people involved in the same non-traffic crash have the same Person weights that are equal to the crash base weight because there is no further subsequent Person sampling in each crash.

FARS, on the other hand, is a census of all traffic fatal crashes. During the FARS data collection, if a crash is identified as a non-traffic fatal crash, it is set aside for the NTS. Therefore, all identified non-traffic fatal crash PCRs were sampled with certainty. Therefore, all FARS non-traffic crashes and people have a base weight of one.

NTS uses a dual frame method to make estimates for injuries and fatalities. For a fatality estimate, only the fatal records collected from the FARS non-traffic crashes are used. For an injury estimate, injury records collected from both the FARS non-traffic crashes and the CRSS non-traffic injury crashes are used. CRSS fatal non-traffic crashes are not used for the NTS injury and fatality estimates because non-traffic fatal crashes are included in the FARS non-traffic fatal crashes.

However, the fatality and injury estimates made using these base weights showed systematic under-estimation when compared to the auxiliary information obtained from the National Vital Statistics System (NVSS) mortality data collected by the Centers for Disease Control and Prevention (CDC) and the State data from the State Data System (SDS) collected by NHTSA.

NVSS's mortality data is a census of all fatalities (traffic or non-traffic). It can be used to calculate the total number of crash-related fatalities (traffic or non-traffic). On the other hand, FARS provides the total number of crash-related traffic fatalities. The difference between the NVSS's total number of crash-related fatalities and the FARS's total number of crash-related traffic fatalities is the total number of crash-related non-traffic fatalities.

NHTSA's State Data System includes computer data files coded from police crash reports provided by more than 30 States. Some States provide both traffic crash and non-traffic crash data so that the ratio of non-traffic crash injuries to traffic crash injuries can be calculated. The product of this ratio and the estimated number of traffic crash injuries from CRSS is an estimate of the non-traffic crash injuries.

The fact that NTS estimates are lower than the estimates made using the NVSS and the SDS information suggests there may be an under-coverage error of the NTS non-traffic crashes through the FARS and the CRSS data collection framework. Essentially, many non-traffic crashes were not available to the CRSS PCR collection or the FARS PCR collection. To mitigate this coverage error, the NTS non-traffic crash injury and fatality estimates were calibrated to the known auxiliary information. This was performed by adjusting the NTS base weights so that the NTS injury and fatality estimates equal the better overall totals from the NVSS and the SDS information. Specifically, the NTS Person records were post-stratified into four cells generated by two dichotomous variables: person type (occupant or non-occupant) and injury severity (injured or killed). For each of the two killed person cells (killed occupants and killed non-occupants), the first step is to calculate the total number of non-traffic crash fatalities from the NVSS and the FARS as described above. Then the total number of non-traffic crash fatalities is

estimated separately by the number of the NTS non-traffic crash fatalities in the cell. The ratio of the two totals, the total estimated from the NVSS and the FARS, and the total estimated from NTS non-traffic crash fatalities, is the adjustment factor of the cell. A killed person's final weight is the product of the base weight and the adjustment factor.

Five States (Indiana, Kentucky, Nebraska, New Jersey, and North Carolina) from NHTSA's SDS provided both non-traffic crash injury data and the traffic crash injury data for each of the two injured person cells (injured occupants and injured non-occupants). For each of the five States, we calculated the non-traffic injury to traffic injury ratio using all the available data up to the current year. Then we took the median ratio of the five States and multiplied it by the total number of traffic injuries estimated from the CRSS traffic crashes. This gives us an estimate of the total number of the non-traffic injuries. Separately, the NTS total non-traffic injuries is estimated by the sum of the NTS non-traffic injured person's base weights in the cell. The ratio of the two total non-traffic injury estimates, one using the SDS data and the other from the NTS injury cases, is the adjustment factor of the cell. The final weight of a non-traffic injured person is the product of the base weight of the person and the adjustment factor. Table 1 lists 2016–2021 adjustment factors.

Table 1. 2016–2021 Adjustment Factors

Cell	Adjustment Factor					
	2016	**2017**	**2018**	**2019**	**2020**	**2021**
Occupant Fatalities	34.21	41.09	39.61	43.30	33.29	30.27
Nonoccupant Fatalities	16.02	10.54	9.58	19.08	13.49	12.34
Occupant Injuries	6.25	5.06	5.20	4.18	3.63	3.71
Nonoccupant Injuries	4.54	2.78	2.88	2.75	2.43	2.01

Because these adjustments are performed at the Person level, people with different person types (occupant or non-occupant) or injury severity (killed or injured) involved in the same crash may have different adjustment factors and hence have different final weights. These final weights can only be applied to the Person Level file.

In addition, only those injured and killed people from the NTS FARS non-traffic crashes and those injured people from the NTS CRSS non-traffic injury crashes are weighted.

The final weights for the weighted injured and killed people can be found in file PERSON_ADJ. To use these weights to make estimates, merge this file to the NTS Person file by matching variables: CASENUM, VEH_NO, and PER_NO. The final weight variable name is ADJUST. Only the matched Person records with positive ADJUST values should be used to make NTS non-traffic crash-related injury or fatal estimates. Please see DOT HS 813 225[1] for the method of estimating the standard errors of the NTS estimates.

[1] Zhang, F., Noh, E. Y., & Boyle, L. (2021, December). *Crash Report Sampling System: Composite estimator variance estimation* (Report No. DOT HS 813 225). National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813225

NTS SAS Data Files

NTS data are made available to the public in Statistical Analysis System (SAS) data files as well as Comma Separated Value files (CSV). For the current data collection year, there are 10 data files. The current data files are: Accident, Vehicle, Person, Parkwork, Cevent, Vevent, Vsoe, Damage, Distract, and Vision data files. Three of these data files contain one data element each in which the analyst could code multiple responses: Damage, Distract, and Vision. That is, the NTS Coding and Validation Manual instructs coders to "select all that apply" for these data elements. Therefore, there is a record for each response.

The data files are presented with their data elements in the Data Elements Definitions and Codes section. For each of the data elements, a brief definition is provided along with any additional information that could assist analyses. SAS names and values are also provided for the data elements.

The SAS data files are:

- ***Accident***: This data file contains information about crash characteristics. There is one record per crash.
- ***Vehicle***: This data file contains information describing the motor vehicles in-transport and the drivers of motor vehicles in-transport who are involved in the crash: There is one record per motor vehicle in-transport. Parked and working vehicle information is in the Parkwork data file.
- ***Person***: This data file contains information describing all people involved in the crash including motorists (i.e., drivers and passengers of motor vehicles in-transport) and non-motorists (e.g., pedestrians and pedalcyclists). It provides information such as age, sex, vehicle occupant restraint use, and injury severity. There is one record per person.
- ***Parkwork***: This data file contains information about parked and working vehicles that were involved in NTS crashes. A parked vehicle is a motor vehicle that is stopped off the roadway, i.e., parked off the roadway. A working vehicle is a motor vehicle involved in trafficway maintenance, construction, or utility activities. It excludes vehicles performing private maintenance, construction, or utility activities. Data users are strongly advised to consult the annual NTS Coding and Validation Manuals for a detailed discussion. There is one record per parked/working vehicle.
- ***Cevent***: This data file contains information for all of the qualifying events (harmful) that occurred in the crash. It details the chronological sequence of events resulting from an unstabilized situation that constitutes a motor vehicle traffic crash. There is one record per event. Included in each record is a description of the event or object contacted, the vehicles involved, and the vehicles' areas of impact.
- ***Vevent***: This data file contains the sequence of events for each motor vehicle in-transport involved in the crash. This data file has the same data elements as the Cevent data file. In addition, this data file has a data element that records the sequential event number for each vehicle (VEVENTNUM). There is one record for each event for each motor vehicle in-transport.
- ***Vsoe***: This data file contains the sequence of events for each motor vehicle in-transport involved in the crash. This data file has a subset of the data elements contained in the

Vevent data file (It is a simplified Vevent data file). There is one record for each event for each motor vehicle in-transport.

- ***Damage***: This data set contains information about all of the areas on this vehicle that were damaged in the crash. There is one record per damaged area.
- ***Distract***: This data file contains information about driver distractions. Each distraction is a separate record. There is at least one record per motor vehicle in-transport.
- ***Vision***: This data file contains information about circumstances that may have obscured the driver's vision. Each obstruction is a separate record. There is at least one record for each driver of motor vehicle in-transport.
- ***Person_adj****:* This data file contains the final weights for occupant fatalies, occupant injuries, non-occupant fatalities, and non-occupant injuries involved in the non-traffic crash.

NTS Data Element List

The following lists all SAS data elements with their SAS data file locations. Except for key data elements, if the element does not have a Data Element ID at the left side of the list then it has been discontinued.

Data Element List

Data Element Definitions and Codes

This section represents the majority of the manual. It provides information on each data element, including definitions, SAS names, attribute codes and attribute labels. Over the years, changes have been made to the data collected. Some data elements have been dropped, new ones added, and attribute codes of individual data elements have changed. Element changes and the years for which individual attributes are available are shown for each data element.

For a detailed description of each data element including coding instructions and attribute definitions, see the NTS Coding and Validation Manual. The Coding Manual is published for each year of data collection and is available at:

NCSA Publications — Manuals and Documentation — NTS.

Additionally, a SAS program (format[YY].sas) and catalog (formats.sas7bcat) are provided with the data files each year for applying the labels and formats described in this section to the current year's attributes.

The data elements in this section are listed under the data file in which they are stored. Some data elements are provided in more than one data file to facilitate analyses. For example, Month of Crash (MONTH) is a crash-level data element but for convenience it is also provided in the Vehicle, Parkwork, and Person files. For such elements, they are listed under the primary data file only.

All data elements are numeric except the following which are character.

- V13 Vehicle Identification Number (VIN, PVIN) [12 characters]

Key Data Elements

All of the data files contain the following four crash-level data elements:

Case Number

Definition

This data element is the unique case number assigned to each crash. It appears on each data file and is used to merge information from the data files together.

Additional Information

This data element is assigned by the data entry system to each crash and is the unique identifier for the crash within the year. It is used as the key, when any two of these files from the same year are merged.

SAS Name

CASENUM

Attribute Codes

2016-Later	
xx	Case Number

Primary Sampling Unit (PSU)

Definition

This data element identifies the general geographic location from where the police report was sampled. A PSU is either a large central city, a county surrounding a city, or a group of counties.

Additional Information

SAS Name

PSU

Police Jurisdiction (PJ)

Definition

This data element identifies the number of the police jurisdiction from which the police crash report was originally sampled.

Additional Information

SAS Name

PJ

Attribute Codes

2016-Later	
46-4060	Police Jurisdiction Number

Study

Definition

This data element is the data collection system source that identified the case as applicable to NTS.

Additional Information

SAS Name

STUDY

All of the vehicle level data files contain the preceding accident level data elements as well as VEH_NO:

Vehicle Number

Definition

This data element is the consecutive number assigned to each vehicle in the case. This data element appears on each vehicle level data file and is used in conjunction with the CASENUM data element to merge information from vehicle level data files.

Additional Information

All vehicles (motor vehicles in-transport as well as parked/working vehicles) are sequentially ordered starting with 1.

SAS Name

VEH_NO

Attribute Codes

2016-Later	
0	Non-Motorist
1-999	Assigned Vehicle Number

All of the person level data files contain the preceding accident level and vehicle level data elements as well as PER_NO:

Person Number

Definition

This data element is the consecutive number assigned to each person in the case (i.e., each occupant, pedestrian, or non-motorists involved in the crash). This data element appears on each person level data file and is used in conjunction with the CASENUM data element (and sometimes the VEH_NO data element) to merge information from person level data files.

Additional Information

This data element is computer assigned. Each occupant of the vehicle is numbered and each non-occupant is numbered; in the case of a non-occupant the vehicle number is zero. The numbers for occupants are consecutive, for each vehicle, beginning with 1. Numbers are never skipped. Drivers do not have to be coded 1. Non-occupants are identified by vehicle number 0 and are numbered consecutively starting with 1 for each non-motorist. To get drivers see data element PER_TYP, under Person Type.

SAS Name

PER_NO

Attribute Codes

2016-Later	
1-999	Assigned Person Number

The CEVENT and VEVENT data files contain the preceding crash level data elements as well as EVENTNUM:

Event Number

Definition

This data element is the consecutive number assigned to each harmful and non-harmful event in a crash, in chronological order.

Additional Information

Qualifying events are those that involve a motor vehicle in-transport or an object set in motion by a motor vehicle in-transport.

SAS Name

EVENTNUM

Attribute Codes

2016-Later	
1-999	Event Number

The VEVENT and VSOE data files contain the preceding crash level data elements and VEH_NO as well as VEVENTNUM:

Vehicle Event Number

Definition

This data element is the consecutive number assigned to each harmful and non-harmful event for this vehicle, in chronological order.

Additional Information

The vehicle's event number shows the chronological sequence of the qualifying harmful and non-harmful events involving a particular vehicle. Qualifying events are those that involve a motor vehicle in-transport or an object set in motion by a motor vehicle in-transport.

SAS Name

VEVENTNUM

Attribute Codes

2016-Later	
1-999	Vehicle Event Number

The ACCIDENT Data File

The Accident data file includes crash data. It contains the data elements CASENUM, PSU, PJ, and STUDY, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The Accident data file also contains the data elements on the following pages.

CASENUM is the unique case identifier for each record.

C3 Number of Persons Not in Motor Vehicles

Definition

This data element is the number of Person Forms (Not a Motor Vehicle Occupant) that are applicable to this case (i.e., non-occupants).

Additional Information

This represents the number of forms created for people *not* in motor vehicles. Prior to 2020, it is the number of people in the crash where "Person Type" is in (4, 5, 6, 7, 10, 19, 20, 21, 22, 23, 24, 25, 26, 27, or 28). Starting in 2020, the attributes are in (4, 5, 6, 7, 10, 11, 12, 13, or 19).

Note: People where "Person Type" = 3 (Occupant of a Motor Vehicle Not In-Transport) are *not* included in this data element but are counted in C3A below.

SAS Name

PEDS

Attribute Codes

2016-Later	
0-99	Number of Persons Not in Motor Vehicles

C3A Number of Persons Not in Motor Vehicles In-Transport (MVIT)

Definition

This data element is a count of the number of non-motorists in the crash. A non-motorist is defined as a pedestrian, a cyclist, an occupant of a motor vehicle not in-transport, a person riding a horse, an occupant of an animal drawn conveyance, person associated with non-motorist conveyance (e.g., baby carriage, skateboard, wheelchair), or an other non-motorist (e.g., person outside a trafficway, person in a house).

Additional Information

Prior to 2020, this data element is calculated as the count of all people in the crash where "Person Type" is in (3, 4, 5, 6, 7, 10, 19, 20, 21, 22, 23, 24, 25, 26, 27, or 28). Starting in 2020, the attributes are in (3, 4, 5, 6, 7, 10, 11, 12, 13, or 19).

SAS Name

PERNOTMVIT

Attribute Codes

2016-Later	
0-98	Number of Persons Not in Motor Vehicles In-Transport

C4 Number of Total Motor Vehicles

Definition

This data element is the number of contact motor vehicles that the officer reported on the police crash report as a unit involved in the crash.

Additional Information

This number represents all of the motor vehicles in the crash. This includes the vehicles in-transport that are documented in the Vehicle data file and the vehicles not in-transport that are documented in the Parkwork data file. This data element only appears in the Accident data file.

SAS Name

VE_TOTAL

Attribute Codes

2016-Later	
1-999	Number of Vehicles in Crash

C4A Number of Motor Vehicles In-Transport (MVIT)

Definition

This data element is a count of the number of motor vehicles in-transport involved in the crash. Legally parked vehicles are not included.

Additional Information

This data element is derived as the count of all vehicles in the crash where "Unit Type" = 1. It is the number of records in the Vehicle data file.

This data element also appears in the Vehicle and Person data files, and in the Parkwork data file as PVE_FORMS.

SAS Name

VE_FORMS

Attribute Codes

2016-Later	
1-999	Number of Vehicles

C4B Number of Parked/Working Vehicles

Definition: This data element is a count of the number of parked and working vehicles involved in the crash.

Additional Information

This data element is derived as the count of all vehicles in the crash where "Unit Type" is in (3 or 4). It is the number of records in the Parkwork data file.

Working vehicles include only vehicles involved in trafficway maintenance, construction, or utility activities. Vehicles performing private maintenance, construction, or utility activities are excluded.

SAS Name

PVH_INVL

Attribute Codes

2016-Later	
0-999	Number of Parked/Working Vehicles in the Crash

C5A Number of Persons in Motor Vehicles In-Transport (MVIT)

Definition

This data element is a count of the number of motorists in the crash. A motorist is a driver, passenger or unknown occupant type of a motor vehicle in-transport.

Additional Information

This data element is derived as the count of all people in the crash where "Person Type" is in (1, 2 or 9).

Note: People where "Person Type" = 3 (Occupant of a Motor Vehicle Not In-Transport) are *not* included in this data element.

SAS Name

PERMVIT

Attribute Codes

2016-Later	
0-999	Number of Persons in Motor Vehicles In-Transport

C8 Crash Date

C8A Month of Crash

Definition

This data element records the month in which the crash occurred.

Additional Information

This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PMONTH.

SAS Name

MONTH

Attribute Codes

2016-Later	
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

C8C Day of Week

Definition

This data element records the day of the week on which the crash occurred.

Additional Information

This data element is derived from the SAS Weekday function. The SAS Weekday function returns the day of the week from a date.

SAS Name

DAY_WEEK

Attribute Codes

2016-Later	
1	Sunday
2	Monday
3	Tuesday
4	Wednesday
5	Thursday
6	Friday
7	Saturday
9	Unknown

C8D Year of Crash

Definition

This data element records the year in which the crash occurred.

Additional Information

SAS Name

YEAR

Attribute Codes

2016-Later	
xxxx	Year of the Crash

C9 Crash Time

C9A Hour of Crash

Definition

This data element records the hour at which the crash occurred.

Additional Information

Military time is used. Noon is coded as "12." Midnight is coded as HOUR=0 and MINUTE=0. Hour is coded 0 for 1 minute after midnight to 59 minutes after midnight.

This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PHOUR.

SAS Name

HOUR

Attribute Codes

2016-Later	
0-23	Hour
99	Unknown

C9B Minute of Crash

Definition

This data element records the minutes after the hour at which the crash occurred.

Additional Information

This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PMINUTE.

SAS Name

MINUTE

Attribute Codes

2016-Later	
0-59	Minute
99	Unknown

C19 First Harmful Event

Definition

This data element describes the first injury or damage producing event of the crash.

Additional Information

"First Harmful Event" applies to the crash. "Most Harmful Event" (M_HARM) applies to the vehicle. "First Harmful Event," "Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes.

This data element is derived from the "Sequence of Events" data element.

This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PHARM_EV.

SAS Name

HARM_EV

Attribute Codes

2016	2017	2018-Later	
Non-collision Harmful Events			
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion or Partial Immersion
4	4	4	Gas Inhalation
5	5	5	Fell/Jumped from Vehicle
6	6	6	Injured in Vehicle (Non-Collision)
7	7	7	Other Non-collision
16	16	16	Thrown or Falling Object
44	44	44	Pavement Surface Irregularity (Ruts, Potholes, Grates, etc.)
51	51	51	Jackknife (Harmful to This Vehicle)
72	72	--	Cargo/Equipment Loss or Shift (Harmful to This Vehicle)
--	--	72	Cargo/Equipment Loss, Shift, or Damage (Harmful)
Collision with Motor Vehicle In-Transport			
54	54	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
55	55	55	Motor Vehicle in Motion Outside the Trafficway

2016	2017	2018-Later	
Collision with Object Not Fixed			
8	8	8	Pedestrian
9	9	9	Pedalcyclist
10	10	10	Railway Vehicle
11	11	11	Live Animal
14	14	14	Parked Motor Vehicle
15	15	15	Non-Motorist on Personal Conveyance
18	18	18	Other Object Not Fixed
45	45	45	Working Motor Vehicle
49	49	49	Ridden Animal or Animal Drawn Conveyance
73	73	73	Object That Had Fallen From Motor Vehicle In-Transport
74	74	74	Road Vehicle on Rails
--	91	91	Unknown Object Not Fixed
Collision with Fixed Object			
17	17	17	Boulder
19	19	19	Building
20	20	20	Impact Attenuator/Crash Cushion
21	21	21	Bridge Pier or Support
23	23	23	Bridge Rail (Includes Parapet)
24	24	24	Guardrail Face
25	25	25	Concrete Traffic Barrier
26	26	26	Other Traffic Barrier
30	30	30	Utility Pole/Light Support
31	31	31	Post, Pole or Other Support
32	32	32	Culvert
33	33	33	Curb
34	34	34	Ditch
35	35	35	Embankment
38	38	38	Fence
39	39	39	Wall
40	40	40	Fire Hydrant
41	41	41	Shrubbery
42	42	42	Tree (Standing Only)
43	43	43	Other Fixed Object
46	46	46	Traffic Signal Support
48	48	48	Snow Bank
50	50	50	Bridge Overhead Structure

2016	2017	2018-Later	
52	52	52	Guardrail End
53	53	53	Mail Box
57	57	57	Cable Barrier
58	58	58	Ground
59	59	59	Traffic Sign Support
--	93	93	Unknown Fixed Object
--	--	98	Harmful Event, Details Not Reported (Since 2019)
99	99	--	Unknown
--	--	99	Reported as Unknown

C20 Manner of Collision of the First Harmful Event

Definition

This data element describes the orientation of two motor vehicles in-transport when they are involved in the "First Harmful Event" of a collision crash. If the "First Harmful Event" is not a collision between two motor vehicles in-transport it is classified as such.

Additional Information

Prior to 2019 this data element's name was "Manner of Collision."

This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PMAN_COLL.

SAS Name

MAN_COLL

Attribute Codes

2016-2017	2018	2019-Later	
0	0	--	Not Collision with Motor Vehicle In-Transport
--	--	0	First Harmful Event was Not a Collision with Motor Vehicle In-Transport
1	1	1	Front-to-Rear
2	2	2	Front-to-Front
6	6	6	Angle
7	7	7	Sideswipe – Same Direction
8	8	8	Sideswipe – Opposite Direction
9	9	9	Rear-to-Side
10	10	10	Rear-to-Rear
11	11	11	Other
98	98	98	Not Reported
99	--	--	Unknown
--	99	99	Reported as Unknown

C23A Location of First Harmful Event

Definition

This data element identifies the location of the crash based on the "First Harmful Event."

Additional Information

SAS Name

LOC_FHE

Attribute Codes

2016-Later	
1	Residential Driveway
2	Residential Garage
3	Residential Parking Lot
4	Other Residential Area
5	Commercial Driveway
6	Commercial Parking Lot
7	Other Commercial Area
8	Parking Garage Structure (Residential or Commercial)
10	Other Parking Lot (Incl. All Parking Lots Of Unknown Type)
11	Other Private Road (Incl. Alleys That Are Not Trafficways)
12	Other Developed Area
13	Undeveloped Area
14	Other Structure (Not Parking Garage Structure)
15	Railway
16	Unknown Driveway Type
98	Not Reported
99	Unknown/Reported as Unknown (since 2018)

C27 School Bus Related

Definition

This data element identifies if a school bus, or motor vehicle functioning as a school bus, is related to the crash.

Additional Information

The number of school bus related crashes may not equal the number of crashes with school buses involved. For example, if a vehicle goes around a stopped school bus and hits a pedestrian, the school bus usually will not be coded, but the crash is school bus related.

SAS Name

SCH_BUS

Attribute Codes

2016-Later	
0	No
1	Yes

C90 Maximum Injury Severity in Crash

Definition

This data element records the single most severe injury of all people involved in the crash, and is derived from "Injury Severity" in the Person data file.

Additional Information

The following order of severity is used.

- 4-Fatal
- 3-Suspected Serious Injury
- 2-Suspected Minor Injury
- 1-Possible Injury
- 5-Injured, Unknown Severity
- 0-No Apparent Injury
- 6-Died Prior
- 9- Unknown/Not Reported
- 8-No Person Involved in Crash

See Appendix A: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

SAS Name

MAX_SEV

Attribute Codes

2016-Later	
0	No Apparent Injury
1	Possible Injury
2	Suspected Minor Injury
3	Suspected Serious Injury
4	Fatal
5	Injured, Severity Unknown
6	Died Prior to Crash
8	No Person Involved in Crash
9	Unknown/Not Reported

C91 Number Injured in Crash

Definition

This data element records the number of people injured in the crash and is derived by counting all people with "Injury Severity" of (1, 2, 3, 4, or 5) in the crash. This count includes fatally injured occupants.

Additional Information

See Appendix A: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

SAS Name

NUM_INJ

Attribute Codes

2016-Later	
0	No Person Injured/Property Damage Only Crash
x	Number of Known Injured
98	No Person Involved in the Crash
99	All Persons in Crash are Unknown if Injured.

Discontinued ACCIDENT Data Elements

Adjust (discontinued)

Definition

This data element is used to produce national estimates from the data.

Additional Information

From 2016 to 2020, this data element was contained in the Accident data file.

SAS Name

ADJUST

The VEHICLE Data File

The Vehicle data file includes motor vehicle in-transport data as well as driver and precrash data. It contains the data elements CASENUM, PSU, PJ, STUDY, and VEH_NO, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section.

The Vehicle data file also contains the data elements on the following pages.

CASENUM and VEH_NO are the unique identifiers for each record. CASENUM should be used to merge the Vehicle data file with the Accident data file. CASENUM and VEH_NO should be used to merge the Vehicle data file with other vehicle-level data files and the Person data file.

V4 Number of Occupants

Definition

This data element is a count of the number of occupants in this vehicle.

Additional Information

This data element also appears in the Parkwork data file as PNUMOCCS.

SAS Name

NUMOCCS

Attribute Codes

2016-Later	
0	None
1-98	Number of Occupants
99	Unknown

V5 Unit Type

Definition

This data element identifies the type of unit that applies to this motor vehicle at the time it became an involved vehicle in the crash and was reported as a unit on the police crash report.

Additional Information

This data element also appears in the Parkwork data file as PTYPE. The valid attributes for PTYPE are:

3 Motor Vehicle Not In-Transport Outside the Trafficway

4 Working Motor Vehicle (Highway Construction, Maintenance, Utility Only)

SAS Name

UNITTYPE

Attribute Codes

2016-Later	
1	Motor Vehicle In-Transport (Inside or Outside the Trafficway)

V6 Hit and Run

Definition

This data element identifies whether this vehicle was a contact vehicle in the crash that did not stop to render aid (this can include drivers who flee the scene on foot). Hit and run is coded when a motor vehicle in-transport, or its driver, departs from the scene; vehicles not in-transport are excluded. It does not matter whether the hit-and-run vehicle was striking or struck.

Additional Information

This data element also appears in the Parkwork data file as PHIT_RUN.

SAS Name

HIT_RUN

2016-2017	2018-2019	2020-Later	
0	0	0	No
1	1	1	Yes
9	--	--	Unknown
--	9	--	Reported as Unknown

V9 Vehicle Identification Number (VIN)

Definition

This data element records the vehicle identification number (VIN) of this vehicle assigned by the vehicle manufacturer. The VIN contains information on the vehicle such as: manufacturer, model year, model, body type, restraint type, etc.

Additional Information

The vehicle manufacturers use the VIN to describe certain characteristics of a vehicle and to assign a serial number to the vehicle.

Prior to 2018, if a character of the VIN is missing or undecipherable, the VIN length will be less than 12 characters. Starting in 2018, an asterisk (*) is used for missing or undecipherable VIN characters. Prior to 2020, the Data Element ID was V13.

This data element also appears in the Parkwork data file as PVIN.

SAS Name

VIN

Attribute Codes

2016-2017	2018-2020	2021-Later	
000000000000	000000000000	--	No VIN Required
--	--	000000000000	No VIN Required, Not a Vehicle for Road Use
xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx	First 12 Characters of the VIN
888888888888	888888888888	888888888888	Not Reported
999999999999	--	--	Unknown
--	999999999999	999999999999	Reported as Unknown
--	*	*	VIN Character Missing or Not Decipherable

V10 Vehicle Model Year

Definition

This data element identifies the manufacturer's model year of this vehicle.

Additional Information

Prior to 2020, the Data Element ID was V12.

This data element also appears in the Person data file and in the Parkwork data file as PMODYEAR.

SAS Name

MOD_YEAR

Attribute Codes

2016-Later	
xxxx	Actual Model Year
9998	Not Reported
9999	Unknown

V11 vPIC Make

Definition

This element identifies the Make (manufacturer brand name) of this vehicle as per NHTSA vPIC submissions.

Additional Information

For more information on NHTSA's Product Information Catalog and Vehicle Listing (vPIC), go to https://vpic.nhtsa.dot.gov/.

A complete listing of vPIC Makes can be downloaded using the following URL: https://vpic.nhtsa.dot.gov/api/vehicles/getallmakes?format=csv.

The vPIC Make Name (make_name) and vPIC Make ID (make_id) in the listing can be used to download the vPIC Models for a particular vPIC Make. (See vPIC Model for more details.)

This data element also appears in the Person data file and in the Parkwork data file as PVPICMAKE.

SAS Name

VPICMAKE

Attribute Codes

2020-Later	
xxxxx	Actual 5-digit Make
99997	Other
99998	Not Reported
99999	Unknown

V12 vPIC Model

Definition

This element identifies the Model of this vehicle using NHTSA's VIN decoder application, vPIC.

Additional Information

For more information on NHTSA's Product Information Catalog and Vehicle Listing (vPIC), go to https://vpic.nhtsa.dot.gov/.

A complete listing of vPIC Models for a particular vPIC Make can be downloaded using the following URLs as a guide. The first uses vPIC Make ID (make_id) as a search parameter and the second uses vPIC Make Name (make_name). (See vPIC Make for obtaining vPIC Make Names and IDs.)

- Replace * in the URL with vPIC Make ID:
  https://vpic.nhtsa.dot.gov/api/vehicles/GetModelsForMakeId/*?format=csv
- Replace * in the URL with vPIC Make Name:
  https://vpic.nhtsa.dot.gov/api/vehicles/getmodelsformake/*?format=csv

Example 1: Use the following URLs to download all the Models for ***Buick***:

Use Buick Make ID **468** as parameter:
https://vpic.nhtsa.dot.gov/api/vehicles/GetModelsForMakeId/468?format=csv

Use the Make Name "**Buick**" as parameter:
https://vpic.nhtsa.dot.gov/api/vehicles/getmodelsformake/Buick?format=csv

Example 2: Use the following URLs to download all the Models for ***Toyota***

Use Toyota Make ID **448** as parameter:
https://vpic.nhtsa.dot.gov/api/vehicles/GetModelsForMakeId/448?format=csv

Use the Make Name "**Toyota**" as parameter:
https://vpic.nhtsa.dot.gov/api/vehicles/getmodelsformake/Toyota?format=csv

This data element also appears in the Person data file and in the Parkwork data file as PVPICMODEL.

SAS Name

VPICMODEL

Attribute Codes

2020-Later	
xxxxx	Actual 5-digit Model
99997	Other
99998	Not Reported
99999	Unknown

V13 vPIC Body Class

Definition

This element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc. as defined by the manufacturer.

Additional Information

For more information on NHTSA's Product Information Catalog and Vehicle Listing (vPIC), go to https://vpic.nhtsa.dot.gov/.

Attributes with an asterisk (*) have the finished body class for an incomplete vehicle captured under Final Stage Body Class.

This data element also appears in the Person data file and in the Parkwork data file as PVPICBODYCLASS.

SAS Name

VPICBODYCLASS

Attribute Codes

2020	2021-Later	
1	1	Convertible/Cabriolet
2	2	Minivan
3	3	Coupe
4	4	Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV)
5	5	Hatchback/Liftback/Notchback
6	6	Motorcycle - Standard
7	7	Sport Utility Vehicle (SUV)/Multi-Purpose Vehicle (MPV)
8	8	Crossover Utility Vehicle (CUV)
9	9	Van
10	10	Roadster
11	11	Truck
12	12	Motorcycle - Scooter
13	13	Sedan/Saloon
15	15	Wagon
16	16	Bus
60	60	Pickup
62	62	Incomplete - Cutaway*
63	63	Incomplete - Chassis Cab (Single Cab)*
64	64	Incomplete - Glider*
65	65	Incomplete*

2020	2021-Later	
66	66	Truck-Tractor
67	67	Incomplete - Stripped Chassis*
68	68	Streetcar/Trolley
69	69	Off-Road Vehicle - All Terrain Vehicle (ATV) (Motorcycle-Style)
70	70	Incomplete - Chassis Cab (Double Cab)*
71	71	Incomplete - School Bus Chassis*
72	72	Incomplete - Commercial Bus Chassis*
73	73	Bus - School Bus
74	74	Incomplete - Chassis Cab (Number of Cab Unknown)*
75	75	Incomplete - Transit Bus Chassis*
76	76	Incomplete - Motor Coach Chassis*
77	77	Incomplete - Shuttle Bus Chassis*
78	78	Incomplete - Motor Home Chassis*
80	80	Motorcycle - Sport
81	81	Motorcycle - Touring/Sport Touring
82	82	Motorcycle - Cruiser
83	83	Motorcycle - Trike
84	84	Off-Road Vehicle - Dirt Bike/Off-Road
85	85	Motorcycle - Dual Sport/Adventure/Supermoto/On/Off-Road
86	86	Off-Road Vehicle - Enduro (off-road long-distance racing)
87	87	Motorcycle - Small/Minibike
88	88	Off-Road Vehicle - Go Kart
90	90	Motorcycle - Side Car
94	94	Motorcycle - Custom
95	95	Cargo Van
97	97	Off-Road Vehicle - Snowmobile
98	98	Motorcycle - Street
100	100	Motorcycle - Enclosed Three Wheeled/Enclosed Autocycle
103	103	Motorcycle - Unenclosed Three Wheeled/Open Autocycle
104	104	Motorcycle - Moped
105	105	Off-Road Vehicle - Recreational Off-Road Vehicle (ROV)
107	107	Incomplete - Bus Chassis*
108	108	Motorhome
109	109	Motorcycle - Cross Country
110	110	Motorcycle - Underbone
111	111	Step Van/Walk-in Van
112	112	Incomplete - Commercial Chassis*

2020	2021-Later	
113	113	Off-Road Vehicle - Motocross (Off-Road Short-Distance, Closed-Track Racing)
114	114	Motorcycle - Competition
117	117	Limousine
119	119	Sport Utility Truck (SUT)
124	124	Off-Road Vehicle - Golf Cart
125	125	Motorcycle - Unknown Body Type
126	126	Off-Road Vehicle - Farm Equipment
127	127	Off-Road Vehicle - Construction Equipment
--	128	Ambulance
--	129	Street Sweeper
--	130	Fire Apparatus
996	996	Motorized Bicycle
997	997	Other
998	998	Not Reported
999	999	Unknown

V14 NCSA Make

Definition

This data element identifies the make (manufacturer) of this vehicle by NCSA historically.

Additional Information

Prior to 2020, this data element's name was "Vehicle Make" and the Data Element ID was V9.

This data element also appears in the Person data file and in the Parkwork data file as PMAKE.

SAS Name

MAKE

Attribute Codes

2016-Later		
1	American Motors	
2	Jeep/Kaiser-Jeep/Willys-Jeep	
3	AM General	
6	Chrysler	
7	Dodge	
8	Imperial	
9	Plymouth	
10	Eagle	
12	Ford	
13	Lincoln	
14	Mercury	
18	Buick/Opel	
19	Cadillac	
20	Chevrolet	
21	Oldsmobile	
22	Pontiac	
23	GMC	
24	Saturn	
25	Grumman	
26	Coda	
29	Other Domestic Manufacturers	
		Avanti
		Checker
		DeSoto
		Excalibur
		Hudson

2016-Later		
		Packard
		Panoz
		Saleen
		Studebaker
		Stutz
		Tesla
30	Volkswagen	
31	Alfa Romeo	
32	Audi	
33	Austin/Austin Healey	
34	BMW	
35	Datsun/Nissan	
36	Fiat	
37	Honda	
38	Isuzu	
39	Jaguar	
40	Lancia	
41	Mazda	
42	Mercedes-Benz	
43	MG	
44	Peugeot	
45	Porsche	
46	Renault	
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	Diahatsu	
61	Sterling	

2016-Later		
62	Land Rover	
63	Kia	
64	Daewoo	
65	Smart	
67	Scion	
69	Other Import	
		Aston Martin
		Bentley
		Bertone
		Bricklin
		Bugatti
		Caterham
		Citroen
		DeLorean
		Desta
		Ferrari
		Fisker
		Gazelle
		Hillman
		Jensen
		Koenigsegg
		Lada
		Lamborghini
		Lotus
		Mahindra
		Maserati
		Maybach
		McLaren
		Mini Cooper
		Morgan
		Morris
		Reliant (British)
		Rolls-Royce
		Simca
		Singer
		Spyker
		Sunbeam
		TVR

2016-Later		
70	BSA	
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	
89	White/Autocar, White/GMC	
90	Bluebird	
91	Eagle Coach	
92	Gillig	
93	MCI	
94	Thomas Built	
97	Not Reported	
98	Other Make	
		Auto-Union-DKW
		Carpenter
		Collins Bus
		DINA
		Divco
		Hino
		Meyers Motors
		Mid Bus
		Neoplan
		Orion
		Oshkosh
		Scania

2016-Later		
		Sterling
		Think
		UD
		Van Hool
		Western Star
99	Unknown Make	

V15 NCSA Model

Definition

This data element identifies the NCSA model of this vehicle within a given NCSA make.

Additional Information

Prior to 2020, this data element's name was "Vehicle Model" and the Data Element ID was V10.

This data element also appears in the Person data file and in the Parkwork data file as PMODEL.

SAS Name

MODEL

Attribute Codes

2016-Later
See the current NTS Coding and Validation Manual for vehicle model codes.

V16 NCSA Body Type

Definition

This data element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc. as defined by NCSA.

Additional Information

Prior to 2020, this data element's name was "Body Type" and the Data Element ID was V11.

This data element also appears in the Person data file and in the Parkwork data file as PBODYTYP.

SAS Name

BODY_TYP

Attribute Codes

2016	2017-2019	2020-Later	
Automobiles			
1	1	1	Convertible (Excludes Sun-Roof, T-Bar)
2	2	2	2-Door Sedan, Hardtop, Coupe
3	3	3	3-Door/2-Door Hatchback
4	4	4	4-Door Sedan, Hardtop
5	5	5	5-Door/4-Door Hatchback
6	6	6	Station Wagon (Excluding Van And Truck Based)
7	7	7	Hatchback, Number Of Doors Unknown
8	8	8	Sedan/Hardtop, Number of Doors Unknown
9	9	9	Other or Unknown Automobile Type
17	17	17	3-Door Coupe
Automobile Derivatives			
10	10	10	Auto Based Pickup (Includes El Camino, Caballero, Ranchero, SSR, G8-ST, Baha, Brat, And Rabbit Pickup)
11	11	11	Auto Based Panel (Cargo Station Wagon, Auto-Based Ambulance/Hearse)
12	12	12	Large Limousine (More Than Four Side Doors or Stretched Chassis)
13	13	13	Three Wheel Automobile or Automobile Derivative
Utility Vehicles			
14	14	14	Compact Utility (ANSI D-16 Utility Vehicle Categories "Small" and "Midsize")

2016	2017-2019	2020-Later	
15	15	15	Large Utility (ANSI D-16 Utility Vehicle Categories "Full Size" and "Large")
16	16	16	Utility Station Wagon
19	19	19	Utility Vehicle, Unknown Body Type
Van-Based Light Trucks (GVWR ≤ 10,000 lbs)			
20	20	20	Minivan
21	21	21	Large Van – Includes Van-Based Buses
22	22	22	Step Van or Walk-in Van (GVWR less than or equal to 10,000 lbs)
28	28	28	Other Van Type
29	29	29	Unknown Van Type
Light Conventional Trucks (Pickup style cab, GVWR ≤10,000 lbs)			
30	--	--	Compact Pickup (S-10, LUV, Ram 50, Rampage, Courier, Ranger, S-5, Pup, Mazda Pickup, Mitsubishi Truck, Datsun/Nissan Pickup, Arrow Pickup, Scamp, Toyota Pickup, VW Pickup, D50, Colt P/U, T-10, S-15, T-15, Ram 100, Dakota, Sonoma)
31	--	--	Standard Pickup (C10-C35, Jeep P/U, Comanche, Ram P/U, K10-K35, D100-D350, W100-350, F100-F350, R100-500, R10-R35, V10-35, Silverado, Sierra, T100)
32	32	32	Pickup With Slide-in Camper (2016-2017 Only)
33	33	33	Convertible Pickup
--	34	34	Light Pickup
39	39	39	Unknown (Pickup Style) Light Conventional Truck
Other Light Trucks (GVWR ≤10,000 lbs)			
40	40	40	Cab Chassis Based (Included Rescue Vehicle, Light Stake, Dump, And Tow Truck)
41	41	41	Truck Based Panel
45	45	45	Other Light Conventional Truck Type
48	48	48	Unknown Light Truck Type
49	49	49	Unknown Light Vehicle Type (Automobile, Utility, Van, or Light Truck)
Buses (excludes van based buses with a GVWR ≤ 10,000 lbs)			
50	50	50	School Bus (Designed to Carry Students, Not Cross Country or Transit)
51	51	51	Cross Country/Intercity Bus (i.e., Greyhound)
52	52	52	Transit Bus (City Bus)

2016	2017-2019	2020-Later	
55	55	55	Van-Based Bus (GVWR greater than 10,000 lbs)
58	58	58	Other Bus Type
59	59	59	Unknown Bus Type
Medium/Heavy Trucks (GVWR > 10,000 lbs)			
60	60	60	Step Van (GVWR greater than 10,000 lbs)
61	61	61	Single-Unit Straight Truck or Cab-Chassis (GVWR range 10,001 to 19,500 lbs)
62	62	62	Single-Unit Straight Truck or Cab-Chassis (GVWR range 19,501 to 26,000 lbs)
63	63	63	Single-Unit Straight Truck or Cab-Chassis (GVWR greater than 26,000 lbs)
64	64	64	Single Unit Straight Truck or Cab-Chassis (GVWR unknown)
66	66	66	Truck-Tractor (Cab Only, or With Any Number Of Trailing Units; Any Weight)
67	67	67	Medium/Heavy Pickup (GVWR > 10,000 lbs)
71	71	71	Unknown if Single-Unit or Combination-Unit Medium Truck (GVWR range 10,001 to 26,000 lbs)
72	72	72	Unknown if Single-Unit or Combination-Unit Heavy Truck (GVWR greater than 26,000 lbs)
78	78	78	Unknown Medium/Heavy Truck Type
79	79	79	Unknown Truck Type (Light/Medium/Heavy)
Motor Homes			
42	42	--	Light Truck-Based Motor Home (Chassis Mounted)
--	--	42	Light Vehicle-Based Motor Home (Chassis Mounted)
65	65		Medium/Heavy Truck-Based Motor Home
--	--	65	Medium/Heavy Vehicle-Based Motor Home
73	73	--	Camper or Motor Home, Unknown Truck Type
--	--	73	Camper or Motor Home, Unknown GVWR
Motored Cycles, MOPEDS, All-Terrain Vehicles, All-Terrain cycles			
80	--	--	Motorcycle
--	80	80	Two Wheel Motorcycle (excluding motor scooters)
81	--	--	Moped (Motorized Bicycle)
--	81	81	Moped or Motorized Bicycle
82	--	--	Three Wheeled Motorcycle or Moped

2016	2017-2019	2020-Later	
--	82	82	Three-wheel Motorcycle (2 Rear Wheels)
83	--	--	Off-Road Motorcycle (2-Wheel)
--	83	83	Off-Road Motorcycle
--	84	84	Motor Scooter
--	85	85	Unenclosed Three Wheel Motorcycle/Unenclosed Autocycle (1 Rear Wheel)
--	86	86	Enclosed Three Wheel Motorcycle/Enclosed Autocycle (1 Rear Wheel)
--	87	87	Unknown Three Wheel Motorcycle Type
88	--	--	Other Motored Cycle Type (Minibike, Motor Scooter, Pocket Motorcycles, Pocket Bikes)
--	88	88	Other Motored Cycle Type (Mini-bikes, Pocket Motorcycles, "Pocket Bikes")
89	89	89	Unknown Motored Cycle Type
90	90	90	ATV (All-Terrain Vehicle)/ATC (All-Terrain Cycle)
Other Vehicles			
91	91	91	Snowmobile
92	92	92	Farm Equipment Other Than Trucks
93	93	93	Construction Equipment Other Than Trucks (Includes Graders)
94	94	94	Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV)
95	95	95	Golf Cart
--	96	96	Recreational Off-Highway Vehicle (ROV)
97	97	97	Other Vehicle Type (Includes Go-Cart, Fork-Lift, City Street Sweeper)
98	98	98	Not Reported
99	99	99	Unknown Body Type

V17 Final Stage Body Class

Definition

This element captures the completed/finished body class for an Incomplete Vehicle. An incomplete vehicle is completed by a final stage manufacturer. The intent of this data element is to capture the body class for incomplete vehicles when they are finished for road-use.

Additional Information

This data element is only applicable to incomplete vehicles under vPIC Body Class, and the attributes are a subset of the vPIC Body Class attributes. Information captured in this data element is based on the police crash report.

This data element also appears in the Person data file and in the Parkwork data file as PICFINALBODY.

SAS Name

ICFINALBODY

Attribute Codes

2020	2021-Later	
0	0	Not Applicable
2	2	Minivan
4	4	Low-Speed Vehicle (LSV)
7	7	Sport Utility Vehicle (SUV)/Multi-Purpose Vehicle (MPV)
8	8	Crossover Utility Vehicle (CUV)
9	9	Van
11	11	Truck
15	15	Wagon
16	16	Bus
60	60	Pickup
66	66	Truck-Tractor
68	68	Streetcar/Trolley
73	73	Bus-School Bus
95	95	Cargo Van
108	108	Motorhome
111	111	Step Van/Walk-in Van
117	117	Limousine
119	119	Sport Utility Truck
--	128	Ambulance
--	129	Street Sweeper
--	130	Fire Apparatus

2020	2021-Later	
997	997	Other
998	998	Not Reported
999	999	Unknown

V19 Vehicle Trailing

Definition

This data element identifies whether this vehicle had any attached trailing units or was towing another motor vehicle. A trailing unit can be a horse trailer, fifth wheel trailer, camper, boat, truck trailer, towed vehicle or any other trailer.

Additional Information

Prior to 2020, the Data Element ID was V14.

This data element also appears in the Person data file and in the Parkwork data file as PTRAILER.

SAS Name

TOW_VEH

Attribute Codes

2016-Later	
0	No Trailing Units
1	Yes, One Trailing Unit
2	Yes, Two Trailing Units
3	Yes, Three or More Trailing Units
4	Yes, Number of Trailing Units Unknown
5	Vehicle Towing Another Motor Vehicle – Fixed Linkage
6	Vehicle Towing Another Motor Vehicle – Non-fixed Linkage
9	Unknown

V20 Trailer Vehicle Identification Number

Definition

This data element records the vehicle identification number (VIN) of any trailing units of a combination vehicle.

Additional Information

Prior to 2018, if a character of the VIN is missing or undecipherable, the VIN length will be less than 12 characters. Starting in 2018, an asterisk (*) is used for missing or undecipherable VIN characters. Prior to 2020, the Data Element ID was V15.

These data elements also appear in the Parkwork data file as PTRLR1VIN, PTRLR2VIN, and PTRLR3VIN.

SAS Name

TRLR1VIN, TRLR2VIN, TRLR3VIN

2016-2017	2018-2020	2021-Later	
000000000000	000000000000	--	No VIN Required
--	--	000000000000	No VIN Required, Not a Vehicle for Road Use
xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx	First 12 Characters of the VIN
777777777777	777777777777	777777777777	No Trailing Units
888888888888	888888888888	888888888888	Not Reported
999999999999	--	--	Unknown
--	999999999999	999999999999	Reported as Unknown
--	*	*	VIN Character Missing or Not Decipherable

V34A Area of Impact – Initial Contact Point

Definition

This data element identifies the area on this vehicle that produced the first instance of injury to non-motorists or occupants of this vehicle, or that resulted in the first instance of damage to other property or to this vehicle.

Additional Information

This data element is derived from the crash events for the vehicle. It is the first recorded "Area of Impact (This Vehicle)" value for this vehicle. See Appendix A: Rules for Derived Data Elements for an explanation of this data element and how it is derived.

Prior to 2020, the Data Element ID was V29A.

This data element also appears in the Person data file and in the Parkwork data file as PIMPACT1.

SAS Name

IMPACT1

Attribute Codes

2016	2017	2018	2019- Later	
0	0	0	0	Non-Collision
1-12	1-12	1-12	1-12	Clock points
13	13	13	13	Top
14	14	14	14	Undercarriage
18	18	18	18	Cargo/Vehicle Parts Set-in-Motion
19	19	19	--	Other Objects Set-in-Motion
--	--	--	19	Other Objects or Person Set-in-Motion
--	20	20	20	Object Set in Motion, Unknown if
				Cargo/Vehicle Parts or Other
61	61	61	61	Left
62	62	62	62	Left-Front Side
63	63	63	63	Left-Back Side
81	81	81	81	Right
82	82	82	82	Right-Front Side
83	83	83	83	Right-Back Side
98	98	98	98	Not Reported
99	99	--	--	Unknown
--	--	99	99	Reported as Unknown

V35 Extent of Damage

Definition

This data element records the amount of damage sustained by this vehicle as indicated on the police crash report based on an operational damage scale.

Additional Information

Prior to 2020, the Data Element ID was V30.

This data element also appears in the Parkwork data file as PVEH_SEV.

SAS Name

DEFORMED

Attribute Codes

2016-2017	2018-Later	
0	0	No Damage
2	2	Minor Damage
4	4	Functional Damage
6	6	Disabling Damage
8	8	Not Reported
9	--	Unknown
--	9	Reported as Unknown

V36 Vehicle Removal

Definition

This data element describes the mode by which this vehicle left the scene of the crash.

Additional Information

Prior to 2020, the Data Element ID was V31.

This data element also appears in the Parkwork data file as PTOWED.

SAS Name

TOWED

Attribute Codes

2016-2017	2018-2019	2020-Later	
2	2	2	Towed Due to Disabling Damage
3	3	--	Towed Not Due to Disabling Damage
--	--	3	Towed But Not Due to Disabling Damage
5	5	5	Not Towed
--	7	7	Towed, Unknown Reason
8	8	8	Not Reported
9	--	--	Unknown
--	9	9	Reported as Unknown

V38 Most Harmful Event

Definition

This data element describes the event that resulted in the most severe injury or, if no injury, the greatest property damage involving this vehicle.

Additional Information

"First Harmful Event" applies to the crash (HARM_EV). "Most Harmful Event" applies to the vehicle. "First Harmful Event," "Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

Prior to 2020, the Data Element ID was V33.

This data element also appears in the Parkwork data file as PM_HARM.

SAS Name: M_HARM

Attribute Codes

2016	2017	2018-Later	
Non-collision			
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion or Partial Immersion
4	4	4	Gas Inhalation
5	5	5	Fell/Jumped from Vehicle
6	6	6	Injured in Vehicle (Non-Collision)
7	7	7	Other Non-collision
16	16	16	Thrown or Falling Object
44	44	44	Pavement Surface Irregularity (Ruts, Potholes, Grates, etc.)
51	51	51	Jackknife (Harmful to This Vehicle)
72	72	--	Cargo/Equipment Loss or Shift (Harmful to This Vehicle)
--	--	72	Cargo/Equipment Loss, Shift, or Damage (Harmful)
Collision with Motor Vehicle In-Transport			
12	12	12	Motor Vehicle In-Transport
54	54	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport

2016	2017	2018-Later	
55	55	55	Motor Vehicle in Motion Outside the Trafficway
Collision with Object Not Fixed			
8	8	8	Pedestrian
9	9	9	Pedalcyclist
10	10	10	Railway Vehicle
11	11	11	Live Animal
14	14	14	Parked Motor Vehicle
15	15	15	Non-Motorist on Personal Conveyance
18	18	18	Other Object Not Fixed
45	45	45	Working Motor Vehicle
49	49	49	Ridden Animal or Animal Drawn Conveyance
73	73	73	Object That Had Fallen From Motor Vehicle In-Transport
74	74	74	Road Vehicle on Rails
--	91	91	Unknown Object Not Fixed
Collision with Fixed Object			
17	17	17	Boulder
19	19	19	Building
20	20	20	Impact Attenuator/Crash Cushion
21	21	21	Bridge Pier or Support
23	23	23	Bridge Rail (Includes Parapet)
24	24	24	Guardrail Face
25	25	25	Concrete Traffic Barrier
26	26	26	Other Traffic Barrier
30	30	30	Utility Pole/Light Support
31	31	31	Post, Pole or Other Support
32	32	32	Culvert
33	33	33	Curb
34	34	34	Ditch
35	35	35	Embankment
38	38	38	Fence
39	39	39	Wall
40	40	40	Fire Hydrant
41	41	41	Shrubbery
42	42	42	Tree (Standing Only)
43	43	43	Other Fixed Object

2016	2017	2018-Later	
46	46	46	Traffic Signal Support
48	48	48	Snow Bank
50	50	50	Bridge Overhead Structure
52	52	52	Guardrail End
53	53	53	Mail Box
57	57	57	Cable Barrier
58	58	58	Ground
59	59	59	Traffic Sign Support
--	93	93	Unknown Fixed Object
--	--	98	Harmful Event, Details Not Reported (Since 2019)
99	99	--	Unknown
--	--	99	Reported as Unknown

V90 Maximum Injury Severity in Vehicle

Definition

This data element records the single most severe injury level reported for any occupant in this vehicle. This data element is derived by comparing "Injury Severity" from the Person data file for each occupant record in this vehicle. The following is the order of severity codes.

- 4-Fatal
- 3-Suspected Serious Injury
- 2-Suspected Minor Injury
- 1-Possible Injury
- 5-Injured, Unknown Severity
- 0-No Apparent Injury
- 6-Died Prior
- 9- Unknown/Not Reported
- 8-No Person in Vehicle

Additional Information

See Appendix A: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

SAS Name

MAX_VSEV

Attribute Codes

2016-Later	
0	No Apparent Injury
1	Possible Injury
2	Suspected Minor Injury
3	Suspected Serious Injury
4	Fatal
5	Injured, Severity Unknown
6	Died Prior to Crash
8	No Person in Vehicle
9	Unknown/Not Reported

V91 Number Injured in Vehicle

Definition: This data element records the number of people injured in the vehicle and is derived by counting all the people with "Injury Severity" of (1, 2, 3, 4, or 5) in a vehicle. This count includes fatally injured occupants.

Additional Information

See Appendix A: Rules for Derived Data Elements for an expanded explanation of this data element and how it is derived.

SAS Name

NUM_INJV

Attribute Codes

2016-Later	
0	No Person Injured in Vehicle
1-97	Actual Number
98	No Person in the Vehicle
99	All Persons in the Vehicle are Unknown if Injured

V100 Make Model Combined

Definition

This derived data element represents the 5-digit combination of two data elements, the 2-digit NCSA Vehicle Make code (MAKE) followed by the 3-digit NCSA Vehicle Model code (MODEL).

Additional Information

This data element also appears in the Person data file and in the Parkwork data file as PMAK_MOD.

SAS Name

MAK_MOD

Attribute Codes

2016-Later
See the current NTS Coding and Validation Manual for vehicle make and model codes.

D4 Driver Presence

Definition

This data element identifies whether a driver was present in this vehicle at the onset of the unstabilized situation.

Additional Information

SAS Name

DR_PRES

Attribute Codes

2016-Later	
0	No Driver Present/Not Applicable
1	Yes
9	Unknown

PC17A Last Movement

Definition

This element identifies the attribute that best describes this vehicle's activity prior to the driver's realization of an impending danger or just prior to impact if the driver took no action or had no time to attempt any evasive maneuvers.

Additional Information

SAS Name

LASTMOVE

Attribute Codes

2016-Later	
0	No Driver Present/Unknown if Driver Present
1	Going Straight
2	Decelerating
3	Accelerating
4	Starting
5	Stopped
6	Passing or Overtaking Another Vehicle
7	Disabled or "Parked"
8	Leaving a Parking Position With a Forward Motion
9	Entering a Parking Position With a Forward Motion
10	Leaving a Parking Position With a Rearward Motion
11	Entering a Parking Position With A Rearward Motion
12	Turning Right
13	Turning Left
14	Making a U-Turn
15	Backing Up (Other Than for Parking Position)
98	Other
99	Unknown

PC20 Attempted Avoidance Maneuver

Definition

This element assesses the stability of the vehicle after the driver has realization of an impending danger but before the impact.

SAS Name

P_CRASH3

Attribute Codes

2016-Later	
0	No Driver Present/Unknown if Driver Present
1	No Avoidance Maneuver
5	Releasing Brakes
6	Steering Left
7	Steering Right
8	Braking And Steering Left
9	Braking And Steering Right
10	Accelerated
11	Accelerating And Steering Left
12	Accelerating And Steering Right
15	Braking and Unknown Steering Direction
16	Braking
98	Other Actions
99	Unknown/Not Reported

PC21 Pre-Impact Stability

Definition

This element assesses the stability of the vehicle after the driver has realization of an impending danger but before the impact.

Additional Information

SAS Name

PCRASH4

Attribute Codes

2016-Later	
0	No Driver Present/Unknown if Driver Present
1	Tracking
2	Skidding Longitudinally – Rotation Less Than 30 Degrees
3	Skidding Laterally – Clockwise Rotation
4	Skidding Laterally – Counterclockwise Rotation
5	Skidding Laterally – Rotation Direction Unknown
7	Other Vehicle Loss-of-Control
9	Precrash Stability Unknown

The PERSON Data File

The Person data file includes motorist and non-motorist data. It contains the data elements CASENUM, PSU, PJ, STUDY, VEH_NO, and PER_NO, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The Person data file also contains the data elements on the following pages.

CASENUM, VEH_NO, and PER_NO are the unique identifiers for each record. CASENUM should be used to merge the Person data file with the Accident data file for a set of all motorists and non-motorists. CASENUM and VEH_NO should be used to merge the Person data file with the Vehicle and Parkwork data files for a set of all motor vehicle occupants. CASENUM and PER_NO should be used to merge the Person data file with non-motorist person level data files.

In the Person data file, motor vehicle occupants are PER_TYPE = 1, 2, 3, 9. Motor vehicle occupants have assigned vehicle numbers starting with 1. When PER_TYPE = 3, the occupied vehicle will be found in the PARKWORK data file. Prior to 2020, non-motor vehicle occupants are PER_TYPE =4, 5, 6, 7, 10, 19, 20, 21, 22, 23, 24, 25, 26, 27, or 28. Starting in 2020, non-motor vehicle occupants are PER_TYPE = 4, 5, 6, 7, 10, 11, 12, 13, or 19. VEH_NO = 0 for non-motor vehicle occupants.

P5/NM5 Age

Definition

This data element identifies this person's age at the time of the crash in years with respect to their last birthday.

Additional Information

SAS Name

AGE

Attribute Codes

2016-2017	2018-Later	
0	0	Less than 1 Year
1-120	1-120	Years of Age
998	998	Not Reported
999	--	Unknown
--	999	Reported as Unknown

P6/NM6 Sex

Definition

This data element identifies the sex of this person involved in the crash.

Additional Information

SAS Name

SEX

Attribute Codes

2016-2017-	2018-Later	
1	1	Male
2	2	Female
8	8	Not Reported
9	--	Unknown
--	9	Reported as Unknown

P7/NM7 Person Type

Definition

This data element describes the role of this person involved in the crash.

SAS Name

PER_TYP

Additional Information

In 2020, the data element Non-Motorist Conveyance Type was added and the specific types of non-motorists on personal conveyances (attributes 20-28) were moved to this data element.

Attribute Codes

2016-2019	2020-Later	
Motorists		
1	1	Driver of a Motor Vehicle In-Transport
2	2	Passenger of a Motor Vehicle In-Transport
9	9	Unknown Occupant Type in a Motor Vehicle In-Transport
Non-Motorists-Occupant		
3	3	Occupant of a Motor Vehicle Not In-Transport
4	4	Occupant of a Non-Motor Vehicle Transport Device
Non-Motorists-Non-Occupant		
5	5	Pedestrian
6	6	Bicyclist
7	7	Other Cyclist
10	10	Persons in or on Buildings
--	11	Person on Motorized Personal Conveyance
--	12	Person on Non-Motorized Personal Conveyance
--	13	Person on Personal Conveyance, Unknown if Motorized or Non-Motorized
19	19	Unknown Type of Non-Motorist
20	--	Skates
21	--	Skateboards
22	--	Baby Carriage
23	--	Scooters
24	--	Toy Wagons
25	--	Motorized Toy Cars
26	--	Segway®-style Devices
27	--	Wheelchairs (Motorized and Non-motorized)
28	--	Handicapped Scooters

NM7A Non-Motorist Conveyance Type

Definition

This element describes the type of non-motorist personal conveyance involved in the crash.

Additional Information

Prior to 2020, the specific personal conveyance attributes were collected as part of "Person Type."

SAS Name

NMCNVTYP

Attribute Codes

2020	2021-Later	
0	0	Not a Person on a Personal Conveyance
19	19	Unknown Type of Non-Motorist
20	20	Skates
21	--	Skateboards
--	21	Skateboard
22	22	Baby Carriage
23	--	Scooters
--	23	Scooter
24	--	Toy Wagons
--	24	Toy Wagon
25	--	Toy Cars
--	25	Toy Car
26	--	Two-wheeled self-balancing personal transportation device
--	26	Two-Wheeled Self-balancing Personal Transportation Device
27	--	Wheelchairs
--	27	Wheelchair
28	--	Handicapped Scooters
--	28	Scooters for Person with a Disability
29	--	Unknown Non-Motorist Conveyance Type
--	97	Other Non-Motorist Conveyance Type
--	99	Unknown Non-Motorist Conveyance Type

P8/NM8 Injury Severity

Definition

This data element describes the severity of the injury to this person in the crash using the KABCO scale.

Additional Information

See the Accident data file for C90 Maximum Injury Severity in Crash and the Vehicle data file for V90 Maximum Injury Severity in Vehicle, both of which are derived from this data element.

SAS Name: INJ_SEV

Attribute Codes

2016-Later	
0	No Apparent Injury (O)
1	Possible Injury (C)
2	Suspected Minor Injury (B)
3	Suspected Serious Injury (A)
4	Fatal Injury (K)
5	Injured, Severity Unknown (U)
6	Died Prior to Crash
9	Unknown/Not Reported

P9 Seating Position

Definition

This data element identifies the location of this person in or on the vehicle.

Additional Information

More than one person can be assigned the same seat position, however this is coded only when a person is sitting on someone's lap.

SAS Name

SEAT_POS

Attribute Codes

2016-2018	2019-Later	
0	0	Not a Motor Vehicle Occupant
11	11	Front Seat – Left Side (Driver's Side)
12	12	Front Seat – Middle
13	13	Front Seat – Right Side
18	18	Front Seat – Other
19	19	Front Seat – Unknown
21	21	Second Seat – Left Side
22	22	Second Seat – Middle
23	23	Second Seat – Right Side
28	28	Second Seat – Other
29	29	Second Seat – Unknown
31	31	Third Seat – Left Side
32	32	Third Seat – Middle
33	33	Third Seat – Right Side
38	38	Third Seat – Other
39	39	Third Seat – Unknown
41	41	Fourth Seat – Left Side
42	42	Fourth Seat – Middle
43	43	Fourth Seat – Right Side
48	48	Fourth Seat – Other
49	49	Fourth Seat – Unknown
50	50	Sleeper Section of Cab (Truck)
51	51	Other Passenger in Enclosed Passenger or Cargo Area
52	52	Other Passenger in Unenclosed Passenger or Cargo Area
53	53	Other Passenger in Passenger or Cargo Area, Unknown Whether or Not Enclosed

2016-2018	2019-Later	
54	54	Trailing Unit
55	55	Riding on Exterior of Vehicle
--	56	Appended to a Motor Vehicle for Motion
98	98	Not Reported
99	99	Unknown/Reported as Unknown (Since 2018)

NM4 Vehicle Number of Motor Vehicle Striking Non-Motorist

Definition

This data element identifies the "Vehicle Number" (VEH_NO) of the motor vehicle in-transport that made contact with this non-motorist.

Additional Information

This data element applies only to non-motorists/non-occupants and reflects the vehicle that made contact with the non-motorist/non-occupant being coded.

The number must match the vehicle number of the striking vehicle. This number is similar to VEH_NO, except that the non-motorist/non-occupant was struck by the vehicle, rather than being within the vehicle.

SAS Name

STR_VEH

Attribute Codes

2016-2017	2018-Later	
0	0	Occupant of Motor Vehicle
1-998	1-998	Vehicle Number of Striking Vehicle
999	--	Unknown

NM10 Non-Motorist Location at Time of Crash

Definition

This element identifies the location of the non-motorist with respect to the crash.

Additional Information

Non-motorists who are occupants of motor vehicles not in-transport are coded with respect to the location of the vehicle.

SAS Name

LOCATION

Attribute Codes

2016-2017	2018-Later	
1	1	Residential Driveway
2	2	Residential Garage
3	3	Residential Parking Lot
4	4	Other Residential Area
5	5	Commercial Driveway
6	6	Commercial Parking Lot
7	7	Other Commercial Area
8	8	Parking Garage Structure (residential or commercial)
10	10	Other Parking Lot (incl. all parking lots of unknown type)
11	11	Other Private Road (to incl. alleys that are not trafficways)
12	12	Other Developed Area
13	13	Undeveloped Area
14	14	Other structure (not parking garage structure)
15	15	Railway
16	16	Unknown Driveway Type
98	98	Not Reported
99	--	Unknown Location
--	99	Reported as Unknown Location

NM27 Pedestrian Motion

Definition

This element is used to describe the motion of pedestrians.

Additional Information

Non-motorists who are occupants of motor vehicles not in-transport are coded with respect to the location of the vehicle.

SAS Name

PEDMOTN

Attribute Codes

2016-Later	
1	Not Moving
2	Walking
3	Running
4	Skipping/Hopping/Jumping
5	Falling/Stumbling/Rising
7	Not a Pedestrian
8	Other
9	Unknown Type of Pedestrian Motion

NM28 Pedestrian Posture

Definition

This element is used to describe the posture of pedestrians.

Additional Information

Non-motorists who are occupants of motor vehicles not in-transport are coded with respect to the location of the vehicle.

SAS Name

PEDPOST

Attribute Codes

2016-Later	
1	Standing
2	Bending at Waist
3	Sitting
4	Crouching/Kneeling
7	Not a Pedestrian
8	Other
9	Unknown Type of Pedestrian Posture

The PARKWORK Data File

The Parkwork data file includes Vehicle data elements applicable to Parked and Working Vehicles. It contains the data elements CASENUM, PSU, PJ, STUDY, and VEH_NO, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The Parkwork data file also contains the data elements on the following pages.

CASENUM and VEH_NO are the unique identifiers for each record. CASENUM should be used to merge the Parkwork data file with the Accident data file. CASENUM and VEH_NO should be used to merge the Parkwork data file with the Vindecode and Person data files.

C4A Number of Motor Vehicles In-Transport (MVIT) Involved

Definition

This data element is a count of the number of motor vehicles in-transport involved in the crash.

Additional Information

See this data element in the Accident data file section for more information.

SAS Name

PVE_FORMS

Attribute Codes

2016-Later	
1-100	Number of Vehicles

C8 Crash Date

C8A Month of Crash

Definition

This data element records the month in which the crash occurred.

Additional Information

See this data element in the Accident data file section for more information.

SAS Name

PMONTH

Attribute Codes

2016-Later	
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

C9 Crash Time

C9A Hour of Crash

Definition

This data element records the hour at which the crash occurred.

Additional Information

See this data element in the Accident data file section for more information.

SAS Name

PHOUR

Attribute Codes

2016-Later	
0-23	Hour
99	Unknown

C9B Minute of Crash

Definition

This data element records the minutes after the hour at which the crash occurred.

Additional Information

See this data element in the Accident data file section for more information.

SAS Name

PMINUTE

Attribute Codes

2016-Later	
0-59	Minute
99	Unknown

C19 First Harmful Event

Definition

This data element describes the first injury or damage producing event of the crash.

Additional Information

See this data element in the Accident data file section for more information.

SAS Name

PHARM_EV

Attribute Codes

2016	2017	2018-Later	
Non-collision			
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion or Partial Immersion
4	4	4	Gas Inhalation
5	5	5	Fell/Jumped from Vehicle
6	6	6	Injured in Vehicle (Non-Collision)
7	7	7	Other Non-collision
16	16	16	Thrown or Falling Object
44	44	44	Pavement Surface Irregularity (Ruts, Potholes, Grates, etc.)
51	51	51	Jackknife (Harmful to This Vehicle)
72	72	--	Cargo/Equipment Loss or Shift (Harmful to This Vehicle)
--	--	72	Cargo/Equipment Loss, Shift, or Damage (Harmful)
Collision with Motor Vehicle In-Transport			
54	54	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
55	55	88	Motor Vehicle in Motion Outside the Trafficway
Collision with Object Not Fixed			
8	8	8	Pedestrian
9	9	9	Pedalcyclist
10	10	10	Railway Vehicle
11	11	11	Live Animal
14	14	14	Parked Motor Vehicle
15	15	15	Non-Motorist on Personal Conveyance

2016	2017	2018-Later	
18	18	18	Other Object Not Fixed
45	45	45	Working Motor Vehicle
49	49	49	Ridden Animal or Animal Drawn Conveyance
73	73	73	Object That Had Fallen From Motor Vehicle In-Transport
74	74	74	Road Vehicle on Rails
--	91	91	Unknown Object Not Fixed
Collision with Fixed Object			
17	17	17	Boulder
19	19	19	Building
20	20	20	Impact Attenuator/Crash Cushion
21	21	21	Bridge Pier or Support
23	23	23	Bridge Rail (Includes Parapet)
24	24	24	Guardrail Face
25	25	25	Concrete Traffic Barrier
26	26	26	Other Traffic Barrier
30	30	30	Utility Pole/Light Support
31	31	31	Post, Pole or Other Support
32	32	32	Culvert
33	33	33	Curb
34	34	34	Ditch
35	35	35	Embankment
38	38	38	Fence
39	39	39	Wall
40	40	40	Fire Hydrant
41	41	41	Shrubbery
42	42	42	Tree (Standing Only)
43	43	43	Other Fixed Object
46	46	46	Traffic Signal Support
48	48	48	Snow Bank
50	50	50	Bridge Overhead Structure
52	52	52	Guardrail End
53	53	53	Mail Box
57	57	57	Cable Barrier
58	58	58	Ground
59	59	59	Traffic Sign Support
--	93	93	Unknown Fixed Object

2016	2017	2018-Later	
--	--	98	Harmful Event, Details Not Reported (Since 2019)
99	99	--	Unknown
--	--	99	Reported as Unknown

C20 Manner of Collision of the First Harmful Event

Definition

This data element describes the orientation of two motor vehicles in-transport when they are involved in the "First Harmful Event" of a collision crash. If the "First Harmful Event" is not a collision between two motor vehicles in-transport it is classified as such.

Additional Information

See this data element in the Accident data file section for more information.

SAS Name

PMAN_COLL

Attribute Codes

2016-2017	2018	2019-Later	
0	0	--	Not Collision with Motor Vehicle In-Transport
--	--	0	First Harmful Event was Not a Collision with Motor Vehicle In-Transport
1	1	1	Front-to-Rear
2	2	2	Front-to-Front
6	6	6	Angle
7	7	7	Sideswipe – Same Direction
8	8	8	Sideswipe – Opposite Direction
9	9	9	Rear-to-Side
10	10	10	Rear-to-Rear
11	11	11	Other
98	98	98	Not Reported
99	--	--	Unknown
--	99	99	Reported as Unknown

V4 Number of Occupants

Definition

This data element is a count of the number of occupants in this vehicle.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PNUMOCCS

Attribute Codes

2016-Later	
0	None
1-98	Number of Occupants
99	Unknown

V5 Unit Type

Definition

This data element identifies the type of unit that applies to this motor vehicle at the time it became an involved vehicle in the crash and was reported as a unit on the police crash report.

Additional Information

This data element also appears in the Vehicle data file as UNITTYPE. The only valid attribute for UNITTYPE is 1 (Motor Vehicle In-Transport [Inside or Outside the Trafficway]).

SAS Name

PTYPE

Attribute Codes

2016-Later	
3	Motor Vehicle Not In-Transport Outside the Trafficway
4	Working Motor Vehicle (Highway Construction, Maintenance, Utility Only)

V6 Hit and Run

Definition

This data element identifies whether this vehicle was a contact vehicle in the crash that did not stop to render aid (this can include drivers who flee the scene on foot). Hit and run is coded when a motor vehicle in-transport, or its driver, departs from the scene; vehicles not in-transport are excluded. It does not matter whether the hit-and-run vehicle was striking or struck.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PHIT_RUN

Attribute Codes

2016-2017	2018-2019	2020-Later	
0	0	0	No
1	1	1	Yes
9	--	--	Unknown
--	9	--	Reported as Unknown

V9 Vehicle Identification Number (VIN)

Definition

This data element records the vehicle identification number (VIN) of this vehicle assigned by the vehicle manufacturer. The VIN contains information on the vehicle such as: manufacturer, model year, model, body type, restraint type, etc.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PVIN

Attribute Codes

2016-2017	2018-2020	2021-Later	
000000000000	000000000000	--	No VIN Required
--	--	000000000000	No VIN Required, Not a Vehicle for Road Use
xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx	First 12 Characters of the VIN
888888888888	888888888888	888888888888	Not Reported
999999999999	--	--	Unknown
--	999999999999	999999999999	Reported as Unknown
--	*	*	VIN Character Missing or Not Decipherable

V10 Vehicle Model Year

Definition

This data element identifies the manufacturer's model year of this vehicle.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PMODYEAR

Attribute Codes

2016-Later	
xxxx	Actual Model Year
9998	Not Reported
9999	Unknown

V11 vPIC Make

Definition

This element identifies the Make (manufacturer brand name) of this vehicle as per NHTSA vPIC submissions.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PVPICMAKE

Attribute Codes

2020-Later	
xxxxx	Actual 5-digit Make
99997	Other
99998	Not Reported
99999	Unknown

V12 vPIC Model

Definition

This element identifies the Model of this vehicle using NHTSA's VIN decoder application, vPIC.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PVPICMODEL

Attribute Codes

2020-Later	
xxxxx	Actual 5-digit Model
99997	Other
99998	Not Reported
99999	Unknown

V13 vPIC Body Class

Definition

This element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc. as defined by the manufacturer.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PVPICBODYCLASS

Attribute Codes

2020	2021-Later	
1	1	Convertible/Cabriolet
2	2	Minivan
3	3	Coupe
4	4	Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV)
5	5	Hatchback/Liftback/Notchback
6	6	Motorcycle - Standard
7	7	Sport Utility Vehicle (SUV)/Multi-Purpose Vehicle (MPV)
8	8	Crossover Utility Vehicle (CUV)
9	9	Van
10	10	Roadster
11	11	Truck
12	12	Motorcycle - Scooter
13	13	Sedan/Saloon
15	15	Wagon
16	16	Bus
60	60	Pickup
62	62	Incomplete - Cutaway*
63	63	Incomplete - Chassis Cab (Single Cab)*
64	64	Incomplete - Glider*
65	65	Incomplete*
66	66	Truck-Tractor
67	67	Incomplete - Stripped Chassis*
68	68	Streetcar/Trolley
69	69	Off-Road Vehicle - All Terrain Vehicle (ATV) (Motorcycle-Style)
70	70	Incomplete - Chassis Cab (Double Cab)*
71	71	Incomplete - School Bus Chassis*

2020	2021-Later	
72	72	Incomplete - Commercial Bus Chassis*
73	73	Bus - School Bus
74	74	Incomplete - Chassis Cab (Number of Cab Unknown)*
75	75	Incomplete - Transit Bus Chassis*
76	76	Incomplete - Motor Coach Chassis*
77	77	Incomplete - Shuttle Bus Chassis*
78	78	Incomplete - Motor Home Chassis*
80	80	Motorcycle - Sport
81	81	Motorcycle - Touring/Sport Touring
82	82	Motorcycle - Cruiser
83	83	Motorcycle - Trike
84	84	Off-Road Vehicle - Dirt Bike/Off-Road
85	85	Motorcycle - Dual Sport/Adventure/Supermoto/On/Off-Road
86	86	Off-Road Vehicle - Enduro (off-road long-distance racing)
87	87	Motorcycle - Small/Minibike
88	88	Off-Road Vehicle - Go Kart
90	90	Motorcycle - Side Car
94	94	Motorcycle - Custom
95	95	Cargo Van
97	97	Off-Road Vehicle - Snowmobile
98	98	Motorcycle - Street
100	100	Motorcycle - Enclosed Three Wheeled/Enclosed Autocycle
103	103	Motorcycle - Unenclosed Three Wheeled/Open Autocycle
104	104	Motorcycle - Moped
105	105	Off-Road Vehicle - Recreational Off-Road Vehicle (ROV)
107	107	Incomplete - Bus Chassis*
108	108	Motorhome
109	109	Motorcycle - Cross Country
110	110	Motorcycle - Underbone
111	111	Step Van/Walk-in Van
112	112	Incomplete - Commercial Chassis*
113	113	Off-Road Vehicle - Motocross (Off-Road Short-Distance, Closed-Track Racing)
114	114	Motorcycle - Competition
117	117	Limousine
119	119	Sport Utility Truck (SUT)
124	124	Off-Road Vehicle - Golf Cart
125	125	Motorcycle - Unknown Body Type

2020	2021-Later	
126	126	Off-Road Vehicle - Farm Equipment
127	127	Off-Road Vehicle - Construction Equipment
--	128	Ambulance
--	129	Street Sweeper
--	130	Fire Apparatus
996	996	Motorized Bicycle
997	997	Other
998	998	Not Reported
999	999	Unknown

V14 NCSA Make

Definition

This data element identifies the make (manufacturer) of this vehicle by NCSA historically.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PMAKE

Attribute Codes

2016-Later		
1	American Motors	
2	Jeep/Kaiser-Jeep/Willys-Jeep	
3	AM General	
6	Chrysler	
7	Dodge	
8	Imperial	
9	Plymouth	
10	Eagle	
12	Ford	
13	Lincoln	
14	Mercury	
18	Buick/Opel	
19	Cadillac	
20	Chevrolet	
21	Oldsmobile	
22	Pontiac	
23	GMC	
24	Saturn	
25	Grumman	
26	Coda	
29	Other Domestic Manufacturers	
		Avanti
		Checker
		DeSoto
		Excalibur
		Hudson
		Packard

2016-Later		
		Panoz
		Saleen
		Studebaker
		Stutz
		Tesla
30	Volkswagen	
31	Alfa Romeo	
32	Audi	
33	Austin/Austin Healey	
34	BMW	
35	Datsun/Nissan	
36	Fiat	
37	Honda	
38	Isuzu	
39	Jaguar	
40	Lancia	
41	Mazda	
42	Mercedes-Benz	
43	MG	
44	Peugeot	
45	Porsche	
46	Renault	
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	Diahatsu	
61	Sterling	
62	Land Rover	

2016-Later		
63	Kia	
64	Daewoo	
65	Smart	
67	Scion	
69	Other Import	
		Aston Martin
		Bentley
		Bertone
		Bricklin
		Bugatti
		Caterham
		Citroen
		DeLorean
		Desta
		Ferrari
		Fisker
		Gazelle
		Hillman
		Jensen
		Koenigsegg
		Lada
		Lamborghini
		Lotus
		Mahindra
		Maserati
		Maybach
		McLaren
		Mini Cooper
		Morgan
		Morris
		Reliant (British)
		Rolls-Royce
		Simca
		Singer
		Spyker
		Sunbeam
		TVR
70	BSA	

2016-Later		
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	
89	White/Autocar, White/GMC	
90	Bluebird	
91	Eagle Coach	
92	Gillig	
93	MCI	
94	Thomas Built	
97	Not Reported	
98	Other Make	
		Auto-Union-DKW
		Carpenter
		Collins Bus
		DINA
		Divco
		Hino
		Meyers Motors
		Mid Bus
		Neoplan
		Orion
		Oshkosh
		Scania

2016-Later		
		Sterling
		Think
		UD
		Van Hool
		Western Star
99	Unknown Make	

V15 NCSA Model

Definition

This data element identifies the NCSA model of this vehicle within a given NCSA make.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PMODEL

Attribute Codes

2016-Later
See the current NTS Coding and Validation Manual for vehicle model codes.

V16 NCSA Body Type

Definition

This data element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc. as defined by NCSA.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PBODYTYP

Attribute Codes

2016	2017-2019	2020-Later	
Automobiles			
1	1	1	Convertible (Excludes Sun-Roof, T-Bar)
2	2	2	2-Door Sedan, Hardtop, Coupe
3	3	3	3-Door/2-Door Hatchback
4	4	4	4-Door Sedan, Hardtop
5	5	5	5-Door/4-Door Hatchback
6	6	6	Station Wagon (Excluding Van And Truck Based)
7	7	7	Hatchback, Number Of Doors Unknown
8	8	8	Sedan/Hardtop, Number of Doors Unknown
9	9	9	Other or Unknown Automobile Type
17	17	17	3-Door Coupe
Automobile Derivatives			
10	10	10	Auto Based Pickup (Includes El Camino, Caballero, Ranchero, SSR, G8-ST, Baha, Brat, And Rabbit Pickup)
11	11	11	Auto Based Panel (Cargo Station Wagon, Auto-Based Ambulance/Hearse)
12	12	12	Large Limousine (More Than Four Side Doors or Stretched Chassis)
13	13	13	Three Wheel Automobile or Automobile Derivative
Utility Vehicles			
14	14	14	Compact Utility (ANSI D-16 Utility Vehicle Categories “Small” and “Midsize”)
15	15	15	Large Utility (ANSI D-16 Utility Vehicle Categories “Full Size” and “Large”)

2016	2017-2019	2020-Later	
16	16	16	Utility Station Wagon
19	19	17	Utility Vehicle, Unknown Body Type
Van-Based Light Trucks (GVWR ≤ 10,000 lbs)			
20	20	20	Minivan
21	21	21	Large Van – Includes Van-Based Buses
22	22	22	Step Van or Walk-in Van (GVWR ≤ 10,000 lbs)
28	28	28	Other Van Type
29	29	29	Unknown Van Type
Light Conventional Trucks (Pickup style cab, GVWR ≤10,000 lbs)			
30	--	--	Compact Pickup (S-10, LUV, Ram 50, Rampage, Courier, Ranger, S-5, Pup, Mazda Pickup, Mitsubishi Truck, Datsun/Nissan Pickup, Arrow Pickup, Scamp, Toyota Pickup, VW Pickup, D50, Colt P/U, T-10, S-15, T-15, Ram 100, Dakota, Sonoma)
31	--	--	Standard Pickup (C10-C35, Jeep P/U, Comanche, Ram P/U, K10-K35, D100-D350, W100-350, F100-F350, R100-500, R10-R35, V10-35, Silverado, Sierra, T100)
32	32	32	Pickup With Slide-in Camper (2016-2017 Only)
33	33	33	Convertible Pickup
--	34	34	Light Pickup
39	39	39	Unknown (Pickup Style) Light Conventional Truck
Other Light Trucks (GVWR ≤10,000 lbs)			
40	40	40	Cab Chassis Based (Included Rescue Vehicle, Light Stake, Dump, And Tow Truck)
41	41	41	Truck Based Panel
45	45	45	Other Light Conventional Truck Type
48	48	48	Unknown Light Truck Type
49	49	49	Unknown Light Vehicle Type (Automobile, Utility, Van, or Light Truck)
Buses (excludes van based buses with a GVWR ≤ 10,000 lbs)			
50	50	50	School Bus (Designed to Carry Students, Not Cross Country or Transit)

2016	2017-2019	2020-Later	
51	51	51	Cross Country/Intercity Bus (i.e., Greyhound)
52	52	52	Transit Bus (City Bus)
55	55	55	Van-Based Bus (GVWR > 10,000 lbs)
58	58	58	Other Bus Type
59	59	59	Unknown Bus Type
Medium/Heavy Trucks (GVWR > 10,000 lbs)			
60	60	60	Step Van (GVWR > 10,000 lbs)
61	61	61	Single-Unit Straight Truck or Cab-Chassis (GVWR range 10,001 to 19,500 lbs)
62	62	62	Single-Unit Straight Truck or Cab-Chassis (GVWR range 19,501 to 26,000 lbs)
63	63	63	Single-Unit Straight Truck or Cab-Chassis (GVWR > 26,000 lbs)
64	64	64	Single Unit Straight Truck or Cab-Chassis (GVWR unknown)
66	66	66	Truck-Tractor (Cab Only, or With Any Number Of Trailing Units; Any Weight)
67	67	67	Medium/Heavy Pickup (GVWR > 10,000 lbs)
71	71	71	Unknown if Single-Unit or Combination-Unit Medium Truck (GVWR range 10,001 to 26,000 lbs)
72	72	72	Unknown if Single-Unit or Combination-Unit Heavy Truck (GVWR > 26,000 lbs)
78	78	78	Unknown Medium/Heavy Truck Type
79	79	79	Unknown Truck Type (Light/Medium/Heavy)
Motor Homes			
42	42	--	Light Truck-Based Motor Home (Chassis Mounted)
--	--	42	Light Vehicle-Based Motor Home (Chassis Mounted)
65	65	--	Medium/Heavy Truck-Based Motor Home
--	--	65	Medium/Heavy Vehicle-Based Motor Home
73	73	--	Camper or Motor Home, Unknown Truck Type
--	--	73	Camper or Motor Home, Unknown GVWR

2016	2017-2019	2020-Later	
Motored Cycles, MOPEDS, All-Terrain Vehicles, All-Terrain cycles			
80	--	--	Motorcycle
--	80	80	Two Wheel Motorcycle (excluding motor scooters)
81	--	--	Moped (Motorized Bicycle)
--	81	81	Moped or Motorized Bicycle
82	--	--	Three Wheeled Motorcycle or Moped
--	82	82	Three-wheel Motorcycle (2 Rear Wheels)
83	--	--	Off-Road Motorcycle (2-Wheel)
--	83	83	Off-Road Motorcycle
--	84	84	Motor Scooter
--	85	85	Unenclosed Three Wheel Motorcycle/Unenclosed Autocycle (1 Rear Wheel)
--	86	86	Enclosed Three Wheel Motorcycle/Enclosed Autocycle (1 Rear Wheel)
--	87	87	Unknown Three Wheel Motorcycle Type
88	--	--	Other Motored Cycle Type (Minibike, Motor Scooter, Pocket Motorcycles, Pocket Bikes)
--	88	88	Other Motored Cycle Type (Mini-bikes, Pocket Motorcycles, "Pocket Bikes")
89	89	89	Unknown Motored Cycle Type
90	90	90	ATV (All-Terrain Vehicle)/ATC (All-Terrain Cycle)
Other Vehicles			
91	91	91	Snowmobile
92	92	92	Farm Equipment Other Than Trucks
93	93	93	Construction Equipment Other Than Trucks (Includes Graders)
94	94	94	Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV)
95	95	95	Golf Cart
--	96	96	Recreational Off-Highway Vehicle (ROV)
97	97	97	Other Vehicle Type (Includes Go-Cart, Fork-Lift, City Street Sweeper)
98	98	98	Not Reported
99	99	99	Unknown Body Type

V17 Final Stage Body Class

Definition

This element captures the completed/finished body class for an Incomplete Vehicle. An incomplete vehicle is completed by a final stage manufacturer. The intent of this data element is to capture the body class for incomplete vehicles when they are finished for road-use.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PICFINALBODY

Attribute Codes

2020	2021-Later	
0	0	Not Applicable
2	2	Minivan
4	4	Low-Speed Vehicle (LSV)
7	7	Sport Utility Vehicle (SUV)/Multi-Purpose Vehicle (MPV)
8	8	Crossover Utility Vehicle (CUV)
9	9	Van
11	11	Truck
15	15	Wagon
16	16	Bus
60	60	Pickup
66	66	Truck-Tractor
68	68	Streetcar/Trolley
73	73	Bus-School Bus
95	95	Cargo Van
108	108	Motorhome
111	111	Step Van/Walk-in Van
117	117	Limousine
119	119	Sport Utility Truck
--	128	Ambulance
--	129	Street Sweeper
--	130	Fire Apparatus
997	997	Other
998	998	Not Reported
999	999	Unknown

V19 Vehicle Trailing

Definition

This data element identifies whether this vehicle had any attached trailing units or was towing another motor vehicle. A trailing unit can be a horse trailer, fifth wheel trailer, camper, boat, truck trailer, towed vehicle or any other trailer.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PTRAILER

Attribute Codes

2016-Later	
0	No Trailing Units
1	Yes, One Trailing Unit
2	Yes, Two Trailing Units
3	Yes, Three or More Trailing Units
4	Yes, Number of Trailing Units Unknown
5	Vehicle Towing Another Motor Vehicle – Fixed Linkage
6	Vehicle Towing Another Motor Vehicle – Non-fixed Linkage
9	Unknown

V20 Trailer Vehicle Identification Number

Definition

This data element records the vehicle identification number (VIN) of any trailing units of a combination vehicle.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PTRLR1VIN, PTRLR2VIN, PTRLR3VIN

Attribute Codes

2016-2017	2018-2020	2021-Later	
000000000000	000000000000	--	No VIN Required
--	--	000000000000	No VIN Required, Not a Vehicle for Road Use
xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx	First 12 Characters of the VIN
777777777777	777777777777	777777777777	No Trailing Units
888888888888	888888888888	888888888888	Not Reported
999999999999	--	--	Unknown
--	999999999999	999999999999	Reported as Unknown
--	*	*	VIN Character Missing or Not Decipherable

V34A Initial Contact Point

Definition

This data element identifies the area on this vehicle that produced the first instance of injury to non-motorists or occupants of this vehicle, or that resulted in the first instance of damage to other property or to this vehicle.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PIMPACT1

Attribute Codes

2016	2017	2018	2019-Later	
0	0	0	0	Non-Collision
1-12	1-12	1-12	1-12	Clock points
13	13	13	13	Top
14	14	14	14	Undercarriage
18	18	18	18	Cargo/Vehicle Parts Set-in-Motion
19	19	19	--	Other Objects Set-in-Motion
--	--	--	19	Other Objects or Person Set-in-Motion
--	20	20	20	Object Set in Motion, Unknown if
				Cargo/Vehicle Parts or Other
61	61	61	61	Left
62	62	62	62	Left-Front Side
63	63	63	63	Left-Back Side
81	81	81	81	Right
82	82	82	82	Right-Front Side
83	83	83	83	Right-Back Side
98	98	98	98	Not Reported
99	99	--	--	Unknown
--	--	99	99	Reported as Unknown

V35 Extent of Damage

Definition

This data element records the amount of damage sustained by this vehicle as indicated on the police crash report based on an operational damage scale.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name: PVEH_SEV

Attribute Codes

2016-2017	2018-Later	
0	0	No Damage
2	2	Minor Damage
4	4	Functional Damage
6	6	Disabling Damage
8	8	Not Reported
9	--	Unknown
--	9	Reported as Unknown

V36 Vehicle Removal

Definition

This data element describes the mode by which this vehicle left the scene of the crash.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PTOWED

Attribute Codes

2016-2017	2018-2019	2020-Later	
2	2	2	Towed Due to Disabling Damage
3	3	--	Towed Not Due to Disabling Damage
--	--	3	Towed But Not Due to Disabling Damage
5	5	5	Not Towed
--	7	7	Towed, Unknown Reason
8	8	8	Not Reported
9	--	--	Unknown
--	9	9	Reported as Unknown

V38 Most Harmful Event

Definition

This data element describes the event that resulted in the most severe injury or, if no injury, the greatest property damage involving this vehicle.

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PM_HARM

Attribute Codes

2016	2017	2018-Later	
Non-collision			
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion or Partial Immersion
4	4	4	Gas Inhalation
5	5	5	Fell/Jumped from Vehicle
6	6	6	Injured in Vehicle (Non-Collision)
7	7	7	Other Non-collision
16	16	16	Thrown or Falling Object
44	44	44	Pavement Surface Irregularity (Ruts, Potholes, Grates, etc.)
51	51	51	Jackknife (Harmful to This Vehicle)
72	72	--	Cargo/Equipment Loss or Shift (Harmful to This Vehicle)
--	--	72	Cargo/Equipment Loss, Shift, or Damage (Harmful)
Collision with Motor Vehicle In-Transport			
54	54	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
55	55	55	Motor Vehicle in Motion Outside the Trafficway
Collision with Object Not Fixed			
8	8	8	Pedestrian
9	9	9	Pedalcyclist
10	10	10	Railway Vehicle

2016	2017	2018-Later	
11	11	11	Live Animal
14	14	14	Parked Motor Vehicle
15	15	15	Non-Motorist on Personal Conveyance
18	18	18	Other Object Not Fixed
45	45	45	Working Motor Vehicle
49	49	49	Ridden Animal or Animal Drawn Conveyance
73	73	73	Object That Had Fallen From Motor Vehicle In-Transport
74	74	74	Road Vehicle on Rails
--	91	91	Unknown Object Not Fixed
Collision with Fixed Object			
17	17	17	Boulder
19	19	19	Building
20	20	20	Impact Attenuator/Crash Cushion
21	21	21	Bridge Pier or Support
23	23	23	Bridge Rail (Includes Parapet)
24	24	24	Guardrail Face
25	25	25	Concrete Traffic Barrier
26	26	26	Other Traffic Barrier
30	30	30	Utility Pole/Light Support
31	31	31	Post, Pole or Other Support
32	32	32	Culvert
33	33	33	Curb
34	34	34	Ditch
35	35	35	Embankment
38	38	38	Fence
39	39	39	Wall
40	40	40	Fire Hydrant
41	41	41	Shrubbery
42	42	42	Tree (Standing Only)
43	43	43	Other Fixed Object
46	46	46	Traffic Signal Support
48	48	48	Snow Bank
50	50	50	Bridge Overhead Structure
52	52	52	Guardrail End
53	53	53	Mail Box
57	57	57	Cable Barrier

2016	2017	2018-Later	
58	58	58	Ground
59	59	59	Traffic Sign Support
--	93	93	Unknown Fixed Object
--	--	98	Harmful Event, Details Not Reported (Since 2019)
99	99	--	Unknown
--	--	99	Reported as Unknown

V100 Make Model Combined

Definition

This derived data element represents the 5-digit combination of two data elements, the 2-digit NCSA Vehicle Make code (MAKE) followed by the 3-digit NCSA Vehicle Model code (MODEL).

Additional Information

See this data element in the Vehicle data file section for more information.

SAS Name

PMAK_MOD

Attribute Codes

2016-Later
See the current NTS Coding and Validation Manual for vehicle make and model codes.

The CEVENT Data File

The Cevent data file includes harmful and non-harmful events in the crash. It contains the data elements CASENUM, PSU, PJ, STUDY, and EVENTNUM, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The Cevent data file also contains the data elements on the following pages.

CASENUM and EVENTNUM are the unique identifiers for each record. CASENUM should be used to merge the Cevent data file with the Accident data file.

C18A Vehicle Number (This Vehicle)

Definition

This data element identifies the "Vehicle Number" (VEH_NO) of this motor vehicle in-transport described in this event.

Additional Information

This is the vehicle described in "Sequence of Events" for this event.

SAS Name

VNUMBER1

Attribute Codes

2016-Later	
1-999	Vehicle Number

C18B Area of Impact (This Vehicle)

Definition

This data element identifies the impact point, if any, on this motor vehicle in-transport that produced property damage or personal injury in this event.

Additional Information

This is the impact area of the vehicle recorded in "Vehicle Number (This Vehicle)" and described in "Sequence of Events."

SAS Name

AOI1

Attribute Codes

2016	2017	2018	2019-Later	
0	0	0	0	Non-Collision
1-12	1-12	1-12	1-12	Clock points
13	13	13	13	Top
14	14	14	14	Undercarriage
18	18	18	18	Cargo/Vehicle Parts Set-in-Motion
19	19	19	--	Other Objects Set-in-Motion
--	--	--	19	Other Objects or Person Set-in-Motion
--	20	20	20	Object Set in Motion, Unknown if
				Cargo/Vehicle Parts or Other
55	55	55	55	Non-Harmful Event
61	61	61	61	Left
62	62	62	62	Left-Front Side
63	63	63	63	Left-Back Side
81	81	81	81	Right
82	82	82	82	Right-Front Side
83	83	83	83	Right-Back Side
98	98	98	98	Not Reported
99	99	--	--	Unknown
--	--	99	99	Reported as Unknown

V37 Sequence of Events

Definition

This data element describes this event. A motor vehicle traffic crash is a series of events resulting from an unstabilized situation. This series of harmful and non-harmful events is recorded in chronological order based on the police crash report narrative and diagram.

Additional Information

"First Harmful Event, Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes. Prior to 2020, the Data Element ID was V32.

SAS Name

SOE

Attribute Codes

2016	2017	2018-Later	
Non-collision Harmful Events			
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion or Partial Immersion
4	4	4	Gas Inhalation
5	5	5	Fell/Jumped from Vehicle
6	6	6	Injured in Vehicle (Non-Collision)
7	7	7	Other Non-collision
16	16	16	Thrown or Falling Object
44	44	44	Pavement Surface Irregularity (Ruts, Potholes, Grates, etc.)
51	51	51	Jackknife (Harmful to This Vehicle)
72	72	--	Cargo/Equipment Loss or Shift (Harmful to This Vehicle)
--	--	72	Cargo/Equipment Loss, Shift, or Damage (Harmful)
Collision with Motor Vehicle In-Transport			
12	12	12	Motor Vehicle In-Transport
54	54	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
55	55	55	Motor Vehicle in Motion Outside the Trafficway

2016	2017	2018-Later	
Collision with Object Not Fixed			
8	8	8	Pedestrian
9	9	9	Pedalcyclist
10	10	10	Railway Vehicle
11	11	11	Live Animal
14	14	14	Parked Motor Vehicle
15	15	15	Non-Motorist on Personal Conveyance
18	18	18	Other Object Not Fixed
45	45	45	Working Motor Vehicle
49	49	49	Ridden Animal or Animal Drawn Conveyance
73	73	73	Object That Had Fallen From Motor Vehicle In-Transport
74	74	74	Road Vehicle on Rails
--	91	91	Unknown Object Not Fixed
Collision with Fixed Object			
17	17	17	Boulder
19	19	19	Building
20	20	20	Impact Attenuator/Crash Cushion
21	21	21	Bridge Pier or Support
23	23	23	Bridge Rail (Includes Parapet)
24	24	24	Guardrail Face
25	25	25	Concrete Traffic Barrier
26	26	26	Other Traffic Barrier
30	30	30	Utility Pole/Light Support
31	31	31	Post, Pole or Other Support
32	32	32	Culvert
33	33	33	Curb
34	34	34	Ditch
35	35	35	Embankment
38	38	38	Fence
39	39	39	Wall
40	40	40	Fire Hydrant
41	41	41	Shrubbery
42	42	42	Tree (Standing Only)
43	43	43	Other Fixed Object
46	46	46	Traffic Signal Support
48	48	48	Snow Bank

2016	2017	2018-Later	
50	50	50	Bridge Overhead Structure
52	52	52	Guardrail End
53	53	53	Mail Box
57	57	57	Cable Barrier
58	58	58	Ground
59	59	59	Traffic Sign Support
--	93	93	Unknown Fixed Object
--	--	98	Harmful Event, Details Not Reported (Since 2019)
99	99	--	Unknown
--	--	99	Reported as Unknown

C18C Vehicle Number (Other Vehicle)

Definition

This data element identifies the "Vehicle Number" (VEH_NO) of the other motor vehicle, if any, in this event.

Additional Information

This is the vehicle contacted by the motor vehicle in-transport recorded in "Vehicle Number (This Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid vehicle number (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

SAS Name

VNUMBER2

Attribute Codes

2016-Later	
1-999	Vehicle Number
5555	Non-Harmful Event
9999	Not a Motor Vehicle

C18D Area of Impact (Other Vehicle)

Definition

This data element identifies the impact point on the other motor vehicle, if any, in this event.

Additional Information

This is the impact area of the vehicle recorded in "Vehicle Number (Other Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid impact location (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

SAS Name: AOI2

Attribute Codes

2016	2017	2018	2019-Later	
0	0	0	0	Non-Collision
1-12	1-12	1-12	1-12	Clock points
13	13	13	13	Top
14	14	14	14	Undercarriage
18	18	18	18	Cargo/Vehicle Parts Set-in-Motion
19	19	19	--	Other Objects Set-in-Motion
--	--	--	19	Other Objects or Person Set-in-Motion
--	20	20	20	Object Set in Motion, Unknown if
				Cargo/Vehicle Parts or Other
55	55	55	55	Non-Harmful Event
61	61	61	61	Left
62	62	62	62	Left-Front Side
63	63	63	63	Left-Back Side
81	81	81	81	Right
82	82	82	82	Right-Front Side
83	83	83	83	Right-Back Side
98	98	98	98	Not Reported
99	99	--	--	Unknown
--	--	99	99	Reported as Unknown

The VEVENT Data File

The Vevent data file includes harmful and non-harmful events for each motor vehicle in-transport. It contains the data elements CASENUM, PSU, PJ, STUDY, VEH_NO, EVENTNUM, and VEVENTNUM, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The Vevent data file also contains the data elements on the following pages.

CASENUM, VEH_NO, and VEVENTNUM are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Vevent data file with the Vehicle data file.

C18A Vehicle Number (This Vehicle)

Definition

This data element identifies the "Vehicle Number" (VEH_NO) of the motor vehicle in-transport described in this event.

Additional Information

This is the vehicle described in "Sequence of Events" for this event.

If Vehicle #1 (V1) impacts Vehicle #2 (V2), then we have at least 2 Vevent records.

Example:

VEH_NO	EVENTNUM	VNUMBER1	SOE	VNUMBER2
1	1	1	12	2
2	1	1	12	2

The explanation of these 2 records is as follows:

V1 was involved in event 1 where V1 impacts V2

V2 was involved in event 1 where V1 impacts V2

SAS Name

VNUMBER1

Attribute Codes

2016-Later	
1-999	Vehicle Number

C18B Area of Impact (This Vehicle)

Definition

This data element identifies the impact point, if any, on this motor vehicle in-transport that produced property damage or personal injury in this event.

Additional Information

SAS Name

AOI1

Attribute Codes

2016	2017	2018	2019-Later	
0	0	0	0	Non-Collision
1-12	1-12	1-12	1-12	Clock points
13	13	13	13	Top
14	14	14	14	Undercarriage
18	18	18	18	Cargo/Vehicle Parts Set-in-Motion
19	19	19	--	Other Objects Set-in-Motion
--	--	--	19	Other Objects or Person Set-in-Motion
--	20	20	20	Object Set in Motion, Unknown if
				Cargo/Vehicle Parts or Other
55	55	55	55	Non-Harmful Event
61	61	61	61	Left
62	62	62	62	Left-Front Side
63	63	63	63	Left-Back Side
81	81	81	81	Right
82	82	82	82	Right-Front Side
83	83	83	83	Right-Back Side
98	98	98	98	Not Reported
99	99	--	--	Unknown
--	--	99	99	Reported as Unknown

V37 Sequence of Events

Definition

This data element describes this event. A motor vehicle traffic crash is a series of events resulting from an unstabilized situation. This series of harmful and non-harmful events is recorded in chronological order based on the police crash report narrative and diagram.

Additional Information

"First Harmful Event, Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

Prior to 2020, the Data Element ID was V32.

SAS Name

SOE

Attribute Codes

2016	2017	2018-Later	
Non-collision Harmful Events			
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion or Partial Immersion
4	4	4	Gas Inhalation
5	5	5	Fell/Jumped from Vehicle
6	6	6	Injured in Vehicle (Non-Collision)
7	7	7	Other Non-collision
16	16	16	Thrown or Falling Object
44	44	44	Pavement Surface Irregularity (Ruts, Potholes, Grates, etc.)
51	51	51	Jackknife (Harmful to This Vehicle)
72	72	--	Cargo/Equipment Loss or Shift (Harmful to This Vehicle)
--	--	72	Cargo/Equipment Loss, Shift, or Damage (Harmful)
Collision with Motor Vehicle In-Transport			
54	54	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
55	55	55	Motor Vehicle in Motion Outside the Trafficway

2016	2017	2018-Later	
Collision with Object Not Fixed			
8	8	8	Pedestrian
9	9	9	Pedalcyclist
10	10	10	Railway Vehicle
11	11	11	Live Animal
14	14	14	Parked Motor Vehicle
15	15	15	Non-Motorist on Personal Conveyance
18	18	18	Other Object Not Fixed
45	45	45	Working Motor Vehicle
49	49	49	Ridden Animal or Animal Drawn Conveyance
73	73	73	Object That Had Fallen From Motor Vehicle In-Transport
74	74	74	Road Vehicle on Rails
--	91	91	Unknown Object Not Fixed
Collision with Fixed Object			
17	17	17	Boulder
19	19	19	Building
20	20	20	Impact Attenuator/Crash Cushion
21	21	21	Bridge Pier or Support
23	23	23	Bridge Rail (Includes Parapet)
24	24	24	Guardrail Face
25	25	25	Concrete Traffic Barrier
26	26	26	Other Traffic Barrier
30	30	30	Utility Pole/Light Support
31	31	31	Post, Pole or Other Support
32	32	32	Culvert
33	33	33	Curb
34	34	34	Ditch
35	35	35	Embankment
38	38	38	Fence
39	39	39	Wall
40	40	40	Fire Hydrant
41	41	41	Shrubbery
42	42	42	Tree (Standing Only)
43	43	43	Other Fixed Object
46	46	46	Traffic Signal Support
48	48	48	Snow Bank

2016	2017	2018-Later	
50	50	50	Bridge Overhead Structure
52	52	52	Guardrail End
53	53	53	Mail Box
57	57	57	Cable Barrier
58	58	58	Ground
59	59	59	Traffic Sign Support
--	93	93	Unknown Fixed Object
--	--	98	Harmful Event, Details Not Reported (Since 2019)
99	99	--	Unknown
--	--	99	Reported as Unknown

C18C Vehicle Number (Other Vehicle)

Definition

This data element identifies the "Vehicle Number" (VEH_NO) of the other motor vehicle, if any, in this event.

Additional Information

This is the vehicle contacted by the motor vehicle in-transport recorded in "Vehicle Number (This Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid vehicle number (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

SAS Name

VNUMBER2

Attribute Codes

2016-Later	
1-999	Vehicle Number
5555	Non-Harmful Event
9999	Not a Motor Vehicle

C18D Area of Impact (Other Vehicle)

Definition

This data element identifies the impact point on the other motor vehicle, if any, in this event.

Additional Information

This is the impact area of the vehicle recorded in "Vehicle Number (Other Vehicle)." Another vehicle must have been involved in this event for this data element to be a valid impact location (i.e., "Sequence of Events" for this event must be 12, 14, 45, 54, or 55).

SAS Name

AOI2

Attribute Codes

2016	2017	2018	2019-Later	
0	0	0	0	Non-Collision
1-12	1-12	1-12	1-12	Clock points
13	13	13	13	Top
14	14	14	14	Undercarriage
18	18	18	18	Cargo/Vehicle Parts Set-in-Motion
19	19	19	--	Other Objects Set-in-Motion
--	--	--	19	Other Objects or Person Set-in-Motion
--	20	20	20	Object Set in Motion, Unknown if
				Cargo/Vehicle Parts or Other
55	55	55	55	Non-Harmful Event
61	61	61	61	Left
62	62	62	62	Left-Front Side
63	63	63	63	Left-Back Side
81	81	81	81	Right
82	82	82	82	Right-Front Side
83	83	83	83	Right-Back Side
98	98	98	98	Not Reported
99	99	--	--	Unknown
--	--	99	99	Reported as Unknown

The VSOE Data File

The Vsoe data file includes harmful and non-harmful events for each motor vehicle in-transport. It contains the data elements CASENUM, PSU, PJ, STUDY, VEH_NO, and VEVENTNUM, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The Vsoe data file also contains the data elements on the following pages.

CASENUM, VEH_NO, and VEVENTNUM are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Vsoe data file with the Vehicle data file.

C18E Area of Impact Associated with the Event

Definition

This data element identifies the impact point, if any, on this motor vehicle in-transport that produced property damage or personal injury in this event.

Additional Information

This is the impact area of the vehicle recorded as “Vehicle Number (This Vehicle)” or “Vehicle Number (Other Vehicle)” in the crash events.

SAS Name

AOI

Attribute Codes

2016	2017	2018	2019-Later	
0	0	0	0	Non-Collision
1-12	1-12	1-12	1-12	Clock points
13	13	13	13	Top
14	14	14	14	Undercarriage
18	18	18	18	Cargo/Vehicle Parts Set-in-Motion
19	19	19	--	Other Objects Set-in-Motion
--	--	--	19	Other Objects or Person Set-in-Motion
--	20	20	20	Object Set in Motion, Unknown if
				Cargo/Vehicle Parts or Other
55	55	55	55	Non-Harmful Event
61	61	61	61	Left
62	62	62	62	Left-Front Side
63	63	63	63	Left-Back Side
81	81	81	81	Right
82	82	82	82	Right-Front Side
83	83	83	83	Right-Back Side
98	98	98	98	Not Reported
99	99	--	--	Unknown
--	--	99	99	Reported as Unknown

V37 Sequence of Events

Definition

The events in sequence related to this motor vehicle, regardless of injury and/or property damage. Events for the vehicle are recorded in the order in which they occur, time-wise, from the police crash report narrative and diagram.

Additional Information

"First Harmful Event," "Most Harmful Event," and the "Sequence of Events" data elements have the same harmful event attributes. "Sequence of Events" also has non-harmful event attributes.

Prior to 2020, the Data Element ID was V32.

SAS Name

SOE

Attribute Codes

2016	2017	2018-Later	
Non-collision Harmful Events			
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion or Partial Immersion
4	4	4	Gas Inhalation
5	5	5	Fell/Jumped from Vehicle
6	6	6	Injured in Vehicle (Non-Collision)
7	7	7	Other Non-collision
16	16	16	Thrown or Falling Object
44	44	44	Pavement Surface Irregularity (Ruts, Potholes, Grates, etc.)
51	51	51	Jackknife (Harmful to This Vehicle)
72	72	--	Cargo/Equipment Loss or Shift (Harmful to This Vehicle)
--	--	72	Cargo/Equipment Loss, Shift, or Damage (Harmful)
Collision with Motor Vehicle In-Transport			
54	54	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
55	55	55	Motor Vehicle in Motion Outside the Trafficway

2016	2017	2018-Later	
Collision with Object Not Fixed			
8	8	8	Pedestrian
9	9	9	Pedalcyclist
10	10	10	Railway Vehicle
11	11	11	Live Animal
14	14	14	Parked Motor Vehicle
15	15	15	Non-Motorist on Personal Conveyance
18	18	18	Other Object Not Fixed
45	45	45	Working Motor Vehicle
49	49	49	Ridden Animal or Animal Drawn Conveyance
73	73	73	Object That Had Fallen From Motor Vehicle In-Transport
74	74	74	Road Vehicle on Rails
--	91	91	Unknown Object Not Fixed
Collision with Fixed Object			
17	17	17	Boulder
19	19	19	Building
20	20	20	Impact Attenuator/Crash Cushion
21	21	21	Bridge Pier or Support
23	23	23	Bridge Rail (Includes Parapet)
24	24	24	Guardrail Face
25	25	25	Concrete Traffic Barrier
26	26	26	Other Traffic Barrier
30	30	30	Utility Pole/Light Support
31	31	31	Post, Pole or Other Support
32	32	32	Culvert
33	33	33	Curb
34	34	34	Ditch
35	35	35	Embankment
38	38	38	Fence
39	39	39	Wall
40	40	40	Fire Hydrant
41	41	41	Shrubbery
42	42	42	Tree (Standing Only)
43	43	43	Other Fixed Object
46	46	46	Traffic Signal Support
48	48	48	Snow Bank

2016	2017	2018-Later	
50	50	50	Bridge Overhead Structure
52	52	52	Guardrail End
53	53	53	Mail Box
57	57	57	Cable Barrier
58	58	58	Ground
59	59	59	Traffic Sign Support
--	93	93	Unknown Fixed Object
--	--	98	Harmful Event, Details Not Reported (Since 2019)
99	99	--	Unknown
--	--	99	Reported as Unknown

The DAMAGE Data File

The Damage data file identifies each area of damage as a separate record. That is, there can be more than one damage record for each vehicle. It contains the data elements CASENUM, PSU, PJ, STUDY, and VEH_NO, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The Damage data file also contains the data elements on the following pages.

CASENUM and VEH_NO are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Damage data file with vehicles from the Vehicle data file.

V34B Area of Impact – Damaged Areas

Definition

This data element identifies all the areas on this vehicle that were damaged in the crash as reflected in the case materials.

Additional Information

Prior to 2020, the Data Element ID was V29B.

SAS Name

MDAREAS ***2016-2019***

DAMAGE ***2020-Later***

Attribute Codes

2016-Later	
1-12	Clock points
13	Top
14	Undercarriage
15	No Damage
99	Damage Areas Unknown

The DISTRACT Data File

The Distract data file identifies each driver distraction as a separate record. That is, there can be more than one distraction record for each driver. It contains the data elements CASENUM, PSU, PJ, STUDY, and VEH_NO, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The data file also contains DRDISTRACT which is described below.

CASENUM, VEH_NO, and DRDISTRACT are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Distract data file with drivers from the Vehicle data file.

PC16 Driver Distracted By

Definition

This data element identifies the attributes that best describe this driver's attention to driving prior to the driver's realization of an impending critical event or just prior to impact if realization of an impending critical event does not occur.

Additional Information

Distraction from the primary task of driving occurs when drivers divert their attention from the driving task to some other activity. Also, driving while daydreaming or lost in thought is identified as distracted driving by NHTSA. Physical conditions/impairments (fatigue, alcohol, medical condition, etc.) or psychological states (anger, emotional, depressed, etc.) are not identified as distractions by NHTSA.

SAS Name

MDRDSTRD *2016-2019*

DRDISTRACT *2020-Later*

Attribute Codes

2016-2017	2018-Later	
0	0	Not Distracted
1	--	Looked But Did Not See
3	3	By Other Occupants
4	4	By a Moving Object in Vehicle
5	5	While Talking or Listening to Mobile Phone
6	6	While Manipulating Mobile Phone
7	7	While Adjusting Audio or Climate Controls
9	9	While Using Other Component/Controls Integral to Vehicle
10	10	While Using or Reaching for Device/Object Brought into Vehicle
12	12	Distracted By Outside Person, Object or Event
13	13	Eating or Drinking
14	14	Smoking Related
15	15	Other Mobile Phone Related
16	16	No Driver Present/Unknown if Driver Present
17	17	Distraction/Inattention
18	18	Distraction/Careless
19	19	Careless/Inattentive
92	92	Distraction (Distracted), Details Unknown
93	93	Inattention (Inattentive), Details Unknown
96	96	Not Reported

2016-2017	2018-Later	
97	97	Lost in Thought/Day Dreaming
98	98	Other Distraction
99	--	Unknown if Distracted
--	99	Reported as Unknown if Distracted

The VISION Data File

The Vision data file identifies each visual obstruction as a separate record. That is, there can be more than one vision record for each driver. It contains the data elements CASENUM, PSU, PJ, STUDY, and VEH_NO, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The data file also contains VISION which is described below.

CASENUM, VEH_NO, and VISION are the unique identifiers for each record. CASENUM and VEH_NO should be used to merge the Vision data file with drivers from the Vehicle data file.

PC14 Driver's Vision Obscured By

Definition

This data element records impediments to this driver's visual field that were noted in the police crash report.

Additional Information

SAS Name

MVISOBSC *2016-2019*

VISION *2020-Later*

Attribute Codes

2016-2017	2018-Later	
0	0	No Obstruction Noted
1	1	Rain, Snow, Fog, Smoke, Sand, Dust
2	2	Reflected Glare, Bright Sunlight, Headlights
3	3	Curve, Hill, or Other Roadway Design Features
4	4	Building, Billboard, or Other Structure
5	5	Trees, Crops, Vegetation
6	6	In-Transport Motor Vehicle (Including Load)
7	7	Not In-Transport Motor Vehicle (Parked, Working)
8	8	Splash or Spray of Passing Vehicle
9	9	Inadequate Defrost or Defog System
10	10	Inadequate Vehicle Lighting System
11	11	Obstructing Interior to the Vehicle
12	12	External Mirrors
13	13	Broken or Improperly Cleaned Windshield
14	14	Obstructing Angles on Vehicle
95	95	No Driver Present/Unknown if Driver Present
97	97	Vision Obscured – No Details
98	98	Other Visual Obstruction
99	--	Unknown
--	99	Reported as Unknown

The PERSON_ADJ Data File

The Person_adj data file contains the weights for the injury and fatalities involved in the non-traffic crash. It contains the data elements CASENUM, PSU, PJ, STUDY, VEH_NO, and PER_NO, which are described in the Key Data Elements at the beginning of the Data Element Definitions and Codes section. The data file also contains ADJUST which is described below.

CASENUM, VEH_NO, and PER_NO are the unique identifiers for each record. CASENUM, VEH_NO, and PER_NO should be used to merge the Person_adj data file with the Person data file.

Adjust

Definition

This data element is used to produce national estimates from the data.

Additional Information

From 2016 to 2020, this data element was contained in the Accident data file.

SAS Name

ADJUST

References

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Appendix A. Rules for Derived Data Elements

Several derived data elements are included in the data files. A derived data element is any element that is not coded (i.e., not directly entered into the system) but translated from existing data. Derived data elements include:

- records counted from vehicle and person levels as crash level counters (e.g., "Number of Parked/Working Vehicles"), and
- data extracted across several records (e.g., "First Harmful Event")

The derived data elements are provided to facilitate analyses and as a common platform for presenting findings. These elements and the translations used to derive them are described in this Appendix.

Crash Level Counts

Number of Motor Vehicles In-Transport (MVIT)

Accident. VE_FORMS

(also provided as Vehicle.VE_FORMS, Parkwork.PVE_FORMS, Person.VE_FORMS)

Logic of Derivation

All Vehicle records linked to the crash are used. This data element is derived as the count of all vehicles in the crash where "Unit Type" = 1. It is the number of records in the Vehicle data file.

Number of Parked/Working Vehicles

Accident. PVH_INVL

Logic of Derivation

All Vehicle records linked to the crash are used. This data element is derived as the count of all vehicles in the crash where "Unit Type" is in (3 or 4). It is the number of records in the Parkwork data file.

Number of Persons in Motor Vehicles In-Transport (MVIT)

Accident. PERMVIT

Logic of Derivation

All Person records linked to the crash are used. This data element is derived as the count of all people in the crash where "Person Type" is in (1, 2, or 9).

Number of Persons Not in Motor Vehicles In-Transport (MVIT)

Accident. PERNOTMVIT

Logic of Derivation

All Person records linked to the crash are used. Prior to 2020, this data element is derived as the count of all people in the crash where "Person Type" is in (3, 4, 5, 6, 7, 10, or 19). Starting in 2020, the attributes are in (3, 4, 5, 6, 7, 10, 11, 12, 13, or 19).

Crash and Vehicle Level Derived Data Elements

Maximum Injury Severity in Crash

Accident.MAX_SEV

Attribute Labels	2016-Later
No Apparent Injury	0
Possible Injury	1
Suspected Minor Injury	2
Suspected Serious Injury	3
Fatal	4
Injured, Severity Unknown	5
Died Prior to Crash	6
No person involved in the Crash	8
Unknown if Injured/Not Reported	9

Logic of Derivation

All Person records linked to the crash are used. If there are no records, then the value 8 is assigned. If there is a single record, then the SAS code for Person.INJ_SEV is used. If there are multiple records, all SAS codes for Person.INJ_SEV are obtained and prioritized. Follow the priority ranking of each attribute as follows: 4, 3, 2, 1, 5, 0, 6, 9.

Maximum Injury Severity in Vehicle

Vehicle.MAX_VSEV

Attribute Labels	2016-Later
No Apparent Injury	0
Possible Injury	1
Suspected Minor Injury	2
Suspected Serious Injury	3
Fatal	4
Injured, Severity Unknown	5
Died Prior to Crash	6
No person in Vehicle	8
Unknown if Injured/Not Reported	9

Logic of Derivation

All Person records linked to the vehicle are used. If there are no records, then the value 8 is assigned. If there is a single record, then the SAS code for Person.INJ_SEV is used. If there are multiple records, all SAS codes for Person.INJ_SEV are obtained and prioritized. Follow the priority ranking of each attribute as follows: 4, 3, 2, 1, 5, 0, 6, 9.

Number Injured in Crash

Accident.NUM_INJ

Attribute Labels	2016-Later
No Person Injured/Property Damage Only Crash	0
Number of Known Injured	x
No Person involved in the Crash	98
All Persons in Crash are Unknown if Injured	99

Logic of Derivation

All Person records linked to the crash are used. If there are no records, then the value 98 is assigned. If the SAS code for Person.INJ_SEV is 9 for all people in the crash, then the value is 99. If not, the value assigned is the number (count) of Person records where the SAS code for Person.INJ_SEV is between 1 and 5.

Number Injured in Vehicle

Vehicle.NUM_INJV

Attribute Labels	2016-Later
No Person Injured in Vehicle	0
Number of Known Injured	1-97
No Person involved in the Vehicle	98
All Persons in Vehicle are Unknown if Injured	99

Logic of Derivation

All Person records linked to the vehicle are used. If there are no records, then the value 98 is assigned. If the SAS code for Person.INJ_SEV is 9 for all people in the vehicle, then the value is 99. If not, the value assigned is the number (count) of Person records where the SAS code for Person.INJ_SEV is between 1 and 5.

First Harmful Event

Accident.HARM_EV
(also provided as Vehicle.HARM_EV, Parkwork.PHARM_EV, Person.HARM_EV)

Logic of Derivation

This data element is derived from the set of all crash events. Each event in a crash is recorded in chronological order. The data element that records the event is “Sequence of Events”. First Harmful Event, therefore, is the first “Sequence of Events” value.

Initial Contact Point

Vehicle. IMPACT1, Parkwork.PIMPACT1

(also provided as Person.IMPACT1)

Logic of Derivation

This data element is derived from the set of all crash events for a vehicle. Each event in a crash is recorded in chronological order. The data element that records each impact for a vehicle is “Area of Impact (This Vehicle)”) for “This Vehicle” or “Area of Impact (Other Vehicle)” for the “Other Vehicle”. Initial Contact Point, therefore, is the vehicle’s first recorded Area of Impact value for a harmful event. Note that the vehicle may be “This Vehicle” or the “Other Vehicle” in the crash event.

Make Model Combined

Vehicle. MAK_MOD, Parkwork. PMAK_MOD

(also provided as Person. MAK_MOD)

Logic of Derivation

This 5-digit data element is the combination of two data elements, the 2-digit "Vehicle Make" code followed by the 3-digit "Vehicle Model" code.

Appendix B. Notable Changes

Addition of VIN-Decoded Data

Prior to 2020, the descriptive vehicle information in Vehicle Make, Vehicle Model, and Body Type were coded from information in the police crash reports and based on a Vehicle Make/Model/Body Type table maintained by NCSA for this purpose. Starting in 2020, this table will no longer be updated and a new set of data elements has been added to the Vehicle and Parkwork data files. These new data elements are the following.

- *vPIC Make*
- *vPIC Model*
- *vPIC Body Class*
- *Final Stage Body Class*

These elements are also added to the Person data file.

These data elements are mostly derived from VIN decoding using NHTSA's tool, Product Information Catalog and Vehicle Listing (vPIC) which is based on the vehicle manufacturer submissions to NHTSA mandated by Federal Motor Vehicle Safety Standard (FMVSS) 49 Code of Federal Regulation (CFR) 565. If a vehicle VIN or trailer VIN can be decoded cleanly, such as with no errors or minor issues, *vPIC Make, vPIC Model,* and *vPIC Body Class* are coded using information derived from vPIC VIN decoder. If a VIN cannot be decoded cleanly or there is no VIN reported in the police crash report, these elements are coded by analysts using the information on the crash report. Final Stage Body Class is applicable only to incomplete vehicles and always coded using the information from police crash report.

To further differentiate between these new data elements and the historic NCSA descriptions for Make, Model, and Body Type, the following data elements have been renamed the following.

- Vehicle Make → NCSA Make
- Vehicle Model → NCSA Model
- Body Type → NCSA Body Type

It is important to note that the new VIN-derived data elements will eventually replace the NCSA ones and result in new body class designations that will differ from NCSA's historic body type classifications. For more information on NHTSA's Product Information Catalog and Vehicle Listing (vPIC), go to https://vpic.nhtsa.dot.gov/.

Changes to SAS Names

In 2020, the three NTS data files that store "select all that apply" elements were given new SAS names. The updated SAS names are identified below.

Data Element ID	2019 SAS Name	New 2020 SAS Name	Data Element Name
V34B	Damage.MDAREAS	Damage.DAMAGE	Damaged Areas
PC14	Vision.MVISOBSC	Vision.VISION	Driver's Vision Obscured By
PC16	Distract.MDRDSTRD	Distract.DRDISTRACT	Driver Distracted By

Modifications to the Collection of Non-Motorist Personal Conveyances

The data element *Non-Motorist Conveyance Type* was added to identify specific personal conveyances previously collected under Person Type. These personal conveyance attributes were modified slightly to remove designations of motorized or non-motorized, while Person Type was also modified to add new non-occupant attributes that identify if the personal conveyance was motorized or non-motorized. The new Person Type attributes are:

- 11 (Person on Motorized Personal Conveyance)
- 12 (Person on Non-Motorized Personal Conveyance)
- 13 (Person on Personal Conveyance, Unknown if Motorized or Non-Motorized)

This change allows the analyst to target motorized and/or non-motorized devices generally or to focus on specific conveyance types in the new data element.

DOT HS 813 580
January 2025

U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

16279-010225-v3