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**National Highway  
Traffic Safety  
Administration**

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# **National Automotive Sampling System (NASS) General Estimates System (GES)**

## **Analytical Users Manual 1988-2011**

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**NASS GES Analytical User's Manual**  
**1988 – 2011**

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**U. S. Department of Transportation**  
National Highway Traffic Safety Administration  
National Center for Statistics and Analysis  
Washington, D.C. 20590

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**New in 2011 NASS GES**

Most changes in 2011 NASS GES are the result of NHTSA's efforts to standardize variables in NASS GES and the Fatality Analysis Reporting System (FARS). The final phase of the FARS/NASS GES standardization occur during the 2011 data collection year, while remaining separate data systems, FARS and NASS GES are sharing a single data entry system and uniform set of data elements. All the locator codes for NASS GES data elements have changed, the summary of this change is documented in *Appendix H: 2011 Changes to Locator Codes*. The additions, deletions, and changes for 2011 NASS GES data files and data elements are listed below. Also, summary of the 2010 changes are documented in *Appendix G: Summary of the 2010 NASS GES Changes* for reference.

More detailed information on each data element can be found in the NASS GES Coding and Editing Manuals, which NHTSA publishes for each year of data collection. While the 2011 changes are addressed in this Analytical User's Manual, data users should compare the 2010 and 2011 Coding and Editing Manuals for a more thorough understanding. Manuals for 1995 to the present can be found at:

[http://www-nrd.nhtsa.dot.gov/cats/listpublications.aspx?Id=k&ShowBy=DocType.](http://www-nrd.nhtsa.dot.gov/cats/listpublications.aspx?Id=k&ShowBy=DocType)

## 2011 New, Deleted and Changed Data Elements

### New or Changed SAS Data Files:

- Vsoe
- Drimpair
- Nmimpair
- Parkwork (previously Parked data file)

### New Data Elements:

Locator Code	Data Element Name	SAS Name
<b>Accident:</b>		
C3	Number of Persons Not in Motor Vehicles	PEDS
C4	Number of Total Motor Vehicles Involved	VE_TOTAL
C5	Number of Persons in Motor Vehicles	PERSONS
C5A	Number of Persons in Motor Vehicles in-Transport (MVIT)	PERMVIT
<b>Vehicle:</b>		
V5	Unit Type	UNITTYPE
V16A	MCID Issuing Authority	MCARR_I1, PMCARR_I1
V16B	MCID Identification Number	MCARR_I2, PMCARR_I2
V17	Gross Vehicle Weight Rating	GVWR, PGVWR
<b>Cevent, Vevent:</b>		
C17	Vehicle Number (Other Vehicle) [Cevent & Vevent data files]	VNUMBER2
C17	Area of Impact Associated with the Event [Vsue data file]	AOI
C17	Vehicle Event Number [Vevent & Vsue data files]	VEVENTNUM
<b>Parkwork:</b>		
C4A	Number of Vehicles Involved	PVE_FORMS
C8A	Month of Crash	PMONTH

Locator Code	Data Element Name	SAS Name
C9A	Hour of Crash	PHOUR
C9B	Minute of Crash	PMINUTE
C18	First Harmful Event	PHARM_EV
C19	Manner of Collision	PMAN_COLL
V6	Hit and Run	PHIT_RUN
V16A	MCID Issuing Authority	MCARR_I1, PMCARR_I1
V16B	MCID Identification Number	MCARR_I2, PMCARR_I2
V17	Gross Vehicle Weight Rating	GVWR, PGVWR
V21	Bus Use	PBUS_USE
V32	Most Harmful Event	PM_HARM

**Deleted Data Elements:**

Locator Code	Data Element Name	SAS Name
V20A	Most Harmful Event Number	MHENUM
EO6/VE6	Vehicle's Action	E_ACTION
VE7	Vehicle Number (Parked/Working Vehicle)	PVEHNUM
VE8	Area of Impact (Parked/Working Vehicle)	PGAD
PV30	Rollover	PROLLOVR
PV30A	Location of Rollover	PROLINLOC
PV37	Vehicle Location	PREL_RWY

**Changed Data Elements:**

<b>Locator Code</b>	<b>Data Element Name</b>	<b>SAS Name</b>	<b>Change</b>
V3/D3/PC3/P3	Vehicle Number	VEH_NO	Updated SAS name (was VEHNO, PVEHNO in Parked data file)
P4/NM3	Person Number	PER_NO	Updated SAS name (was PERNO)
<b>Accident:</b>			
C3A	Number of Persons Not in Motor Vehicles in-Transport (MVIT)	PERNOTMVIT	Updated SAS name (was NON_INVL)
C4A	Number of Motor Vehicles in-Transport (MVIT) Involved	VE_FORMS	Updated SAS name (was VEH_INVL)
C18	First Harmful Event	HARM_EV	Updated SAS name (was EVENT1)
C19	Manner of Collision	MAN_COLL	Updated SAS name (was MAN_COL)  Updated attribute codes
C19I	Imputed Manner of Collision	MANCOL_IM	Updated Imputation
C21	Type of Intersection	TYP_INT	Updated attribute codes
C22	Relation to Trafficway	REL_ROAD	Updated attribute codes
C23	Work Zone	WRK_ZONE	Updated attribute codes
C26	School Bus Related	SCH_BUS	Updated attribute codes
C92	Alcohol Involved in Crash	ALCOHOL	Updated attribute codes
<b>Vehicle:</b>			
V6	Hit and Run	HIT_RUN	Updated attribute codes
V9	Vehicle Make	MAKE	New attributes
V10	Vehicle Model	MODEL	New attributes
V11	Body Type	BODY_TYP	Updated attributes
V12	Vehicle Model Year	MOD_YEAR	Updated SAS name (was MODEL_YR)  Updated attribute codes

Locator Code	Data Element Name	SAS Name	Change
V15	Jackknife	J_KNIFE	Updated SAS name (was JACKNIFE)
V16	Motor Carrier Identification Number (MCID)	MCARR_ID	Updated attributes
V18	Vehicle Configuration	V_CONFIG	Updated attribute codes
V21	Bus Use	BUS_USE	Updated attribute codes
V22	Special Use	SPEC_USE	Updated attribute codes
V23	Emergency Use	EMER_USE	Updated attribute codes
V27	Location of Rollover	ROLINLOC	Updated attribute codes
V28A	Initial Point of Impact	IMPACT1	Updated attribute codes
V28B	Most Damaged Area	IMPACT2	Updated attribute codes
V29	Extent of Damage	DEFORMED	Updated attribute codes
V30	Vehicle Removal	TOWED	Updated attribute codes
V32	Most Harmful Event	M_HARM	Updated SAS name (was V_EVENT)  Updated attribute codes
D6	Driver's Zip Code	DR_ZIP	Updated SAS name (was DZIPCODE)  Updated attribute codes
PC7	Speed Limit	VSPD_LIM	Updated attribute codes
PC12	Traffic Control Device	VTRAFCON	Updated attribute codes
PC17	Pre-Event Movement (Prior To Recognition of Critical Event)	P_CRASH1	Updated element name (was "Movement Prior to Critical Event")  Updated attributes
PC19	Critical Event- Pre-Crash	P_CRASH2	Updated attributes
PC20	Attempted Avoidance Maneuver	P_CRASH3	Updated element name (was "Corrective Action Attempted")
PC21	Pre-Impact Stability	PCRASH4	Updated element name (was "Prcrash Vehicle Control")

Locator Code	Data Element Name	SAS Name	Change
PC22	Pre-Impact Location	PCRASH5	Updated element name (was "Precrash Location")  Updated attribute codes
PC23	Crash Type	ACC_TYPE	Updated element name (was "Accident Type")  Updated attributes
<b>Person:</b>			
P5/NM5	Age	AGE	Updated attribute codes
P6/NM6	Sex	SEX	Updated attribute codes
P7/NM7	Person Type	PER_TYP*	Updated attribute codes
P9	Seating Position	SEAT_POS	Updated attribute codes
P10	Restraint System Use	REST_USE	Updated SAS name (was REST_SYS)  Updated attribute codes
P11	Indication of Misuse of Restraint System/Helmet	REST_MIS	Updated attribute codes
P12	Air Bag Deployed	AIR_BAG	Updated attribute codes  Updated information
P13	Ejection	EJECTION	Updated information
P16/NM15	Police-Reported Alcohol Involvement	DRINKING	Updated SAS name (was PER_ALCH)
P18A/ NM17A	Alcohol Test Status	ALC_STATUS	Updated SAS name (was ALCHTEST)  Updated attribute codes
P18B/ NM17B	Alcohol Test Type	ATST_TYP	Updated SAS name (was ALTSTTYPE)  Updated attribute codes
P18C/ NM17C	Alcohol Test Result	ALTRSLT	Updated SAS name (was ALC_RES)
P19/NM18	Police Reported Drug Involvement	DRUGS	Updated SAS name (was PER_DRUG)

Locator Code	Data Element Name	SAS Name	Change
P21A/ NM20A	Drug Test Status	DSTATUS	Updated SAS name (was DRUGTEST)  Updated attribute codes
P21B/ NM20B	Drug Test Type	DRUGTST1, DRUGTST2, DRUGTST3	Updated SAS name (was DRTSTYPE)  Updated attribute codes
P21C/ NM20C	Drug Test Result	DRUGRES1, DRUGRES2, DRUGRES3	Updated SAS name (was DRTRSLT)  Updated attribute codes
P22/NM21	Transported to Medical Facility By	HOSPITAL	Updated attribute codes
NM4	Non-Motorist Striking Vehicle Number	STR_VEH	Updated attribute codes
NM10	Non Motorist Location	LOCATION	Updated SAS name (was LOCATN)  Updated attribute codes
<b>Cevent, Vevent:</b>			
C17	Vehicle Number (This Vehicle)	VNUMBER1	Updated SAS name (was VEHNUM)  Updated attribute codes
C17	Area of Impact (This Vehicle)	AOI1	Updated SAS name (was GAD)  Updated attribute codes
V31	Sequence of Events	SOE	Updated SAS name (was OBJCONT)  Updated element name (was "Non-Collision Category or Object Contacted")  Updated attributes and attribute codes
C17	Area of Impact (Other Vehicle)	AOI2	Updated SAS name (was OBJGAD)  Updated attribute codes

Locator Code	Data Element Name	SAS Name	Change
<b>Factor:</b>			
PC4	Contributing Circumstances, Motor Vehicle	MFACTOR	Updated element name (was "Vehicle Contributing Factors")
<b>Maneuver:</b>			
PC15	Driver Maneuvered to Avoid	MDRMANAV	Updated attribute codes
<b>Distract:</b>			
PC16	Driver Distracted By	MDRDSTRD	Updated attribute codes
<b>Nmprior:</b>			
NM11	Non-Motorist Action/Circumstances Prior to Crash	MPR_ACT	Updated attribute codes
<b>Parked:</b>			
V3	Vehicle Number	VEH_NO	Updated SAS name (was PVEHNO)
V5	Unit Type	PTYPE	Updated attribute codes
V6	Hit and Run	PHIT_RUN	Updated attribute codes
V9	Vehicle Make	PMAKE	New attributes
V10	Vehicle Model	PMODEL	New attributes
V11	Body Type	PBODYTYP	Updated attributes
V12	Vehicle Model Year	PMODYEAR	Updated SAS name (was PMODELYR) Updated attribute codes
V16	Motor Carrier Identification Number (MCID)	PMCARR_ID	Updated SAS name (was PCARIDNO) Updated attributes
V18	Vehicle Configuration	PV_CONFIG	Updated attribute codes
V22	Special Use	PSP_USE	Updated attribute codes
V23	Emergency Use	PEM_USE	Updated attribute codes
V28A	Initial Point of Impact	PIMPACT1	Updated attribute codes

Locator Code	Data Element Name	SAS Name	Change
V28B	Most Damaged Area	PIMPACT2	Updated attribute codes
V29	Extent of Damage	PVEH_SEV	Updated attribute codes
V30	Vehicle Removal	PTOWED	Updated attribute codes

\* The 2010 NASS GES entry system follows a scheme of breaking out persons as motorists or non-motorists. The “Long Names” of their elements reflect this and the input system are structured around this. While the manual and entry systems reflect a difference in the organization of people in a case, FARS and NASS GES both have the same Person Type attributes in total. It is because of the differences in the two entry systems and handling of persons in structuring of the case that the elements are presented differently. This principally affects the Person Type of “03 – Occupant of a Motor Vehicle Not In-transport” when 2011 NASS GES and FARS shared the same data entry system. P03 (Occupant) in 2010 NASS GES does not match exactly with 2011 NASS GES because it includes “03 – Occupant of a Motor Vehicle Not In-transport” in 2011. It is the same situation but in reverse for 2010 NASS GES P03 (Non-motorist) and 2011 NASS GES NM7.

## Summary of the SAS Naming Changes in 2011

Locator Code	2010 SAS Name	2011 SAS Name	Data Element Name
C3	N/A	PEDS	Number of Persons Not in Motor Vehicles
C3A	NON_INVL	PERNOTMVIT	Number of Persons Not in Motor Vehicles in Transport (MVIT)
C4	N/A	VE_TOTAL	Number of Total Motor Vehicles Involved
C4A	VEH_INVL	VE_FORMS	Number of Motor Vehicles in Transport (MVIT) Involved
C4A (Parkwork)	N/A	PVE_FORMS	Number of Motor Vehicles Involved
C5	N/A	PERSONS	Number of Persons in Motor Vehicles
C5A	N/A	PERMVIT	Number of Persons in Motor Vehicles in Transport (MVIT)
C8A (Parkwork)	N/A	PMONTH	Month of Crash
C9A (Parkwork)	N/A	PHOUR	Hour of Crash
C9B (Parkwork)	N/A	PMINUTE	Minute of Crash
C17 (Cevent,Vevent)	VEHNUM	VNUMBER1	Vehicle Number (This Vehicle)
C17 (Cevent,Vevent)	GAD	AOI1	Area of Impact (This Vehicle)
C17 (Cevent, Vevent)	N/A	VNUMBER2	Vehicle Number (Other Vehicle)
C17 (Cevent,Vevent)	OBJGAD	AOI2	Area of Impact (Other Vehicle)
C17 (Vevent,Vsoe)	N/A	VEVENTNUM	Vehicle Event Number
C17 (Vsoe)	N/A	AOI	Area of Impact Associated with the Event
C18	EVENT1	HARM_EV	First Harmful Event
C18 (Parkwork)	N/A	PHARM_EV	First Harmful Event
C19	MAN_COL	MAN_COLL	Manner of Collision
C19 (Parkwork)	N/A	PMAN_COLL	Manner of Collision
V3/D3/ PC3/P3	VEHNO	VEH_NO	Vehicle Number
V3 (Parkwork)	PVEHNO	VEH_NO	Vehicle Number
V5	N/A	UNITTYPE	Unit Type
V6 (Parkwork)	N/A	PHIT_RUN	Hit and Run
V12	MODEL_YR	MOD_YEAR	Vehicle Model Year

Locator Code	2010 SAS Name	2011 SAS Name	Data Element Name
V12 (Parkwork)	PMODELYR	PMODYEAR	Vehicle Model Year
V15	JACKNIFE	J_KNIFE	Jackknife
V16 (Parkwork)	PCARIDNO	PMCARR_ID	Motor Carrier Identification Number (MCID)
V16A	N/A	MCARR_I1	MCID Issuing Authority
V16A (Parkwork)	N/A	PMCARR_I1	MCID Issuing Authority
V16B	N/A	MCARR_I2	MCID Identification Number
V16B (Parkwork)	N/A	PMCARR_I2	MCID Identification Number
V17	N/A	GVWR	Gross Vehicle Weight Rating/GCWR
V17 (Parkwork)	N/A	PGVWR	Gross Vehicle Weight Rating/GCWR
V21 (Parkwork)	N/A	PBUS_USE	Bus Use
V31 (Cevent)	OBJCONT	SOE	Non-Collision Category or Object Contacted → Sequence of Events
V32	V_EVENT	M_HARM	Most Harmful Event
V32 (Parkwork)	N/A	PM_HARM	Most Harmful Event
D6	DZIPCODE	DR_ZIP	Driver's Zip Code
D23	MIMPAIR	DRIMPARI	Condition (Impairment) at Time of Crash- Driver (stored in Drimpair data file)
P4/NM3	PERNO	PER_NO	Person Number
P10	REST_SYS	REST_USE	Restraint System Use
P16/NM15	PER_ALCH	DRINKING	Police-Reported Alcohol Involvement
P18A/ NM17A	ALCHTEST	ALC_STATUS	Alcohol Test Status
P18B/ NM17B	ALTSTTYPE	ATST_TYP	Alcohol Test Type
P18C/ NM17C	ALTRSLT	ALC_RES	Alcohol Test Result
P19/NM18	PER_DRUG	DRUGS	Police-Reported Drug Involvement
P21A/ NM20A	DRUGTEST	DSTATUS	Drug Test Status
P21B/ NM20B	DRTSTTYPE	DRUGTST1, DRUGTST2, DRUGTST3	Drug Test Type
P21C/ NM20C	DRTRSLT	DRUGRES1, DRUGRES2, DRUGRES3	Drug Test Result
NM10	LOCATN	LOCATION	Non-Motorist Location

Locator Code	2010 SAS Name	2011 SAS Name	Data Element Name
NM14	MIMPAIR	NMIMPAIR	Condition (Impairment) at Time of Crash- Non-Motorist (stored in Nmimpair data file)

The data elements in RED are new to 2011 NASS GES.

The data elements in BLUE are changed in 2011 NASS GES.

**Introduction**

One of the primary objectives of the National Highway Traffic Safety Administration (NHTSA) is to reduce the staggering human toll and property damage that motor vehicle traffic crashes impose 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 National Automotive Sampling System (NASS) General Estimates System (GES) which began operation in 1988. Providing data about all types of crashes involving all types of vehicles, the NASS GES is used to identify highway safety problem areas, provide a basis for regulatory and consumer information initiatives, and form the basis for cost and benefit analyses of highway safety initiatives.

The NASS GES obtains its data from a nationally representative probability sample selected from the more than 5 million police-reported crashes which occur annually. These crashes include those that result in a fatality or injury and those involving major property damage. Although various sources suggest that there are many more crashes that are not reported to the police, the majority of these unreported crashes involve only minor property damage and no significant personal injury. By restricting attention to police-reported crashes, the NASS GES concentrates on those crashes of greatest concern to the highway safety community and the general public.

This multi-year analytical user's manual provides documentation on data elements that are contained in the NASS GES and other useful information that will enable the users to become familiar with the data system. NASS GES Coding and Editing Manuals provide more detailed definitions for each data element and attribute for a given year. Years 1995 to current are available at:

<http://www-nrd.nhtsa.dot.gov/cats/listpublications.aspx?Id=k&ShowBy=DocType>.

**NASS GES Operations**

The National Automotive Sampling System (NASS) -General Estimates System (GES) data are obtained from a nationally representative probability sample selected from all police-reported crashes. The data system began operation in 1988. To be eligible for the NASS GES sample, a Police Accident Report (PAR) must be completed for the crash, and the crash must involve at least one motor vehicle traveling on a trafficway and must result in property damage, injury, or death.

The NASS GES is directed by the National Center for Statistics and Analysis, which is a component of Vehicle Safety (NVS) in NHTSA. The data are obtained by NASS GES data collectors in 60 geographic sites across the United States. These data collectors make weekly, biweekly, or monthly visits to approximately 400 police agencies within the 60 sites, where they randomly sample about 50,000 PARs per year. During the visit the data collectors compile a list of all qualifying crashes reported since their last visit and then select a sample of these crashes. The collectors send copies of the Police Accident Reports (PARs) for the selected crashes to the NASS quality control centers for coding. No other data are collected beyond the selected PARs—no driver license, vehicle registration, or medical information is obtained.

Trained personnel interpret and code data directly from the PARs onto an electronic data file. To protect individual privacy, no personal information such as names, addresses, specific crash location, etc., is coded.

During data coding, the data are checked for validity and consistency. After the data file is created, quality checks are performed on the data. When these are completed, the electronic data are made available to the public. The NASS GES data are also used to respond to requests from the international and national highway safety communities, state and local governments, the Congress, federal agencies, research organizations, industry, the media, and private citizens. Annual NASS GES data files are available for 1988 through 2011.

## NASS GES Sample Design

The PARs from which the NASS GES data are coded are a probability sample of police-reported crashes that occurred in the United States. Since each crash that occurred in the survey year had a chance of being selected, the design makes it possible to compute not only national estimates but also probable errors associated with the estimates.

The selection of the sample of PARs for the NASS GES is accomplished in three stages. The first stage is a sample of geographic areas, called Primary Sampling Units (PSUs), from across the United States. A PSU is a central city, a county surrounding a central city, an entire county, or a group of contiguous counties. The NASS GES divides the U.S. into 1,195 of these PSUs. The PSUs are then grouped into categories according to the following geographic regions and types of PSUs:

- Geographic Region: Northeast, Midwest, South, and West
- Type: Large Central City, Large Suburban Area, and All others.

The second stage of the design is a sample of police jurisdictions within each PSU. In most PSUs the number of police jurisdictions is more than can reasonably be visited by a data collector, so in most PSUs the police jurisdictions are sampled based upon probability proportional to the number of crashes investigated in the police jurisdiction. That is, as the number of crashes investigated increases, the probability of selecting that jurisdiction increases. An average of seven police jurisdictions have been selected within each PSU.

The third and final stage is the selection of crashes within the sampled police jurisdictions. The first step in this process is for the NASS GES data collector to compile a list of every crash that was reported in the police jurisdiction since their last visit. In some very large police jurisdictions the number of crashes is too large for each to be listed. In these jurisdictions the data collector selects a subsample of PARs, with those listed depending on the PAR number. These "listed" crashes are then grouped into 6 strata depending on the type of vehicle(s) involved, the severity of the injuries, and the tow status of the vehicle(s) involved. Within each of these 6 groups a systematic sample of crashes is selected, based on different sampling ratios.

**From 2002 to the present, crashes have been grouped into six strata:**

- Group 1L: NASS crashes where an occupant of a towed passenger vehicle is killed. This category also includes crashes where an occupant of a towed passenger vehicle received an incapacitating injury and is transported for treatment. If the crash involves two or more passenger vehicles, at least two passenger vehicles must be towed and at least one of the occupants of a towed passenger vehicle must receive an incapacitating injury and be transported for treatment. No medium or heavy trucks may be involved.
- Group 1M: NASS crashes not qualifying for Group 1L, but at least one occupant of a towed passenger vehicle is injured and transported for treatment. No medium or heavy trucks may be involved.
- Group 1N: NASS crashes not qualifying for Group 1L or Group 1M, but a passenger vehicle is towed. No medium or heavy trucks may be involved.
- Group 2: NASS crashes not qualifying for Group 1, involving at least one medium or heavy truck in which a vehicle was towed due to damage or at least one involved person had a police-reported injury of K, A, B, or C;

- Group 3: NASS crashes not qualifying for Group 1 or 2 in which none of the vehicles involved in the crash was a medium or heavy truck and at least one person involved in the crash had a police-reported injury of K, A, or B; and,
- Group 4: NASS crashes not qualifying for Group 1, 2, or 3, No one in the crash can receive a K, A, or B injury.

**From 1990 to 2001 there were four strata:**

- Group 1: NASS crashes involving at least one passenger vehicle, i.e., a passenger car, sport utility vehicle, pickup truck or van) towed due to damage from the crash scene and no medium or heavy trucks are involved.
- Group 2: NASS crashes not qualifying for Group 1 involving at least one medium or heavy truck in which a vehicle was towed due to damage or at least one involved person had a police-reported injury of K, A, B, or C.
- Group 3: NASS crashes not qualifying for Group 1 or 2 in which none of the vehicles involved in the crash was a medium or heavy truck and at least one person involved in the crash had a police-reported injury of K, A, or B.
- Group 4: NASS crashes not qualifying for Group 1, 2 or 3. No one in the crash can receive a K, A, or B injury.

**In 1988 and 1989 there were three strata:**

- Group 1: NASS crashes involving at least one passenger vehicle, i.e., a passenger car, sport utility vehicle, pickup truck or van) towed due to damage from the crash scene.
- Group 2: NASS crashes not qualifying for Group 1 in which at least one person involved in the crash had a police reported injury K, A or B. No passenger vehicles involved in the crash were towed due to damage.
- Group 3: NASS not qualifying for Group 1 or 2. No one in the crash can receive a K, A or B injury.

In 2011, approximately 55,166 PARs were sampled and coded.

A thorough discussion of the sample design can be found in the **National Accident Sampling System General Estimates System Technical Note**, DOT HS 807 796. The document is available at:

<http://www-nrd.nhtsa.dot.gov/Pubs/807796.pdf>.

## National Estimates

Since the NASS GES data are obtained from a probability sample of police-reported traffic crashes, national estimates can be made from these data. In order to calculate estimates of national crash characteristics, data from each PAR on the data file must be weighted. The national weight has been added to the data file for each PAR and is called "WEIGHT". Technically, this weight is the product of the inverse of the probabilities of selection at each of the three stages in the sampling process.

In 1995, the methodology for calculating the national weight in the NASS GES was evaluated. Based on 1992 state data obtained through state agencies for each of the 1,195 Primary Sampling Units (PSUs), it was determined that the number of fatal and injury crashes increased throughout the 12 geographical and urbanization areas, and that the changes were large enough to warrant some modification in procedures. PSUs in the NASS GES had not been reselected since the 1986 redesign because of the cost and time required to do so. To account for shifts in the distribution of crashes, the procedures used to stratify and select the PSUs in 1979 and 1986 were followed, without actually resampling the PSUs. Rather, the weights of the current PSUs were adjusted to reflect changes. The revised weights were phased into the 1993, 1994 and 1995 NASS GES data files. Therefore, estimates from the NASS GES for 1993-95 were revised.

Because some of the changes were so dramatic, NHTSA decided to make adjustments to the PSU weights every three years. For more information on reweighting of the PSUs in the NASS GES, refer to the research note, ***Reweighting of the Primary Sampling Units in the National Automotive Sampling System***, published September 1997. This document is available at:

<http://www-nrd.nhtsa.dot.gov/Pubs/97.845.pdf>.

The second round for making adjustments to the PSU weights was implemented in 1998. Some of the same procedures used in the first round also were used in the second round. Using 1995 state data obtained through state agencies, the number of fatal and injury crashes throughout the 12 regional and urbanization areas were evaluated. Overall, there was a decrease in the number of crashes. The PSU weights were revised to reflect the shift and the revised weights were phased into the 1996 and 1997 NASS GES data files. Therefore, estimates from the NASS GES for 1996-98 were revised.

A weight data element is provided in the NASS GES data files that produces the national estimates (see NASS GES Data Elements and Definitions).

The national estimates produced from NASS GES data may differ from the true values because they are based on a probability sample of crashes and not a census of all crashes. The size of these differences may vary depending on which sample of crashes was selected. The standard error of an estimate is a measure of the precision or reliability with which an estimate from this particular NASS GES sample approximates the results of a census.

It is impractical to compute a standard error for each national estimate crash characteristic. Instead, generalized standard errors for estimates of totals, and the method used to produce them, are provided in *Appendix D: Statistical Methods*.

For more information on NASS GES estimation and the reliability of these estimates, refer to the ***National Accident Sampling System General Estimates System Technical Note***, DOT HS 807 796, available at :

[http://www-nrd.nhtsa.dot.gov/cats/listpublications.aspx?Id=k&ShowBy=DocType.](http://www-nrd.nhtsa.dot.gov/cats/listpublications.aspx?Id=k&ShowBy=DocType)

## NASS GES SAS Data Files

NASS GES data are made available to the public in Statistical Analysis System (SAS) data files. Over the years changes have been made to the type of data collected and the way the data are presented in the SAS data files. Some data elements have been dropped and new ones added, coding of individual data elements has changed, and new SAS data files have been created. Coding changes and the years for which individual data items are available are shown in the "Data Elements and Definitions" section of this document. The NASS GES Coding and Editing Manual contains a detailed description of each SAS data element including coding instructions and attribute definitions. The Coding Manual is published for each year of data collection. Years 1995 to current are available at:

<http://www-nrd.nhtsa.dot.gov/cats/listpublications.aspx?Id=k&ShowBy=DocType>

Note: In this manual the word vehicle means in-transport motor vehicle unless otherwise noted.

The SAS data files and years of availability are:

- **Accident - (1988-current):** This data file contains information about crash characteristics and environmental conditions at the time of the crash. There is one record per crash.
- **Vehicle - (1988-current):** This data file contains information describing the in-transport motor vehicles and the drivers of in-transport motor vehicles who are involved in the crash: There is one record per in-transport motor vehicle. Parked and working vehicle information is in the Parkwork data file.
- **Person - (1988-current):** This data file contains information describing all persons involved in the crash including motorists (i.e., drivers and passengers of in-transport motor vehicles) and non-motorists (e.g., pedestrians and pedalcyclists). It provides information such as age, sex, and vehicle occupant restraint use and injury severity. There is one record per person.
- **Event - (1998-2009):** This data file contains information for each harmful event which occurred in the crash, including the vehicles or objects involved and the general area of damage. 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. This data file was replaced with the Cevent data file in 2010.
- **Cevent - (2010-current):** This data file contains information for all of the qualifying events (both harmful and non-harmful) which occurred in the crash. This is a modification to the Event data file to include non-harmful events. This data file 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 (e.g., ran off road-right, crossed center line, guardrail, parked motor vehicle), the vehicles involved, and the vehicles' area of impact.
- **Vevent - (2010-current):** This data file contains the sequence of events for each in-transport motor vehicle 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. There is one record for each event for each in-transport motor vehicle.

- **Vsoe** – (*New in 2011*): This data file contains the sequence of events for each in-transport motor vehicle 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 in-transport motor vehicle.
- **Factor** - (*2002-current*): This data file contains information about vehicle circumstances which may have contributed to the crash. There is at least one record per in-transport motor vehicle. Each factor is a separate record.
- **Violatn** - (*2002-current*): This data file contains information about violations which were charged to drivers. There is at least one record per in-transport motor vehicle. Each violation is a separate record.
- **Vision** - (*2002-current*): This data file contains information about circumstances which may have obscured the driver's vision. There is at least one record per in-transport motor vehicle. Each obstruction is a separate record.
- **Maneuver** - (*2002-current*): This data file contains information about actions taken by the driver to avoid something or someone in the road. There is at least one record per in-transport motor vehicle. Each maneuver is a separate record.
- **Distract** - (*2002-current*): This data file contains information about driver distractions. There is at least one record per in-transport motor vehicle. Each distraction is a separate record.
- **Impair** - (*2002-2010*): This data file contains information about physical impairments. From 2002 through 2009 this information is published for drivers and non-motorists (includes people in parked/working vehicles). Starting in 2010 this information is published for drivers and people who are not occupants of motor vehicles (does not include people in parked/working vehicles). There is one record per impairment and there is at least one record for each driver and non-motorist (2002-2009) or each driver and person who is not an occupant of a motor vehicle (2010). This data file was replaced in 2011 with the Drimpair and Nmimpair data files.
- **Drimpair** - (*New in 2011*): This data file contains information about physical impairments of drivers of motor vehicles. There is one record per impairment and there is at least one record for each driver of an in-transport motor vehicle.
- **Nmimpair** - (*New in 2011*): This data file contains information about physical impairments of people who are not occupants of motor vehicles. There is one record per impairment and there is at least one record for each person who is not an occupant of a motor vehicle.
- **Nmaction** - (*2002-2009*): This data file contains information on actions of non-motorists that may have contributed to the crash. There is one record per action, and there is at least one record for each non-motorist.
- **Nmcrash** - (*2010-current*): This data file contains information about any improper actions of people who are not occupants of motor vehicles (e.g., pedestrians and bicyclists) or contributing circumstances noted on the PAR. There is one record per action and there is at least one record for each person who is not an occupant of a motor vehicle.
- **Nmprior** - (*2010-current*): This data file contains information about what people who are not occupants of motor vehicles (e.g., pedestrians and bicyclists) are doing prior to the crash. There is one record per action and there is at least one record for each person who is not an occupant of a motor vehicle.

- **Safetyeq - (2002-current):** This data file contains information about safety equipment used by people who are not occupants of motor vehicles. There is one record per equipment item, and there is at least one record for each person who is not an occupant of a motor vehicle.
- **Trafcon – (2002-2009):** This data file contains information about traffic control devices for each in-transport motor vehicle in a crash. There is one record per traffic control device, and at least one record for every in-transport motor vehicle.
- **Biketraf – (2002-2010):** This data file contains information about traffic control devices for each cyclist. There is one record per traffic control device, and at least one record for every cyclist.
- **Parked – (2005-2010):** This data file contains information about parked and working vehicles which were involved in GES crashes. A parked vehicle is a motor vehicle which is stopped off the roadway, i.e., parked off the roadway. The definition of working vehicles has changed over the study years. From 2005 to 2008 working vehicles were defined as transport devices being used as equipment which would be classified under ANSI D16.1-1996 as motor vehicles, if not being used as equipment. In 2009 the definition changed to include only vehicles involved in trafficway maintenance, construction, or utility activities. Also, vehicles performing private maintenance, construction, or utility activities were excluded. Data users are strongly advised to consult the annual GES Coding and Editing Manuals for a detailed discussion. There is one record per parked/working vehicle.
- **Parkwork – (2011-current):** This data file was called the Parked data file from 2005-2010. It contains information about parked and working vehicles which were involved in GES crashes. A parked vehicle is a motor vehicle which 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 GES Coding and Editing Manuals for a detailed discussion. There is one record per parked/working vehicle.
- **Parkevnt – (2005-2010):** This data file contains information about events in which parked/working vehicles are involved. The structure of this data file is similar to the Event data file (2005-2009) and the Cevent data file (2010), with one record per event involving a parked/working vehicle. However, there are several differences between Event/Cevent and Parkevnt. In Event/Cevent, struck parked/working vehicles are not individually identified. Instead, parked vehicles are coded as "parked vehicle or other motor vehicle not in-transport" (2005-2009) or "parked vehicle" (2010) and working motor vehicles are coded as non-fixed objects (2005-2008) or "parked vehicle or other motor vehicle not in-transport" (2009) or as "working motor vehicle" (2010). In Parkevnt each parked/working vehicle is identified by parked vehicle number, event number, and case number. Merging Event/Cevent and Parkevnt data files by CASENUM and EVENTNUM produces a list of events in which parked/working vehicles were involved and identifies the specific vehicles involved (both in-transport and parked/working).

## NASS GES Imputation

The NASS GES data are obtained either directly from an item on the PAR or by interpreting the information provided in the PAR through reviewing the crash diagram, the Officer's written summary of the crash, or combinations of data elements on the PAR. Because of this interpretation, and because the police officer may not have entered some item of information or provided complete information, data can be missing. Different statistical procedures have been used on NASS GES data to complete values for unknown data: univariate imputation and hot-deck imputation from 1988 to 2009, and sequential regression imputation as instituted in 2010. A thorough discussion of the 2009 and earlier imputation procedures can be found in *Imputation in the NASS General Estimates System*, DOT HS 807 985 available at:

<http://www-nrd.nhtsa.dot.gov/Pubs/807985.pdf>

The proportion of unknowns for a given data element varies from year to year. In some years the proportion is so low that it seems redundant to provide an imputed data element, however imputed data elements are not removed for those years to avoid rounds of removing and then reinstating data elements in the SAS data files.

The univariate imputation procedure was developed in SAS to randomly assign values to the unknowns in the same proportion as the known values for that one data element. Since these imputed values are randomly assigned the analyst should use them only for univariate frequency distributions. The following is an example of univariate imputation using the data element *EJECTION*. The original distribution might be:

No	60
Yes	40
Unknown	5
Total	105

The SAS univariate imputation program would assign values to the five unknown values in the following proportions:

No	60/100
Yes	40/100

The new data element, *EJECT\_I* would have these values:

No	63
Yes	42
Total	105

Hot-deck imputation differs from univariate imputation in that the unknown values for a data element are replaced based on information from correlated data elements. For example, the hot-deck imputation program for *SEX* used the following correlated data elements: *AGE*, *HOUR*, *DAY OF WEEK*, *VIOLATIONS CHARGED*, *PERSON TYPE*, *SEATING POSITION*, *DRUG & ALCOHOL INVOLVEMENT*, and *NUMBER OF OCCUPANTS & VEHICLES INVOLVED*. When *SEX* was unknown for a person record, the hot-deck program searches for another record that has a set of data elements similar to the unknown sex record. When that record is found, the *SEX* value is used for the unknown *SEX* record.

From 1988 to 2009, hot-deck and univariate imputed data elements can be identified by the \_H or \_I suffix in their SAS names. Hot-deck imputed *Body Type* is labeled *BDYTYP\_H* and univariate imputed *EJECTION* is labeled *EJECT\_I*. The imputed data elements do not replace the originals; all original data elements still exist on the data files.

Imputation by sequential regression was instituted in 2010 using a software package called IVWare, developed at the University of Michigan. In this method, covariates are selected automatically using stepwise regression. Since it can be done in an automated fashion, this method replaced both univariate and hot-deck imputation in 2010. The only exception was body type, which was imputed in a univariate method. The specific data elements imputed are consistent with those imputed in 1998-2009, except for five derived data elements at the crash level that are no longer derived in 2010 (see table).

Starting in 2010, all imputed data elements except body type use the sequential regression method and are identified by the \_IM suffix. As before, the imputed data elements do not replace the originals; all original data elements still exist on the data files.

The following table gives the summary of the SAS name changes from 2009 and prior to 2010:

SAS Data File	Label	Data Elements			Imputed Data Elements	
		2009 SAS Name	2010 SAS Name	2011 SAS Name	1998-2009	2010-Later
ACCIDENT	Alcohol Involved	ALCOHOL	ALCOHOL	ALCOHOL	ALCHL_I	ALCHL_IM
ACCIDENT	Roadway Alignment	ALIGNMNT	Deleted	Deleted	ALIGN_I	Discontinued
ACCIDENT	Day Of The Week	DAY_WEEK	DAY_WEEK	DAY_WEEK	WKDY_I	WKDY_IM
ACCIDENT	First Harmful Event	EVENT1	EVENT1	HARM_EV	EVENT1_I	EVENT1_IM
ACCIDENT	Hour	HOUR	HOUR	HOUR	HOUR_I	HOUR_IM
ACCIDENT	Light Condition	LGT_COND	LGT_COND	LGT_COND	LGTCON_I	LGTCON_IM
ACCIDENT	Manner Of Collision	MAN_COL	MAN_COL	MAN_COLL	MANCOL_I	MANCOL_IM
ACCIDENT	Maximum Injury Severity	MAX_SEV	MAX_SEV	MAX_SEV	MAXSEV_I	MAXSEV_IM
ACCIDENT	Minute	MINUTE	MINUTE	MINUTE	MINUTE_I	MINUTE_IM
ACCIDENT	Number Of Injured	NUM_INJ	NUM_INJ	NUM_INJ	NO_INJ_I	NO_INJ_IM
ACCIDENT	Roadway Grade	PROFILE	Deleted	Deleted	PROFIL_I	Discontinued
ACCIDENT	Relation To Junction	REL_JCT	changed in 2010	changed in 2010	RELJCT_I	changed in 2010
ACCIDENT	Relation To Junction - Within Interchange Area		RELJCT1	RELJCT1		RELJCT1_IM

SAS Data File	Label	Data Elements			Imputed Data Elements	
		2009 SAS Name	2010 SAS Name	2011 SAS Name	1998-2009	2010-Later
ACCIDENT	Relation To Junction - Junction		RELJCT2	RELJCT2		RELJCT2_IM
ACCIDENT	Speed Limit	SP_LIMIT	Deleted	Deleted	SPDLIM_H	Discontinued
ACCIDENT	Roadway Surface Condition	SUR_COND	Deleted	Deleted	SURCON_I	Discontinued
ACCIDENT	Traffic Control Devices	TRAF_CON	Deleted	Deleted	TRFCON_I	Discontinued
ACCIDENT	Atmospheric Condition	WEATHER	WEATHER	WEATHER	WEATHR_I	WEATHR_IM
VEHICLE	Body Type	BODY_TYP	BODY_TYP	BODY_TYP	BDYTYP_H	BDYTYP_IM
VEHICLE	Hit And Run	HIT_RUN	HIT_RUN	HIT_RUN	HITRUN_I	HITRUN_IM
VEHICLE	Area Of Impact - Initial	IMPACT	IMPACT1	IMPACT1	IMPACT_H	IMPACT1_IM
VEHICLE	Max Injury Severity	MAX_VSEV	MAX_VSEV	MAX_VSEV	MXVSEV_I	MXVSEV_IM
VEHICLE	Model Year	MODEL_YR	MODEL_YR	MOD_YEAR	MDLYR_I	MDLYR_IM
VEHICLE	Number Injured In Vehicle	NUM_INJV	NUM_INJV	NUM_INJV	NUMINJ_I	NUMINJ_IM
VEHICLE	Movement Prior To Critical Event	P_CRASH1	P_CRASH1	P_CRASH1	MANEUV_I	PCRASH1_IM
VEHICLE	Vehicle Role	VEH_ROLE	deleted in 2010	deleted in 2010	VROLE_I	deleted in 2010
VEHICLE	Driver Violations	VIOLATN	only in its own table	only in its own table	VLTN_I	deleted in 2010
VEHICLE	Driver Drinking In Vehicle	VEH_ALCH	VEH_ALCH	VEH_ALCH	V_ALCH_I	V_ALCH_IM
VEHICLE	Most Harmful Event	V_EVENT	V_EVENT	M_HARM	V_EVNT_H	VEVENT_IM
PERSON	Age	AGE	AGE	AGE	AGE_H	AGE_IM
PERSON	Ejection	EJECTION	EJECTION	EJECTION	EJECT_I	EJECT_IM
PERSON	Injury Severity	INJ_SEV	INJ_SEV	INJ_SEV	INJSEV_H	INJSEV_IM
PERSON	Police-Reported Alcohol Involvement	PER_ALCH	PER_ALCH	DRINKING	PERALC_H	PERALCH_IM
PERSON	Seating Position	SEAT_POS	SEAT_POS	SEAT_POS	SEAT_H	SEAT_IM
PERSON	Sex	SEX	SEX	SEX	SEX_H	SEX_IM

<b>NASS GES Data Element List</b>
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The following lists all SAS data elements with their SAS data file locations.

### DATA ELEMENT LIST

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Primary Sampling Unit Stratum	PSUSTRAT	39
Region of the Country	REGION	40
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C34 Police Jurisdiction (PJ)	PJ	43
Case Weight	WEIGHT	44
V3/D3/PC3/P3 Vehicle Number	VEH_NO	45
P4/NM3 Person Number	PER_NO	46
C17 Event Number	EVENTNUM	47
C17 Vehicle Event Number	VEVENTNUM	47

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C3	Number of Persons Not in Motor Vehicles	PEDS	49
C3A	Number of Persons Not in Motor Vehicles in Transport (MVIT)	NON_INVL	49
C4	Number of Total Motor Vehicles Involved	VE_TOTAL	50
C4A	Number of Motor Vehicles in Transport (MVIT) Involved	VEH_INVL	50
C4B	Number of Parked/Working Vehicles Involved	PVH_INVL	51
C5A	Number of Persons in Motor Vehicles in Transport (MVIT)	PERMVIT	52
C8A	Month of Crash	MONTH	53
C8C	Day of Week	DAY_WEEK	54
C8CI	Imputed Day of Week	WKDY_IM	54
C8D	Year of Crash	YEAR	54
C9A	Hour of Crash	HOUR	55
C9AI	Imputed Hour of Crash	HOUR_IM	55
C9B	Minute of Crash	MINUTE	56
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C18	First Harmful Event	HARM_EV	57
C18I	Imputed First Harmful Event	EVENT1_IM	59
C19	Manner of Collision	MAN_COLL	60
C19I	Imputed Manner of Collision	MANCOL_IM	60
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C20B	Relation to Junction- Specific Location	RELJCT2	61
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C20BI	Imputed Relation to Junction	RELJCT2_IM	63
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C90	Maximum Injury Severity in Crash	MAX_SEV	72
C90I	Imputed Maximum Injury Severity in Crash	MAXSEV_IM	72
C91	Number Known Injured in Crash	NUM_INJ	73
C91I	Imputed Number Known Injured in Crash	NO_INJ_IM	73
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	Roadway Type (discontinued)	NHS_RWTP	85
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V6I	Imputed Hit and Run	HITRUN_IM	99
V9	Vehicle Make	MAKE	100
V10	Vehicle Model	MODEL	103
V11	Body Type	BODY_TYP	104
V11I	Imputed Body Type	BDYTYP_IM	110
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**Data Element Definitions and Codes**

The “Data Element Definitions and Codes” section of this report provides detailed information on the data elements, including SAS formats. If the SAS data element has an associated format, the format name appears in brackets following the SAS data element name. Format names are given for the last three years. Format names for earlier years can be obtained from a SAS PROC CONTENTS for the year(s) of interest.

All data elements are numeric except the following:

- VIN (V13) Character all GES years
- Driver Zip Code (D6) Character since 2002, numeric all prior years
- Motor Carrier ID (V16) Character since 2002, numeric all prior years

All of the data files contain the following seven (7) accident-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****1988-Later**

xx NASS GES 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. There are 60 possible values ranging from 1 to 97.

**Additional Information:** See the section *GES Sample Design* for more information.

**SAS Name:** **PSU**

#### Attribute Codes

##### **1988-Later**

1-97 Primary Sampling Unit Number

### Primary Sampling Unit Stratum

---

**Definition:** The PSUs are grouped into 14 strata to reflect the first stage of the sample selection. This data element is used by statistical software packages that use complex sample design for calculating variances, such as SUDAAN and SAS V9.

**Additional Information:** See *Appendix D: Statistical Methods* for more information.

**SAS Name:** **PSUSTRAT**

#### Attribute Codes

##### **1988-Later**

1 to 14

### Region of the Country

---

**Definition:** This data element identifies the region of the country where the crash occurred. It is based on the Primary Sampling Unit.

**Additional Information:**

**SAS Name:** REGION

**Attribute Codes**

**1988-Later**

- 1 Northeast (PA, NJ, NY, NH, VT, RI, MA, ME, CT)
- 2 Midwest (OH, IN, IL, MI, WI, MN, ND, SD, NE, IA, MO, KS)
- 3 South (MD, DE, DC, WV, VA, KY, TN, NC, SC, GA, FL, AL, MS, LA, AR, OK, TX)
- 4 West (MT, ID, WA, OR, CA, NV, NM, AZ, UT, CO, WY, AK, HI)

**C33 Case Stratum**

---

**Definition:** This data element identifies the number of the category in which the PAR was originally listed in NASS GES PAR Program or Stratification Record.

**Additional Information:** See *NASS GES Sample Design* for more information.

**SAS Name:** STRATUM

**Attribute Codes****1988-1989**

- 1 Group 1: NASS crashes involving at least one passenger vehicle, i.e., a passenger car, sport utility vehicle, pickup truck or van) towed due to damage from the crash scene.
- 2 Group 2: NASS crashes not qualifying for Group 1 in which at least one person involved in the crash had a police reported injury K, A or B. No passenger vehicles involved in the crash were towed due to damage.
- 3 Group 3: NASS not qualifying for Group 1 or 2. No one in the crash can receive a K, A or B injury.

**1990-2001**

- 1 Group 1: NASS crashes involving at least one passenger vehicle, i.e., a passenger car, sport utility vehicle, pickup truck or van) towed due to damage from the crash scene and no medium or heavy trucks are involved.
- 2 Group 2: NASS crashes not qualifying for Group 1 involving at least one medium or heavy truck in which a vehicle was towed due to damage or at least one involved person had a police-reported injury of K, A, B, or C.
- 3 Group 3: NASS crashes not qualifying for Group 1 or 2 in which none of the vehicles involved in the crash was a medium or heavy truck and at least one person involved in the crash had a police-reported injury of K, A, or B.
- 4 Group 4: NASS crashes not qualifying for Group 1, 2 or 3 . No one in the crash can receive a K, A, or B injury.

**2002-Later**

- 1 Group 1L: NASS crashes where an occupant of a towed passenger vehicle is killed. This category also includes crashes where an occupant of a towed passenger vehicle received an incapacitating injury and is transported for treatment. If the crash involves two or more passenger vehicles, at least two passenger vehicles must be towed and at least one of the occupants of a towed passenger vehicle must receive an incapacitating injury and be transported for treatment. No medium or heavy trucks may be involved
- 2 Group 2: NASS crashes not qualifying for Group 1 involving at least one medium or heavy truck in which a vehicle was towed due to damage or at least one involved person had a police-reported injury of K, A, B, or C.
- 3 Group 3: NASS crashes not qualifying for Group 1 or 2 in which none of the vehicles involved in the crash was a medium or heavy truck and at least one person involved in the crash had a police-reported injury of K, A, or B.
- 4 Group 4: NASS crashes not qualifying for Group 1, 2 or 3 . No one in the crash can receive a K, A, or B injury.

**C33 Case Stratum *(continued)***

---

- 5 Group 1M: NASS crashes not qualifying for Group 1L, but at least one occupant of a towed passenger vehicle is injured and transported for treatment. No medium or heavy trucks may be involved.
- 6 Group 1N: NASS crashes not qualifying for Group 1L or Group 1M, but a passenger vehicle is towed and no medium or heavy trucks are involved.

**C34 Police Jurisdiction (PJ)**

---

**Definition:** This data element identifies the number of the police jurisdiction from which the PAR was originally sampled.

**Additional Information:**

**SAS Name:** PJ

**Attribute Codes****1988-Later**

1-120      Police Jurisdiction Number

### Case Weight

---

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

**Additional Information:** See the section *National Estimates* for more information.

**SAS Name:** WEIGHT

All of the vehicle-level data files contain the preceding accident-level data elements as well as VEH\_NO:

---

**V3/D3/PC3/P3      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:** Starting in 2011, all vehicles (motor vehicles in-transport as well as parked/working vehicles) are sequentially ordered starting with 1. Prior to 2011, all motor vehicles in-transport were sequentially ordered starting with 1 and all parked/working motor vehicles were sequentially ordered separately starting with 1.

**SAS Name:** **VEHNO**      **1988-2010**  
**VEH\_NO**      **2011-Later**

**Attribute Codes**

<b>1988-</b>	<b>2011-</b>	
<b>2010</b>	<b>Later</b>	
0	0	Non-Motorist
1-100	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:

#### P4/NM3 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:** PERNO      1988-2010  
                PER\_NO      2011-Later

#### Attribute Codes

##### **1988-Later**

1-999 Assigned Person Number

The event-level (Cevent) and vehicle-event-level (Vevent, Vsoe) data files contain the preceding accident-level data elements as well as EVENTNUM:

### C17 Event Number

---

**Definition:** Number assigned to each harmful and non-harmful event in a crash, in chronological order.

**Additional Information:** Prior to 2011 this data element was called “Crash Event Sequence Number” and only included harmful events.

**SAS Name:** EVENTNUM

#### Attribute Codes

2000-	2011-
2010	<i>Later</i>
1-100	1-999      Event Number

The vehicle-event-level (Vevent, Vsoe) data files contain the preceding accident-level data elements and VEH\_NO (vehicle-level) as well as VEVENTNUM:

### C17 Vehicle Event Number

---

**Definition:** This data element identifies the number assigned to each event for this vehicle. 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 which involve an in-transport motor vehicle or an object set in motion by an in-transport motor vehicle.

**Additional Information:**

**SAS Name:** VEVENTNUM

#### Attribute Codes

<i>2011-Later</i>
1-999      Vehicle Event Number

**The ACCIDENT Data File**

The Accident data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, AND PJ, which are discussed in the “NASS GES Data Element List” section. CASENUM is the case identifier. It also contains:

### C3 Number of Persons Not in Motor Vehicles

---

**Definition:** This data element counts the number of Person Forms (Not a Motor Vehicle Occupant) that are applicable to this case.

**Additional Information:** Persons with a Person Type "03 - 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

##### **2011-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 counts the number of non-motorists involved 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, skate board, wheelchair), or an other non-motorist (e.g., person outside a trafficway, person in a house).

**Additional Information:** This data element is derived from the Person data file and is the number of records in which the Person Type is a Pedestrian, Bicyclist, Other Cyclist, Occupant of a Motor Vehicle Not In-Transport, Occupant of a Non-Motor Vehicle Transport Device, Person on Personal Conveyances, Persons In/On Buildings, or Unknown Type of Non-Motorist.

**SAS Name:** **NON\_INVL**      **1988-2010**  
**PERNOTMVIT**      **2011-Later**

#### Attribute Codes

##### **1988- 1999-** **1998 Later**

0-25 0-98 Number of Persons Not in Motor Vehicles in Transport

**C4 Number of Total Motor Vehicles Involved**

---

**Definition:** This data element counts the number of contact motor vehicles that the officer reported on the Police Accident Report as a unit involved in the crash.

**Additional Information:** This counts all of the vehicles in the crash. This includes the vehicles in-transport which are documented in the Vehicle data file and the vehicles not in-transport which are documented in the Parkwork data file. This data element only appears in the Accident data file.

**SAS Name:** VE\_TOTAL

**Attribute Codes**

*2011-Later*

001-999    Number of Vehicles in Crash

**C4A Number of Motor Vehicles in Transport (MVIT) Involved**

---

**Definition:** This data element counts the number of vehicles in-transport involved in the crash. Legally parked vehicles are not included.

**Additional Information:** This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PVE\_FORMS.

**SAS Name:** VEH\_INVL    1988-2010  
                  VE\_FORMS    2011-Later

**Attribute Codes**

*1988-  
2010*    *2011-  
Later*

1-100    1-999    Number of Vehicles

**C4B Number of Parked/Working Vehicles Involved**

---

**Definition:** This data element counts the number of records in the Parked Vehicle data file for the crash.

**Additional Information:** The Parked data file contains records for Parked and Working Vehicles.

From 2005 to 2008 working vehicles were defined as transport devices being used as equipment which would be classified under ANSI D16.1-1996 as motor vehicles, if not being used as equipment. In 2009 the definition changed to include only vehicles involved in trafficway maintenance, construction, or utility activities. Also, vehicles performing private maintenance, construction, or utility activities were excluded.

**SAS Name:** PVH\_INVL

**Attribute Codes**

2005-	2011-
2010	<i>Later</i>
0-30	0-999

Number of Parked/Working Vehicles in the Crash

**C5A Number of Persons in Motor Vehicles in Transport (MVIT)**

---

**Definition:** This data element counts 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 from the Person data file and is the number of records in which the Person Type is a Driver, Passenger or Unknown Occupant Type of a Motor Vehicle In-Transport.

**SAS Name:** PERMVIT

**Attribute Codes*****2011-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****1988-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:** WEEKDAY 1988-2008  
DAY\_WEEK 2009-Present

#### Attribute Codes

##### 1988-Later

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

### C8CI Imputed Day of Week

---

**Definition:** This imputed data element has the same definition and data element values as Day of Week, excluding value 9 for unknown day of week.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** WKDY\_I 1988-2009  
WKDY\_IM 2010-Later

### C8D Year of Crash

---

**Definition:** This data element records the year in which the crash occurred.

**Additional Information:** In 1999 year of the crash was changed to a four digit code.

**SAS Name:** YEAR

#### Attribute Codes

1988- 1999-  
1998 Later

xx 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."

From 1988-2008 midnight was coded as HOUR=24 and MINUTE=0. Starting in 2009 midnight is coded as HOUR=0 and MINUTE=0. For all years, hour is coded 0 for one minute after midnight to fifty-nine 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**

**1988-2008    2009-Later**

0-24	0-23	Hour
99	99	Unknown

**C9AI Imputed Hour of Crash**

---

**Definition:** This imputed data element has the same definition and data element values as Hour of the Crash, excluding value 99 for unknown hour.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** HOUR\_I    1988-2009  
                HOUR\_IM    2010-Later

**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****1988-Later**

0-59	Minute
99	Unknown

**C9BI Imputed Minute of Crash**

---

**Definition:** This imputed data element has the same definition and data element values as Minute of the Crash, excluding value 99 for unknown minutes.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section.

**SAS Name:** MINUTE\_I    1988-2009  
MINUTE\_IM    2010-Later

**C18 First Harmful Event**

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

**Additional Information:** This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PHARM\_EV.

**SAS Name:** **EVENT1**      **1988-2010**  
**HARM\_EV**      **2011-Later**

**Attribute Codes**

1988- 1991	1992- 1998	1999- 2008	2009	2010	2011- Later	
<i>NONCOLLISION</i>						
1	1	1	1	1	1	Rollover/Overtur
2	2	2	2	2	2	Fire/Explosion
3	3	3	3	3	3	Immersion
4	--	4	4	4	4	Gas Inhalation
5	5	5	5	--	--	Jackknife
--	--	--	--	5	51	Jackknife ( <i>Harmful to This Vehicle</i> )
6	6	6	6	--	--	Noncollision Injury ( <i>Injured In Vehicle Or Fell From Vehicle</i> )
--	50	7	7	7	44	Pavement Surface Irregularity ( <i>Ruts, Potholes, Grates, etc.</i> )
8	8	8	8	8	7	Other Noncollision
9	9	9	9	--	--	Noncollision-No Details
10	10	10	10	10	16	Thrown or Falling Object
--	--	--	--	11	6	Injured in Vehicle ( <i>Non-Collision</i> )
--	--	--	--	12	72	Cargo/Equipment Loss or Shift ( <i>Harmful to This Vehicle</i> )
--	--	--	--	13	5	Fell/Jumped from Vehicle
<i>COLLISION WITH OBJECT NOT FIXED</i>						
21	21	21	21	21	8	Pedestrian
22	22	22	22	--	--	Cycle or Cyclist ( <i>Pedalcyclist or Pedalcycle</i> )
--	--	--	--	22	9	Pedalcyclist
23	23	23	23	--	--	Railway Train
--	--	--	--	23	10	Railway Vehicle
24	24	24	24	--	--	Animal
--	--	--	--	24	11	Live Animal
--	--	--	--	49	49	Ridden Animal or Animal Drawn Conveyance
25	25	25	25	--	--	Motor Vehicle in Transport
26	26	26	26	--	--	Parked Motor Vehicle ( <i>or Other M.V. Not in Transport</i> )
27	27	27	27	--	--	Other Type Non-Motorist
--	--	--	--	27	15	Non-Motorist on Personal Conveyance
--	--	--	47	--	--	Vehicle Occupant

**C18 First Harmful Event (continued)****Attribute Codes**

<b>1988- 1991</b>	<b>1992- 1998</b>	<b>1999- 2008</b>	<b>2009</b>	<b>2010</b>	<b>2011- Later</b>	
28	28	28	28	28	18	Other Object Not Fixed
29	29	29	29	--	--	Object Not Fixed-No Details
--	--	--	--	29	14	Parked Motor Vehicle
--	--	--	--	30	45	Working Motor Vehicle
<b>COLLISION WITH FIXED OBJECT</b>						
31	31	31	31	31	58	Ground
32	32	32	32	32	19	Building
33	33	33	33	33	20	Impact Attenuator/Crash Cushion
34	34	34	34	--	--	Bridge Structure ( <i>Bridge Pier/Abutment/Parapet End/Rail</i> )
35	35	35	35	--	--	Guardrail
36	36	36	36	--	--	Concrete Traffic Barrier or Other Longitudinal Barrier Type
--	--	--	--	36	25	Concrete Traffic Barrier
37	37	37	37	--	--	Post, Pole or Support ( <i>Sign Post, Utility Post</i> )
38	38	38	38	--	--	Culvert or Ditch
39	39	39	39	39	33	Curb
40	40	40	40	40	35	Embankment
41	41	41	41	41	38	Fence
42	42	42	42	42	39	Wall
43	43	43	43	43	40	Fire Hydrant
44	44	44	44	44	41	Shrubbery
45	45	45	45	--	--	Tree
--	--	--	--	45	42	Tree ( <i>Standing Only</i> )
46	46	46	46	46	17	Boulder
48	59	58	58	58	43	Other Fixed Object
49	59	59	59	--	--	Fixed Object, No Details
--	--	--	--	71	50	Bridge Overhead Structure
--	--	--	--	72	21	Bridge Pier or Support
--	--	--	--	73	23	Bridge Rail ( <i>Includes Parapet</i> )
--	--	--	--	74	24	Guardrail Face
--	--	--	--	75	52	Guardrail End
--	--	--	--	76	57	Cable Barrier
--	--	--	--	77	26	Other Traffic Barrier
--	--	--	--	78	59	Traffic Sign Support
--	--	--	--	79	46	Traffic Signal Support
--	--	--	--	80	30	Utility Pole/Light Support
--	--	--	--	81	31	Other Post, Other Pole or Other Supports
--	--	--	--	82	32	Culvert
--	--	--	--	83	34	Ditch
--	--	--	--	84	48	Snow Bank
--	--	--	--	85	53	Mail Box

**C18 First Harmful Event (continued)****Attribute Codes**

<b>1988- 1991</b>	<b>1992- 1998</b>	<b>1999- 2008</b>	<b>2009</b>	<b>2010</b>	<b>2011- Later</b>
-----------------------	-----------------------	-----------------------	-------------	-------------	------------------------

**COLLISION WITH MOTOR VEHICLE IN TRANSPORT**

--	--	--	--	90	12	Motor Vehicle In-Transport
--	--	--	--	91	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
--	--	--	--	92	55	Motor Vehicle in Motion Outside the Trafficway

**NOT REPORTED AND UNKNOWN**

97	--	--	--	--	--	Other – No Details (*1988-1989 only)
--	--	--	--	97	--	Not Reported
99	99	99	99	99	99	Unknown

**C18I Imputed First Harmful Event**

**Definition:** This imputed data element has the same definition as First Harmful Event, excluding value 99 for unknown first harmful event and value 97 for not reported first harmful event.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **EVENT1\_I**   **1988-2009**  
**EVENT1\_IM**   **2010-Later**

**C19 Manner of Collision**

**Definition:** This data element identifies 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:** This data element also appears in the Vehicle and Person data files and in the Parkwork data file as PMAN\_COLL.

**SAS Name:** **MAN\_COL** 1988-2010  
**MAN\_COLL** 2011-Later

**Attribute Codes**

1988- 1998	1999- 2009	2010	2011- Later	
0	0	0	0	Not Collision with Motor Vehicle in Transport
1	1	--	--	Rear-End
--	--	1	1	Front-to-Rear
2	2	--	--	Head-On
--	--	2	2	Front-to-Front
3	3	3	10	Rear-to-Rear
4	4	4	6	Angle
5	5	5	7	Sideswipe, Same Direction
6	6	6	8	Sideswipe, Opposite Direction
--	--	7	9	Rear-to-Side
8	--	8	11	Other
9	9	9	99	Unknown
--	--	97	98	Not Reported

**C19I Imputed Manner of Collision**

**Definition:** This imputed data element has the same definition and data element values as Manner of Collision, excluding value 99 (value 9 prior to 2011) for unknown manner of collision and value 98 (value 97 prior to 2011) for not reported manner of collision.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **MANCOL\_I** 1988-2009  
**MANCOL\_IM** 2010-Later

**C20 Relation to Junction**

---

**C20A Relation to Junction- Within Interchange Area**

---

**Definition:** This data element identifies the crash's location with respect to presence in an interchange area. The coding of this data element is done in two sub-fields (see also C20B) and is based on the location of the First Harmful Event of the crash.

**Additional Information:**

**SAS Name:** RELJCT1

**Attribute Codes****2010-Later**

- |   |              |
|---|--------------|
| 0 | No           |
| 1 | Yes          |
| 8 | Not Reported |
| 9 | Unknown      |

**C20B Relation to Junction- Specific Location**

---

**Definition:** This data element identifies the crash's location with respect to presence in or proximity to components typically in junction or interchange areas. The coding of this data element is done in two sub-fields (see also C20A) and is based on the location of the First Harmful Event of the crash.

**Additional Information:**

**SAS Name:** REL\_JCT      1988-2009  
                  RELJCT2      2010-Later

**Attribute Codes****1988-1991**

- |   |                              |
|---|------------------------------|
| 0 | Non-Junction                 |
| 1 | Intersection                 |
| 2 | Intersection Related         |
| 3 | Interchange Area             |
| 4 | Driveway, Alley Access, Etc. |
| 5 | Entrance/Exit Ramp           |
| 6 | Rail Grade Crossing          |
| 8 | Other                        |
| 9 | Unknown                      |

**C20B Relation to Junction- Specific Location (continued)**

**1992- 1995- 1999-**  
**1994 1998 2009**

**NON-INTERCHANGE AREA**

0	0	0	Non-Junction
1	1	1	Intersection
2	2	2	Intersection Related
3	3	3	Driveway, Alley Access, Etc.
4	4	4	Entrance/Exit Ramp
5	5	5	Rail Grade Crossing
	6	6	On A Bridge
		7	Crossover Related
8	8	8	Other, Non-interchange
9	9	9	Unknown, Non-interchange

**INTERCHANGE AREA**

10	10	10	Non-Junction
11	11	11	Intersection
12	12	12	Intersection Related
13	13	13	Driveway, Alley Access, Etc.
14	14	14	Entrance/Exit Ramp
	16	16	On A Bridge
		17	Crossover Related
18	18	18	Other Location in Interchange
19	19	19	Unknown, Interchange Area
99	99	99	Unknown if Interchange

**2010-Later**

1	Non-Junction
2	Intersection
3	Intersection Related
4	Driveway Access
5	Entrance/Exit Ramp Related
6	Railway Grade Crossing
7	Crossover Related
8	Driveway Access Related
16	Shared-Use Path or Trail
17	Acceleration/Deceleration Lane
18	Through Roadway
19	Other Location Within Interchange Area
98	Not Reported
99	Unknown

**C20BI Imputed Relation to Junction**

---

**Definition:** Starting in 2010, these imputed data elements have the same definition and data element values as Relation to Junction – Within Interchange Area/Specific Location, excluding value 98 for not reported and 99 for unknown Relation to Junction – Within Interchange Area (RELJCT1); and excluding value 8 for not reported and 9 for unknown Relation to Junction - Specific Location (RELJCT2). Prior to 2010, the single imputed variable has the same values as Relation to Junction (RELJCT) excluding values 9, 19, and 99.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

SAS Name:	<b>RELJCT_I</b>	<b>1988-2009</b>
	<b>RELJCT1_IM, RELJCT2_IM</b>	<b>2010-Later</b>

**C21 Type of Intersection**

---

**Definition:** This data element identifies and allows separation of various intersection types.

**Additional Information:**

**SAS Name:** TYP\_INT

**Attribute Codes**

		2011-
2010		Later
0	1	Not an Intersection
1	2	Four-Way Intersection
2	3	T-Intersection
3	4	Y-Intersection
4	5	Traffic Circle
5	6	Roundabout
6	7	Five-Point, or More
7	8	Not Reported
9	9	Unknown

## C22 Relation to Trafficway

---

**Definition:** This data element identifies the location of the crash as it relates to its position within or outside the trafficway based on the First Harmful Event.

**Additional Information:** Prior to 2009, this data element was called Relation to Roadway.

**SAS Name:** **REL\_RWY**    **1988-2008**  
**REL\_ROAD**    **2009-Later**

### Attribute Codes

<b>1988- 1998</b>	<b>1999- 2001</b>	<b>2002- 2010</b>	<b>2011- Later</b>	
1	1	1	1	On Roadway
2	--	--	--	On Shoulder or Parking Lane
--	2	2	2	On Shoulder
3	--	--	--	Off Roadway/Shoulder/Parking Lane
4	3	3	3	On Median
--	4	4	4	On Roadside
--	5	5	5	Outside Trafficway
--	6	6	6	Off Roadway – Location Unknown
--	7	7	7	In Parking Lane/Zone
8	--	--	--	Other
--	8	8	8	Gore
--	--	9	11	Continuous Left Turn Lane
--	10	10	10	Separator
--	--	97	98	Not Reported
9	99	99	99	Unknown

**C23 Work Zone**

---

**Definition:** This data element identifies a motor vehicle traffic crash in which the first harmful event occurs within the boundaries of a work zone or on an approach to or exit from a work zone, resulting from an activity, behavior, or control related to the movement of the traffic units through the work zone.

**Additional Information:** From 1995 to 2003 this data element indicated whether the first harmful event occurred in a construction area or work zone. From 2004 to 2008 it was expanded to identify first harmful events that were related to, but did not necessarily occur in, a construction or work zone. Starting in 2009 it describes a "work zone crash".

**SAS Name:** WRK\_ZONE

**Attribute Codes****1995-2003**

- |   |   |
|---|---|
| 0 | No  |
| 1 | Yes, First Harmful Event In a Construction or Work Zone |

**2004-2008**

- |   |  |
|---|--|
| 3 | No   |
| 4 | Yes, First Harmful Event in Work or Construction Zone  |
| 5 | Yes, First Harmful Event Related to, But Not In, Work or Construction Zone                             |
| 6 | Yes, First Harmful Event is In or is Related to a Work or Construction Zone, But it is Not Known Which |
| 9 | Unknown  |

			2011-
2009	2010	Later	
0	0	0	None
1	1	1	Construction
2	2	2	Maintenance
3	3	3	Utility
4	4	4	Work Zone, Type Unknown
--	7	8	Not Reported

## C24 Light Condition

---

**Definition:** This data element records the type/level of light that existed at the time of the crash as indicated in the Police Accident Report.

**Additional Information:**

SAS Name: **LGHT\_CON 1988-2008**  
**LGT\_COND 2009-Later**

### Attribute Codes

1988- 1998	1999- 2008	2009	2010- Later	
1	1	1	1	Daylight
2	2	--	--	Dark
--	--	2	2	Dark – Not Lighted
3	3	3	3	Dark – Lighted
4	4	4	4	Dawn
5	5	5	5	Dusk
6	--	--	--	Dawn or Dusk
--	--	6	6	Dark – Unknown Lighting
--	--	7	7	Other
--	--	--	8	Not Reported
9	9	9	9	Unknown

## C24I Imputed Light Condition

---

**Definition:** This imputed data element has the same definition and data element values as Light Condition, excluding value 9 for unknown light condition and value 8 for not reported light condition.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

SAS Name: **LGTCON\_I 1988-2009**  
**LGTCON\_IM 2010-Later**

## C25 Atmospheric Conditions

---

**Definition:** This data element identifies the prevailing atmospheric conditions that existed at the time of the crash as indicated in the Police Accident Report.

**Additional Information:** This data element identifies up to two values. If more than two atmospheric conditions were reported, the two conditions that most affect visibility were selected. Accident.WEATHER1 and Accident.WEATHER2 are coded data elements, and Accident.WEATHER is derived from these two.

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

SAS Name:	<b>WEATHER</b>	<b>1988-2009</b>
	<b>WEATHER , WEATHER1 , WEATHER2</b>	<b>2010-Later</b>

### Attribute Codes

#### **1988-2009**

- 1 No Adverse Conditions
- 2 Rain
- 3 Sleet
- 4 Snow
- 5 Fog
- 6 Rain and Fog
- 7 Sleet and Fog
- 8 Other (*Smog, Smoke, Blowing Sand/Dust/Snow, Crosswind, Hail*)
- 9 Unknown

#### **2010-Later**

- 0 No Additional Atmospheric Conditions
- 1 Clear
- 2 Rain
- 3 Sleet, Hail (*Freezing Rain or Drizzle*)
- 4 Snow
- 5 Fog, Smog, Smoke
- 6 Severe Crosswinds
- 7 Blowing Sand, Soil, Dirt
- 8 Other
- 10 Cloudy
- 11 Blowing Snow
- 98 Not Reported
- 99 Unknown

**C25I Imputed Atmospheric Conditions**

---

**Definition:** This imputed data element has the same definition and data element values as Atmospheric Conditions, excluding value 99 (value 9 prior to 2010) for unknown atmospheric conditions and value 98 for not reported atmospheric conditions.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **WEATHR\_I 1988-2009**  
**WEATHR\_IM 2010-Later**

**C26 School Bus Related**

---

**Definition:** This data element identifies if a school bus, or motor vehicle functioning as a school bus, was involved in 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.

This data element also appears on the Person data file starting in 2011.

**SAS Name:** **SCHL\_BUS**    **1988-2008**  
**SCH\_BUS**    **2009-Later**

**Attribute Codes**

1988-		2011-	
2009	2010	Later	
0	0	0	No
1	1	1	Yes
--	7	8	Not Reported

**C32 Interstate Highway**

---

**Definition:** This data element identifies whether the crash occurred on an interstate highway. Interstate highway is a Federal Highway Administration classification.

**SAS Name:** INT\_HWY

**Attribute Codes****1988-Later**

- |   |         |
|---|---------|
| 0 | No      |
| 1 | Yes     |
| 9 | Unknown |

**C90 Maximum Injury Severity in Crash**

**Definition:** This data element indicates the most severe injury of all persons involved in the crash, and is derived from the injury severity data element in the Person data file.

**Additional Information:** The following order of severity has been used since 2001.

- 4-Fatal
- 3- Incapacitating
- 2-Non- incapacitating
- 1-Possible Injury
- 5-Injured, Unknown Severity
- 0-No Injury
- 6-Died Prior
- 9-Unknown if Injured
- 8-No Person Involved in the Crash

From 1999 to 2000 the priority was different: Unknown if Injured had priority over No Injury.

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

**SAS Name:** MAX\_SEV

**Attribute Codes**

1988-	2010-
2009	Later
0	0
1	No Injury
2	1
3	Possible Injury
4	2
5	Non-incapacitating
6	3
7	Incapacitating
8	4
9	Fatal
--	5
--	Injured, Unknown Injury Severity
--	6
--	Died Prior
--	8
--	No Person Involved in the Crash
--	9
--	Unknown if Injured
--	Unknown if Injured/Not Reported

**C90I Imputed Maximum Injury Severity in Crash**

**Definition:** This imputed data element has the same definition and data element values as Maximum Injury Severity in Crash, excluding value 9 for unknown maximum injury severity.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

This data element is derived from P09I, the imputed injury severity data element in the Person data file.

**SAS Name:** MAXSEV\_I 1988-2009  
MAXSEV\_IM 2010-Later

**C91 Number Known Injured in Crash**

---

**Definition:** This data element is derived by counting all the persons with an injury severity of (1, 2, 3, 4, 5, or 9) in a crash.

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

**SAS Name:** **NUM\_INJ**

**Attribute Codes****1988-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.

**C91I Imputed Number Known Injured in Crash**

---

**Definition:** This imputed data element has the same definition and data element values as Number Known Injured in Crash, excluding value 99 for unknown number injured, which is imputed, and the attribute code 98, which is converted to code 0.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

This data element is derived from P09I, the imputed injury severity data element in the Person data file.

**SAS Name:** **NO\_INJ\_I      1988-2009**  
**NO\_INJ\_IM    2010-Later**

## C92 Alcohol Involved in Crash

---

**Definition:** This is a derived data element based on police-reported alcohol involvement from the Person data file. This data element indicates alcohol use for drivers, pedestrians, cyclists and other type of non-motorists (except occupants of motor vehicles not in-transport) involved in the crash.

**Additional Information:** No Applicable Person is coded if the crash involved only passengers of in-transport motor vehicles, occupants of motor vehicles not in-transport or unknown occupant types who are in an in-transport motor vehicle where there is no driver present.

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

**SAS Name:** ALCOHOL

### Attribute Codes

1988-	1991-	1999-	
1990	1998	Later	
1	1	1	Alcohol Involved
2	2	2	No Alcohol Involved
8	--	8	No Applicable Person
9	9	9	Unknown

## C92I Imputed Alcohol Involved in Crash

---

**Definition:** This data element has the same definition and data element values as Alcohol Involved in Crash, excluding value 9 for unknown alcohol involvement, which is imputed, and the value 8, which is converted to attribute code 2.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

This imputed data element is derived from P11I, the imputed police reported alcohol involvement in the Person data file.

**SAS Name:** ALCHL\_I    1988-2009  
ALCHL\_IM    2010-Later

## C105 Land Use

---

**Definition:** The population of the area associated with the police jurisdiction from which the accident report is selected.

**Additional Information:** The data element was temporarily discontinued in 2009. The data element value for this data element is computer generated. The attribute selected is based on the PSU and police jurisdiction from which the crash is selected. For example, if the crash is selected from PSU72, jurisdiction 1; the attribute selected by the computer is Within area of population 100,000+.

**SAS Name:** LAND\_USE

### Attribute Codes

#### *1988-Later*

- 1 Within Area of Population 25,000-50,000
- 2 Within Area of Population 50,000-100,000
- 3 Within Area of Population 100,000+
- 8 Other Area
- 9 Unknown

**Discontinued ACCIDENT Data Elements**

**Number of Non-Motorists Coded (discontinued)**

---

**Definition:** This data element is derived by counting the number of records for non-motorists in the Person data file for the crash.

**Additional Information:** A value 0 is coded when there were no non-motorists coded in the crash. This data element was discontinued in 1990.

**SAS Name:** **NON\_COD**

**Attribute Codes****1988-1989**

- x Number of Non-Motorists

**Number of Vehicles Coded (discontinued)**

---

**Definition:** This data element was derived by counting the number of vehicles listed in the Vehicle data file for a crash.

**Additional Information:** This data element was discontinued in 1990.

**SAS Name:** VEH\_COD

**Attribute Codes****1988-1989**

x Number of Vehicles

**Number of Persons Involved (discontinued)**

---

**Definition:** The number of persons involved in the crash.

**Additional Information:** The value 0 is coded when there are no persons involved in the crash. For example, if a parked vehicle slips into gear, rolls down a driveway and hits a vehicle parked on the street, the number of persons involved is 0. This data element was discontinued in 1990.

**SAS Name:** PER\_INVL

**Attribute Codes****1988-1989**

0-98	Number of Persons
99	Unknown

**Number of Persons Coded (discontinued)**

---

**Definition:** This data element is derived from the number of records in the Person data file for the crash.

**Additional Information:** A value 0 is coded when there are no persons coded in the crash. This number may be less than number of persons involved because some states report only the number of injured occupants, but no further information. This data element was discontinued in 1990.

**SAS Name:** PER\_COD

**Attribute Codes****1988-1989**

- x Number of Persons

**Percentage Rural (discontinued)**

---

**Definition:**

**Additional Information:** This data element was discontinued in 1997.

**SAS Name:** RUR\_URB

**Attribute Codes****1988-1996**

- |    |                        |
|----|------------------------|
| 0  | Rural                  |
| 1  | 10 % of Area is Rural  |
| 2  | 20 % of Area is Rural  |
| 3  | 30 % of Area is Rural  |
| 4  | 40 % of Area is Rural  |
| 5  | 50 % of Area is Rural  |
| 6  | 60 % of Area is Rural  |
| 7  | 70 % of Area is Rural  |
| 8  | 80 % of Area is Rural  |
| 9  | 90 % of Area is Rural  |
| 10 | 100 % of Area is Rural |

### Pedestrian/Cyclist Crash Type (discontinued)

---

**Definition:** This data element describes the crash situation involving the pedestrian/bicyclist.

**Additional Information:** SAS codes 1 through 99 pertain to cyclist crashes and 110 through 920 pertain to pedestrian crashes. In 1989 4-digit codes were added pertaining to wheelchair crashes. Wheelchair codes are similar to those for pedestrians, with a 1 added as the first digit. For example a pedestrian involved with a commercial bus is coded 110 and a wheelchair occupant involved with a commercial bus is coded 1110.

If more than one qualifying non-motorist is involved, the data element is coded with respect to the first one involved. Within the selected non-motorist type (pedestrian or cyclist) coding is prioritized in the order listed below, if more than one crash type applies.

This data element was discontinued in 2010.

**SAS Name:** **PED\_ACC**

#### Attribute Codes

**1988-2009** (Exceptions indicated by “\*”)

- 0 No pedestrian/cyclist involved
- 9999 First qualifying non-motorist is an unknown person type

#### CYCLIST:

- 40 Play Vehicle (Big Wheel, Other Tricycle, or Bicyclist With Training Wheels)
- 11 Motorist Backing
- 29 Parking Lot, Other Open Area Or Location Such As Gas Station
- 97 Unknown Whether Parallel Or Crossing Approach Path

#### *PARALLEL PATH 1: MOTORIST TURNS OR MERGES INTO THE PATH OF THE CYCLIST*

- 35 Drive out – on Street Parking
- 22 Motorist Left Turn in Front of Cyclist
- 23 Motorist Left Turn Facing Cyclist
- 24 Motorist Right Turn in Front of Cyclist
- 61 Motorist Changes Lanes into Cyclist (\* Added in 2009)

#### *PARALLEL PATH 2 CYCLIST TURNS OR MERGES INTO THE PATH OF THE MOTORIST*

- 3 Ride-out from Sidewalk
- 18 Cyclist Left Turn, in Front of Traffic
- 19 Cyclist Left Turn, Facing Traffic
- 21 Cyclist Right Turn, from Wrong Side of Street
- 62 Cyclist Changes Lanes into Motorist (\* Added in 2009)

#### *PARALLEL PATH 3 OPERATOR IS ON THE WRONG SIDE OF THE STREET*

- 30 Head-on, Counteractive Evasive Actions
- 28 Wrong Way Motorist
- 26 Wrong Way Cyclist

**Pedestrian/Cyclist Crash Type (continued)**

---

**PARALLEL PATH 4 MOTORIST IS OVERTAKING THE CYCLIST**

- 13 Motorist Overtakes Undetected Cyclist
- 15 Motorist Overtaking, Counteractive Evasive Actions
- 16 Motorist Overtaking, Misjudges Passing Space
- 17 Motorist Overtaking Cyclist, Path Obstructed
- 39 Motorist Overtaking

**PARALLEL PATH 5 CYCLIST IS OVERTAKING A MOTOR VEHICLE**

- 27 Cyclist Overtaking

**PARALLEL PATH 6 OPERATOR LOSES CONTROL AND INADVERTENTLY SWERVES INTO THE PATH OF THE OTHER VEHICLE**

- 14 Motorist Lost Control
- 20 Cyclist Lost Control
- 98 Parallel Path, Unknown Type

**CROSSING PATH 1 CYCLIST DOES NOT CLEAR INTERSECTION BEFORE LIGHT TURNS GREEN FOR CROSS TRAFFIC**

- 6 Trapped
- 7 Multiple Threat

**CROSSING PATH 2 MOTORIST FAILS TO YIELD TO THE CYCLIST**

- 8 Drive Out, Driveway/Alley
- 12 Drive Through
- 9 Drive Out, Stop Sign
- 10 Right on Red
- 48 Drive Out, Intersection

**CROSSING PATH 3 CYCLIST FAILS TO YIELD TO THE MOTORIST, MIDBLOCK**

- 1 Ride Out, Residential Driveway
- 2 Ride Out, Commercial Driveway
- 4 Ride Out, Midblock
- 60 Ride Out – Unknown Driveway Type (\* Added in 2009)

**CROSSING PATH 4 CYCLIST FAILS TO YIELD TO THE MOTORIST AT AN INTERSECTION**

- 5 Ride Out, Stop Sign
- 49 Ride Out, Intersection
- 50 Ride Through (\* added in 2009)

**CROSSING PATH 5 MOTORIST IS TURNING**

- 33 Motorist Cuts Corner
- 34 Motorist Swings Wide

**CROSSING PATH 6 CYCLIST IS TURNING**

- 31 Cyclist Cuts Corner
- 32 Cyclist Swings Wide

**Pedestrian/Cyclist Crash Type (continued)****CROSSING PATH 7 CRASH OCCURS AT AN INTERSECTION**

- 55 Controlled Intersection, Other  
 25 Uncontrolled Intersection, Other  
 90 Unknown if Controlled or Uncontrolled (\* Added in 2009)  
 99 Crossing Path, Unknown Type

**PEDESTRIAN WHEEL CHAIR**

110	1110	Commercial Bus
120	1120	School Bus
130	1130	Ice Cream Vendor
140	1140	Mailbox Related
150	1150	Entering/Exiting
210	1210	Driverless Vehicle
220	1220	Backing Vehicle
230	1230	Hot Pursuit
310	1310	To/from Disabled Vehicle
320	1320	Disabled Vehicle Related
330	1330	Emergency Vehicle Related
410	1410	Working on Roadway
420	1420	Play Vehicle-Related
430	1430	Playing in Roadway
510	1510	Hitchhiking
520	1520	Expressway Crossing
531	1531	Walking/Running along Roadway with Traffic
532	1532	Walking/Running along Roadway against Traffic
539	1539	Walking/Running along Roadway Can't Specify
610	1610	Waiting to Cross At or Near Curb
620	1620	Pedestrian / Wheel Chair Not in Roadway
710	1710	Multiple Threat, Intersection
720	1720	Vehicle Turn/Merge – at Intersection
730	1730	Intersection Dash
740	1740	Trapped
750	1750	Pedestrian Walked /Wheel Chair Rolled into Vehicle, Intersection
760	1760	Intersection, Driver Violation
790	1790	Intersection-other
810	1810	Multiple Threat, Mid-block
821	1821	Mid-block Dart-out, First half
822	1822	Mid-block Dart-out, Second half
829	1829	Mid-block Dart-out, Can't specify
830	1830	Mid-block dash
840	1840	Pedestrian Walked / Wheel Chair Rolled into Vehicle, Mid-block
890	1890	Mid-block-other
910	1910	Other-weird
920	1920	Inadequate information

**National Highway System (NHS) Roadway Type (discontinued)**

---

**Definition:** This data element was added to indicate whether this roadway is designated as part of the National Highway System and the urban or rural character of the area through which the roadway travels.

**Additional Information:** This data element was added to the accident data file in 1995 and removed in 1999.

**SAS Name:** NHS\_RWTP

**Attribute Codes****1995-1998**

00 Not NHS Roadway

*URBAN*

- 1 Eisenhower Interstate (E/S)
- 2 Congressional High Priority Route
- 3 STRAHNET Route
- 4 STRAHNET Major Connector
- 5 Other NHS Route
- 9 Unknown Urban Route

*RURAL*

- 11 Eisenhower Interstate (E/S)
- 12 Congressional High Priority Route
- 13 STRAHNET Route
- 14 STRAHNET Major Connector
- 15 Other NHS Route
- 19 Unknown Urban Route

*URBAN OR RURAL*

- 21 Eisenhower Interstate (E/S)
- 22 Congressional High Priority Route
- 23 STRAHNET Route
- 24 STRAHNET Major Connector
- 25 Other NHS Route
- 98 Unknown if Urban or Rural
- 99 Unknown if NHS Route

**EMS On Scene (discontinued)**

---

**Definition:** Indicates whether an EMS vehicle was present at the scene of the crash.

**Additional Information:** This data element was discontinued in 2009.

**SAS Name:** EMS

**Attribute Codes****2005-2008**

- |   |            |
|---|------------|
| 0 | No         |
| 1 | Yes        |
| 6 | Not on PAR |
| 7 | Not Coded  |
| 9 | Unknown    |

### Trafficway Flow (discontinued)

---

**Definition:** Indicates whether or not the roadway was divided.

**Additional Information:** If the crash involves vehicles traveling on different trafficways (e.g., first harmful event occurred in an intersection), the trafficway coded is based on the roadway surface type and number of travel lanes of the trafficways involved and a determination of which vehicle contributed most the cause of the crash.

Starting in 2002 this information is also available for each vehicle in a crash. The data element VTRAFWAY is in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** TRAF\_WAY

#### Attribute Codes

**1988- 2003-**

**2002 2009**

0	--	Not Physically Divided (Center 2-way Left Turn Lane)
1	1	Not Physically Divided (Two Way Trafficway)
2	2	Divided Highway (Median Strip, Barrier)
3	3	One Way Trafficway
9	9	Unknown

### Number of Travel Lanes (discontinued)

---

**Definition:** Indicates the number of lanes of travel. If the roadway is a divided trafficway, the number of travel lanes counts only lanes in the direction of travel of the first harmful event. If the roadway is an undivided trafficway, the number of travel lanes are all the lanes regardless of their direction of travel.

**Additional Information:** If the crash involves vehicles traveling on different trafficways (e.g., first harmful event occurred in an intersection), the trafficway coded is based on the roadway surface type and number of travel lanes of the trafficways involved and a determination of which vehicle contributed most the cause of the crash.

Starting in 2002 this information is also available for each vehicle in a crash. The data element VNUM\_LAN is in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** **NUM\_LAN**    **1988-2008**  
**NO\_LANES**    **2009**

#### Attribute Codes

##### **1988-2009**

- 1 One Lane
- 2 Two Lanes
- 3 Three Lanes
- 4 Four Lanes
- 5 Five Lanes
- 6 Six Lanes
- 7 Seven or More Lanes
- 9 Unknown

### Speed Limit (discontinued)

---

**Definition:** Posted speed limit in miles per hour.

**Additional Information:** If the crash involves vehicles traveling on different trafficways (e.g., first harmful event occurred in an intersection), the highest speed limit is coded.

Starting in 2002 this information is also available for each vehicle in a crash. The data element VSPD\_LIM is in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** **SPD\_LIM**    **1988-2008**  
**SP\_LIMIT**    **2009**

#### Attribute Codes

##### **1988-2009**

- |      |  |
|------|--|
| 0    | No Statutory Limit ( <i>Parking Lot, Alley, etc.</i> ) |
| 5-75 | Actual Speed Limit                                     |
| 99   | Unknown  |

---

### Imputed Speed Limit (discontinued)

---

**Definition:** This imputed data element has the data element values as Speed Limit, excluding value 99 for unknown speed limit.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **SPDLIM\_H**

### Roadway Alignment (discontinued)

---

**Definition:** Horizontal alignment of roadway in the immediate vicinity of the first harmful event.

**Additional Information:** If the crash involves vehicles traveling on different trafficways (e.g., first harmful event occurred in an intersection), the trafficway coded is based on the roadway surface type and number of travel lanes of the trafficways involved and a determination of which vehicle contributed most the cause of the crash.

Starting in 2002 this information is also available for each vehicle in a crash. The data element VALIGN is in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** **ALIGN**      **1988-2008**  
**ALIGNMNT**      **2009**

#### Attribute Codes

##### **1988-2009**

- 1 Straight
- 2 Curve
- 9 Unknown

---

### Imputed Roadway Alignment (discontinued)

---

**Definition:** This imputed data element has the same definition and data element values as Roadway Alignment, excluding value 9 for unknown roadway alignment.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **ALIGN\_I**

### Roadway Profile (discontinued)

---

**Definition:** Vertical alignment of roadway.

**Additional Information:** If the crash involves vehicles traveling on different trafficways (e.g., first harmful event occurred in an intersection), the trafficway coded is based on the roadway surface type and number of travel lanes of the trafficways involved and a determination of which vehicle contributed most the cause of the crash.

Starting in 2002 this information is also available for each vehicle in a crash. The data element VPROFILE is in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** PROFILE

#### Attribute Codes

1988- 2002-

2001 2009

1	1	Level
2	2	Grade ( <i>Uphill, Downhill, Unknown Slope</i> )
3	3	Hillcrest
8	--	Other
--	8	Sag
9	9	Unknown

### Imputed Roadway Profile (discontinued)

---

**Definition:** This imputed data element has the same as definition and data element values as Roadway Profile, excluding value 9 for unknown roadway profile.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** PROFIL\_I

### Roadway Surface Condition (discontinued)

---

**Definition:** Condition of road surface at the time of the crash.

**Additional Information:** If the crash involves vehicles traveling on different trafficways (e.g., first harmful event occurred in an intersection), the trafficway coded is based on the roadway surface type and number of travel lanes of the trafficways involved and a determination of which vehicle contributed most the cause of the crash.

Starting in 2002 this information is also available for each vehicle in a crash. The data element VSURCOND is in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** **SUR\_COND**

#### Attribute Codes

##### **1988-2009**

- 1 Dry
- 2 Wet
- 3 Snow or Slush
- 4 Ice
- 5 Sand, Dirt, Oil
- 8 Other
- 9 Unknown

---

### Imputed Roadway Surface Condition (discontinued)

---

**Definition:** This imputed data element has the same definition and data element values as Roadway Surface Condition, excluding value 9 for unknown roadway surface condition.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **SURCON\_I**

**Traffic Control Device (discontinued)**

---

**Definition:** Indicates whether or not a traffic control device was present for the crash and the type of traffic control device.

**Additional Information:** If the crash involves vehicles and cyclists subject to different traffic control devices, the device coded is based on the following priority:

- 51 - Officer, Crossing Guard, Flagman, etc
- The lowest numbered device shown below
- No traffic control device.

From 2002-2009, this information is also available on the Vehicle data file (Vehicle.VTRAFCON), the Biketraf data file (BTRAFCON) and the Trafcon data file (MTRAFCON).

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** **TRAFCON**

**Attribute Codes**

**1988- 1990-**

**1989 2009**

0 0 No Controls

**NOT AT RAILROAD GRADE CROSSING TRAFFIC SIGNALS:****TRAFFIC SIGNALS:**

- |    |    |  |
|----|----|--|
| -- | 1  | Traffic Control Signal (On Colors)                         |
| 1  | -- | Traffic Control Signal (On Colors) w/o Pedes. Signal       |
| 2  | -- | Traffic Control Signal (On Colors) w/ Pedes. Signal        |
| 3  | -- | Traffic Control Signal (On Colors) Pedes. Signal Not Known |
| 4  | 4  | Flashing Traffic Control Signal or Flashing Beacon         |
| 8  | 8  | Other Traffic Signal                                       |
| 9  | 9  | Unknown Traffic Signal                                     |

**REGULATORY, SCHOOL ZONE OR WARNING SIGNS:**

- |    |    |                          |
|----|----|--------------------------|
| 11 | 21 | Stop Sign                |
| 12 | 22 | Yield Sign               |
| 13 | 23 | School Zone Related Sign |
| 14 | -- | Warning Sign             |

**Traffic Control Device (continued)**

---

**Attribute Codes****1988- 1990-****1989 2009**

18	28	Other Sign
19	29	Unknown Sign
--	40	Advisory Speed Sign
--	41	Warning Sign For Road Conditions ( <i>Hill, Steep Grade, Etc.</i> )
--	42	Warning Sign For Road Construction
--	43	Warning Sign For Environment/Traffic ( <i>Fog Ahead, Wind, Crash Ahead, Etc.</i> )
--	49	Unknown Type Warning

**MISCELLANEOUS NOT AT RAILROAD CROSSING:**

21	51	Officer, Crossing Guard, Flagman, etc
----	----	---------------------------------------

**AT RAILROAD GRADE CROSSING:**

31	61	Active Devices (e.g. Gates, Flashing Lights, Traffic Signal)
32	62	Passive Devices (Stop Sign, Cross Bucks)

**OTHER:**

97	97	Traffic Control Present-No Details
98	98	Other Traffic Control ( <i>Whether Or Not At RR Grade Crossing</i> )
99	99	Unknown

---

**Imputed Traffic Control Device (discontinued)**

---

**Definition:** This imputed data element has the same definition and data element values as Traffic Control Device, excluding value 99 for unknown traffic control device.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **TRFCON\_I**

### Traffic Control Device Functioning (discontinued)

---

**Definition:** This data element is a derived data element based on traffic control device from the crash data file. Traffic control device functioning attributes for vehicle(s) "Bikes" with the same traffic control device as the crash data file are prioritized (1, 2, 3, 8, 9, 0) and the traffic control device functioning attribute with the highest priority selected.

**Additional Information:** The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

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

**SAS Name:** **DEV\_FUNC**    **1988-1989**

#### Attribute Codes

##### **1988-1989**

- 0 No Controls
- 1 Device Not Functioning
- 2 Device Functioning
- 9 Unknown

**The VEHICLE Data File**

The Vehicle data file includes Vehicle as well as Driver and Precrash data. It contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and VEH\_NO. CASENUM and VEH\_NO are the unique identifiers. The data file also contains:

**V4 Number of Occupants**

---

**Definition:** This data element counts of the number of occupants in each vehicle.

**Additional Information:** This data element also appears in the Parkwork data file as PNUMOCCS.

**SAS Name:** NUMOCCS

**Attribute Codes**

<b>2000-</b>	<b>2009-</b>	
<b>2008</b>	<b>Later</b>	
0	0	None
1-998	1-95	Number of Occupants Involved
--	96	Ninety-six or More
--	97	Not Reported ( <i>2010 Only</i> )
999	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 Accident Report.

**Additional Information:** This data element also appears in the Parkwork data file as PTYPE.

**SAS Name:** UNITTYPE

**Attribute Codes****2011-Later**

- 1    Motor Vehicle in Transport (*Inside or Outside the Trafficway*)
- 2    Motor Vehicle Not in Transport Within the Trafficway
- 3    Motor Vehicle Not in Transport Outside the Trafficway
- 4    Working Motor Vehicle (*Highway Construction, Maintenance, Utility Only*)

## V6 Hit and Run

---

**Definition:** 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

### Attribute Codes

1988-	2011-	
2009	2010	Later
0	0	0 No
1	1	1 Yes
--	7	8 Not Reported
9	9	9 Unknown

## V6I Imputed Hit and Run

---

**Definition:** This imputed data element has the same definition and data element values as Hit and Run, excluding value 9 for unknown hit and run and value 8 (value 7 in 2010) for not reported hit and run.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** HITRUN\_I    1988-2009  
                  HITRUN\_IM    2010-Later

**V9      Vehicle Make**

---

**Definition:** This data element identifies the make (manufacturer) of this vehicle.

**Additional Information:** See *Appendix A: Vehicle Make/Model Designation* for more detailed information.

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

**SAS Name:** **MAKE**

**Attribute Codes****1988-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                      |
| 29 | Other Domestic Manufacturers |
| 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                      |

**V9      Vehicle Make    (*continued*)**

---

**Attribute Codes****1988-Later**

- 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
- 63 Kia
- 64 Daewoo
- 65 Mini (*2002-2007 Only*)
- 65 Smart (*2008-Later*)
- 66 Mahindra (*Since 2011*)
- 69 Other Import
- 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 Rio/Rio
- 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

**V9      Vehicle Make    (*continued*)**

---

**Attribute Codes*****1988-Later***

91	Eagle Coach
92	Gillig
93	MCI
94	Thomas Built
97	Not Reported
98	Other Make
99	Unknown Make

**V10    Vehicle Model**

---

**Definition:** This data element identifies the model of this vehicle within a given make.

**Additional Information:** This data element also appears in the Parkwork data file as PMODEL.

**SAS Name:** MODEL

**Attribute Codes****1988-Later**

See Appendix A: *Vehicle Make/Model Designation* for make and model codes.

## V11 Body Type

---

**Definition:** This data element identifies a classification of this vehicle based on its general body configuration, size, shape, doors, etc.

**Additional Information:** Changes to this data element were made in:

- 1990: Attribute codes 11 and 12 were modified, attribute codes 13 Limousine and 22 Step Van or Walk-in Van were added, and attribute codes 33, 34, and 47 were deleted.
- 1992: Attribute codes 11, 12, 13, 14, 20, 21, 30, 31, 60, and 65 were modified.
- Attribute codes 15, 16, 17, 19, 23, 33, 45, and 64 were added. Some of the existing attribute coding changed.
- 1993: Attribute codes 24 and 25 were added. Prior to 1993 GVWR was measured in kilograms; in 1993 it changed to pounds.
- 1999: Attribute 17 was added.
- 2010: Attribute 98 (Not Reported) was added.

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

**SAS Name:** BODY\_TYP

### Attribute Codes

#### 1988-1989

##### AUTOMOBILES

- 1 Convertible (*Excludes Sun-Roof, T-Bar*)
- 2 2-Door Sedan, Hardtop, Coupe
- 3 3-Door/2-Door Hatchback
- 4 4-Door Sedan, Hardtop
- 5 5-Door/4-Door Hatchback
- 6 Station Wagon (*Excluding Van And Truck Based*)
- 7 Hatchback, Number Of Doors Unknown
- 8 Other Automobile Type
- 9 Unknown Automobile Type

##### AUTOMOBILE DERIVATIVES

- 10 Auto Based Pickup (*Included El Camino, Caballero, Ranchero, And Brat*)
- 11 Auto Based Panel (*Cargo Station Wagon, Auto-Based Ambulance/Hearse*)
- 12 Large Limousine (*More Than Four Side Doors Or Stretched Chassis*)

##### UTILITY VEHICLES

- 14 Utility- (*Includes Jeep CJ-2-CJ7, Renegade, Landrover, Bronco, Landcruiser, Thing, Blazer, Bronco II, Jimmy, Ramcharger, Cherokee, Trailduster, Scout*)

##### VAN-BASED LIGHT TRUCKS (<10,000 LBS GVWR)

- 20 Minivan (*Astro, Caravan, Plymouth Vista, Aerostar, Safari, Voyager, Dodge Vista, Toyota Cargo Van, Toyota Van, Vanagon, Vw Bus, Kombi*)
- 21 Standard Van (*Sportvan, Chevy Van, Club Wagon, Ford Econoline, Ram Van, Mini Ram Van, Chateau, Ram Wagon, Vandura, Rally Voyager, Beauville, Sportsman*)
- 28 Other Van Type
- 29 Unknown Van Type

**V11 Body Type (continued)****Attribute Codes****1988-1989***LIGHT CONVENTIONAL TRUCKS (PICKUP STYLE CAB, ≤10,000 LBS GVWR)*

- 30 Compact Pickup (< 4,500 Lbs GVWR, S-10, LUV, Ram 50, Rampage, Courier, Ranger, S-5, Pup, Mazda Pickup, Mitsubishi Truck, Nissan Pickup, Arrow Pickup, Scamp, Toyota Pickup, VW Pickup)
- 31 Standard Pickup (4,500 To 10,000 Lbs GVWR, C10-C30, K10-K30, T10, D100-D300, W150, F100-F350, Comanche, J10, J20)
- 32 Pickup With Slide-In Camper
- 33 Truck Based Station Wagon (4-Door; Includes Suburban, Travelall, Wagoneer)
- 34 Light Truck Based Suburban Limousine
- 39 Unknown (Pickup Style) Light Conventional Truck

*OTHER LIGHT TRUCKS (<10,000 LBS GVWR)*

- 40 Cab Chassis Based (Included Rescue Vehicle, Light Stake, Dump, And Tow Truck)
- 41 Truck Based Panel
- 42 Light Truck Based Motor Home (Chassis Mounted)
- 47 Other Light Conventional Truck Type (Not A Pickup)
- 48 Unknown Other Light Truck Type (Utility, Van, Pickup, Or Other Light Truck)
- 49 Unknown Light Vehicle Type (Automobile, Van, Or Light Truck)

*BUSES (EXCLUDES VAN BASED)*

- 50 School Bus Type (Designed To Carry Students, Not Cross Country Or Transit)
- 58 Other Bus (e.g., Transit, Intercity, Bus Based Motor Home)
- 59 Unknown Bus Type

*MEDIUM/HEAVY TRUCKS (>10,000 LBS GVWR)*

- 60 Single Unit Straight Truck
- 63 Medium/Heavy Truck Based Motor Home
- 65 Truck-Tractor (Cab Only, Or With Any Number Of Trailing Units; Any WEIGHT)
- 68 Unknown Medium/Heavy Truck Type
- 69 Unknown Truck Type (Light/Medium/Heavy)

*MOTORED CYCLES (DOES NOT INCLUDE ALL TERRAIN VEHICLES/CYCLES)*

- 70 Motorcycle
- 71 Moped (Motorized Bicycle)
- 72 Three Wheeled Motorcycle Or Moped
- 78 Other Motored Cycle Type (Minibike, Motor Scooter)
- 79 Unknown Motored Cycle Type

*OTHER VEHICLES*

- 80 ATV (All-Terrain Vehicle Including Dune/Swamp Buggy) And ATC (All Terrain Cycle)
- 81 Snowmobile
- 82 Farm Equipment Other Than Trucks
- 83 Construction Equipment Other Than Trucks (Includes Graders)
- 88 Other Type Vehicle (Includes Go-Cart, Fork Lift, City Street Sweeper)
- 89 Unknown Other Vehicle
- 99 Unknown Body Type

**V11 Body Type (continued)****Attribute Codes****1990-1991****AUTOMOBILES**

- 1 Convertible (*Excludes Sun-Roof, T-Bar*)
- 2 2-Door Sedan, Hardtop, Coupe
- 3 3-Door/2-Door Hatchback
- 4 4-Door Sedan, Hardtop
- 5 5-Door/4-Door Hatchback
- 6 Station Wagon (*Excluding Van And Truck Based*)
- 7 Hatchback, Number Of Doors Unknown
- 8 Other Automobile Type
- 9 Unknown Automobile Type

**AUTOMOBILE DERIVATIVES**

- 10 Auto Based Pickup (*Included El Camino, Caballero, Ranchero, And Brat*)
- 11 Ambulance
- 12 Hearse
- 13 Limousine

**UTILITY VEHICLES**

- 14 Utility- (*Includes Jeep CJ-2-CJ7, Renegade, Landrover, Bronco, Landcruiser, Thing, Blazer, Bronco II, Jimmy, Ramcharger, Cherokee, Trailduster, Scout*)

**VAN-BASED LIGHT TRUCKS ( $\leq 10,000$  LBS GVWR)**

- 20 Minivan (Astro, Caravan, Plymouth Vista, Aerostar, Safari, Voyager, Dodge Vista, Toyota Cargo Van, Toyota Van, Vanagon, Vw Bus, Kombi)
- 21 Large Van (Sportvan, Chevy Van, Club Wagon, Ford Econoline, Ram Van, Chateau, Ram Wagon, Vandura, Rally Voyager, Beauville, Sportsman)
- 22 Step Van Or Walk-In Van ( $< 10,000$  Lbs GVWR)
- 28 Other Van Type
- 29 Unknown Van Type

**LIGHT CONVENTIONAL TRUCKS (PICKUP STYLE CAB,  $\leq 10,000$  LBS GVWR)**

- 30 Compact Pickup (S-10, LUV, Ram 50, Rampage, Courier, Ranger, S-5, Pup, Mazda Pickup, Mitsubishi Truck, Nissan Pickup, Arrow Pickup, Scamp, Toyota Pickup, VW Pickup)
- 31 Standard Pickup (C10-C30, K10-K30, T10, D100-D300, W150, F100-F350, Comanche, J10, J20)
- 32 Pickup With Slide-In Camper
- 39 Unknown (Pickup Style) Light Conventional Truck

**OTHER LIGHT TRUCKS ( $< 10,000$  LBS GVWR)**

- 40 Cab Chassis Based (*Included Rescue Vehicle, Light Stake, Dump, And Tow Truck*)
- 41 Truck Based Panel
- 42 Light Truck Based Motor Home (*Chassis Mounted*)
- 48 Unknown Other Light Truck Type (*Utility, Van, Pickup, Or Other Light Truck*)
- 49 Unknown Light Vehicle Type (*Automobile, Van, Or Light Truck*)

**V11 Body Type (continued)**

---

**Attribute Codes****1990-1991***BUSES (EXCLUDES VAN BASED)*

- 50 School Bus Type (*Designed To Carry Students, Not Cross Country Or Transit*)  
 58 Other Bus (e.g., *Transit, Intercity, Bus Based Motor Home*)  
 59 Unknown Bus Type

*MEDIUM/HEAVY TRUCKS (>10,000 LBS GVWR)*

- 60 Single Unit Straight Truck  
 63 Medium/Heavy Truck Based Motor Home  
 65 Truck-Tractor (*Cab Only, Or With Any Number Of Trailing Units; Any WEIGHT*)  
 68 Unknown Medium/Heavy Truck Type  
 69 Unknown Truck Type (*Light/Medium/Heavy*)

*MOTORED CYCLES (DOES NOT INCLUDE ALL TERRAIN VEHICLES/CYCLES)*

- 70 Motorcycle  
 71 Moped (*Motorized Bicycle*)  
 72 Three Wheeled Motorcycle Or Moped  
 78 Other Motored Cycle Type (*Minibike, Motor Scooter*)  
 79 Unknown Motored Cycle Type

*OTHER VEHICLES*

- 80 ATV (*All-Terrain Vehicle Including Dune/Swamp Buggy*) And ATC (*All Terrain Cycle*)  
 81 Snowmobile  
 82 Farm Equipment Other Than Trucks  
 83 Construction Equipment Other Than Trucks (*Includes Graders*)  
 88 Other Type Vehicle (*Includes Go-Cart, Fork Lift, City Street Sweeper*)  
 89 Unknown Other Vehicle  
 99 Unknown Body Type

**1992- 2010-****2009 Later** (Exceptions indicated by “ \* ”)*AUTOMOBILES*

- 1 1 Convertible (*Excludes Sun-Roof, T-Bar*)  
 2 2 2-Door Sedan, Hardtop, Coupe  
 3 3 3-Door/2-Door Hatchback  
 4 4 4-Door Sedan, Hardtop  
 5 5 5-Door/4-Door Hatchback  
 6 6 Station Wagon (*Excluding Van And Truck Based*)  
 7 7 Hatchback, Number Of Doors Unknown  
 17 17 3-Door Coupe (\*Since 1999)  
 8 -- Other Automobile Type  
 -- 8 Sedan/Hardtop, Number of Doors Unknown  
 9 -- Unknown Automobile Type  
 -- 9 Other or Unknown Automobile Type

**V11 Body Type (continued)****Attribute Codes****1992- 2010-****2009 Later** (Exceptions indicated by “ \* ”)**AUTOMOBILE DERIVATIVES**

10	10	Auto Based Pickup ( <i>Includes El Camino, Caballero, Ranchero, SSR, G8-ST, Baha, Brat, And Rabbit Pickup</i> )
11	11	Auto Based Panel ( <i>Cargo Station Wagon, Auto-Based Ambulance/Hearse</i> )
12	12	Large Limousine ( <i>More Than Four Side Doors Or Stretched Chassis</i> )
13	13	Three Wheel Automobile Or Automobile Derivative

**UTILITY VEHICLES**

14	14	Compact Utility ( <i>ANSI D-16 Utility Vehicle Categories “Small” and “Midsize”</i> )
15	15	Large Utility ( <i>ANSI D-16 Utility Vehicle Categories “Full Size” and “Large”</i> )
16	16	Utility Station Wagon
19	19	Utility Vehicle, Unknown Body Type

**VAN-BASED LIGHT TRUCKS (< 4,536 KG GVWR)**

20	20	Minivan
21	21	Large Van – Includes Van-Based Buses
22	22	Step Van Or Walk-In Van ( $\leq 4,536$ Kg GVWR)
23	--	Van-Based Motor-Home
24	--	Van-Based School Bus (*Since 1993)
25	--	Van-Based Other Bus (*Since 1993)
28	28	Other Van Type
29	29	Unknown Van Type

**LIGHT CONVENTIONAL TRUCKS (PICKUP STYLE CAB,  $\leq 4,536$  KG GVWR)**

30	30	Compact Pickup ( <i>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</i> )
31	31	Standard Pickup ( <i>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</i> )
32	32	Pickup With Slide-In Camper
33	33	Convertible Pickup
39	39	Unknown ( <i>Pickup Style</i> ) Light Conventional Truck

**OTHER LIGHT TRUCKS ( $\leq 4,536$  KG GVWR)**

40	40	Cab Chassis Based ( <i>Included Rescue Vehicle, Light Stake, Dump, And Tow Truck</i> )
41	41	Truck Based Panel
45	45	Other Light Conventional Truck Type
48	--	Unknown Other Light Truck Type ( <i>Utility, Van, Pickup, Or Other Light Truck</i> )
--	48	Unknown Light Truck Type ( <i>Not A Pickup</i> )
49	49	Unknown Light Vehicle Type ( <i>Automobile, Utility, Van, Or Light Truck</i> )

**V11 Body Type (continued)****Attribute Codes****1992- 2010-****2009 Later** (Exceptions indicated by “ \* ”)**BUSES (EXCLUDES VAN BASED BUSES WITH A GVWR <= 10,000 LBS.)**

50	50	School Bus ( <i>Designed To Carry Students, Not Cross Country Or Transit</i> )
--	51	Cross Country/Intercity Bus ( <i>Motor Coach</i> )
--	52	Transit Bus ( <i>City Bus</i> )
--	55	Van-Based Bus GVWR > 10,000 lbs. (*Since 2011)
58	58	Other Bus Type (e.g., <i>Transit, Intercity, Bus Based Motor Home</i> )
59	59	Unknown Bus Type

**MEDIUM/HEAVY TRUCKS (>4,536 KG GVWR)**

60	60	Step Van
--	61	Single-Unit Straight Truck (10,000 lbs<GVWR< or =19,500 lbs) (*2010 Only)
--	61	Single-Unit Straight Truck or Cab-Chassis (10,000 lbs<GVWR< or =19,500 lbs) (*Since 2011)
--	62	Single-Unit Straight Truck (19,500 lbs<GVWR< or =26,000 lbs) (*2010 Only)
--	62	Single-Unit Straight Truck or Cab-Chassis (19,500 lbs<GVWR< or =26,000 lbs) (*Since 2011)
--	63	Single-Unit Straight Truck (GVWR>26,000 lbs) (2010 Only)
--	63	Single-Unit Straight Truck or Cab-Chassis (GVWR>26,000 lbs) (*Since 2011)
64	--	Single Unit Straight Truck
--	64	Single Unit Straight Truck or Cab-Chassis (GVWR unknown) (*Since 2011)
66	66	Truck-Tractor ( <i>Cab Only, Or With Any Number Of Trailing Units; Any Weight</i> )
--	67	Medium/Heavy Pickup (GVWR > 10,000 lbs) (*Since 2001)
--	68	Single-Unit Straight Truck (GVWR unknown) (*2010 Only)
--	71	Unknown if Single-Unit or Combination-Unit Medium Truck (10,000 lbs < GVWR < 26,000 lbs)
--	72	Unknown if Single-Unit or Combination-Unit Heavy Truck (GVWR>26,000 lbs)
78	78	Unknown Medium/Heavy Truck Type
79	79	Unknown Truck Type ( <i>Light/Medium/Heavy</i> )

**MOTOR HOMES**

42	42	Light Truck Based Motor Home ( <i>Chassis Mounted</i> )
65	65	Medium/Heavy Truck-Based Motor Home
--	73	Camper or Motor Home, Unknown Truck Type

**MOTORED CYCLES, MOPEDS, ALL-TERRAIN VEHICLES**

80	80	Motorcycle
81	81	Moped ( <i>Motorized Bicycle</i> )
82	82	Three Wheeled Motorcycle Or Moped
--	83	Off-Road Motorcycle (2-Wheel)
88	88	Other Motored Cycle Type ( <i>Minibike, Motor Scooter, Pocket Motorcycles, Pocket Bikes</i> )
89	89	Unknown Motored Cycle Type
90	90	ATV ( <i>All-Terrain Vehicle; Includes 3 or 4 Wheels</i> )

**V11 Body Type (continued)**

---

**Attribute Codes****1992- 2010-****2009 Later** (Exceptions indicated by “ \* ”)**OTHER VEHICLES**

91	91	Snowmobile
92	92	Farm Equipment Other Than Trucks
93	93	Construction Equipment Other Than Trucks ( <i>Includes Graders</i> )
--	94	Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV) (*Since 2011)
97	97	Other Vehicle Type ( <i>Includes Go-Cart, Fork-Lift, City Street Sweeper, Dune/Swamp Buggy, Golf Cart</i> )
--	98	Not Reported
99	99	Unknown Body Type

**V11I Imputed Body Type**

---

**Definition:** The attributes for this imputed data element have changed over the years to mirror the values for Body Type, excluding values 49, 79, and 99 for unknown light vehicle type, unknown truck type (light/medium/heavy), and unknown body type, respectively, and value 98 for not reported body type.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **BDYTYP\_H** *1988-2009*  
**BDYTYP\_IM** *2010-Later*

**V12    Vehicle Model Year**

---

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

**Additional Information:** From 1988 to 1998, model years earlier than 1941 were coded "1940." Starting in 1999 the actual model year was coded for all vehicles.

This data element also appears in the Person data file and in the Parkwork data file as PMODYEAR (PMODELYR prior to 2011).

**SAS Name:** **MODEL\_YR** **1988-2010**  
**MOD\_YEAR** **2011-Later**

#### Attribute Codes

<b>1988-</b> <b>1998</b>	<b>1999-</b> <b>2009</b>	<b>2010</b>	<b>2011-</b> <b>Later</b>	
1940	--	--	--	Model Year 1940 and Earlier
1941-xxxx	xxxx	xxxx	xxxx	Actual Model Year
--	--	7777	9998	Not Reported
9999	9999	9999	9999	Unknown

**V12I    Imputed Model Year**

---

**Definition:** This imputed data element has the same definition and data element values as Model Year, excluding value 9999 for unknown model year and value 9998 (value 7777 in 2010) for not reported.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **MDLYR\_I** **1988-2009**  
**MDLYR\_IM** **2010-Later**

### V13 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:** From 1988 to 2008 the first 11 characters of the VIN are recorded; from 2009 onward the first 12 are used. The vehicle manufacturers use the VIN to describe certain characteristics of a vehicle and to assign a serial number to the vehicle.

If a character of the VIN is missing or undecipherable, that character is blank.

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

**SAS Name:** VIN

#### Attribute Codes

**1988-2008** (character data type, length 11)

**2009-Later** (character data type, length 12)

<b>1988- 2008</b>	<b>2009</b>	<b>2010- Later</b>	
00000000000	00000000000	000000000000	No VIN Required
xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx	First 12 Characters of the VIN
--	--	888888888888	Not Reported
99999999999	999999999999	999999999999	Unknown

**V14     Vehicle Trailing**

---

**Definition:** This data element identifies whether this vehicle was pulling a trailer unit. A trailer unit can be a horse trailer, fifth wheel trailer, camper, boat, truck trailer, towed vehicle or any other trailer.

**Additional Information:** Prior to 2009 if each linkage was non-fixed then Vehicle Trailer=no.

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

**SAS Name:** **TRAILER**     **1988-2008**  
**TOW\_VEH**     **2009-Later**

**Attribute Codes**

<b>1988-</b> <b>1998</b>	<b>1999-</b> <b>2008</b>	<b>2009-</b> <b>Later</b>	
0	1	0	No Trailing Units
1	2	1	Yes, One Trailing Unit
2	3	2	Yes, Two Trailing Units
3	4	3	Yes, Three or More Trailing Units
4	5	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	6	9	Unknown

## V15 Jackknife

---

**Definition:** This data element identifies whether a jackknife occurred. A jackknife occurs when the trailer does not follow directly behind the power unit (tracking) and the driver did not initiate the non-tracking situation.

**Additional Information:** Jackknife is defined differently for V14 and A06, First Harmful Event. In A06 jackknife is defined as sufficient rotation between a vehicle/trailer that they contact each other. For V14, contact is not required

**SAS Name:** JACKNIFE    1988-2010  
              J\_KNIFE    2011-Later

### Attribute Codes

1988- 2011-  
2010 Later

0	--	No Jackknife Noted on PAR
--	0	Not an Articulated Vehicle
1	--	Jackknife Occurred
--	1	No
--	2	Yes, First Event
--	3	Yes, Subsequent Event

## V16 Motor Carrier Identification Number (MCID)

**Definition:** This data element records the issuing authority and motor carrier identification number if applicable to this vehicle. This data element is the combination of two data elements, MCARR\_I1 and MCARR\_I2.

**Additional Information:** The Carrier Identification Number is found only on vehicles of interstate for-hire or private carriers in the transportation business. It is the unique number assigned to the Carrier by the United States Department of Commerce Commission, or the State. The number can be either a US DOT number (on interstate private carriers) or an ICC MC number (interstate for-hire carriers). Collected only for buses and trucks over 4,500 kg GVWR (Bodytype (V5)= 60, 64, 66-79), this data element is applicable to the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

In 2002 the data element changed from numeric to character to preserve leading zeros. In 2003 the length was changed from 8 characters to 9 characters. In 2011 the length was changed from 9 characters to 11 characters with the first two characters representing the issuing authority followed by the nine character carrier identification number.

This data element also appears in the Parkwork data file as PMCARR\_ID (PCARIDNO prior to 2011).

SAS Name:	C_ID_NO	1992-2001
	CARIDNUM	2002-2009
	MCARR_ID	2010-Later

### Attribute Codes

#### 1992-2001

0	Not Applicable
xxxxxx	U.S. DOT or ICC MC Number
999999	Unknown

2002	2003-	2010	Not Applicable U.S. DOT or ICC MC Number Not Reported Unknown
	2009		
00000000	000000000	000000000	Not Applicable
xxxxxxx	xxxxxxxxx	1-999999996	U.S. DOT or ICC MC Number
--	--	999999997	Not Reported
99999999	999999999	999999999	Unknown

**V16 Motor Carrier Identification Number (MCID) *(continued)***

---

**Attribute Codes****2011-Later**

xxxxxxxxxxxx	11-Character Combination of MCARR_I1 followed by MCARR_I2
00000000000	Not Applicable
77777777777	Not Reported
88888888888	None
99999999999	Unknown

**V16A MCID Issuing Authority**

---

**Definition:** This data element records the issuing authority if applicable to this vehicle.

**Additional Information:** This data element is only applicable for the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

This data element also appears in the Parkwork data file as PMCARR\_I1.

**SAS Name:** **MCARR\_I1**

**Attribute Codes****2011-Later**

00	Not Applicable
01-56	State Code
57	US DOT
58	MC/MX (ICC)
77	Not Reported
88	None
95	Canada
96	Mexico
99	Unknown

**V16B MCID Identification Number**

---

**Definition:** This data element records the motor carrier identification number if applicable to this vehicle.

**Additional Information:** The Carrier Identification Number is found only on vehicles of interstate for-hire or private carriers in the transportation business. It is the unique number assigned to the Carrier by the United States Department of Commerce Commission, or the State. The number can be either a US DOT number (on interstate private carriers) or an ICC MC number (interstate for-hire carriers). Collected only for buses and trucks over 4,500 kg GVWR (Bodytype (V5)= 60, 64, 66-79), this data element is applicable to the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

This data element also appears in the Parkwork data file as PMCARR\_I2.

**SAS Name:** **MCARR\_I2**

**Attribute Codes****2011-Later**

xxxxxxxxxx	Actual 9-Digit Number
000000000	Not Applicable
777777777	Not Reported
888888888	None
999999999	Unknown

## V17 Gross Vehicle Weight Rating

---

**Definition:** This data element identifies the gross vehicle weight rating of this vehicle if applicable.

**Additional Information:** The Gross Vehicle Weight Rating (GVWR) or Gross Combination Weight Rating (GCWR) is a value specified by the manufacturer for a single-unit truck, truck tractor, or trailer. In the absence of a gross vehicle weight rating, an estimate of the gross weight of a fully loaded unit can be substituted.

This data element is the gross vehicle weight of the Power Unit only. The weight of trailers is not added.

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

**SAS Name: GVWR**

### Attribute Codes

#### *2011-Later*

- 0 Not Applicable
- 1 10,000 lbs or Less
- 2 10,001 lbs - 26,000 lbs
- 3 26,001 lbs or More
- 8 Not Reported
- 9 Unknown

## V18 Vehicle Configuration

---

**Definition:** This data element describes the general configuration of this vehicle if applicable.

**Additional Information:** Not Applicable is used for automobiles, motorcycles, passenger vans (with less than 9 seats, including driver) and single-unit light trucks or cargo vans (10,000 lbs. or less GVWR), not carrying hazardous cargo.

This data element also appears in the Parkwork data file as PV\_CONFIG.

**SAS Name:** V\_CONFIG

### Attribute Codes

2010	2011- Later	
0	0	Not Applicable
1	1	Single-Unit Truck ( <i>2 axles and GVWR more than 10,000 lbs.</i> )
2	2	Single-Unit Truck ( <i>3 or More axles</i> )
4	4	Truck Pulling Trailer(s)
5	5	Truck Tractor ( <i>Bobtail, i.e., Tractor Only, No Trailer</i> )
6	6	Truck Tractor/Semi-Trailer
7	7	Truck Tractor/Double
8	8	Truck Tractor/Triple
10	10	Vehicle 10,000 lbs or Less Placarded for Hazardous Materials
19	19	Truck More than 10,000 lbs, Cannot Classify
20	20	Bus/Large Van ( <i>Seats for 9-15 Occupants, Including Driver</i> )
21	21	Bus ( <i>Seats for More Than 15 Occupants, Including Driver</i> )
97	98	Not Reported
99	99	Unknown

## V19 Cargo Body Type

---

**Definition:** This data element describes the primary cargo carrying capability of this vehicle if applicable.

**Additional Information:** From 1992 to 2008 specific cargo body type was coded only for buses and trucks over 4,500 kg GVWR (Bodytype (V5)= 60, 64, 66-79). All other vehicles were coded "Not applicable." Starting in 2009 passenger vehicles and light trucks that display a hazardous cargo placard are coded "No Cargo Body Type," as are medium/heavy trucks with no cargo carrying capability. "Not Applicable" is coded only for passenger vehicles and light trucks and vans that do not display a hazardous cargo placard. Before 2009 "Unknown" was coded for both unknown cargo body type and unknown vehicle type. Starting in 2009 "Unknown" is coded only for unknown vehicle type. See the annual Coding and Editing Manuals for more information.

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

**SAS Name:** **CARG\_TYP** 1992-2008  
**CARGO\_BT** 2009-Later

### Attribute Codes

1992- 2008	2009	2010- Later	
0	0	0	Not Applicable
1	22	22	Bus
2	1	1	Van/Enclosed Box
3	2	2	Cargo Tank
4	3	3	Flatbed
5	4	4	Dump
6	5	5	Concrete Mixer
7	6	6	Auto Transporter
8	7	7	Garbage/Refuse
--	8	8	Grain/Chips/Gravel
--	9	9	Pole-Trailer
--	10	10	Log
--	11	11	Intermodal Container Chassis
--	12	12	Vehicle Towing Another Vehicle
--	--	28	Not Reported
--	96	96	No Cargo Body
98	97	97	Other
--	98	98	Unknown Cargo Body Type
99	99	99	Unknown

**V20A/HM1 Hazardous Materials Involvement**

---

**Definition:** This data element identifies whether the vehicle was carrying hazardous materials.

**Additional Information:** This data element also appears in the Parkwork data file as PHAZ\_INV.

**SAS Name:** HAZ\_INV

**Attribute Codes****2009-Later**

- |   |     |
|---|-----|
| 1 | No  |
| 2 | Yes |

**V20B/HM2 Hazardous Materials Placard**

---

**Definition:** This data element identifies the presence of hazardous materials and whether the vehicle displayed a hazardous materials placard.

**Additional Information:** Prior to 2009 Yes and No were coded only for buses and trucks over 4,500 kg GVWR (Bodytype (V5)= 60, 64, 66-79). Starting in 2009 body type was not a factor in coding this data element. See the annual Coding and Editing Manuals for more information. From 2005-2008 the data element name was "Hazardous Materials Placarded."

This data element also appears in the Parkwork data file as PHAZPLAC (PHAZ\_MAT prior to 2009).

**SAS Name:** HAZ\_MAT    2005-2008  
                HAZ\_PLAC    2009-Later

**Attribute Codes****2005- 2009-  
2008 Later**

- |    |    |                |
|----|----|----------------|
| 0  | 0  | Not Applicable |
| 2  | 1  | No             |
| 1  | 2  | Yes            |
| -- | 8  | Not Reported   |
| 9  | -- | Unknown        |

**V20C/HM3 Hazardous Material Identification Number**

---

**Definition:** This data element identifies the 4-digit hazardous material identification number.

**Additional Information:** Prior to 2009 placard numbers were coded only for buses and trucks over 4,500 kg GVWR (Bodytype (V5)= 60, 64, 66-79). Other vehicles were coded “Not Applicable,” or “Unknown” if body type was unknown. Starting in 2009 body type was not a factor in coding this data element. From 2005-2008 the data element name was “Hazardous Materials Placard Number.” See the annual Coding and Editing Manuals for more information.

This data element also appears in the Parkwork data file as PHAZ\_ID (PHAZM\_NO prior to 2009).

**SAS Name:** **HAZM\_NO**    **1992-2008**  
**HAZ\_ID**        **2009-Later**

**Attribute Codes**

<b>1992-</b>	<b>2009-</b>
<b>2008</b>	<b>Later</b>
0	0              Not Applicable
xxxx	xxxx            Actual 4-Digit Number
--	8888            Not Reported
9999	--              Unknown

**V20D/HM4 Hazardous Material Class Number**

---

**Definition:** This data element identifies the single-digit hazardous material class number.

**Additional Information:** This data element was added in 2009 and is coded for all vehicles.

This data element also appears in the Parkwork data file as PHAZ\_CNO.

**SAS Name:** **HAZ\_CNO**

**Attribute Codes****2009-Later**

0	Not Applicable
1	Explosives
2	Gases
3	Flammable / Combustible Liquid
4	Flammable Solid, Spontaneously Combustible, and Dangerous When Wet
5	Oxidizer and Organic Peroxide
6	Poison and Poison Inhalation Hazard
7	Radioactive
8	Corrosive
9	Miscellaneous
88	Not Reported

**V20E/HM5      Release of Hazardous Material from the Cargo Compartment**

---

**Definition:** This data element identifies whether any hazardous cargo was released from the cargo tank or compartment.

**Additional Information:** Prior to 2009 Yes and No were coded only for buses and trucks over 4,500 kg GVWR (Bodytype (V5)= 60, 64, 66-79). Other vehicles were coded Not Applicable, or Unknown if body type was unknown. Starting in 2009 body type is not a factor in coding this data element. Prior to 2009 the data element name was "Hazardous Materials Release."

This data element also appears in the Parkwork data file as PHAZ\_REL (PHAZMA\_R prior to 2009).

**SAS Name:** **HAZ\_MA\_R    2005-2008**  
**HAZ\_REL    2009-Later**

**2005- 2009-**

**2008 Later**

0	0	Not Applicable
2	1	No
1	2	Yes
--	8	Not Reported
9	--	Unknown

**V21 Bus Use**

---

**Definition:** This data element describes the common type of bus service this vehicle was being used as at the time of the crash or the primary use for the bus if not in service at the time of the crash.

**Additional Information:** This data element also appears in the Parkwork data file as PBUS\_USE.

**SAS Name:** **BUS\_USE**

**Attribute Codes**

2011-		
2010    Later		
0	0	Not a Bus
1	1	School
4	6	Transit/Commuter
5	4	Intercity
6	5	Charter/Tour
7	7	Shuttle
8	8	Modified for Personal/Private Use
97	98	Not Reported
99	99	Unknown

**V22 Special Use**

**Definition:** This data element identifies whether the vehicle has a special use. Special use means "in use" and not necessarily emergency use.

**Additional Information:** All military vehicles are classified as "4" even if they are police, ambulance, or fire trucks. The Remarks and Attribute descriptions changed considerably in the 2009 Coding and Editing Manual. The analyst should compare the 2008 and 2009 NASS GES Coding and Editing Manuals for more detailed information.

This data element also appears in the Person data file and in the Parkwork data file as PSP\_USE.

**SAS Name:** SPEC\_USE

**Attribute Codes**

1988- 1991	1992- 2008	2009	2010	2011- Later	
0	0	0	0	0	No Special Use
1	1	1	1	1	Taxi
2	2	2	2	2	Vehicle Used as School Bus
3	3	3	3	3	Vehicle Used as Other Bus
4	4	4	4	4	Military
5	5	5	5	5	Police
6	6	6	6	6	Ambulance
7	--	7	7	7	Fire Truck
--	7	--	--	--	Fire Truck and Car
8	--	--	--	--	Other
--	--	8	8	8	Emergency Services Vehicle
--	10	--	--	--	Hearse
--	11	--	--	--	Farm Equipment
--	12	--	--	--	Construction Equipment
--	--	--	77	98	Not Reported
9	99	9	99	99	Unknown

## V23 Emergency Use

---

**Definition:** This data element identifies whether certain types of Special Use vehicles are on an emergency run.

**Additional Information:** From 1988-2008 this includes military, police, ambulance, and fire vehicles. In 2009 it also includes emergency services vehicles. Value "0" is coded if an applicable vehicle was not on an emergency run or it was not one of the applicable vehicles.

This data element also appears in the Person data file and in the Parkwork data file as PEM\_USE.

**SAS Name:** **EMCY\_USE** 1988-2008  
**EMER\_USE** 2009-Later

### Attribute Codes

	1988- 2009	2010	2011- Later	
0	--	--		No Emergency Use or Not an Applicable Vehicle
--	0	0		No
1	1	1		Yes
--	7	8		Not Reported
9	9	9		Unknown

**V24 Travel Speed**

---

**Definition:** This data element records the speed the vehicle was traveling prior to the occurrence of the crash as reported by the investigating officer.

**Additional Information:**

SAS Name: SPEED 1988-2008  
TRAV\_SP 2009-Later

**Attribute Codes****1988-1999**

- 0 Stopped Vehicle
- 1-96 Travel Speed (*mph*)
- 97 97 mph or Greater
- 99 Unknown

**2000-2008**

- 0 Stopped Vehicle
- 1-998 Travel Speed (*mph*)
- 999 Unknown

**2009-Later**

- 0 Stopped Motor Vehicle in Transport
- 1-151 Reported Speed Up to 151 mph
- 997 Speed Greater than 151 mph
- 998 Not Reported
- 999 Unknown

**V26 Rollover**

---

**Definition:** This data element identifies whether a rollover occurred (tripped or untripped). Rollover is defined as any vehicle rotation of 90 degrees or more about any true longitudinal or lateral axis. Rollover can occur at any time during the crash.

**Additional Information:** In 1992, Rollover was changed to include more specific rollover information. Prior to 2009 the data element name was '*Rollover Type*'.

This data element also appears in the Person data file.

**SAS Name:** **ROLLOVER**

**Attribute Codes**

**1992- 2009-**

**2008 Later**

0	0	No Rollover
--	1	Rollover, Tripped By Object/Vehicle
20	--	Tripped Rollover-By Curb
21	--	Tripped Rollover-By Guardrail
22	--	Tripped Rollover-By Ditch
23	--	Tripped Rollover-By Soft Soil
28	--	Tripped Rollover-Other
29	--	Tripped Rollover-Unknown Mechanism
10	2	Rollover, Untripped
99	9	Rollover, Unknown Type

**V27 Location of Rollover**

---

**Definition:** This data element identifies the location of the trip point or start of the vehicle's roll.

**Additional Information:**

**SAS Name:** ROLINLOC

**Attribute Codes**

**2009- 2011-**

**2010 Later**

0	0	No Rollover
1	1	On Roadway
2	2	On Shoulder
3	3	On Median/Separator
4	4	In Gore
5	5	On Roadside
6	6	Outside of Trafficway
--	7	In Parking Lane/Zone
9	9	Unknown

**V28 Area of Impact- Initial/Most Damaged**

---

**V28A Initial Damaged Area**

---

**Definition:** This data element identifies the first impact point that produced property damage or personal injury (regardless of FIRST or MOST HARMFUL EVENT).

**Additional Information:** This data element was added to the Vehicle data file in 1990. Prior to 2010 this data element was called "Initial Point of Impact".

This data element also appears in the Person data file and in the Parkwork data file as PIMPACT1 (PIMPACT prior to 2010).

**SAS Name:** IMPACT      1988-2009  
                IMPACT1      2010-Later

**Attribute Codes**

1990-	1992-	2007-	
1991	2006	2009	
0	--	--	No Damage/Non-Collision
--	0	0	Non-Collision
1	1	1	Front
2	2	2	Right Side
3	3	3	Left Side
4	4	4	Back
5	5	5	Top
6	6	6	Undercarriage
7	--	--	Corner
--	11	11	Front Right Corner
--	12	12	Front Left Corner
--	13	13	Back Right Corner
--	14	14	Back Left Corner
--	--	15	Object Set in Motion
99	99	99	Point of Impact Unknown

**V28A Initial Damaged Area (continued)**

---

**Attribute Codes**

<b>2010</b>	<b>2011-Later</b>	
0	0	Non-Collision
21-32	1-12	Clock points
33	13	Top
34	14	Undercarriage
38	18	Set-in-Motion (Not a Clock Point)
61	61	Left
62	62	Left-Front Half
63	63	Left-Back Half
81	81	Right
82	82	Right-Front Half
83	83	Right-Back Half
97	98	Not Reported
99	99	Unknown

**V28AI Imputed Initial Damaged Area**

---

**Definition:** This imputed data element has the same definition and data element values as Initial Point of Impact, excluding value 99 for unknown initial point of impact and value 98 (value 97 in 2010) for not reported initial point of impact.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **IMPACT\_H 1988-2009**  
**IMPACT1\_IM 2010-Later**

**V28B Most Damaged Area**

---

**Definition:** This data element identifies the area on this vehicle that was most damaged during an event it underwent in the crash.

**Additional Information:** The striking vehicle, not the vehicle struck, determines the underride/override condition. After the crash, in the case of an override or underride one vehicle is over the other. If the striking vehicle is over the other, then the crash is an override. If the striking vehicle is under the other, the crash is an underride.

This data element also appears in the Person data file and in the Parkwork data file as PIMPACT2.

**SAS Name:** IMPACT2

**Attribute Codes**

<b>2010</b>	<b>2011- Later</b>	
0	0	Non-Collision
21-32	1-12	Clock points
33	13	Top
34	14	Undercarriage
38	18	Set-in-Motion (Not a Clock Point)
61	61	Left
62	62	Left-Front Half
63	63	Left-Back Half
81	81	Right
82	82	Right-Front Half
83	83	Right-Back Half
97	98	Not Reported
99	99	Unknown

**V29 Extent of Damage**

---

**Definition:** This data element indicates the amount of damage sustained by the vehicle in this crash as indicated on the Police Accident Report based on an operational damage scale.

**Additional Information:** Prior to 2009 this data element was called Damage Severity.

This data element also appears in the Parkwork data file as PVEH\_SEV.

**SAS Name:** **VEH\_SEV 1988-2008**  
**DEFORMED 2009-Later**

**Attribute Codes**

1988-			2011-	
2008	2009	2010	Later	
0	0	0	0	No Damage
1	2	2	2	Minor Damage
2	--	--	--	Functional ( <i>Moderate</i> )
--	4	4	4	Functional Damage
3	--	--	--	Disabling ( <i>Severe</i> )
--	6	6	6	Disabling Damage
--	--	7	8	Not Reported
9	9	9	9	Unknown

**V30     Vehicle Removal**

**Definition:** This data element describes the mode by which the vehicle left the scene of the crash.

**Additional Information:** Prior to 2009 only the power unit of an articulated combination was considered, i.e. if only the trailing unit was towed then TOWED=Driven. Starting in 2009 the disposal status of the trailing unit is also considered. Prior to 2009 the data element name was *Manner of Leaving Scene*.

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

**SAS Name: TOWED****Attribute Codes**

1988-	1999-	2011-		
1989	2008	2009	2010	Later
1	1	1	1	1
2	--	--	--	--
--	2	--	--	--
--	--	2	2	2
--	3	--	--	--
--	--	3	3	3
3	4	--	--	--
--	--	4	4	4
--	--	--	7	8
4	9	9	9	9

Driven Away  
Towed Away  
Towed Due to Damage  
Towed Due to Disabling Damage  
Towed Not Due to Damage  
Towed Not Due to Disabling Damage  
Abandoned  
Abandoned/Left at Scene  
Not Reported  
Unknown

**V32 Most Harmful Event**

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

**Additional Information:** This data element also appears in the Parkwork data file as PM\_HARM.

**SAS Name:** **V\_EVENT**    **1988-2010**  
**M\_HARM**    **2011-Later**

**Attribute Codes**

1988- 1991	1992- 1998	1999- 2008	2009	2010	2011- Later	
<b>NONCOLLISION</b>						
1	1	1	1	1	1	Rollover/Overtur
2	2	2	2	2	2	Fire/Explosion
3	3	3	3	3	3	Immersion
4	--	4	4	4	4	Gas Inhalation
5	5	5	5	--	--	Jackknife
--	--	--	--	5	51	Jackknife ( <i>Harmful to This Vehicle</i> )
6	6	6	6	--	--	Noncollision Injury ( <i>Injured In Vehicle Or Fell From Vehicle</i> )
--	50	7	7	7	44	Pavement Surface Irregularity ( <i>Ruts, Potholes, Grates, etc.</i> )
8	8	8	8	8	7	Other Noncollision
9	9	9	9	--	--	Noncollision-No Details
10	10	10	10	10	16	Thrown or Falling Object
--	--	--	--	11	6	Injured in Vehicle ( <i>Non-Collision</i> )
--	--	--	--	12	72	Cargo/Equipment Loss or Shift ( <i>Harmful to This Vehicle</i> )
--	--	--	--	13	5	Fell/Jumped from Vehicle
<b>COLLISION WITH OBJECT NOT FIXED</b>						
21	21	21	21	21	8	Pedestrian
22	22	22	22	--	--	Cycle or Cyclist ( <i>Pedalcyclist or Pedalcycle</i> )
--	--	--	--	22	9	Pedalcyclist
23	23	23	23	--	--	Railway Train
--	--	--	--	23	10	Railway Vehicle
24	24	24	24	--	--	Animal
--	--	--	--	24	11	Live Animal
--	--	--	--	49	49	Ridden Animal or Animal Drawn Conveyance
25	25	25	25	--	--	Motor Vehicle in Transport
26	26	26	26	--	--	Parked Motor Vehicle ( <i>or Other M.V. Not in Transport</i> )
27	27	27	27	--	--	Other Type Non-Motorist
--	--	--	--	27	15	Non-Motorist on Personal Conveyance
--	--	--	47	--	--	Vehicle Occupant

**V32 Most Harmful Event (continued)****Attribute Codes**

<b>1988- 1991</b>	<b>1992- 1998</b>	<b>1999- 2008</b>	<b>2009</b>	<b>2010</b>	<b>2011- Later</b>	
28	28	28	28	28	18	Other Object Not Fixed
29	29	29	29	--	--	Object Not Fixed-No Details
--	--	--	--	29	14	Parked Motor Vehicle
--	--	--	--	30	45	Working Motor Vehicle
<b>COLLISION WITH FIXED OBJECT</b>						
31	31	31	31	31	58	Ground
32	32	32	32	32	19	Building
33	33	33	33	33	20	Impact Attenuator/Crash Cushion
34	34	34	34	--	--	Bridge Structure ( <i>Bridge Pier/Abutment/Parapet End/Rail</i> )
35	35	35	35	--	--	Guardrail
36	36	36	36	--	--	Concrete Traffic Barrier or Other Longitudinal Barrier Type
--	--	--	--	36	25	Concrete Traffic Barrier
37	37	37	37	--	--	<i>Post, Pole or Support (Sign Post, Utility Post)</i>
38	38	38	38	--	--	Culvert or Ditch
39	39	39	39	39	33	Curb
40	40	40	40	40	35	Embankment
41	41	41	41	41	38	Fence
42	42	42	42	42	39	Wall
43	43	43	43	43	40	Fire Hydrant
44	44	44	44	44	41	Shrubbery
45	45	45	45	--	--	Tree
--	--	--	--	45	42	<i>Tree (Standing Only)</i>
46	46	46	46	46	17	Boulder
48	59	58	58	58	43	Other Fixed Object
49	59	59	59	--	--	Fixed Object, No Details
--	--	--	--	71	50	Bridge Overhead Structure
--	--	--	--	72	21	Bridge Pier or Support
--	--	--	--	73	23	<i>Bridge Rail (Includes Parapet)</i>
--	--	--	--	74	24	Guardrail Face
--	--	--	--	75	52	Guardrail End
--	--	--	--	76	57	Cable Barrier
--	--	--	--	77	26	Other Traffic Barrier
--	--	--	--	78	59	Traffic Sign Support
--	--	--	--	79	46	Traffic Signal Support
--	--	--	--	80	30	Utility Pole/Light Support
--	--	--	--	81	31	Other Post, Other Pole or Other Supports
--	--	--	--	82	32	Culvert
--	--	--	--	83	34	Ditch
--	--	--	--	84	48	Snow Bank
--	--	--	--	85	53	Mail Box

**V32 Most Harmful Event (continued)****Attribute Codes**

<b>1988- 1991</b>	<b>1992- 1998</b>	<b>1999- 2008</b>	<b>2009</b>	<b>2010</b>	<b>2011- Later</b>
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**COLLISION WITH MOTOR VEHICLE IN TRANSPORT**

--	--	--	--	90	12	Motor Vehicle In-Transport
--	--	--	--	91	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
--	--	--	--	92	55	Motor Vehicle in Motion Outside the Trafficway

**NOT REPORTED AND UNKNOWN**

97	--	--	--	--	--	Other – No Details (*1988-1989 only)
--	--	--	--	97	--	Not Reported
99	99	99	99	99	99	Unknown

**V32I Imputed Most Harmful Event**

**Definition:** This imputed data element has the same data element values as Most Harmful Event, excluding value 99 for unknown most harmful event and value 97 for not reported most harmful event.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **V\_EVNT\_H 1988-2009**  
**VEVENT\_IM 2010-Later**

**V34 Fire Occurrence**

---

**Definition:** This data element identifies whether a fire in any way related to the crash occurred in this vehicle.

**Additional Information:** This data element also appears in the Person data file and in the Parkwork data file as PFIRE.

**SAS Name:** FIRE      **1988-2008**  
                  FIRE\_EXP      **2009-Later**

**Attribute Codes****1988-2008**

- 0 No Fire Noted on PAR
- 1 Fire Occurred in Vehicle

**2009-Later**

- 0 No or Not Reported
- 1 Yes

**V90 Maximum Injury Severity in Vehicle**

---

**Definition:** This data element indicates the single most severe injury level reported for any occupant in this vehicle. This data element is derived by comparing the injury severity for each occupant record in this vehicle. The following order of severity codes has been used since 2001.

- 4-Fatal
- 3- Incapacitating
- 2-Non- incapacitating
- 1-Possible Injury
- 5-Injured, Unknown Severity
- 0-No Injury
- 6-Died Prior
- 9-Unknown if Injured
- 8-No Person in the Vehicle

**Additional Information:** From 1999 to 2000 the priority was different: Unknown if Injured had priority over No Injury.

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

**SAS Name:** MAX\_VSEV

**Attribute Codes**

1988-	2010-
2009	Later
0	0      No Injury
1	1      Possible Injury
2	2      Non-incapacitating
3	3      Incapacitating
4	4      Fatal
5	5      Injured, Unknown Injury Severity
6	6      Died Prior
8	8      No Person in Vehicle
9	--     Unknown
--	9      Unknown if Injured/Not Reported

**V90I Imputed Maximum Injury Severity in Vehicle**

---

**Definition:** This imputed data element has the same definition and data element values as Maximum Injury Severity in Vehicle, excluding value 9 for unknown maximum injury severity.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

The data element is derived from the Imputed Injury Severity (P09I) in the Person data file.

**SAS Name:** MXVSEV\_I 1988-2009  
MXVSEV\_IM 2010-Later

**V91 Number Injured in Vehicle**

---

**Definition:** This data element is derived by counting all the persons with Injury Severity (P9) of (1, 2, 3, 4, 5, or 9) in a vehicle. This count includes fatally injured occupants.

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

**SAS Name:** **NUM\_INJV**

**Attribute Codes****1988-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 |

**V91I Imputed Number Injured in Vehicle**

---

**Definition:** This imputed data element has the same definition and data element values as Number Injured in Vehicle, excluding value 99 for unknown number injured, which is imputed, and the attribute code 98, which is converted to code 0.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

This data element is derived from the Imputed Injury Severity (P09I) data element.

**SAS Name:** **NUMINJ\_I      1988-2009**  
**NUMINJ\_IM    2010-Later**

## V92 Driver Drinking in Vehicle

---

**Definition:** This data element reports alcohol use by the driver of the vehicle. The data element is derived from the police-reported alcohol involvement data element in the Person data file.

**Additional Information:** In 1988, this data element reported alcohol use by any occupant in the vehicle, including the driver. In 1989, this data element was changed from Alcohol Involved in Vehicle to Driver Drinking in Vehicle to report alcohol use by the driver.

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

**SAS Name:** VEH ALCH

### Attribute Codes

#### 1988-Later

- 1 Alcohol Involved
- 2 No Alcohol Involved
- 8 No Driver Present/Unknown if Driver Present
- 9 Unknown

## V92I Imputed Driver Drinking in Vehicle

---

**Definition:** This data element has the same definition and data element values as Driver Drinking in Vehicle, excluding value 9 for unknown alcohol involvement, which is imputed, and value 8, which is converted to attribute code 2.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

This imputed data element is derived from Imputed Police Reported Alcohol Involvement (P11I) in the Person data file.

**SAS Name:** V\_ALCH\_I 1988-2009  
V\_ALCH\_IM 2010-Later

**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**

**1988-2008**

- 0    Unattended Vehicle (*Driverless, Or No Driver Involved*)
- 1    Driver Operated Vehicle
- 2    Hit And Run
- 9    Unknown Driver Presence

**2009-Later**

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

**D6      Driver's Zip Code**

---

**Definition:** This data element identifies the zip code of the driver's address as listed on the Police Accident Report.

**Additional Information:** This data element was added to the Vehicle data file in 1992. It changed from numeric to character in 2002.

**SAS Name:** DR\_ZIP\_C    1992-2001  
DZIPCODE    2002-2010  
DR\_ZIP    2011-Later

**Attribute Codes**

1992-	2000-	2011-	
1999	2010	Later	
0	--	--	Not Resident of U.S. or Territories or Driver Not Present
--	00000	00000	Not Resident of U.S. or Territories
xxxxx	xxxxx	xxxxx	Actual Zip Code
--	--	99997	No Driver Present/Unknown if Driver Present
--	99998	--	No Driver Present
99999	99999	99999	Unknown

**D22 Speed Related**

---

**Definition:** This data element identifies whether the driver's speed was related to the crash as indicated by law enforcement.

**Additional Information:** This data element was added to the Vehicle data file in 1997.

**SAS Name:** SPEEDREL

**Attribute Codes**

1997- 1999	2000- 2009	2010- Later	
0	0	0	No
1	1	1	Yes
--	8	--	No Driver Present
--	--	8	No Driver Present/Unknown if Driver Present
9	9	9	Unknown

## PC5 Trafficway Description

---

**Definition:** This data element identifies the attribute that best describes the trafficway flow just prior to this vehicle's critical precrash event.

**Additional Information:** This data element has been coded at the Accident level and included in Accident data file (SAS data element TRAF\_WAY) since 1988. Starting in 2002 the trafficway flow for each vehicle in a crash is available in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

Prior to 2010, this data element was called Trafficway Flow.

**SAS Name:** **VTRAFWAY**

### Attribute Codes

	2003-	
2002	2009	
--	0	Not Physically Divided- Center 2-way Left Turn Lane
1	1	Not Physically Divided- Two Way Trafficway
2	2	Divided Highway ( <i>Median Strip, Barrier</i> )
3	3	One Way Trafficway
9	9	Unknown

### 2010-Later

0	Non-Trafficway Area
1	Two-Way, Not Divided
2	Two-Way, Divided, Unprotected ( <i>Painted &gt; 4 Feet</i> ) Median
3	Two-Way, Divided, Positive Median Barrier
4	One-Way Trafficway
5	Two-Way, Not Divided With a Continuous Left-Turn Lane
6	Entrance/Exit Ramp
8	Not Reported
9	Unknown

## PC6 Total Lanes in Roadway

---

**Definition:** This data element identifies the attribute that best describes the number of travel lanes just prior to this vehicle's critical precrash event.

**Additional Information:** The number of lanes refers to the number of lanes of a continuous cross-section of roadway. For example, a local roadway with one lane going north and one lane going south would be coded as two lanes. However, if a trafficway is a divided highway with two lanes going north, a median, and two lanes going south, then the number of lanes is coded as two. If a trafficway has two lanes going north immediately adjacent to two lanes going south, one continuous cross-section of roadway, then the number of lanes is coded as four. This data element can be used with the Trafficway Description data element VTRAFWAY to determine the trafficway geometry. For example: If (VNUM\_LAN= 2) AND (VTRAFWAY=1), then one has a two-lane roadway that is not physically divided, which is what most people think of as a two-lane road (i.e., one lane going in each direction).

If the roadway is a divided trafficway, the number of travel lanes counts only lanes in the direction of travel of the first harmful event. If the roadway is an undivided trafficway, the number of travel lanes are all the lanes regardless of their direction of travel.

This data element has been coded at the Accident level and been on the Accident data file (SAS data element DNUM\_LAN) since 1988. Starting in 2002 the number of lanes for each vehicle in a crash is available in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

### SAS Name: VNUM\_LAN

#### Attribute Codes

**2002- 2010-**

**2009 Later**

--	0	Non-Trafficway Area
1	1	One Lane
2	2	Two Lanes
3	3	Three Lanes
4	4	Four Lanes
5	5	Five Lanes
6	6	Six Lanes
7	7	Seven or More Lanes
--	8	Not Reported
9	9	Unknown

## PC7 Speed Limit

---

**Definition:** This data element identifies the posted speed limit in miles per hour.

**Additional Information:** This data element has been coded at the Accident level and included in Accident data file (SAS data element DSPD\_LIM) since 1988. Starting in 2002 the speed limit for each vehicle in a crash is available in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

**SAS Name:** **VSPD\_LIM**

### Attribute Codes

2002-		2011-	
2009	2010	Later	
0	--	--	No Statutory Limit ( <i>Parking Lot, Alley, etc.</i> )
--	0	0	No Statutory Limit/Non-Trafficway Area
5-75	5-75	--	Speed Limit ( <i>In mph</i> )
--	--	5-80	Speed Limit ( <i>In 5 mph Increments</i> )
--	97	98	Not Reported
99	99	99	Unknown

**PC8 Roadway Alignment**

---

**Definition:** This data element identifies the attribute that best represents the roadway alignment prior to this vehicle's critical precrash event.

**Additional Information:** This data element has been coded at the Accident level and included in Accident data file (SAS data element ALIGN) since 1988. Starting in 2002 the roadway alignment for each vehicle in a crash is available in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

**SAS Name:** **VALIGN**

**Attribute Codes**

**2002- 2010-**

**2009 Later**

--	0	Non-Trafficway Area
1	1	Straight
2	--	Curve
--	2	Curve Right
--	3	Curve Left
--	4	Curve – Unknown Direction
--	8	Not Reported
9	9	Unknown

**PC9 Roadway Grade**

---

**Definition:** This data element identifies the attribute that best represents the roadway grade prior to this vehicle's critical precrash event.

**Additional Information:** This data element has been coded at the Accident level and included in Accident data file (SAS data element PROFILE) since 1988. Starting in 2002 the roadway profile for each vehicle in a crash is available in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

Prior to 2010, this data element was called Roadway Profile.

**SAS Name: VPROFILE****Attribute Codes****2002- 2010-****2009 Later**

--	0	Non-Trafficway Area
1	1	Level
2	--	Grade
--	2	Grade, Unknown Slope
3	3	Hillcrest
--	4	Sag ( <i>Bottom</i> )
--	5	Uphill
--	6	Downhill
8	--	Sag
--	8	Not Reported
9	9	Unknown

**PC11 Roadway Surface Condition**

---

**Definition:** This data element identifies the attribute that best represents the roadway surface condition prior to this vehicle's critical precrash event.

**Additional Information:** This data element has been coded at the Accident level and included in Accident data file (SAS data element SUR\_COND) since 1988. Starting in 2002 the roadway surface condition for each vehicle in a crash is available in the Vehicle data file.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

**SAS Name:** **VSURCOND**

**Attribute Codes**

**2002- 2010-**  
**2009    Later**

--	0	Non-Trafficway Area
1	1	Dry
2	2	Wet
3	--	Snow or Slush
--	3	Snow
4	--	Ice
--	4	Ice/Frost
5	--	Sand, Dirt, Oil
--	5	Sand
--	6	Water ( <i>Standing or Moving</i> )
--	7	Oil
8	8	Other
--	10	Slush
--	11	Mud, Dirt, Gravel
--	98	Not Reported
9	99	Unknown

## PC12 Traffic Control Device

**Definition:** This data element identifies the attribute that best describes the traffic controls in the vehicle's environment just prior to this vehicle's critical precrash event.

**Additional Information:** If a vehicle is controlled by more than one device, the device coded is based on the following priority:

- 51 - Officer, Crossing Guard, Flagman, etc
- The lowest numbered device shown below
- 0 - No traffic control device.

This data element has been coded at the Accident level and has been included in the Accident data file (SAS data element TRAF\_CON) since 1988.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 2002-2009, this information is also available on the Vehicle data file (Vehicle.VTRAFCON) to store a selected vehicle control device for each vehicle, the Biketraf data file (Biketraf.BTRAFCON) to store all traffic control devices for cyclists, and the Trafcon data file (Trafcon.MTRAFCON) to store all traffic control devices for a vehicle.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

Starting in 2010 this is a single-response question, so the Trafcon data file is discontinued, however, the Biketraf data file will still be available in 2010. From 2010 onward, this data element will be available only in the vehicle data file (Vehicle.VTRAFCON) and Accident data file (Accident.DTRAFCON).

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived prior to 2010.

### SAS Name: VTRAFCON

#### Attribute Codes

2002-	2011-		
2009	2010	Later	
0	0	0	No Controls
<i>TRAFFIC SIGNALS</i>			
1	--	--	Traffic Control Signal ( <i>On Colors</i> )
--	1	1	Traffic Control Signal ( <i>On Colors</i> ) Without Pedestrian Signal
--	2	2	Traffic Control Signal ( <i>On Colors</i> ) With Pedestrian Signal
--	3	3	Traffic Control Signal ( <i>On Colors</i> ) Not Known if Pedestrian Signal
4	--	--	Flashing Traffic Control Signal or Flashing Beacon
--	4	4	Flashing Traffic Control Signal

**PC12 Traffic Control Device (continued)**

<b>2002-</b>	<b>2011-</b>		
<b>2009</b>	<b>2010</b>	<b>Later</b>	
8	8	8	Other Highway Traffic Signal
9	9	9	Unknown Highway Traffic Signal
<b>REGULATORY SIGNS</b>			
21	21	20	Stop Sign
22	22	21	Yield Sign
23	23	23	School Zone Sign/Device
28	28	28	Other Regulatory Sign
29	29	29	Unknown Regulatory Sign
--	5	7	Lane Use Control Signal
<b>WARNING SIGNS</b>			
40	--	--	Advisory Speed Sign
41	--	--	Warning Sign For Road Conditions ( <i>Hill, Steep Grade, etc.</i> )
42	--	--	Warning Sign For Road Construction
43	--	--	Warning Sign For Environment/Traffic ( <i>Fog Ahead, Wind, Crash Ahead, etc.</i> )
--	44	40	Warning Sign
49	--	--	Unknown Type Warning
51	--	--	Officer, Crossing Guard, Flagman, etc
<b>MISCELLANEOUS</b>			
--	51	50	Person
61	--	--	Active Devices (e.g., Gates, Flashing Lights, Traffic Signal)
62	--	--	Passive Devices (e.g., Stop Sign, Cross Bucks)
--	63	65	Railway Crossing Device
<b>OTHER</b>			
97	--	--	Traffic Control Present-No Details
--	97	97	Not Reported
98	--	--	Other Traffic Control ( <i>Whether or Not At RR Grade Crossing</i> )
--	98	98	Other
99	99	99	Unknown

### PC13 Traffic Control Device Functioning

---

**Definition:** This data element identifies the functionality of the traffic control device recorded for this vehicle in the data element Traffic Control Device.

**Additional Information:** This data element was added to the data file in 2010 to indicate whether or not the traffic control device was functioning.

The information for this data element was collected at the vehicle level starting in 1999. The vehicle level data elements first appeared in the SAS data files in 2002.

From 1999 through 2003, the coding instructions were to code the value indicated on the PAR. In 2004, the coding instructions were modified to code the value indicated on the PAR which best represents the environment just prior to the vehicle's critical precrash event.

**SAS Name:** **VTCNT\_F**

#### Attribute Codes

##### **2010-Later**

- 0 No Controls
- 1 Device Not Functioning
- 2 Device Functioning – Functioning Improperly
- 3 Device Functioning Properly
- 8 Not Reported
- 9 Unknown

---

### **PC17 Pre-Event Movement (Prior To Recognition of Critical Event)**

---

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

**Additional Information:** In 1992, data elements PC17, PC19–PC22 were added to the Vehicle data file. These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

Prior to 2011 this data element was called "Movement Prior to Critical Event".

**SAS Name:** P\_CRASH1

#### Attribute Codes

1992- 1994	1995- 1998	1999- 2010	2011- Later	
--	0	0	0	No Driver Present
1	1	1	1	Going Straight
2	2	2	--	Decelerating in Traffic Lane
--	--	--	2	Decelerating in Road
--	3	3	--	Accelerating in Traffic Lane
--	--	--	3	Accelerating in Road
3	4	4	--	Starting in Traffic Lane
--	--	--	4	Starting in Road
4	5	5	--	Stopped in Traffic Lane
--	--	--	5	Stopped in Road
5	6	6	6	Passing or Overtaking Another Vehicle
6	7	7	7	Disabled or Parked in Travel Lane
7	8	8	8	Leaving a Parking Position
8	9	9	9	Entering a Parking Position
10	10	10	10	Turning Right
11	11	11	11	Turning Left
12	12	12	12	Making a U-turn
13	13	13	13	Backing Up ( <i>Other Than For Parking Position</i> )
15	14	14	14	Negotiating a Curve
16	15	15	15	Changing Lanes
17	16	16	16	Merging
18	17	17	17	Successful Corrective Action to a Previous Critical Event
94	--	--	--	More than Two Vehicles Involved
98	97	97	98	Other
99	99	99	99	Unknown

**PC17I Imputed Pre-Event Movement (Prior To Recognition of Critical Event)**

---

**Definition:** This imputed data element has the same definition and data element values as Movement Prior to Critical Event, excluding value 99 for unknown movement prior to critical event.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **MANEUV\_I**      **1988-2009**  
**PCRASH1\_IM**      **2010-Later**

**PC19 Critical Event- Pre-Crash**

---

**Definition:** This data element identifies the critical event which made the crash imminent (i.e., something occurred which made the collision possible).

**Additional Information:** A critical event is coded for each vehicle and identifies the circumstances leading to the vehicle's first impact in the crash. From 1992 to 1993 coding distinguishes between events initiated by "this" vehicle, events initiated by the "other" vehicle, and events initiated by non-motorists. In 1994 coding changed to eliminate the concept of initiation, and to add factors. In 1999 there were extensive additions, deletions, and renumbering.

In 1992, data elements PC17, PC19–PC22 were added to the Vehicle data file. These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

**SAS Name:** P\_CRASH2

**Attribute Codes****1992-1993**

0 Not Applicable/No Collision

**I. CRITICAL EVENT INITIATED BY THIS VEHICLE***LOSS OF CONTROL DUE TO:*

- 1 Blow Out or Flat Tire
- 2 Stalled Engine
- 3 Disabling Vehicle Failure (e.g., *Wheel Fell Off*)
- 4 Minor Vehicle Failure
- 5 Poor Road Conditions (*Puddle, Pothole, Ice, etc.*)
- 6 Excessive Speed
- 9 Other or Unknown Reason

*TRAVELING OVER EDGE OF ROADWAY:*

- 10 Over Left Edge of Roadway
- 11 Over Right Edge of Roadway
- 12 End Departure
- 19 Unknown Which Edge

*IN ANOTHER VEHICLE'S LANE:*

- 20 Stopped
- 21 Traveling In Same Direction With Lower Speed
- 22 Traveling In Same Direction With Higher Speed
- 23 Traveling In Opposite Direction

*ENCROACHING INTO ANOTHER VEHICLE'S LANE: AT NON-JUNCTION*

- 26 From Adjacent Lane (*Opposite Direction*)
- 30 From Adjacent Lane (*Same Direction*)-Over Left Lane Line
- 31 From Adjacent Lane (*Same Direction*)-Over Right Lane Line

**PC19 Critical Event- Pre-Crash (continued)**

---

**Attribute Codes****1992-1993***ENCROACHING INTO ANOTHER VEHICLE'S LANE: AT JUNCTION*

- 33 Entering Intersection-Turning Into Same Direction
- 34 Entering Intersection-Straight Across Path
- 35 Entering Intersection-Turning Into Opposite Direction
- 36 Entering Intersection-Intended Path Unknown
- 37 Entering Driveway, Alley Access, Etc.
- 38 From Driveway, Alley Access, Etc.-Turning Into Same Direction
- 39 From Driveway, Alley Access, Etc.-Straight Across Path
- 40 From Driveway, Alley Access, Etc.-Turning Into Opposite Direction
- 41 From Driveway, Alley Access, Etc.-Intended Path Unknown
- 42 Entering From "Yield" Entrance (*Ramp/Channel*)
- 48 Encroaching-Details Unknown
- 49 This Vehicle Initiated Critical Event-Details Unknown

**II. CRITICAL EVENT INITIATED BY THE OTHER VEHICLE***MOTOR VEHICLE ALREADY IN THIS VEHICLE'S LANE:*

- 50 Stopped
- 51 Traveling In Same Direction With Lower Speed
- 52 Traveling In Same Direction With Higher Speed
- 53 Traveling In Opposite Direction

*ANOTHER VEHICLE ENCROACHING INTO THIS VEHICLE'S LANE: AT NON-JUNCTION*

- 56 From Adjacent Lane (Opposite Direction)
- 60 From Adjacent Lane (Same Direction)-Over Left Lane Line
- 61 From Adjacent Lane (Same Direction)-Over Right Lane Line
- 64 From Parallel/Diagonal Parking Lane

*ANOTHER VEHICLE ENCROACHING INTO THIS VEHICLE'S LANE: AT JUNCTION*

- 65 Entering Intersection-Turning Into Same Direction
- 66 Entering Intersection-Straight Across Path
- 67 Entering Intersection-Turning Into Opposite Direction
- 68 Entering Intersection-Intended Path Unknown
- 69 Entering Driveway, Alley Access, Etc.
- 70 From Driveway, Alley Access, Etc.-Turning Into Same Direction
- 71 From Driveway, Alley Access, Etc.-Straight Across Path
- 72 From Driveway, Alley Access, Etc.-Turning Into Opposite Direction
- 73 From Driveway, Alley Access, Etc.-Intended Path Unknown
- 74 Entering From "Yield" Entrance (*Ramp/Channel*)
- 78 Encroaching-Details Unknown
- 79 Other Vehicle Initiated Critical Event-Details Unknown

**PC19 Critical Event- Pre-Crash (continued)**

---

**Attribute Codes****1992-1993****III. CRITICAL EVENT INITIATED BY PEDESTRIAN, PEDALCYCLIST, OTHER NON-MOTORIST, ANIMAL OR OBJECT**

- 80 Pedestrian In Roadway
- 81 Pedestrian Approaching Roadway
- 83 Pedalcyclist/Other Non-Motorist In Roadway
- 84 Pedalcyclist/Other Non-Motorist Approaching Roadway
- 86 Pedestrian/Pedalcyclist/Other Non-Motorist-Unknown Location
- 87 Animal In Roadway
- 88 Animal Approaching Roadway
- 90 Object In Roadway
- 93 Animal Or Object-Unknown Location

**IV. MISCELLANEOUS**

- 94 More Than Two Vehicles Involved
- 98 Other Event
- 99 Unknown

**1994- 1999- 2011- (exceptions indicated by "")****1998 2010 Later**

- 0 -- -- Not Applicable/No Collision

**THIS VEHICLE LOSS OF CONTROL DUE TO:**

- 10 1 1 Blow Out/Flat Tire
- 20 2 2 Stalled Engine
- 30 3 3 Disabling Vehicle Failure (e.g., *Wheel Fell Off*)
- 40 4 4 Non-Disabling Vehicle Problem (e.g., *Hood Flew Up*)
- 50 5 5 Poor Road Conditions (*Puddle, Pothole, Ice, etc.*)
- 60 6 6 Traveling Too Fast For Conditions
- 99 -- -- Other or Unknown Reason
- 8 8 Other Cause of Control Loss
- 9 9 Unknown Cause of Control Loss

**THIS VEHICLE TRAVELING:**

- 10 10 Over The Lane Line on Left Side of Travel Lane
- 11 11 Over The Lane Line on Right Side of Travel Lane
- 100 12 12 Off The Edge of The Road on The Left Side
- 101 13 13 Off The Edge of The Road on The Right Side
- 199 -- -- Unknown Which Edge
- 102 14 14 End Departure
- 15 -- Turning Left At Intersection
- -- 15 Turning Left At Junction

**PC19 Critical Event- Pre-Crash (continued)****Attribute Codes**

**1994-  
1998**    **1999-  
2010**    **2011-  
Later**    (*exceptions indicated by “\*”*)

--	16	--	Turning Right At Intersection
--	--	16	Turning Right At Junction
--	17	17	Crossing Over ( <i>Passing Through</i> ) Intersection
--	18	18	This Vehicle Decelerating
--	19	19	Unknown Travel Direction

**IN ANOTHER VEHICLE'S LANE:**

200	--	--	Stopped
210	--	--	Traveling In Same Direction With Lower/Steady Speed
215	--	--	Traveling In Same Direction While Decelerating (*Added In 1995)
220	--	--	Traveling In Same Direction With Higher Speed
230	--	--	Traveling In Opposite Direction

**ENCROACHING INTO ANOTHER VEHICLE'S LANE: AT NON-JUNCTION**

300	--	--	From Adjacent Lane ( <i>Opposite Direction</i> )
310	--	--	From Adjacent Lane ( <i>Same Direction</i> )-Over Left Lane Line
320	--	--	From Adjacent Lane ( <i>Same Direction</i> )-Over Right Lane Line
330	--	--	From Parallel/Diagonal Parking Lane

**ENCROACHING INTO ANOTHER VEHICLE'S LANE: AT JUNCTION**

410	--	--	Entering Intersection-Turning Into Same Direction
411	--	--	Entering Intersection-Straight Across Path
412	--	--	Entering Intersection-Turning Across Path
413	--	--	Entering Intersection-Turning Into Opposite Direction
429	--	--	Entering Intersection-Intended Path Unknown
430	--	--	Entering Driveway, Alley Access, Etc.
440	--	--	From Driveway, Alley Access, Etc.-Turning Into Same Direction
441	--	--	From Driveway, Alley Access, Etc.-Straight Across Path
442	--	--	From Driveway, Alley Access, Etc.-Turning Into Opposite Direction
459	--	--	From Driveway, Alley Access, Etc.-Intended Path Unknown
460	--	--	Entering From "Yield" Entrance ( <i>Ramp/Channel</i> )
497	--	--	Encroaching-Other
498	--	--	Encroaching-Details Unknown
499	--	--	This Vehicle Initiated Critical Event-Details Unknown

**OTHER MOTOR VEHICLE IN LANE**

500	50	50	Other Vehicle Stopped
510	51	51	Traveling in Same Direction with Lower or Steady Speed
515	52	52	Traveling in Same Direction while Decelerating (*Added In 1995)
520	53	53	Traveling in Same Direction with Higher Speed
530	54	54	Traveling in Opposite Direction
--	55	55	In Crossover
--	56	56	Backing
--	59	59	Unknown Travel Direction Of The Other Motor Vehicle in Lane

**PC19 Critical Event- Pre-Crash (continued)****Attribute Codes**

**1994- 1999- 2011- (exceptions indicated by "")**  
**1998 2010 Later**

**OTHER MOTOR VEHICLE ENCROACHING INTO LANE**

600	--	--	From Adjacent Lane (Opposite Direction)
610	60	60	From Adjacent Lane (Same Direction)-Over Left Lane Line
620	61	61	From Adjacent Lane (Same Direction)-Over Right Lane Line
--	62	62	From Opposite Direction Over Left Lane Line
--	63	63	From Opposite Direction Over Right Lane Line
630	--	--	From Parallel/Diagonal Parking Lane
--	64	64	From Parking Lane, Median, Shoulder, Roadside
710	--	--	Entering Intersection-Turning Into Same Direction
--	65	65	From Crossing Street, Turning Into Same Direction
711	--	--	Entering Intersection-Straight Across Path
--	66	66	From Crossing Street, Across Path
712	--	--	Entering Intersection-Turning Across Path
713	--	--	Entering Intersection-Turning Into Opposite Direction
--	67	67	From Crossing Street, Turning Into Opposite Direction
729	--	--	Entering Intersection-Intended Path Unknown
--	68	68	From Crossing Street, Intended Path Unknown
730	--	--	Entering Driveway, Alley Access, Etc.
740	70	70	From Driveway, Turning Into Same Direction
741	71	71	From Driveway, Across Path
742	72	72	From Driveway, Turning Into Opposite Direction
759	73	73	From Driveway, Intended Path Unknown
--	74	74	From Entrance to Limited Access Highway
760	--	--	Entering From "Yield" Entrance (Ramp/Channel)
797	--	--	Encroaching-Other
798	78	78	Encroaching By Other Vehicle – Details Unknown
799	--	--	Other Vehicle Initiated Critical Event-Details Unknown

**PEDESTRIAN, PEDACYCLIST OR OTHER NON-MOTORIST**

800	80	--	Pedestrian in Roadway
--	--	80	Pedestrian in Road
801	81	--	Pedestrian Approaching Roadway
--	--	81	Pedestrian Approaching Road
--	82	82	Pedestrian Unknown Location
810	83	--	Pedalcyclist/Other Non-Motorist in Roadway
810	--	83	Pedalcyclist/Other Non-Motorist in Road
811	84	--	Pedalcyclist/Other Non-Motorist Approaching Roadway
811	--	84	Pedalcyclist/Other Non-Motorist Approaching Road
--	85	85	Pedalcyclist Or Other Non-Motorist Unknown Location
829	--	--	Pedestrian/Pedalcyclist/Other Non-Motorist Unknown Location

**PC19 Critical Event- Pre-Crash (continued)**

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**Attribute Codes**

**1994- 1999- 2011- (exceptions indicated by "")**  
**1998 2010 Later**

**OBJECT OR ANIMAL**

830	87	--	Animal in Roadway
--	--	87	Animal in Road
831	88	--	Animal Approaching Roadway
--	--	88	Animal Approaching Road
--	89	89	Animal – Unknown Location
840	90	--	Object in Roadway
--	--	90	Object in Road
841	91	--	Object Approaching Roadway
--	--	91	Object Approaching Road
--	92	92	Object Unknown Location
859	--	--	Animal Or Object-Unknown Location

**OTHER**

994	--	--	More Than Two Vehicles Involved
998	98	98	Other Critical Precrash Event

**UNKNOWN**

999	99	99	Unknown
-----	----	----	---------

**PC20 Attempted Avoidance Maneuver**

---

**Definition:** Describes the actions taken by the driver of the vehicle in response to the impending danger. Because this data element focuses upon the driver's action just prior to the first harmful event it is coded independently of any maneuvers associated with this vehicle's Accident Type (V23).

**Additional Information:** In 1992, data elements PC17, PC19–PC22 were added to the Vehicle data file. These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

Prior to 2011 this data element was called "Corrective Action Attempted".

**SAS Name:** P\_CRASH3

**Attribute Codes**

1992-	1999-
1998	Later
0	-- Not Applicable/ No Corrective Action Attempted
1	-- Braked/Slowed
5	-- Backed
--	0 No Driver Present
--	1 No Avoidance Maneuver
--	2 Braking ( <i>No Lockup</i> )
--	3 Braking ( <i>Lockup</i> )
--	4 Braking ( <i>Lockup Unknown</i> )
--	5 Releasing Brakes
2	6 Steering Left
3	7 Steering Right
11	8 Braking And Steering Left
12	9 Braking And Steering Right
4	10 Accelerated
13	11 Accelerating And Steering Left
14	12 Accelerating And Steering Right
15	-- Steered in Both Directions
94	-- More than Two Vehicles Involved
97	-- Corrective Action Attempted-No Details
98	-- Other Single or Multiple Corrective Action
--	98 Other Actions
99	99 Unknown

**PC21 Pre-Impact Stability**

---

**Definition:** Assesses the stability of the vehicle during the period immediately prior to this vehicle's initial involvement in the crash sequence.

**Additional Information:** In 1992, data elements PC17, PC19–PC22 were added to the Vehicle data file. These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

Prior to 2011 this data element was called "Precrash Vehicle Control".

**SAS Name:** **PCRASH4**

**Attribute Codes**

**1995- 1999-**

**1998 Later**

0	0	No Driver Present
1	--	Vehicle Control Maintained
2	--	Vehicle Rotated (Yawed) Clockwise
3	--	Vehicle Rotated (Yawed) Counter-Clockwise
4	--	Vehicle Slid/Skid Longitudinally-No Rotation
9	--	Vehicle Rotated (Yawed) Unknown Direction
20	--	Combination of 02-09
94	--	More Than Two Vehicles Involved
98	--	Other or Unknown Type of Vehicle Control Was Lost
--	1	Tracking
--	2	Skidding Longitudinally – Rotation Less Than 30 Degrees
--	3	Skidding Laterally – Clockwise Rotation
--	4	Skidding Laterally – Counterclockwise Rotation
--	7	Other Vehicle Loss-of-Control
--	9	Precrash Stability Unknown

**PC22 Pre-Impact Location**

---

**Definition:** Identifies the path of this vehicle prior to its first involvement in the crash sequence, and further reports the results of the vehicle's precrash stability coded in data element V28.

**Additional Information:** In 1992, data elements PC17, PC19–PC22 were added to the Vehicle data file. These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

Prior to 2011 this data element was called "Prcrash Location"

**SAS Name:** PCRASH5

**Attribute Codes**

1995- 1998	1999- 2010	2011- Later	
0	0	0	No Driver Present
1	1	1	Stayed In Original Travel Lane
2	2	2	Stayed On Roadway But Left Original Travel Lane
3	3	3	Stayed On Roadway, Not Known If Left Original Travel Lane
4	4	4	Departed Roadway
6	5	5	Remained Off Roadway
7	6	6	Returned To Roadway
--	7	7	Entered Roadway
94	--	--	More Than Two Vehicles Involved
99	99	9	Unknown

**PC23 Crash Type**

---

**Definition:** Categorizes the precrash situation. For graphic descriptions of possible values see *Appendix B: Accident Type Diagram*.

**Additional Information:** Prior to 2011 this data element was called "Accident Type". In 2011 the term "crash" also replaced "accident" in the attributes below.

**SAS Name:** ACC\_TYPE

**Attribute Codes****1988-Later**

0 No Impact

**CATEGORY I: SINGLE DRIVER****CONFIGURATION A: RIGHT ROADSIDE DEPARTURE**

- 1 Drive Off Road
- 2 Control/Traction Loss
- 3 Avoid Collision with Vehicle, Pedestrian, Animal
- 4 Specifics Other
- 5 Specifics Unknown

**CONFIGURATION B: LEFT ROADSIDE DEPARTURE**

- 6 Drive Off Road
- 7 Control/Traction Loss
- 8 Avoid Collision With Vehicle, Pedestrian, Animal
- 9 Specifics Other
- 10 Specifics Unknown

**CONFIGURATION C: FORWARD IMPACT**

- 11 Parked Vehicle
- 12 Stationary Object
- 13 Pedestrian/Animal
- 14 End Departure
- 15 Specifics Other
- 16 Specifics Unknown

**CATEGORY II: SAME TRAFFICWAY, SAME DIRECTION****CONFIGURATION D: REAR END**

- 20 Stopped
- 21 Stopped, Straight
- 22 Stopped, Left
- 23 Stopped, Right
- 24 Slower
- 25 Slower, Going Straight
- 26 Slower, Going Left
- 27 Slower, Going Right
- 28 Decelerating (*Slowing*)
- 29 Decelerating (*Slowing*), Going Straight

**PC23 Crash Type (continued)**

---

**Attribute Codes****1988-Later**

- 30 Decelerating (*Slowing*), Going Left
- 31 Decelerating (*Slowing*), Going Right
- 32 Specifics Other
- 33 Specifics Unknown

**CONFIGURATION E: FORWARD IMPACT**

- 34 This Vehicles Frontal Area Impacts Another Vehicle.
- 35 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 36 This Vehicles Frontal Area Impacts Another Vehicle.
- 37 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 38 This Vehicles Frontal Area Impacts Another Vehicle.
- 39 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 40 This Vehicles Frontal Area Impacts Another Vehicle.
- 41 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 42 Specifics Other
- 43 Specifics Unknown

**CONFIGURATION F: SIDESWIPE/ANGLE**

- 44 Straight Ahead on Left.
- 45 Straight Ahead on Left/Right.
- 46 Changing Lanes to the Right
- 47 Changing Lanes to the Left
- 48 Specifics Other
- 49 Specifics Unknown

**CATEGORY III: SAME TRAFFICWAY, OPPOSITE DIRECTION****CONFIGURATION G: HEAD-ON**

- 50 Lateral Move (*Left/Right*)
- 51 Lateral Move (*Going Straight*)
- 52 Specifics Other
- 53 Specifics Unknown

**CONFIGURATION H: FORWARD IMPACT**

- 54 This Vehicles Frontal Area Impacts Another Vehicle.
- 55 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 56 This Vehicles Frontal Area Impacts Another Vehicle.
- 57 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 58 This Vehicles Frontal Area Impacts Another Vehicle.
- 59 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 60 This Vehicles Frontal Area Impacts Another Vehicle.
- 61 This Vehicle Is Impacted by Frontal Area of Another Vehicle
- 62 Specifics Other
- 63 Specifics Unknown

**PC23 Crash Type (continued)**

---

**Attribute Codes****1988-Later****CONFIGURATION I: SIDESWIPE/ANGLE**

- 64 Lateral Move (*Left/Right*)
- 65 Lateral Move (*Going Straight*)
- 66 Specifics Other
- 67 Specifics Unknown

**CATEGORY IV: CHANGING TRAFFICWAY, VEHICLE TURNING****CONFIGURATION J: TURN ACROSS PATH**

- 68 Initial Opposite Directions (*Left/Right*)
- 69 Initial Opposite Directions (*Going Straight*)
- 70 Initial Same Directions (*Turning Right*)
- 71 Initial Same Directions (*Going Straight*)
- 72 Initial Same Directions (*Turning Left*)
- 73 Initial Same Directions (*Going Straight*)
- 74 Specifics Other
- 75 Specifics Unknown

**CONFIGURATION K: TURN INTO PATH**

- 76 Turn Into Same Direction (*Turning Left*)
- 77 Turn Into Same Direction (*Going Straight*)
- 78 Turn Into Same Direction (*Turning Right*)
- 79 Turn Into Same Direction (*Going Straight*)
- 80 Turn Into Opposite Directions (*Turning Right*)
- 81 Turn Into Opposite Directions (*Going Straight*)
- 82 Turn Into Opposite Directions (*Turning Left*)
- 83 Turn Into Opposite Directions (*Going Straight*)
- 84 Specifics Other
- 85 Specifics Unknown

**CATEGORY V: INTERSECTING PATHS (VEHICLE DAMAGE)****CONFIGURATION L: STRAIGHT PATHS**

- 86 Striking from the Right
- 87 Struck on the Right
- 88 Striking from the Left
- 89 Struck on the Left
- 90 Specifics Other
- 91 Specifics Unknown

**CATEGORY VI: MISCELLANEOUS****CONFIGURATION M: BACKING, ETC.**

- 92 Backing Vehicle
- 93 Other Vehicle or Object
- 97 Untripped Rollover (*1992 to 1998 only*)
- 98 Other Crash Type
- 99 Unknown Crash Type

## Discontinued VEHICLE Data Elements

### **Number of Occupants Coded (discontinued)**

---

**Definition:** The number of occupants coded for this vehicle.

**Additional Information:** This data element has been in the Vehicle data file for all NASS GES years. The SAS name has stayed the same but the definition has changed. From 1988 to 1989 V10 (OCC\_INVL) represented the number of occupants in the vehicle and V10A (OCC\_COD) represented the number of occupants in the vehicle that were coded. The number coded and the number involved are not always the same because, for example, some PARs have information only for injured occupants. In 1990 V10A (OCC\_COD) was dropped and V10 (OCC\_INVL) changed to represent the number of occupants coded. The definition of V10 has stayed the same since 1990. In 2000 V10B (NUMOCCS), representing the total number of occupants, was added to the Vehicle data file.

This data element also appeared in the Parkwork data file as POCCINVL.

**SAS Name: OCC\_INVL**

**Attribute Codes**

1988-	1990-	2000-	
1989	1999	2010	
0	0	0	None
1-95	1-29	1-95	Number of Occupants Involved
--	30	--	30 or More
96	--	--	96 or More
97	--	--	Unknown-Only Injured Reported
--	--	--	Not Reported
99	--	--	Unknown

---

### **Number of Occupants Coded (discontinued)**

---

**Definition:** Derived by counting the number of occupants including drivers that were coded for this vehicle.

**Additional Information:** This data element was dropped from the Vehicle data file in 1990.

**SAS Name: OCC\_COD**

**Attribute Codes**

**1988-1989**

0-30	Number of Occupants Coded
99	Unknown

**Most Harmful Event Number (discontinued)**

---

**Definition:** Indicates the number of the event that caused the most severe property damage or injury for the vehicle.

**Additional Information:** This data element may be used to identify the specific event in the Event data file.

This data element was added to the Event data file in 1999.

**SAS Name:** **MHENUM**

**Attribute Codes****2000-2010**

1-xx Event Number

**Vehicle Control After Corrective Action (discontinued)**

---

**Definition:** Assesses the stability of the vehicle during the period immediately after the attempted corrective action up to the initial impact in the crash sequence. The stability of the vehicle prior to a corrective action is not considered.

**Additional Information:** In 1992, data elements V21, V26-V29 were added to the Vehicle data file. These data elements were designed to identify: (1) what the vehicle was doing just prior to the critical precrash event, (2) what made the vehicle's situation critical, (3) what was the corrective action made, if any, to this critical situation, and what was the (4) location and (5) stability of the vehicle just prior to impact.

In 1995, the name and definition of this data element changed to reflect the control of the vehicle at the time of the critical event and the first harmful event, not the control as a result of any corrective action.

**SAS Name:** P\_CRASH4

**Attribute Codes****1992-1994**

- 0 No Driver Present
- 1 Vehicle Control Maintained After Corrective Action
- 2 Vehicle Rotated (Yawed) Clockwise
- 3 Vehicle Rotated (Yawed) Counter-Clockwise
- 4 Vehicle Slid/Skid Longitudinally-No Rotation
- 5 Vehicle Slid/Skid Laterally-No Rotation
- 9 Vehicle Rotated (Yawed) Unknown Direction
- 20 Combination of 02-09
- 94 More than Two Vehicles Involved
- 98 Other or Unknown Type of Vehicle Control Was Lost After Corrective Action
- 99 Unknown if Vehicle Control Was Lost After Corrective Action

**Vehicle Path After Corrective Action (discontinued)**

---

**Definition:** Identifies the consequences of the corrective action identified in data element V27 and further reports the results of the vehicle's precrash stability coded in data element V28. The response for this data element must relate directly to the response coded for data element V27.

**Additional Information:** In 1995 the name and definition of this data element changed to reflect the control of the vehicle at the time of the critical event and the first harmful event, not the control as a result of any corrective action.

**SAS Name:** P\_CRASH5

**Attribute Codes****1992-1994**

- 0 No Corrective Action
- 1 Vehicle Stayed in Travel Lane Where Corrective Action was Initiated
- 2 Vehicle Stayed on Roadway But Left Travel Lane Where Corrective Action was Initiated
- 3 Vehicle Stayed on Roadway, Not Known if Left Travel Lane Where Corrective Action was Initiated
- 4 Vehicle Departed Roadway
- 5 Corrective Action Initiated Off Roadway
- 94 More Than Two Vehicles Involved
- 99 Vehicle Path Unknown

**Number of Axles on Vehicle, Including Trailers (discontinued)**

---

**Definition:** Coded only for buses and trucks over 4,500 kg GVWR (Bodytype (V5)= 60, 64, 66-79) The data element was discontinued in 2009.

**Additional Information:** This data element also appears in the Parkwork data file as PAXLES (prior to 2010).

**SAS Name:** AXLES

**Attribute Codes****1992-2008**

0	Not Applicable
2-20	Number Of Axles
99	Unknown

**Vehicle Role (discontinued)**

---

**Definition:** Indicates vehicle role in single or multi-vehicle crashes.

**Additional Information:** This data element was discontinued in 2010.

**SAS Name:** VEH\_ROLE

**Attribute Codes****1988-2009**

- |   |               |
|---|---------------|
| 0 | Non-Collision |
| 1 | Striking      |
| 2 | Struck        |
| 3 | Both          |
| 9 | Unknown       |

**Imputed Vehicle Role (discontinued)**

---

**Definition:** This imputed data element has the same definition and data element values as Vehicle Role, excluding value 9 for unknown vehicle role.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

This data element was discontinued in 2010.

**SAS Name:** VROLE\_I

### Damage Areas (discontinued)

---

**Definition:** This vehicle's specific areas damaged due to impact. The totality of the damage is used when determining the specific areas. Five digits are used to indicate up to five specific areas of damage on the vehicle.

**Additional Information:** This data element replaced Maximum Damage Area (V17) in 1990.

Five digits are used to indicate up to five specific areas of damage on the vehicle. If there are no records coded for the vehicle, then 99999 is assigned. If any of the records have SAS code 0 (no damage) coded, then 00000 is assigned. If there is a record with SAS code 7, and there is also a record with SAS code 9, then 99999 is assigned. Please note that "Unknowns" has priority over ALL, otherwise the value is set to 70000. If there is a record for all values 1 through 6, then the value is set to 70000 ("ALL" should have been coded instead). If none of the above conditions apply, then an ordered string of the SAS code values between 1 and 6, and the string is padded at the start with 9's if there is a record with SAS code 9, and padded with 0's if not. For example, if the records have SAS codes 3, 1,5, and 9, then the result would be 99135.

*Examples of complete codes are:*

*0 = No damage*

*12000 = Front and right damage only*

*12999 = Front and right damage and unknown if damaged in other areas*

This data element was discontinued in 2010.

**SAS Name:** DAM\_AREA

#### Attribute Codes

##### **1990-2009**

- 0 No damage
- 1 Front
- 2 Right side
- 3 Left side
- 4 Back
- 5 Top
- 6 Undercarriage
- 7 All areas damaged
- 9 Unknown damage areas

### **Violations Charged (discontinued)**

---

**Definition:** Indicates which violations are charged to drivers.

**Additional Information:** Starting in 2002 multiple violations for a driver are available in the Violatn data file (SAS data element MVIOLATN).

From 1988 to 2009, if a driver has more than one violation the lowest of the attribute codes shown below is chosen. But the renumbering in 2009 causes the violation rolled up to the driver to be different than in 2008 in some cases when there are multiple charges selected.

Note that the priority used in the 2008 and prior, in SAS, is

- 1-- Alcohol or Drugs,
- 2-- Speeding,
- 3-- Alcohol or Drugs and Speeding,
- 4-- Reckless Driving,
- 5-- Driving With a Suspended or Revoked License,
- 6-- Failure to Yield Right-of-Way,
- 7-- Running a Traffic Signal or Stop Sign,
- 97-- Violation charged, no details (1990-2008),
- 98-- Other Violation (1990-2008),
- 50-- Hit & Run (and No Information) (1990-2008),
- 96-- Not Reported (1999-2008),
- 99-- Unknown if charged(1988-2008),
- 0-- None.
- 95-- no driver present (2000-2008),

And the order of 50, 96, 99, 0 and 95 makes no difference because no other violations are allowed when any of these was selected.

In 2009, the hierarchy is as follows, similar to what FARS chooses, but not the same.

In FARS, up to three violations are coded based on the following hierarchy: codes “01-09” (Serious Violations) are coded first, followed by “11-19,” (Impairment Offenses), Racing, Pass Stopped School Bus, and Driving While License Withdrawn. Beyond this hierarchy, choose violations which are not reflected in other data elements, such as Related Factors.

But in NASS GES, the attribute with the lowest SAS codes is chosen. If the codes 0-None or 95-no driver present are selected, then no other violation can be selected.

Starting in 2010, this data element is only available in the Violatn data file.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived in 2009 and before.

**SAS Name: VIOLATN**

**Violations Charged (continued)****Attribute Codes**

<b>1988-</b> <b>1989</b>	<b>1990-</b> <b>1998</b>	<b>2000-</b> <b>1999</b>	<b>2008</b>	
0	0	0	0	None
1	1	1	1	Alcohol or Drugs
2	2	2	2	Speeding
3	3	3	3	Alcohol or Drugs and Speeding
4	4	4	4	Reckless Driving
5	5	5	5	Driving With a Suspended or Revoked License
6	6	6	6	Failure to Yield Right-of-Way
7	7	7	7	Running a Traffic Signal or Stop Sign
--	50	50	50	Hit & Run ( <i>and No Information</i> )
--	--	--	95	No Driver Present
--	--	96	96	Not Reported
--	97	97	97	Violation Charged-No Details
8	98	98	98	Other Violation
9	99	99	99	Unknown if Charged

**2009**

0    None

**RECKLESS/CARELESS/HIT-AND-RUN TYPE OFFENSES**

- 1    Manslaughter or Homicide
- 2    Willful Reckless Driving; Driving to Endanger; Negligent Driving
- 3    Unsafe Reckless (*Not Willful, Wanton Reckless*) Driving
- 4    Inattentive, Careless, Improper Driving
- 5    Fleeing or Eluding Police
- 6    Fail to Obey Police, Fireman, Authorized Person Directing Traffic
- 7    Hit-And-Run, Fail to Stop After Crash
- 8    Fail to Give Aid, Information, Wait For Police After Crash
- 9    Serious Violation Resulting in Death

**IMPAIRMENT OFFENSES**

- 11    Driving While Intoxicated (*Alcohol Or Drugs*) or BAC Above Limit
- 12    Driving While Impaired
- 13    Driving Under Influence of Substance Not Intended to Intoxicate
- 14    Drinking While Operating
- 15    Illegal Possession of Alcohol or Drugs
- 16    Driving With Detectable Alcohol
- 18    Refusal to Submit to Chemical Test
- 19    Alcohol, Drug or Impairment Violations Generally

**Violations Charged (continued)**

---

**SPEED-RELATED OFFENSES**

- 21 Racing
- 22 Speeding (*Above The Speed Limit*)
- 23 Speed Greater Than Reasonable & Prudent (*Not Necessarily Over The Limit*)
- 24 Exceeding Special Limit
- 25 Energy Speed (*Exceeding 55 mph, Non-Pointable*)
- 26 Driving Too Slowly
- 29 Speed Related Violations, Generally

**RULES OF THE ROAD – TRAFFIC SIGN & SIGNALS**

- 31 Fail to Stop For Red Signal
- 32 Fail to Stop For Flashing Red
- 33 Violation of Turn On Red (*Fail to Stop & Yield, Yield to Pedestrians Before Turning*)
- 34 Fail to Obey Flashing Signal (*Yellow or Red*)
- 35 Fail to Obey Signal, Generally
- 36 Violate RR Grade Crossing Device/Regulations
- 37 Fail to Obey Stop Sign
- 38 Fail to Obey Yield Sign
- 39 Fail to Obey Traffic Control Device

**RULES OF THE ROAD – TURNING, YIELDING, SIGNALING**

- 41 Turn in Violation of Traffic Control
- 42 Improper Method & Position of Turn (*Too Wide, Wrong Lane*)
- 43 Fail to Signal For Turn or Stop
- 45 Fail to Yield To Emergency Vehicle
- 46 Fail to Yield, Generally
- 48 Enter Intersection When Space Insufficient
- 49 Turn, Yield, Signaling Violations, Generally

**RULES OF THE ROAD – WRONG SIDE, PASSING & FOLLOWING**

- 51 Driving Wrong Way On One-Way Road
- 52 Driving On Left, Wrong Side Of Road, Generally
- 53 Improper, Unsafe Passing
- 54 Pass On Right (*Drive Off Pavement To Pass*)
- 55 Pass Stopped School Bus
- 56 Fail to Give Way When Overtaken
- 58 Following Too Closely
- 59 Wrong Side, Passing, Following Violations, Generally

**RULES OF THE ROAD – LANE USAGE**

- 61 Unsafe or Prohibited Lane Change
- 62 Improper Use of Lane (*Enter of 3-Lane Road, HOV Designated Lane*)
- 63 Certain Traffic to Use Right Lane (*Trucks, Slow-Moving, etc.*)
- 66 Motorcycle Lane Violations (*More than Two per Lane, Riding Between Lanes, etc.*)
- 67 Motorcyclist Attached to Another Vehicle
- 69 Lane Violations, Generally

**Violations Charged (continued)**

---

**NON-MOVING – LICENSE AND REGISTRATION VIOLATIONS**

- 71 Driving While License Withdrawn (*Including Violation of Provisions of Work Permit*)
- 72 Other Driver License Violations
- 73 Commercial Driver Violations (*Log Book, Hours, Permits Carried*)
- 74 Vehicle Registration Violations
- 75 Fail to Carry Insurance Card
- 76 Driving Uninsured Vehicle
- 79 Non-Moving Violations, Generally

**EQUIPMENT**

- 81 Lamp Violations
- 82 Brake Violations
- 83 Failure to Require Restraint Use (*By Self Or Passengers*)
- 84 Motorcycle Equipment Violations (*Helmet, Special Equipment*)
- 85 Violation Of Hazardous Cargo Regulations
- 86 Size, Weight, Load Violations
- 89 Equipment Violations, Generally

**LICENSE, REGISTRATION & OTHER VIOLATIONS**

- 91 Parking
- 92 Theft, Unauthorized Use Of Motor Vehicle
- 93 Driving Where Prohibited (*Sidewalk, Limited Access, Off Truck Route*)
- 95 No Driver Present / Unknown if Driver Present
- 97 Not Reported (*Added in 2010*)
- 98 Other Moving Violation (*Coasting, Backing, Opening Door*)
- 99 Unknown Violation

**Imputed Violations Charged (discontinued)**

---

**Definition:** From 1988 to 2008 this data element had the same definition and data element values as Violations Charged, excluding value 99 for unknown if charged and value 97 (value 96 from 2004 to 2008) for not reported violations.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **VLTN\_I 1988-2009**

This data element was discontinued in 2010.

**Driver Physical/Mental Impairment (discontinued)**

---

**Definition:** Identifies driver's physical or mental impairment that may have contributed to the cause of the accident. If two or more impairments apply, the lowest of the attribute codes is chosen.

**Additional Information:** In 1988 and 1989 a distinction was made between impairment for drivers and for non-motorists; the data element for driver impairment was in the Vehicle data file and the data element for non-motorist impairment was in the Person data file. In 1990 these data elements were replaced by a single data element in the Person data file: *Person's Physical Impairment* (P18) was used for both driver and non-motorist impairment. See discussion of *Person's Physical Impairment* (P18) for further changes.

**SAS Name:** DR\_IMPMT

**Attribute Codes****1988-1989**

- 0 No Impairments
- 1 Drowsy, Sleepy, Asleep, Fatigued
- 2 Ill, Blackout
- 3 Emotional (e.g., Depression, Angry, Disturbed)
- 4 Drugs-Medication
- 5 Other Drugs (*Marijuana, Cocaine, etc.*)
- 6 Restricted to Wheelchair
- 7 Impaired Due to Previous Injury
- 8 Deaf
- 50 Hit-and Run Vehicle
- 97 Physical/Mental Impairment-No Details
- 98 Other Physical/Mental Impairment
- 99 Unknown Physical/Mental Condition

---

### Driver's Vision Obscured By (discontinued)

---

**Definition:** Identifies visual circumstances that may have contributed to the cause of the crash.

**Additional Information:** In 2004 the codes 93-Not on PAR and 94-Not Coded replaced 96-Not Reported. Not on PAR is coded if no block exists on the PAR for reporting obscured driver vision and no other information is available. Not Coded is used if there is a specific location on the police report for obscured driver vision but the investigating officer fails to make an assessment, and there is no other information available.

Starting in 2009 this type of unknown (Not on PAR, Not Coded) is coded 99. If a driver's vision is obscured by more than one item, the lowest of the attribute codes is chosen.

Starting in 2002 multiple obstructions for a driver are available in the Vision data file (SAS data element MVISOBSC). The Vehicle.VIS\_OBSC is rolled up from the Vision data file. If there are no records, then the value 00 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned.

Starting in 2010, this data element is only available in the Vision data file.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived in 2009 and before.

#### SAS Name: VIS OBSC

##### Attribute Codes

1988 1991	1992- 1998	1999	2000- 2003	2004- 2008	2009	
0	0	0	0	0	0	No Obstruction noted
1	--	--	--	--	1	Rain, Snow, Fog, Smoke, Sand, Dust
		1	1	1	--	Rain, Snow, Smoke, Sand, Dust
2	2	2	2	2	2	Reflected Glare, Bright Sunlight, Headlights
3	3	3	3	3	--	Curve or Hill
--	--	--	--	--	3	Curve, Hill, or Other Roadway Design Feature
4	4	4	4	4	--	Building, Billboard, or Other Design Features ( <i>includes signs, Embankment</i> )
--	--	--	--	--	4	Building, Billboard, or Other Structure
5	5	5	5	5	5	Trees, Crops, Vegetation
6	6	6	6	6	6	Moving In-Transport Motor Vehicle ( <i>Including Load</i> )
7	7	7	7	7	--	Parked Vehicle
--	--	--	--	--	7	Not-in-Transport Motor Vehicle ( <i>Parked, Working</i> )
8	8	8	8	8	8	Splash or Spray of Passing Vehicle
9	9	9	9	9	9	Inadequate Defrost or Defog System
10	10	10	10	10	10	Inadequate Vehicle Lighting System
11	11	11	11	11	11	Obstruction Interior to Vehicle

**Driver's Vision Obscured By *(continued)***

12	12	12	12	12	12	External Mirrors
13	13	13	13	13		Head Restraints
14	14	14	14	14	13	Broken or Improperly Cleaned Windshield
--	--	--	--	--	14	Obstructing Angles on Vehicle
15	15	15	15	15	--	Fog
50	50	50	50	50	--	Hit & Run Vehicle ( <i>And No Information</i> )
--	--	--	--	93	--	Not on PAR
--	--	--	--	94	--	Not Coded
--	--	--	95	95	--	No Driver Present
--	--	--	--	--	95	No Driver Present / Unknown if Driver Present
--	--	96	96	--	--	Not Reported
97	97	97	97	97	97	Vision Obscured-No Details
98	98	98	98	98	98	Other Visual Obstruction
99	99	99	99	99	99	Unknown Whether Vision was Obstructed

**Driver's Action (discontinued)**

---

**Definition:** Indicates if the driver was avoiding, swerving, or sliding due to one of the following. If two or more actions were noted on the PAR, the lowest of the attribute codes was chosen.

**Additional Information:** In 1990 this data element was replaced with *Driver Maneuvered to Avoid* (D6).

**SAS Name : DR\_ACT**

**Attribute Codes****1988-1989**

- 0 Not Avoiding, Swerving, or Sliding
- 1 Severe Crosswind
- 2 Wind from Passing Truck
- 3 Slippery or Loose Surface
- 4 Tire Blow-out or Flat
- 5 Debris or Objects in Road
- 6 Ruts, Holes, Bumps in Road
- 7 Animals in Road
- 8 Vehicle in Road
- 9 Phantom Vehicle
- 10 Pedestrian, Pedalcyclist, or Other Non-motorist in Road
- 11 Water, Snow, Oil slick in Road
- 50 Hit-and Run Vehicle
- 97 Avoiding, Swerving, or Sliding-No Details
- 98 Other Cause
- 99 Unknown Action

---

### Driver Maneuvered to Avoid (discontinued)

---

**Definition:** Identifies an action taken by the driver to avoid something or someone in the road. The maneuver may have subsequently contributed to the cause of the crash. If a driver made more than one avoidance maneuver, the lowest of the attribute codes shown below is chosen.

**Additional Information:** Starting in 2002 multiple maneuvers for a driver are available in the Maneuver data file (SAS data element MDRMANAV). The Vehicle.DRMAN\_AV is rolled up from the Maneuver data file. If there are no records, then the value 00 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned.

Starting in 2010, this data element is only available in the Maneuver data file.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived in 2009 and before.

**SAS Name: DRMAN\_AV**

**Attribute Codes**

1990- 1998		2000- 2001		2002- 2003		2004- 2009	
0	0	0	0	0	0	Driver Did Not Maneuver To Avoid	
1	1	1	1	1	1	Object In Road	
2	2	2	2	2	2	Poor Road Conditions ( <i>Puddle, Ice, Pot Hole, etc.</i> )	
3	3	3	3	3	3	Animal In Road	
4	4	4	4	4	4	Vehicle In Road	
5	5	5	5	5	5	Pedestrian, Pedalcyclist, or Other Non-Motorist in the Road	
50	50	50	50	50	50	Hit & Run ( <i>And No Information</i> )	
--	--	--	--	--	92	Phantom /Non-Contact Motor Vehicle	
--	--	--	93	93	93	Not on PAR	
--	--	--	94	94	94	Not Coded	
--	--	95	95	95	95	No Driver Present	
--	96	96	--	--	96	Not Reported	
97	97	97	97	97	97	Avoidance Maneuver-No details	
99	99	99	99	99	99	Unknown If Driver Maneuvered To Avoid	

---

### Driver Distracted By (discontinued)

---

**Definition:** Identifies a distraction which may have influenced driver performance and contributed to the cause of the crash. The distraction can be either inside the vehicle (internal) or outside the vehicle (external). If a driver had more than one distraction, the lowest of the attribute codes is chosen.

**Additional Information:** Starting in 2002 multiple distractions for a driver are available in the Distract data file (SAS data element MDRDSTRD). The Vehicle.DR\_DSTRD is rolled up from the Distract data file. If there are no records, then the value 00 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned with the exceptions that SAS code 98 has priority over SAS code 92, and all other values have priority over SAS code 0.

Starting in 2010, this data element is only available in the Distract data file.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived in 2009 and before.

**SAS Name:** DR\_DSTRD

#### Attribute Codes

##### 1990-1998

- 0 Not Distracted
- 1 Passengers, Occupants
- 2 Vehicle Instrument Display (*Radio, CB, Heating*)
- 3 Phone
- 4 Other Internal Distractions
- 5 Other Crash ("Rubbernecking")
- 6 Other External Distractions
- 50 Hit & Run (*And No Information*)
- 97 Distractions-No Details
- 99 Unknown if Distracted

1999	2000-	2002-	2004-	2007-	
	2001	2003	2006	2009	
0	0	0	0	0	Not Distracted
1	1	1	1	1	Looked But Did Not See
3	3	3	3	3	By Other Occupants
4	4	4	4	4	By Moving Object In Vehicle
5	5	5	5	5	While Talking Or Listening To Cellular Phone
6	6	6	6	6	While Dialing Cellular Phone
7	7	7	7	7	While Adjusting Climate Control
8	8	8	8	8	While Adjusting Radio, Cassette Or CD
9	9	9	9	9	While Using Other Devices Integral To Vehicle
10	10	10	10	10	While Using Or Reaching For Other Devices
11	11	11	11	11	Sleepy Or Fell Asleep
12	12	12	12	12	Distracted By Outside Person Or Object
13	13	13	13	13	Eating Or Drinking
14	14	14	14	14	Smoking Related

**Driver Distracted By (continued)**

---

**Attribute Codes**

	2000- 1999	2002- 2001	2004- 2003	2007- 2006	2009	
--	--	--	--	15		Other Cellular Phone Related
--	--	--	--	50		Hit & Run ( <i>And No Information</i> )
--	--	--	92	92		Distraction Or Inattention, Details Unknown
--	--	93	93	93		Not On PAR
--	--	94	94	94		Not Coded
--	95	95	95	95		No Driver Present
96	96	--	--	--		Not Reported
97	97	97	97	97		Inattentive Or Lost In Thought
98	98	98	--	--		Other Distraction Or Inattention
--	--	--	98	98		Other Distraction
99	99	99	99	99		Unknown If Distracted

**Rollover (discontinued)**

---

**Definition:** Indicates if a rollover occurred (tripped or untripped). Rollover is defined as any vehicle rotation of 90 degrees or more about any true longitudinal or lateral axis.

**Additional Information:** The coding of this data element changed after 1991. See V30 *Rollover (V30 Rollover Type from 1992-2009)*.

**SAS Name:** ROLLOVER

**Attribute Codes****1988-1991**

- |   |                          |
|---|--------------------------|
| 0 | No Rollover Noted on PAR |
| 1 | Rollover Occurred        |

### Maximum Damage Area (discontinued)

---

**Definition:** This data element reports the most severe area of damage on the vehicle.

**Additional Information:** In 1990, this data element was replaced with *Initial Point of Impact* and *Damage Areas*.

**SAS Name:** DAM\_AREA

#### Attribute Codes

##### 1988-1989

- |   |   |
|---|---|
| 0 | No Damage                               |
| 1 | Front                                   |
| 2 | Right Side                              |
| 3 | Left Side                               |
| 4 | Back                                    |
| 5 | Top                                     |
| 6 | Undercarriage                           |
| 8 | Multiple Damage Areas                   |
| 9 | Damage Area Not Determinable or Unknown |

### Hot-Deck Imputed Damage Area (discontinued)

---

**Definition:** This imputed data element has the same definition and data element values as Maximum Damage Area, excluding value 9 for damage area not determinable or unknown.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

In 1990, this data element was dropped from the Vehicle data file.

**SAS Name:** DAM\_AR\_H

### Vehicle Maneuver (discontinued)

---

**Definition:** Reports the last action this vehicle's driver engaged in either just prior to the impact or just before the driver's realized the impending danger.

**Additional Information:** This data element changed in 1992, when NASS GES began to collect precrash information. Vehicle Maneuver was changed to Movement Prior to Critical Event. In addition to changing the definition, data element values were added, modified, or deleted and the SAS name changed.

**SAS Name:** MANEUVER

#### Attribute Codes

##### 1988-1991

- 1 Going Straight
- 2 Slowing or Stopping in Traffic Lane
- 3 Starting in Traffic Lane
- 4 Stopped in Traffic Lane
- 5 Passing or Overtaking Another Vehicle
- 6 Leaving a Parked Position
- 7 Parked
- 8 Entering a Parked Position
- 9 Maneuvering to Avoid an Animal, Pedestrian, Object or Vehicle
- 10 Turning Right
- 11 Turning Left
- 12 Making U-turn
- 13 Backing Up (*Other Than For Parking Purposes*)
- 14 Changing Lanes or Merging
- 15 Negotiating a Curve
- 98 Other
- 99 Unknown

### Imputed Vehicle Maneuver (discontinued)

---

**Definition:** This imputed data element, used in 1988-1991, has the same as definition and data element values as Vehicle Maneuver, excluding value 99 for unknown vehicle maneuver.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** MANEUV\_I

**Contributing Circumstances, Motor Vehicle (discontinued)**

---

**Definition:** This data element describes the possible pre-existing motor vehicle defects or maintenance conditions that may have contributed to the crash.

**Additional Information:** From 1988 to 1994 the data element was called Vehicle Defects and the SAS name was DEFECT; in 1995 the name was changed to Vehicle Contributing Factors to include of all factors that may have contributed to this vehicle's involvement in the crash. The SAS name changed to FACTOR.

Starting in 2002 multiple contributing factors for a vehicle are available in the Factor data file (SAS data element MFACTOR).

From 2002 to 2009, the Vehicle.FACTOR is rolled up from the Factor data file. If there are no records, then the value 0 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned.

Starting in 2010, Vehicle.FACTOR is discontinued and is only available in the Factor data file.  
The data element name changed to be Contributing Circumstances, Motor Vehicle.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived in 2009 and before.

SAS Name:	DEFECT	1988-1994
	FACTOR	1995-2009

**Attribute Codes**

1988-	1995-	
1994	2009	
0	0	None
1	1	Tires
2	2	Brake System
3	3	Steering System-Tie Rod, Kingpin, Ball Joint, etc.
4	4	Suspension-Springs, Shock Absorbers, McPherson Struts, Control Arms, etc.
5	5	Power Train-Universal Joint, Drive Shaft, Transmission, etc.
6	6	Exhaust System
7	7	Headlights
8	8	Signal Lights
9	9	Other Lights
10	10	Wipers
11	11	Wheels
12	12	Mirrors
13	13	Driver Seating and Control
14	14	Body, Doors
15	15	Trailer Hitch
50	50	Hit-and-Run Vehicle

**Contributing Circumstances, Motor Vehicle *(continued)***

---

**Attribute Codes****1988- 1995-****1994 2009**

97	--	Vehicle Defects-No Details
--	97	Vehicle Contributing Factors-No Details
98	--	Other Vehicle Defects
--	98	Other Vehicle Contributing Factors
99	--	Unknown if Vehicle Has Defects
--	99	Unknown if Vehicle Has Contributing Factors

**The PERSON Data File**

The Person data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, and PER\_NO. CASENUM, VEH\_NO and PER\_NO are the unique identifiers. CASENUM and VEH\_NO should be used to merge the Person data file with the Vehicle data file. The Person data file also contains the data elements on the following pages.

In the Person data file, VEH\_NO equals 0 for non-motorists (PER\_TYPE=4,5,6,7,8,10 or 19) with the exception of occupants of a motor vehicle not in-transport (PER\_TYPE=3) which have valid vehicle numbers.

**P5/NM5 Age**

**Definition:** This data element identifies the person's age at the time of the crash, in years, with respect to the person's last birthday.

**Additional Information:**

**SAS Name:** AGE

**Attribute Codes**

1988- 2000	2001- 2008	2009	2010	2011- Later	
0	0	0	0	0	Less than One Year
1-96	1-998	1-120	1-110	1-120	Years of Age
97	--	--	--		97 Years or Older
--	--	--	997	998	Not Reported
99	999	999	999	999	Unknown

**P5/NM5I Imputed Age**

**Definition:** This imputed data element has the same definition and data element values as Age, excluding the value 999 (value 99 prior to 2001) for unknown age and value 998 (value 997 in 2010) for not reported age.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** AGE\_H      1988-2009  
**AGE\_IM**      2010-Later

**P6/NM6 Sex**

---

**Definition:** This data element identifies the sex of the person involved in the crash.

**Additional Information:**

**SAS Name:** **SEX**

**Attribute Codes**

1988-		2011-	
2009	2010	Later	
1	1	1	Male
2	2	2	Female
--	7	8	Not Reported
9	9	9	Unknown

**P6/NM6 Imputed Sex**

---

**Definition:** This imputed data element has the same definition and data element values as Sex, excluding value 9 for unknown sex and value 8 (value 7 in 2010) for not reported sex.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **SEX\_H**      **1988-2009**  
**SEX\_IM**      **2010-Later**

**P7/NM7 Person Type**

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

**Additional Information:** From 1988 to 2004 a person in or on a working vehicle was coded Person Type=8 (Other or Unknown Non-Occupant). From 2005 to 2008 such a person was coded 7 (Person in or on a Working Vehicle). Starting in 2009 such a person is coded 3 (Occupant of a Motor Vehicle Not in Transport).

**SAS Name:** PER\_TYPE    1988-2008  
                  PER\_TYP    2009-Later

**Attribute Codes**

1988- 2004	2005- 2008	2009	2010	2011- Later	
<b>MOTORISTS</b>					
1	1	1	1	1	Driver of a Motor Vehicle in Transport
2	2	2	2	2	Passenger of a Motor Vehicle in Transport
9	9	9	9	9	Unknown Occupant Type in a Motor Vehicle in Transport
--	--	--	77	--	Not Reported Occupant Type in a Motor Vehicle in Transport
<b>NON-MOTORISTS-OCCUPANT</b>					
3	3	3	3	3	Occupant of a Motor Vehicle Not in Transport
4	4	4	4	4	Occupant of a Non-Motor Vehicle Transport Device
<b>NON-MOTORISTS-NON-OCCUPANT</b>					
5	5	5	5	5	Pedestrian
6	6	--	--	--	Cyclist ( <i>Pedalcyclist</i> )
--	--	6	6	6	Bicyclist
--	--	7	7	7	Other Cyclist
--	--	8	8	8	Persons on Personal Conveyances
--	--	10	10	10	Persons in or on Buildings
--	7	--	--	--	Person in or on a Working Vehicle
8	8	--	--	--	Other or Unknown Non-Occupant
--	--	19	19	19	Unknown Type of Non-Motorist
--	--	--	78	--	Not Reported Type of Non-Motorist

## 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:**

**SAS Name:** INJ\_SEV

### Attribute Codes

**1988-**

**Later**

- 0 No Injury (O)
- 1 Possible Injury (C)
- 2 Non-incapacitating Evident Injury (B)
- 3 Incapacitating Injury (A)
- 4 Fatal Injury (K)
- 5 Injured, Severity Unknown (U)
- 6 Died Prior to Crash
- 7 Not Reported (\*2010 Only)
- 9 Unknown if Injured

## P8/NM8 Imputed Injury Severity

---

**Definition:** This imputed data element has the same definition and data element values as Injury Severity, excluding value 9 for unknown if injured and value 7 for not reported if injured.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** INJSEV\_H    1988-2009  
              INJSEV\_IM    2010-Later

**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**

1988- 1991-	1992- 2002	2003- 2008	2009	2010	2011- Later	
0	0	0	0	0	--	Non-Motorist
--	--	--	--	--	0	Not a Motor Vehicle Occupant
11	11	11	11	11	11	Front Seat – Left Side ( <i>Driver's Side</i> )
12	12	12	12	12	12	Front Seat – Middle
13	13	13	13	13	13	Front Seat – Right Side
18	18	18	18	18	18	Front Seat – Other
19	19	19	19	19	19	Front Seat – Unknown
21	21	21	21	21	21	Second Seat – Left Side
22	22	22	22	22	22	Second Seat – Middle
23	23	23	23	23	23	Second Seat – Right Side
28	28	28	28	28	28	Second Seat – Other
29	29	29	29	29	29	Second Seat – Unknown
--	31	31	31	31	31	Third Seat – Left Side
--	32	32	32	32	32	Third Seat – Middle
--	33	33	33	33	33	Third Seat – Right Side
--	38	38	38	38	38	Third Seat – Other
--	39	39	39	39	39	Third Seat – Unknown
--	--	41	41	41	41	Fourth Seat – Left Side
--	--	42	42	42	42	Fourth Seat – Middle
--	--	43	43	43	43	Fourth Seat – Right Side
--	--	48	48	48	48	Fourth Seat – Other
--	--	49	49	49	49	Fourth Seat – Unknown
30	50	50	50	50	50	Sleeper Section of Cab ( <i>Truck</i> )
40	51	51	--	--	--	Other Passenger in Passenger or Cargo Area
--	--	--	51	51	51	Other Passenger in Enclosed Passenger or Cargo Area
--	--	--	52	52	52	Other Passenger in Unenclosed Passenger or Cargo Area
--	--	--	53	53	53	Other Passenger in Passenger or Cargo Area, Unknown Whether or Not Enclosed
50	52	52	54	54	54	Trailing Unit
60	53	53	55	55	55	Riding on Vehicle Exterior
--	--	--	--	97	98	Not Reported
99	99	99	99	99	99	Unknown

**P9I      Imputed Seating Position**

---

**Definition:** This imputed data element has the same definition and data element values as Seating Position, excluding values 18, 19, 28, 29, 38, 39, 48, 49 and 99 for unknown or other seating position in 2009 and prior. Starting 2010, this imputed data element has the same definition and element values as Seating Position, excluding values 19, 29, 39, 49 and 99 for unknown seating position and values 97, 98 for not reported seating position..

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:**    SEAT\_H      1988-2009  
                  SEAT\_IM     2010-Later

## P10 Restraint System/Helmet Use

**Definition:** This data element records the restraint equipment in use by the occupant, or the helmet in use by a motorcyclist, at the time of the crash as reported on the Police Accident Report.

**Additional Information:** For a distinction between manual or automatic restraint see *Restraint Type* from 1990 to 1998.

This data element replaced *Safety Equipment Use* in 1990. Starting in 1992 information on air bags is contained in the data element *Air Bag Availability/Function*.

**SAS Name:** REST\_SYS 1990-2010  
REST\_USE 2011-Present

### Attribute Codes

1990- 1991	1992- 1994	1995- 2009	2010	2011- Later	
0	0	0	--	--	None Used or Not Applicable
1	1	1	--	--	Lap/Shoulder Belt
2	2	2	--	--	Lap Belt
3	3	3	--	--	Shoulder Belt
4	--	--	--	--	Air Bag Deployed
5	--	--	--	--	Air Bag Deployed and Lap/Shoulder Belt
6	6	6	--	--	Child Safety Seat
7	7	5	--	--	Motorcycle Helmet
--	--	7	--	--	None Available
8	8	8	--	--	Restraint Used-Specifics Unknown or Other
9	9	9	--	--	Unknown if Used
--	--	21	3	3	Lap and Shoulder Belt Used
--	--	22	2	2	Lap Belt Only Used
--	--	23	1	1	Shoulder Belt Only Used
--	--	28	8	8	Restraint Used – Type Unknown
--	--	30	0	0	Not Applicable
--	--	31	7	7	None Used – Motor Vehicle Occupant
--	--	37	10	10	Child Restraint System – Forward Facing
--	--	38	11	11	Child Restraint System – Rear Facing
--	--	39	12	12	Booster Seat
--	--	40	4	4	Child Restraint Type Unknown
--	--	41	17	17	No Helmet
--	--	42	5	5	DOT-Compliant Motorcycle Helmet
--	--	43	16	16	Other Helmet
--	--	96	96	96	Not a Motor Vehicle Occupant
--	--	97	98	98	Not Reported
--	--	98	97	97	Other
--	--	99	99	99	Unknown

**P11 Indication of Misuse of Restraint System/Helmet**

---

**Definition:** This data element indicates any mis-use of the restraint system or helmet used by this person.

**Additional Information:**

**SAS Name:** REST\_MIS

**Attribute Codes**

<i>2010</i>	<i>2011-</i>	
<i>Later</i>		
1	0	No
2	1	Yes
96	8	Not a Motor Vehicle Occupant

## P12 Air Bag Deployed

**Definition:** This data element records air bag availability and deployment for this person as reported in Police Accident Report.

**Additional Information:** This data element is designed to collect both air bag availability and deployment for each occupied seat position. Variation in the presentation of the source data on the state crash report forms and the selections coded on the Police Accident Report (PAR) may produce unlikely combinations or missing data. For example:

1. If the seat position does not have an air bag at the time of manufacture, but the information on the PAR indicates an air bag was available or deployed, the information on the PAR takes precedence.
2. If the seat position has an air bag installed at the time of manufacture and the PAR indicates there is no air bag available, then the PAR information takes precedence.

This data element was added to the Person data file in 1992.

**SAS Name:** **AIRBAG**      **1992-2008**  
**AIR\_BAG**      **2009-Later**

### Attribute Codes

1992- 1999	2000- 2008	2009	2010	2011- Later	
0	0	--	--	--	No Air Bag Available (Includes Airbags That Are Switched Off)
--	--	0	--	--	Not Applicable (Non-Motorist or Vehicle/Seat Not Equipped)
--	--	--	0	0	Not Applicable
1	1	--	--	--	Deployed
--	--	1	1	1	Deployed – Front
--	--	2	2	2	Deployed – Side (Door, Seat Back)
--	--	3	3	3	Deployed – Curtain (Roof)
--	--	7	7	7	Deployed – Other (Knee, Air Belt, etc.)
--	--	8	8	8	Deployed – Combination
--	--	9	9	9	Deployment – Unknown Location
2	2	20	20	20	Not Deployed
--	--	28	28	28	Switched Off
--	8	--	--	--	Not Applicable (Non-Motorist)
--	--	96	97	97	Not a Motor Vehicle Occupant
--	--	97	98	98	Not Reported
9	9	99	--	--	Unknown if Available or Deployed
--	--	--	99	99	Deployment Unknown

**P13 Ejection**

**Definition:** This data element describes the degree of ejection for this person, excluding motorcycle occupants.

**Additional Information:** Starting in 2011, “Not Applicable” includes people not in motor vehicles (i.e., pedestrians, bicyclists, etc.)

**SAS Name:** **EJECT**      **1988-2008**  
**EJECTION**      **2009-Later**

**Attribute Codes**

<b>1988- 1989</b>	<b>1990- 1994</b>	<b>1995- 1998</b>	<b>1999- 2000</b>	<b>2001- 2003</b>	<b>2004- 2008</b>	<b>2009</b>	<b>2010- Later</b>	
0	0	0	0	0	0	0	0	Not Ejected
1	--	1	1	1	1	1	1	Totally Ejected
--	1	--	--	--	--	--	--	Ejected ( <i>Partial or Total</i> )
2	--	2	2	2	2	2	2	Partially Ejected
--	--	--	--	--	5	--	--	Not on PAR
--	--	--	--	--	6	--	--	Not Coded
7	--	7	--	7	7	3	3	Ejected – Unknown Degree
--	--	--	--	--	--	--	4	Not a Motor Vehicle Occupant ( <i>2010 only</i> )
--	--	--	--	--	--	--	7	Not Reported
--	--	--	--	8	8	8	8	Not Applicable
9	9	9	9	9	9	9	9	Unknown

**P13I Imputed Ejection**

**Definition:** From 2004 to 2008 this imputed data element had the same definition and data element values as Ejection, excluding 9 “Unknown if Ejected,” 5 “Not on PAR,” and 6 “Not Coded.” That is, it had the values (0,1,2,7, and 8). Prior to 2004, and in 2009, the only difference in the imputed data element is that 9, “Unknown if Ejected” was excluded. From 2010 onward, the excluded attributes are 9 for unknown ejection and 7 for not reported ejection.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** **EJECT\_I**      **1988-2009**  
**EJECT\_IM**      **2010-Later**

---

## P16/NM15 Police-Reported Alcohol Involvement

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**Definition:** This data element reflects the judgment of law enforcement as to whether alcohol was involved for this person.

**Additional Information:** This data element does not indicate that alcohol was a cause of the crash. If a PAR indicates that opened or unopened alcohol bottles were found in the vehicle, then this information does not by itself constitute involvement.

From 1988 to 2008 alcohol involvement was reported only for drivers of in-transport motor vehicles and non-motorists. Other person types were coded 0 (Not Applicable or, for 1988-1989, Alcohol Not Involved). Starting in 2009 alcohol involvement is reported for all person types.

**SAS Name:** PER\_ALCH 1988-2010  
DRINKING 2011-Later

### Attribute Codes

1988- 1989	1990- 1998	1999- 2001	2002- 2008	2009- Later	
0	--	1	1	0	No ( <i>Alcohol Not Involved</i> )
--	0	--	--	--	Alcohol Not Involved or N/A
--	--	0	0	--	Not Applicable
1	1	2	2	1	Yes ( <i>Alcohol Involved</i> )
--	--	--	6	--	Not on PAR
--	--	--	7	--	Not Coded
--	7	--	--	--	Alcohol and/or Drugs Involved
8	8	8	--	8	Not Reported
9	9	9	9	9	Unknown ( <i>Police Reported</i> )

---

## P16/NM15I Imputed Police-Reported Alcohol Involvement

---

**Definition:** The definition and data element values are the same as Police-Reported Alcohol Involvement with the following exceptions: From 1988 to 1993 the imputed data element excludes the attribute code 9 (Unknown – Police Reported) and any person who was coded 8 (Not Reported) for PER\_ALCH was coded No Alcohol Involved for ALCH\_H. Beginning in 1994 the methodology changed for the attribute 8 – rather than converting it to No Alcohol Involved it was imputed. The SAS name for the imputed data element changed from ALCH\_H to PERALC\_H in 1994 to reflect this change. In 2002 the PER\_ALCH code 8 was replaced by 6 and 7, so from 2002 to 2008 codes 6 and 7, as well as 9, are imputed. Starting in 2009 codes 8 and 9 are imputed for not reported and unknown alcohol involvement, respectively.

**Additional Information:** See *Understanding the NASS GES Imputation Process* section of this manual.

**SAS Name:** ALCH\_H 1988-1993  
PERALC\_H 1994-2009  
PERALCH\_IM 2010-Later

**P18/NM17      Alcohol Test**

---

**P18A/NM17A      Alcohol Test Status**

---

**Definition:** This data element identifies whether an alcohol test was given to this person.

**Additional Information:** From 2005 to 2008 this was reported only for drivers of in-transport motor vehicles and non-motorists. Other person types were coded 8 (Not Applicable). Starting in 2009 it is reported for all person types.

**SAS Name:** **ALCHTEST      2005-2010**  
**ALC\_STATUS      2011-Present**

**Attribute Codes****2005-2008**

- |   |                |
|---|----------------|
| 0 | No             |
| 1 | Yes            |
| 6 | Not on Par     |
| 7 | Not Coded      |
| 8 | Not Applicable |
| 9 | Unknown        |

			<b>2011-</b>	
<b>2009</b>	<b>2010</b>		<b>Later</b>	
0	0	0	Test Not Given	
1	1	1	Test Refused	
2	2	2	Test Given	
--	7	8	Not Reported	
9	--	--	Unknown if Tested/Not Reported	
--	9	9	Unknown if Tested	

**P18B/NM17B      Alcohol Test Type**

**Definition:** This data element identifies the type of alcohol test that was given to this person.

**Additional Information:** If a valid blood test is administered along with another type of test then blood test is coded. This information is reported for all person types.

**SAS Name:** **ALTSTTYPE** *2009-2010*  
**ATST\_TYP** *2011-Present*

**Attribute Codes**

			<b>2011-</b>
<b>2009</b>	<b>2010</b>		<b>Later</b>
0	0	0	Test Not Given
1	1	1	Blood
2	2	2	Breath ( <i>Breathalyzer "BAC"</i> )
3	3	3	Urine
8	8	8	Other Test Type
10	10	10	Preliminary Breath Test ( <i>PBT</i> )
--	97	95	Not Reported
98	98	98	Unknown Test Type
99	--	--	Unknown if Tested/Not Reported
--	99	99	Unknown if Tested

**P18C/NM17C      Alcohol Test Result**

**Definition:** This data element identifies the alcohol test result for this person.

**Additional Information:** This information is reported for all person types.

**SAS Name:** **ALTRSLT** *2009-2010*  
**ALC\_RES** *2011-Later*

**Attribute Codes**

		<b>2010-</b>
<b>2009</b>		<b>Later</b>
0-93	0-93	Actual Value
94	94	.94 or Greater
--	95	Not Reported
96	96	Test Not Given
97	97	Test Performed, Results Unknown
98	98	Positive Reading With No Actual Value
99	--	Unknown if Tested/Not Reported
--	99	Unknown if Tested

**P19/NM18 Police Reported Drug Involvement**

**Definition:** This data element reflects the judgment of law enforcement as to whether drugs were involved for this person.

**Additional Information:** From 1990 to 2008 drug involvement was reported only for drivers of in-transport motor vehicles and non-motorists. Other person types were coded Not Applicable. Starting in 2009 drug involvement is reported for all person types.

Involvement is not an indication that drugs were in any way cause of the crash, even though it may have been. If the PAR indicates that drugs were found in the vehicle, then this information does not by itself constitute involvement.

This data element was added to the Person data file in 1990.

**SAS Name:** PER\_DRUG 1990-2010  
DRUGS 2011-Later

**Attribute Codes**

1990- 1998	2000- 1999	2002- 2001	2009- 2008	Later	
0	--	--	--	--	Drugs Not Involved or Not Applicable
--	1	0	0	--	Not Applicable
--	0	1	1	0	No ( <i>Drugs Not Involved</i> )
1	2	2	2	1	Yes ( <i>Drugs Involved</i> )
--	--	--	6	--	Not on PAR
--	--	--	7	--	Not Coded
7	--	--	--	--	Drugs and/or Alcohol Involved
8	8	8	--	8	Not Reported
9	9	9	9	9	Unknown ( <i>Police Reported</i> )

**P21/NM20 Drug Test**

---

**P21A/NM20A Drug Test Status**

---

**Definition:** This data element identifies whether a drug test was given to this person.

**Additional Information:** From 2005 to 2008 this was reported only for drivers of in-transport motor vehicles and non-motorists. Other person types were coded 8 (Not Applicable). Starting in 2009 it is reported for all person types.

**SAS Name:** DRUGTEST 2005-2010  
DSTATUS 2011-Present

**Attribute Codes****2005-2008**

0	No
1	Yes
6	Not on Par
7	Not Coded
8	Not Applicable
9	Unknown

			2011-
2009	2010		Later
0	0	0	Test Not Given
1	1	1	Test Refused
2	2	2	Test Given
--	7	8	Not Reported
9	--	--	Unknown if Tested/Not Reported
--	9	9	Unknown if Tested

**P21B/NM20B Drug Test Type**

**Definition:** This data element identifies the type of drug test that was given to this person.

**Additional Information:** This information is reported for all person types.

**SAS Name:** **DRTSTYPE** **2009-2010**  
**DRUGTST1, DRUGTST2, DRUGTST3** **2011-Later**

**Attribute Codes**

			<b>2011-</b>
<b>2009</b>	<b>2010</b>		<b>Later</b>
0	0	0	Test Not Given
1	1	1	Blood Test
2	2	2	Urine Test
3	3	3	Both Blood and Urine Tests
8	8	8	Other Test Type
--	97	6	Not Reported
98	98	7	Unknown Test Type
99	--	--	Unknown if Tested/Not Reported
--	99	9	Unknown if Tested

**P21C/NM20C Drug Test Result**

**Definition:** This data element identifies the drug test result for this person.

**SAS Name:** **DRTRSLT** **2009-2010**  
**DRUGRES1, DRUGRES2, DRUGRES3** **2011-Later**

**Attribute Codes**

			<b>2011-</b>
<b>2009</b>	<b>2010</b>		<b>Later</b>
0	0	000	Test Not Given
1	--	--	Negative
--	1	--	Negative/No Drugs Reported
--	--	001	Negative/No Drugs Found
2	--	--	Positive
--	2	998	Positive/Tested for Drugs, Drugs Found, Type Unknown
--	5	095	Not Reported
7	7	997	Tested for Drugs, Result Unknown
9	--	--	Unknown if Tested/Not Reported
--	9	999	Unknown if Tested

**P22/NM21 Transported to Medical Facility By**

---

**Definition:** This data element identifies the mode of transportation to a hospital or medical facility provided for this person.

**Additional Information:** Prior to 2011 this data element was called "Taken to Hospital or Treatment Facility".

**SAS Name:** HOSPITAL

**Attribute Codes**

<b>1988- 2009</b>	<b>2011- 2010</b>	<b>Later</b>	
0	--	--	No
1	--	--	Yes
9	--	--	Unknown
--	4	0	Not Transported
--	5	5	EMS Ground
--	6	1	EMS Air
--	7	3	EMS Unknown Mode
--	8	2	Law Enforcement
--	9	4	Transported Unknown Source
--	97	8	Not Reported
--	98	6	Other
--	99	9	Unknown

**NM4 Non-Motorist Striking Vehicle Number**

---

**Definition:** This data element identifies the Vehicle Number (VEH\_NO) of the in-transport vehicle 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**

1994-	2011-
2010	Later

0	0	Occupant of Motor Vehicle
1-30	1-998	Vehicle Number of Striking Vehicle
--	999	Unknown

---

**NM10 Non-Motorist Location at Time of Crash**


---

**Definition:** This data element identifies the location of the non-motorist with respect to the roadway at the time of 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:** LOCATN    **1988-2010**  
**LOCATION**    **2011-Present**

**Attribute Codes**

<b>1988-</b> <b>2009</b>	<b>2011-</b> <b>2010</b>	<b>Later</b>	
0	--	--	Not Applicable-Driver or Occupant of M.V. in Transport
--	0	0	Not Applicable-Motor Vehicle Occupant
1	--	--	Intersection-In Crosswalk
2	--	--	Intersection-On Roadway
8	--	--	Intersection-Other
9	--	--	Intersection-Unknown Location
11	--	--	Non-Intersection-In Crosswalk
12	--	--	Non-Intersection-On Roadway
18	--	--	Non-Intersection-Other
19	--	--	Non-Intersection-Unknown Location
20	--	--	In Crosswalk-Unknown if Intersection
--	21	1	Intersection-In Marked Crosswalk
--	22	2	Intersection-Unmarked Crosswalk
--	23	3	Intersection-Not in Crosswalk
--	24	9	Intersection-Unknown Location
--	25	10	Non-Intersection-In Marked Crosswalk
--	26	11	Non-Intersection-On Roadway, Not in Marked Crosswalk
--	27	13	Non-Intersection-On Roadway, Crosswalk Availability Unknown
--	28	16	Bicycle Lane
--	29	20	Shoulder/Roadside
--	30	21	Sidewalk
--	31	22	Median/Crossing Island
--	32	23	Driveway Access
--	33	24	Shared-Use Path/Trail
--	34	25	Non-Trafficway Area
--	35	14	Parking Lane/Zone
--	37	98	Not Reported
98	38	28	Other Location
99	39	99	Unknown Location

## Discontinued PERSON Data Elements

### **Restraint Type (discontinued)**

---

**Definition:** Provides additional information about the restraint system coded in the data element *Restraint System Use*, distinguishing between automatic and manual type devices used.

**Additional Information:** This data element was added to the Person Data set in 1990 and deleted in 1999.

**SAS Name:** REST\_TYP

#### **Attribute Codes**

##### **1990-1998**

- 0 None Available or Not Applicable
- 1 Automatic (*Passive*)
- 2 Manual (*Active*)
- 9 Unknown Type

**Non-Motorist's Physical/Mental Condition (discontinued)**

---

**Definition:** Indicates the physical/mental condition for non-motorists.

**Additional Information:** If the person is a driver or occupant of a motor vehicle in-transport, they are coded as 0. When two or more circumstances apply, the attribute with the lowest numerical value is coded.

In 1990, this data element was dropped and replaced with *Person's Physical Impairment*.

**SAS Name:** **PHY\_COND**

**Attribute Codes****1988-1989**

- 0 No Physical/Mental Conditions, Non-motorist; or Not Applicable, Driver or Occupant of Motor Vehicle in Transport
- 1 Ill, Blackout
- 2 Emotional (e.g. Depression, Angry, Disturbed)
- 3 Drugs-Medication
- 4 Other Drugs (e.g. Cocaine, Marijuana, etc.)
- 5 Walking with Cane or Crutches
- 6 Paraplegic or Restricted to Wheelchair
- 7 Impaired Due to Previous Injury
- 8 Deaf
- 9 Blind
- 97 Physical/Mental Impairment-No Details
- 98 Other Physical/Mental Impairment
- 99 Unknown Physical/Mental Condition

**Condition at Time of Crash (discontinued)**

---

**Definition:** Identifies physical impairments for all drivers and non-motorists which may have contributed to the cause of the crash.

**Additional Information:** In 1990 this data element replaced *Non-Motorist's Physical / Mental Condition* in the Person data file and *Driver Physical/Mental Impairment* in the Vehicle data file.

If more than one impairment is noted on the Police Accident Report the lowest numbered code is selected. From 2002 on all impairments for a driver or non-motorist are available in the Impair data file (SAS data element MIMPAIR).

The Person.IMPALIRMT is rolled up from the Impair data file. If there are no records, then the value 0 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned.

Starting in 2010, this data element will be available only in the Impair data file.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived prior in 2009 and before.

**SAS Name:** IMPAIRMT

**Attribute Codes**

**1990- 2007-**

**2006 2009**

0	0	None
1	1	III, Blackout
2	2	Drowsy, Sleepy, Fell Asleep, Fatigued
3	3	Walking with a Cane or Crutches
4	4	Paraplegic or Restricted to Wheelchair
5	5	Impaired Due to Previous Injury
6	6	Deaf
7	7	Blind
--	50	Hit & Run ( <i>And No Information</i> )
--	93	Not on PAR
--	94	Not Coded
97	97	Physical Impairment-No Details
98	98	Other Physical Impairment
99	99	Unknown if Physically Impaired

### Non-Motorist Action (discontinued)

---

**Definition:** Identifies circumstances (actions) that may have contributed to the cause of the crash. The actions coded pertain to non-motorists only.

**Additional Information:** For 1990-2008 that is Person Type (P03) =4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Pedalcyclist), 7 (Other Cyclist), or 8 (Other or Unknown). From 2009 on it is Person Type (P03)= 4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Bicyclist), 7 (Other Cyclist), 8 (Persons on Personal Conveyances), or 19 (Unknown Type of Non-Motorist).

If more than one action is noted on the Police Accident Report the lowest numbered code shown below is selected.

The Person.ACTION is rolled up from the Nmaction data file. If there are no records, then the value 00 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records, with the exception that if the SAS code 0 is one of the values, is assigned. The SAS code 0 is excluded from the calculation, all other values take precedence over 0 (zero).

From 2002 to 2009 all actions for a non-motorist are available in the Nmaction data file (SAS data element MACTION).

This data element was discontinued in 2010 and replaced with two data elements: *Non-Motorist Action/Circumstances Prior to Crash* and *Non-Motorist Action/Circumstances at Time of Crash*. These data elements are in the Nmprior and Nmcrash data files, respectively.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived prior in 2009 and before.

#### SAS Name: ACTION

#### Attribute Codes

1990-	1992-
1991	2009

0 0 No Action

#### NON-MOTORIST VEHICLE OPERATOR:

1	1	Failing to Have Lights on When Required
2	2	Operating without Required Equipment
3	3	Improper or Erratic Lane Changing
4	4	Failure to Keep in Proper Lane or Running Off Road
5	5	Making Improper Entry to or Exit from Trafficway
6	6	Operating the Vehicle in Erratic, Reckless, Negligent Manner
7	7	Failure to Yield Right of Way
8	8	Failure to Obey Traffic Signs/Control Devices/Officers, Failure to Observe Safety Zone
9	9	Making Other Improper Turn
10	10	Driving on Wrong Side of Road

**Non-Motorist Action (continued)**

---

**Attribute Codes****1990- 1992-****1991 2009****OTHER NON-MOTORIST:**

21	21	Darting or Running into Road
22	22	Improper Crossing of Roadway or Intersection ( <i>Jaywalking</i> )
23	--	Walking/Riding with or Against Traffic, Playing, Working, Sitting, Lying, Standing in Roadway
24	24	Inattentive ( <i>Talking, Eating, etc.</i> )
25	25	Jogging
26	26	Non-Motorist Pushing Vehicle
--	27	Walking with Traffic
--	28	Walking Against Traffic
--	29	Playing, Working, Sitting, Lying, Standing, Etc. In Roadway
98	98	Other Action
99	99	Unknown Action

### Non-Motorist Safety Equipment Use (discontinued)

---

**Definition:** Identifies safety equipment worn or carried by the non-motorist.

**Additional Information:** For 1990-2008 that is Person Type (P03) =4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Pedalcyclist), 7 (Other Cyclist), or 8 (Other or Unknown). From 2009 on it is Person Type (P03)= 4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Bicyclist), 7 (Other Cyclist), 8 (Persons on Personal Conveyances), or 19 (Unknown Type of Non-Motorist).

If more than one item is noted on the Police Accident Report the lowest numbered code shown below is selected. From 2002 on all items for a non-motorist are available in the Safetyeq data file (SAS data element MSAFEQMT).

The Person.SAF\_EQMT is rolled up from the Safetyeq data file. In 2009 and before, if the person type is not 4, 5, 6, 7, 8, or 10 (SAS codes), then the value 0 is assigned. Also, If there are no records, then the value 0 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, and there are both records with SAS codes 2 and 3, then the value is set to 4. If not, the records are prioritized by the following SAS code order, where the earliest value on the list is used: 2, 3, 8, 9, 0, and 1.

Starting in 2010, this data element will be available only in the Safetyeq data file.

See *Appendix F: Rules for Derived Data Elements* for an expanded explanation of this data element and how it is derived prior in 2009 and before.

**SAS Name:** **SAF\_EQMT**

#### Attribute Codes

**1990- 1999-**

**1998 2009**

0	--	None Used or Not Applicable
--	0	Not Applicable
--	1	None Used
1	2	Bicycle Helmet
2	3	Reflective Equipment
3	4	Bicycle Helmet and Reflective Equipment
8	8	Other Safety Equipment
9	9	Unknown if Used

### Safety Equipment Use (discontinued)

---

**Definition:** Indicates the occupant's use of available vehicle restraints. The presence of an air bag system does not mean that there are no active belts present.

**Additional Information:** This data element was dropped from the Person data file in 1990 and was replaced with *Restraint System Use*.

**SAS Name:** **SAF\_EQMT**

#### Attribute Codes

##### **1988-1989**

- 0 Non-Motorist
- 1 Child Restraint Used
- 2 Manual Lap Belt Used
- 3 Manual Shoulder Belt Only Used
- 4 Manual Shoulder and Lap Belt Used
- 5 Automatic Belt Used
- 6 Deployed Air Bag
- 7 Motorcycle Helmet Used
- 8 Other Restraint / Safety Equipment Used
- 9 Restraint Used-Type Unknown
- 10 None Used
- 11 None Available
- 99 Unknown Use or Availability

**Person's Action (discontinued)**

---

**Definition:** Person's actions are indicated for everyone involved in the crash except the driver of a motor vehicle in-transport.

**Additional Information:** This data element was dropped from the Person data file in 1990 and was replaced with the data element *Non-motorist's Action*.

**SAS Name:** ACTION

**Attribute Codes****1988-1989**

- 0 Not Applicable-Driver or, if non-driver, No Action

**NON-MOTORIST VEHICLE OPERATOR:**

- 1 Failing to have Lights on When Required
- 2 Operating without Required Equipment
- 3 Improper or Erratic Lane Changing
- 4 Failure to Keep in Proper Lane or Running Off Road
- 5 Making Improper Entry to or Exit from Trafficway
- 6 Operating the Vehicle in Erratic, Reckless, Negligent Manner
- 7 Failure of Yield Right of Way
- 8 Failure to Obey Traffic Signs/Control Devices/Officers, Failure to Observe Safety Zone
- 9 Making Other Improper Turns
- 10 Driving on Wrong Side of Road

**MOTOR VEHICLE OCCUPANT:**

- 20 Interfering with Driver

**OTHER NON-MOTORISTS:**

- 21 Darting or Running into Road
- 22 Improper Crossing of Roadway or Intersection (*Jaywalking*)
- 23 Walking/Riding with or Against Traffic, Playing, Working, Sitting, Lying, Standing in Roadway
- 24 Inattentive (*Talking, Eating, etc..*)
- 25 Jogger
- 26 Non-motorist Pushing Vehicle
- 98 Other Action
- 99 Unknown Action

**The CEVENT Data File**

The Cevent data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ and EVENTNUM. CASENUM and EVENTNUM are the unique identifiers. CASENUM may be used to merge with crashes in the Accident data file. The data file also contains:

**C17    Vehicle Number (This Vehicle)**

---

**Definition:** This data element identifies the Vehicle Number (VEH\_NO) of the in-transport motor vehicle described in this event.

**Additional Information:** This is the vehicle described in "Sequence of Events" for this event.

**SAS Name:** **VEHNUM**    *2000-2010*  
**VNUMBER1**    *2011-Later*

**Attribute Codes**

<b>2000-</b>	<b>2011-</b>
<b>2010</b>	<b><i>Later</i></b>
1-100	1-999      Vehicle Number

**C17 Area of Impact (This Vehicle)**

**Definition:** This data element describes the impact area, if any, of the in-transport motor vehicle 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:** GAD 2000-2010  
AOI1 2011-Later

**Attribute Codes****2000- 2007-  
2006 2009**

0	0	Non-Collision
1	1	Front
2	2	Right Side
3	3	Left Side
4	4	Back
5	5	Top
6	6	Undercarriage
11	11	Front Right Corner
12	12	Front Left Corner
13	13	Back Right Corner
14	14	Back Left Corner
--	15	Object Set in Motion
99	99	Point of Impact Unknown

**2011-  
2010 Later**

0	0	Non-Collision
21-32	1-12	Clock points
33	13	Top
34	14	Undercarriage
38	18	Set-in-Motion (Not a Clock Point)
55	55	Non-Harmful Event
61	61	Left
62	62	Left-Front Half
63	63	Left-Back Half
81	81	Right
82	82	Right-Front Half
83	83	Right-Back Half
97	98	Not Reported
99	99	Unknown

### V31 Sequence of Events

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

**Additional Information:** Prior to 2010, this data element is called *Non-Collision Category or Object Contacted*. Codes 1-100 are reserved for the Vehicle Number of the contacted vehicle. The remainder of the codes identified the type of non-collision event or the fixed/non-fixed object contacted. In 2010, non-harmful events are added and the data element name is changed to *Non-Harmful Event, Non-Collision Category or Object Contacted*. In 2011, the vehicle number codes 1-100 are retired. Codes 12, 54 and 55 are used to identify contact with another in-transport motor vehicle and the data element *Vehicle Number (Other Vehicle)* added to record the number of the contacted vehicle.

**SAS Name:** **OBJCONT**    **2000-2010**  
**SOE**                **2011-Later**

#### Attribute Codes

<b>2000- 2009</b>	<b>2010</b>	<b>2011- Later</b>	
1-100	1-100	--	Vehicle Number of Other Vehicle
101	101	1	Rollover/Overtur
102	102	2	Fire/Explosion
103	103	3	Immersion
104	104	4	Gas Inhalation
105	--	--	Jackknife
--	105	51	Jackknife ( <i>Harmful to This Vehicle</i> )
106	--	--	Noncollision Injury ( <i>Injured in Vehicle, or Fell From Veh.</i> )
107	107	44	Pavement Surface Irregularity ( <i>Ruts, Potholes, Grates, etc.</i> )
108	108	7	Other Noncollision
109	--	--	Noncollision-No Details
110	110	16	Thrown or Falling Object
--	111	6	Injured in Vehicle ( <i>Non-Collision</i> )
--	112	72	Cargo/Equipment Loss or Shift ( <i>Harmful to This Vehicle</i> )
--	113	5	Fell/Jumped from Vehicle
121	121	8	Pedestrian
122	--	--	Cycle or Cyclist ( <i>Pedalcyclist or Pedalcycle</i> )
--	122	9	Pedalcyclist
123	--	--	Railway Train
--	123	10	Railway Vehicle
124	--	--	Animal
--	124	11	Live Animal
126	--	--	Parked Motor Vehicle ( <i>or Other M.V. Not in Transport</i> )
127	--	--	Other Type Non-Motorist
--	127	15	Non-Motorist on Personal Conveyance
128	128	18	Other Object ( <i>Not Fixed</i> )
129	--	--	Object Not Fixed-No Details

**V31 Sequence of Events (continued)****Attribute Codes**

<b>2000- 2009</b>	<b>2010</b>	<b>2011- Later</b>	
--	129	14	Parked Motor Vehicle
--	130	45	Working Motor Vehicle
131	131	58	Ground
132	132	19	Building
133	133	20	Impact Attenuator/Crash Cushion
134	--	--	Bridge Structure ( <i>Bridge Pier/Abutment/Parapet End/Rail</i> )
135	--	--	Guardrail
136	--	--	Concrete Traffic Barrier or Other Longitudinal Barrier Type
--	136	25	Concrete Traffic Barrier
137	--	--	Post, Pole or Support ( <i>Sign Post, Utility Post</i> )
138	--	--	Culvert or Ditch
139	139	33	Curb
140	140	35	Embankment
141	141	38	Fence
142	142	39	Wall
143	143	40	Fire Hydrant
144	144	41	Shrubbery
145	--	--	Tree
--	145	42	Tree ( <i>Standing Only</i> )
146	146	17	Boulder
147	--	--	Vehicle Occupant ( <i>2009 Only</i> )
--	149	49	Ridden Animal or Animal-Drawn Conveyance
--	151	70	Jackknife ( <i>Non-Harmful</i> )
158	158	43	Other Fixed Object
159	--	--	Fixed Object-No Details
--	160	60	Cargo/Equipment Loss or Shift ( <i>Non-Harmfu</i> )
--	161	61	Equipment Failure ( <i>Blown Tire, Brake Failure, etc.</i> )
--	162	62	Separation of Units
--	163	63	Ran Off Roadway – Right
--	164	64	Ran Off Roadway – Left
--	165	65	Cross Median
--	166	68	Cross Centerline
--	167	66	Downhill Runaway
--	168	67	Vehicle Went Airborne
--	169	69	Re-Entering Roadway
--	171	50	Bridge Overhead Structure
--	172	21	Bridge Pier or Support
--	173	23	Bridge Rail ( <i>Includes Parapet</i> )
--	174	24	Guardrail Face
--	175	52	Guardrail End
--	176	57	Cable Barrier
--	177	26	Other Traffic Barrier

**V31 Sequence of Events (continued)**

---

**Attribute Codes**

<b>2000- 2009</b>	<b>2010</b>	<b>2011- Later</b>	
--	178	59	Traffic Sign Support
--	179	46	Traffic Signal Support
--	180	30	Utility Pole/Light Support
--	181	31	Other Post, Other Pole or Other Supports
--	182	32	Culvert
--	183	34	Ditch
--	184	48	Snow Bank
--	185	53	Mail Box
--	190	12	Motor Vehicle In-Transport
--	191	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
--	192	55	Motor Vehicle in Motion Outside the Trafficway
--	197	--	Not Reported
999	999	99	Unknown

**C17    Vehicle Number (Other Vehicle)**

---

**Definition:** This data element identifies the Vehicle Number (VEH\_NO) of the contacted 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)."

**SAS Name:** **VNUMBER2**

**Attribute Codes*****2011-Later***

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

## C17 Area of Impact (Other Vehicle)

**Definition:** This data element describes the impact area of the contacted motor vehicle, if any, in this event.

**Additional Information:** This is the contact area of the vehicle recorded in “Vehicle Number (Other Vehicle)”.

**SAS Name:** **OBJGAD**    **2000-2010**  
**AOI2**                **2011-Later**

### Attribute Codes

2001-		
<b>2000</b>	<b>2009</b>	
1	1	Front
2	2	Right Side
3	3	Left Side
4	4	Back
5	5	Top
6	6	Undercarriage
11	11	Front Right Corner
12	12	Front Left Corner
13	13	Back Right Corner
14	14	Back Left Corner
--	98	Not a Motor Vehicle in Transport
99	99	Point of Impact Unknown

2011-		
<b>2010</b>	<b>Later</b>	
21-32	1-12	Clock points
33	13	Top
34	14	Undercarriage
38	--	Set-in-Motion (Not a Clock Point)
55	55	Non-Harmful Event
61	61	Left
62	62	Left-Front Half
63	63	Left-Back Half
--	77	Not a Motor Vehicle
81	81	Right
82	82	Right-Front Half
83	83	Right-Back Half
97	98	Not Reported
98	--	Not a Motor Vehicle in Transport
99	99	Unknown

## Discontinued CEVENT Data Elements

### **Vehicle's Action (discontinued)**

---

**Definition:** Describes the action for the event for the vehicle identified by VEHNUM.

**Additional Information:**

**SAS Name:** E\_ACTION

#### **Attribute Codes**

**2002-**

**2009 2010**

1	1	Non-Collision
2	2	Collision With Object Not Fixed
3	3	Collision With Fixed Object
4	--	Strike Another In-Transport Motor Vehicle
5	--	Struck By An In-Transport Motor Vehicle
--	6	Non-Harmful Event
--	7	Motor Vehicle In-Transport
--	8	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
--	9	Motor Vehicle In Motion Outside the Trafficway
--	97	Not Reported

**The VEVENT Data File**

The Vevent data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, EVENTNUM and VEVENTNUM. CASENUM, VEH\_NO and VEVENTNUM are the unique identifiers. CASENUM and VEH\_NO may be used to merge with the Vehicle data file. The data file also contains:

**C17    Vehicle Number (This Vehicle)**

**Definition:** Vehicle number of the in-transport motor vehicle involved in the event. If the event is an impact between two in-transport motor vehicles, this is the vehicle number of the vehicle with the lower vehicle number. If the event is an impact between a vehicle and an object set in motion by another vehicle, this is the number of the vehicle which set the object in motion, even if it is the higher number.

**Additional Information:** Example:

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

<u>VEH_NO</u>	<u>EVENTNUM</u>	<u>VNUMBER1</u>	<u>SOE</u>	<u>VNUMBER2</u>
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:**    **VEHNUM**    **2010**  
**VNUMBER1**    **2011-Later**

**Attribute Codes**

<b>2010</b>	<b>2011-</b>
	<b>Later</b>
1-100	1-999      Vehicle Number

**C17 Area of Impact (This Vehicle)**

---

**Definition:** Indicates the impact point that produced property damage or personal injury for this transport motor vehicle involved in the event.

**Additional Information:**

**SAS Name:** GAD 2010  
AOI1 2011-Later

**Attribute Codes**

<b>2010</b>	<b>2011- Later</b>	
0	0	Non-Collision
21-32	1-12	Clock points
33	13	Top
34	14	Undercarriage
38	18	Set-in-Motion (Not a Clock Point)
55	55	Non-Harmful Event
61	61	Left
62	62	Left-Front Half
63	63	Left-Back Half
81	81	Right
82	82	Right-Front Half
83	83	Right-Back Half
97	98	Not Reported
99	99	Unknown

### V31 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 Accident Report narrative and diagram.

**Additional Information:** Prior to 2010, this data element is called *Non-Collision Category or Object Contacted*. Codes 1-100 are reserved for the Vehicle Number of the contacted vehicle. The remainder of the codes identified the type of non-collision event or the fixed/non-fixed object contacted. In 2010, non-harmful events are added and the data element name is changed to *Non-Harmful Event, Non-Collision Category or Object Contacted*. In 2011, the vehicle number codes 1-100 are retired. Codes 12, 54 and 55 are used to identify contact with another in-transport motor vehicle and the data element *Vehicle Number (Other Vehicle)* added to record the number of the contacted vehicle.

**SAS Name:** **OBJCONT**    **2010**  
**SOE**                **2011-Later**

#### Attribute Codes

<b>2010</b>	<b>2011-Later</b>	
1-100	--	Vehicle Number of Other Vehicle
101	1	Rollover/Overtur
102	2	Fire/Explosion
103	3	Immersion
104	4	Gas Inhalation
105	51	Jackknife ( <i>Harmful to This Vehicle</i> )
107	44	Pavement Surface Irregularity ( <i>Ruts, Potholes, Grates, etc.</i> )
108	7	Other Noncollision
110	16	Thrown or Falling Object
111	6	Injured in Vehicle ( <i>Non-Collision</i> )
112	72	Cargo/Equipment Loss or Shift ( <i>Harmful to This Vehicle</i> )
113	5	Fell/Jumped from Vehicle
121	8	Pedestrian
122	9	Pedalcyclist
123	10	Railway Vehicle
124	11	Live Animal
127	15	Non-Motorist on Personal Conveyance
128	18	Other Object ( <i>Not Fixed</i> )
129	14	Parked Motor Vehicle
130	45	Working Motor Vehicle
131	58	Ground
132	19	Building
133	20	Impact Attenuator/Crash Cushion
136	25	Concrete Traffic Barrier
139	33	Curb
140	35	Embankment

**V31 Sequence of Events (continued)****Attribute Codes**

<b>2010</b>	<b>2011-Later</b>	
141	38	Fence
142	39	Wall
143	40	Fire Hydrant
144	41	Shrubbery
145	42	Tree ( <i>Standing Only</i> )
146	17	Boulder
149	49	Ridden Animal or Animal-Drawn Conveyance
151	70	Jackknife ( <i>Non-Harmful</i> )
158	43	Other Fixed Object
160	60	Cargo/Equipment Loss or Shift ( <i>Non-Harmfu</i> )
161	61	Equipment Failure ( <i>Blown Tire, Brake Failure, etc.</i> )
162	62	Separation of Units
163	63	Ran Off Roadway – Right
164	64	Ran Off Roadway – Left
165	65	Cross Median
166	68	Cross Centerline
167	66	Downhill Runaway
168	67	Vehicle Went Airborne
169	69	Re-Entering Roadway
171	50	Bridge Overhead Structure
172	21	Bridge Pier or Support
173	23	Bridge Rail ( <i>Includes Parapet</i> )
174	24	Guardrail Face
175	52	Guardrail End
176	57	Cable Barrier
177	26	Other Traffic Barrier
178	59	Traffic Sign Support
179	46	Traffic Signal Support
180	30	Utility Pole/Light Support
181	31	Other Post, Other Pole or Other Supports
182	32	Culvert
183	34	Ditch
184	48	Snow Bank
185	53	Mail Box
190	12	Motor Vehicle In-Transport
191	54	Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
192	55	Motor Vehicle in Motion Outside the Trafficway
197	--	Not Reported
999	99	Unknown

**C17    Vehicle Number (Other Vehicle)**

---

**Definition:** This data element represents the number assigned to the “other” motor vehicle involved in the event. This data element is the same as VEH\_NO in the Vehicle data file.

**Additional Information:**

**SAS Name:** **VNUMBER2**

**Attribute Codes*****2011-Later***

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

**C17 Area of Impact (Other Vehicle)**

---

**Definition:** Indicates the impact point for the other in-transport motor vehicle involved in the harmful event.

**Additional Information:**

SAS Name: **OBJGAD**      **2010**  
**AOI2**                **2011-Later**

**Attribute Codes**

<b>2010</b>	<b>2011- Later</b>	
21-32	1-12	Clock points
33	13	Top
34	14	Undercarriage
38	--	Set-in-Motion (Not a Clock Point)
55	55	Non-Harmful Event
61	61	Left
62	62	Left-Front Half
63	63	Left-Back Half
--	77	Not a Motor Vehicle
81	81	Right
82	82	Right-Front Half
83	83	Right-Back Half
97	98	Not Reported
99	99	Unknown

## Discontinued VEVENT Data Elements

### **Vehicle's Action (discontinued)**

---

**Definition:** Describes the action for the event for the vehicle identified by VEHNUM.

**Additional Information:**

**SAS Name:** E\_ACTION

**Attribute Codes**

**2010**

- 1 Non-Collision
- 2 Collision With Object Not Fixed
- 3 Collision With Fixed Object
- 6 Non-Harmful Event
- 7 Motor Vehicle In-Transport
- 8 Motor Vehicle In-Transport Strikes or is Struck by Cargo, Persons or Objects Set-in-Motion from/by Another Motor Vehicle In-Transport
- 9 Motor Vehicle In Motion Outside the Trafficway
- 97 Not Reported

**Vehicle Number (Parked/Working Vehicle) (discontinued)**

---

**Definition:** The number of the parked or working vehicle.

**Additional Information:**

**SAS Name:** PVEHNUM

**Attribute Codes****2010**

1-30	Parked/Working Vehicle Number
96	Not a Parked/Working Vehicle

**Area of Impact (Parked/Working Vehicle) (discontinued)**

---

**Definition:** This data element indicates the impact point for the parked or working vehicle involved in the harmful event.

**Additional Information:**

**SAS Name:** PGAD

**Attribute Codes****2010**

20	Non-Collision
21-32	Clock Points
33	Top
34	Undercarriage
61	Left
62	Left-Front Half
63	Left-Back Half
81	Right
82	Right-Front Half
83	Right-Back Half
96	Not a Parked/Working Vehicle
97	Not Reported
99	Unknown

**The VSOE Data File**

The Vevent data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, EVENTNUM and VEVENTNUM. CASENUM, VEH\_NO and VEVENTNUM are the unique identifiers. CASENUM and VEH\_NO may be used to merge with the Vehicle data file. The data file also contains:

**C17 Area of Impact Associated with the Event**

---

**Definition:** Indicates the impact point that produced property damage or personal injury for the transport motor vehicle involved in this event.

**Additional Information:**

**SAS Name:** **AOI**

**Attribute Codes****2011-Later**

00	Non-Collision
01-12	Clock Points
13	Top
14	Undercarriage
18	Set-In-Motion (Not a Clock Point)
55	Non-Harmful Event
61	Left
62	Left-Front Half
63	Left-Back Half
81	Right
82	Right-Front Half
83	Right-Back Half
98	Not Reported
99	Unknown

### V31 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 Accident Report narrative and diagram.

**Additional Information:**

**SAS Name:** SOE

**Attribute Codes**

**2011-Later**

- 01 Rollover/Overtur
- 02 Fire/Explosion
- 03 Immersion
- 04 Gas Inhalation
- 05 Fell/Jumped from Vehicle
- 06 Injured in Vehicle (*Non-Collision*)
- 07 Other Non-Collision
- 08 Pedestrian
- 09 Pedalcyclist
- 10 Railway Vehicle
- 11 Live Animal
- 12 Motor Vehicle in Transport
- 14 Parked Motor Vehicle
- 15 Non-Motorist on Personal Conveyance
- 16 Thrown or Falling Object
- 17 Boulder
- 18 Other Object (*Not Fixed*)
- 19 Building
- 20 Impact Attenuator/Crash Cushion
- 21 Bridge Pier or Support
- 23 Bridge Rail (*Includes Parapet*)
- 24 Guardrail Face
- 25 Concrete Traffic Barrier
- 26 Other Traffic Barrier
- 30 Utility Pole/Light Support
- 31 Other Post, Other Pole, or Other Support
- 32 Culvert
- 33 Curb
- 34 Ditch
- 35 Embankment
- 38 Fence
- 39 Wall
- 40 Fire Hydrant

**V31 Sequence of Events (continued)**

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**Attribute Codes****2011-Later**

- 41 Shrubbery
- 42 Tree (*Standing Only*)
- 43 Other Fixed Object
- 44 Pavement Surface Irregularity (*Ruts, Potholes, Grates, etc.*)
- 45 Working Motor Vehicle
- 46 Traffic Signal Support
- 48 Snow Bank
- 49 Ridden Animal or Animal-Drawn Conveyance (*Since 1998*)
- 50 Bridge Overhead Structure
- 51 Jackknife (*Harmful to This Vehicle*)
- 52 Guardrail End
- 53 Mail Box
- 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 Motor Vehicle in Motion Outside the Trafficway (*Since 2008*)
- 57 Cable Barrier (*Since 2008*)
- 58 Ground
- 59 Traffic Sign Support
- 60 Cargo/Equipment Loss or Shift (*Non-Harmful*)
- 61 Equipment Failure (*Blown Tire, Brake Failure, etc.*)
- 62 Separation of Units
- 63 Ran Off Road – Right
- 64 Ran Off Road – Left
- 65 Cross Median
- 66 Downhill Runaway
- 67 Vehicle Went Airborne
- 68 Cross Centerline
- 69 Re-Entering Highway
- 70 Jackknife (*Non-Harmful*)
- 72 Cargo/Equipment Loss or Shift (*Harmful To This Vehicle*)
- 98 Not Reported
- 99 Unknown

**The FACTOR Data File**

The Factor data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and VEH\_NO. CASENUM, VEH\_NO and MFACTOR are the unique identifiers. CASENUM and VEH\_NO should be used to merge the Factor data file with the Vehicle data file. MFACTOR identifies each vehicle factor (as a separate record) and is described below:

**PC4 Contributing Circumstances, Motor Vehicle**

---

**Definition:** This data element describes the possible pre-existing motor vehicle defects or maintenance conditions that may have contributed to the crash.

**Additional Information:** This data element has been coded at the Vehicle level, and included in Vehicle/Driver data file (SAS data element FACTOR), since 1995. Starting in 2002 multiple factors for each vehicle are available in the Factor data file. It is important to determine the significance of pre-existing problems, including equipment and operation, in motor vehicles involved in a crash.

Prior to 2011 this data element was called "Vehicle Contributing Factors".

**SAS Name:** MFACTOR

**Attribute Codes**

**2002- 2010-**

**2009 Later**

0	0	None
1	1	Tires
2	2	Brake System
3	3	Steering System-Tie Rod, Kingpin, Ball Joint, etc.
4	4	Suspension-Springs, Shock Absorbers, McPherson Struts, Control Arms, etc.
5	5	Power Train-Universal Joint, Drive Shaft, Transmission, etc.
6	6	Exhaust System
7	7	Headlights
8	8	Signal Lights
9	9	Other Lights
10	10	Wipers
11	11	Wheels
12	12	Mirrors
13	--	Driver Seating and Control
--	13	Windows/Windshield
14	14	Body, Doors
15	--	Trailer Hitch
--	15	Truck Coupling/Trailer Hitch/Safety Chains
--	16	Safety Systems
50	--	Hit-and-Run Vehicle
97	17	Vehicle Contributing Factors-No Details
--	97	Other
98	--	Other Vehicle Contributing Factors
--	98	Not Reported
99	--	Unknown if Vehicle Has Contributing Factors
--	99	Unknown

**The VIOLATN Data File**

The Violatn data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and VEH\_NO. CASENUM, VEH\_NO and MVIOLATN are the unique identifiers. CASENUM and VEH\_NO should be used to merge the Violatn data file with the Vehicle data file. MVIOLATN identifies each violation (as a separate record) and is described below:

**D21 Violations Charged**

---

**Definition:** Indicates which violations are charged to drivers.

**Additional Information:** This data element has been coded at the Driver level and included in Vehicle/Driver data file (SAS data element VIOLATN) since 1988. Starting in 2002 all violations charged to a driver are available in the Violatn data file.

**SAS Name:** MVIOLATN

**Attribute Codes****2002-2008**

- 0 None
- 1 Alcohol
- 2 Drugs
- 3 Speeding
- 4 Reckless Driving
- 5 Driving With a Suspended or Revoked License
- 6 Failure to Yield Right-of-Way
- 7 Running a Traffic Signal or Stop Sign
- 50 Hit & Run (*And No Information*)
- 95 No Driver Present
- 96 Not Reported
- 97 Violation Charged-No Details
- 98 Other Violation
- 99 Unknown if Charged

**2009-Later**

- 0 None

**RECKLESS/CARELESS/HIT-AND-RUN TYPE OFFENSES**

- 1 Manslaughter or Homicide
- 2 Willful Reckless Driving; Driving to Endanger; Negligent Driving
- 3 Unsafe Reckless (*Not Willful, Wanton Reckless*) Driving
- 4 Inattentive, Careless, Improper Driving
- 5 Fleeing or Eluding Police
- 6 Fail to Obey Police, Fireman, Authorized Person Directing Traffic
- 7 Hit-And-Run, Fail to Stop After Crash
- 8 Fail to Give Aid, Information, Wait For Police After Crash
- 9 Serious Violation Resulting In Death

**IMPAIRMENT OFFENSES**

- 11 Driving While Intoxicated (*Alcohol Or Drugs*) Or BAC Above Limit (*Any Detectable BAC for CDLs*)
- 12 Driving While Impaired
- 13 Driving Under Influence of Substance Not Intended To Intoxicate
- 14 Drinking While Operating
- 15 Illegal Possession of Alcohol or Drugs
- 16 Driving With Detectable Alcohol
- 18 Refusal to Submit to Chemical Test
- 19 Alcohol, Drug or Impairment Violations Generally

**D21 Violations Charged (continued)**

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**SPEED-RELATED OFFENSES**

- 21 Racing
- 22 Speeding (*Above The Speed Limit*)
- 23 Speed Greater than Reasonable & Prudent (*Not Necessarily Over The Limit*)
- 24 Exceeding Special Limit
- 25 Energy Speed (*Exceeding 55 mph, Non-Pointable*)
- 26 Driving Too Slowly
- 29 Speed Related Violations, Generally

**RULES OF THE ROAD – TRAFFIC SIGN & SIGNALS**

- 31 Fail to Stop For Red Signal
- 32 Fail to Stop For Flashing Red
- 33 Violation of Turn On Red (*Fail to Stop & Yield, Yield to Pedestrians Before Turning*)
- 34 Fail to Obey Flashing Signal (*Yellow Or Red*)
- 35 Fail to Obey Signal, Generally
- 36 Violate RR Grade Crossing Device/Regulations
- 37 Fail to Obey Stop Sign
- 38 Fail to Obey Yield Sign
- 39 Fail to Obey Traffic Control Device

**RULES OF THE ROAD – TURNING, YIELDING, SIGNALING**

- 41 Turn in Violation of Traffic Control (*Disobey Signs, Turn Arrow Or Pavement Markings; This Is Not A Right-On-Red Violation*)
- 42 Improper Method & Position of Turn (*Too Wide, Wrong Lane*)
- 43 Fail to Signal For Turn or Stop
- 45 Fail to Yield to Emergency Vehicle
- 46 Fail to Yield, Generally
- 48 Enter Intersection when Space Insufficient
- 49 Turn, Yield, Signaling Violations, Generally

**RULES OF THE ROAD – WRONG SIDE, PASSING & FOLLOWING**

- 51 Driving Wrong Way on One-Way Road
- 52 Driving On Left, Wrong Side of Road, Generally
- 53 Improper, Unsafe Passing
- 54 Pass on Right (*Drive Off Pavement To Pass*)
- 55 Pass Stopped School Bus
- 56 Fail to Give Way When Overtaken
- 58 Following Too Closely
- 59 Wrong Side, Passing, Following Violations, Generally

**RULES OF THE ROAD – LANE USAGE**

- 61 Unsafe or Prohibited Lane Change
- 62 Improper Use of Lane (*Enter of 3-Lane Road, HOV Designated Lane*)
- 63 Certain Traffic to Use Right Lane (*Trucks, Slow-Moving, etc.*)
- 66 Motorcycle Lane Violations (*More than Two per Lane, Riding Between Lanes, etc.*)
- 67 Motorcyclist Attached to Another Vehicle
- 69 Lane Violations, Generally

**D21 Violations Charged (continued)**

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**NON-MOVING – LICENSE AND REGISTRATION VIOLATIONS**

- 71 Driving While License Withdrawn (*Including Violation of Provisions of Work Permit*)
- 72 Other Driver License Violations
- 73 Commercial Driver Violations (*Log Book, Hours, Permits Carried*)
- 74 Vehicle Registration Violations
- 75 Fail to Carry Insurance Card
- 76 Driving Uninsured Vehicle
- 79 Non-Moving Violations, Generally

**EQUIPMENT**

- 81 Lamp Violations
- 82 Brake Violations
- 83 Failure to Require Restraint Use (*By Self or Passengers*)
- 84 Motorcycle Equipment Violations (*Helmet, Special Equipment*)
- 85 Violation of Hazardous Cargo Regulations
- 86 Size, Weight, Load Violations
- 89 Equipment Violations, Generally

**LICENSE, REGISTRATION & OTHER VIOLATIONS**

- 91 Parking
- 92 Theft, Unauthorized Use of Motor Vehicle
- 93 Driving Where Prohibited (*Sidewalk, Limited Access, Off Truck Route*)
- 95 No Driver Present / Unknown if Driver Present
- 97 Not Reported (*Added in 2010*)
- 98 Other Moving Violation (*Coasting, Backing, Opening Door*)
- 99 Unknown Violation

**The VISION Data File**

The Vision data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and VEH\_NO. CASENUM, VEH\_NO and MVISOBSC are the unique identifiers. CASENUM and VEH\_NO should be used to merge the Vision data file with the Vehicle data file. MVISOBSC identifies each visual obstruction (as a separate record) and is described below:

**PC14 Driver's Vision Obscured By**

**Definition:** Identifies visual circumstances that may have contributed to the cause of the crash.

**Additional Information:** In 2004 the codes 93-Not on PAR and 94-Not Coded replaced 96-Not Reported. Not on PAR is coded if no block exists on the PAR for reporting obscured driver vision and no other information is available. Not Coded is used if there is a specific location on the police report for obscured driver vision but the investigating officer fails to make an assessment, and there is no other information available.

This data element has been coded at the Driver level and included in Vehicle/Driver data file (SAS data element VIS\_OBSC) since 1988. Starting in 2002 all visual obstructions for a driver are available in the Vision data file.

**SAS Name:** MVISOBSC

**Attribute Codes**

2002-	2004-	2009-	
2003	2008	Later	
0	0	0	No Obstruction
--	--	1	Rain, Snow, Fog, Smoke, Sand, Dust
1	1	--	Rain, Snow, Smoke, Sand, Dust
2	2	2	Reflected Glare, Bright Sunlight, Headlights
3	3	--	Curve or Hill
--	--	3	Curve, Hill, or Other Roadway Design Feature
4	4	--	Building, Billboard, or Other Design Features ( <i>Includes Signs, Embankment</i> )
--	--	4	Building, Billboard, or Other Structure
5	5	5	Trees, Crops, Vegetation
6	6	6	In-Transport Motor Vehicle ( <i>Including Load</i> )
7	7	--	Parked Vehicle
--	--	7	Not-in-Transport Motor Vehicle ( <i>Parked, Working</i> )
8	8	8	Splash or Spray of Passing Vehicle
9	9	9	Inadequate Defrost or Defog System
10	10	10	Inadequate Vehicle Lighting System
11	11	11	Obstruction Interior to Vehicle
12	12	12	External Mirrors
13	13	--	Head Restraints
14	14	13	Broken or Improperly Cleaned Windshield
--	--	14	Obstructing Angles on Vehicle
15	15	--	Fog
50	50	--	Hit & Run Vehicle ( <i>And No Information</i> )
--	93	--	Not on PAR
--	94	--	Not Coded
95	95	--	No Driver Present
--	--	95	No Driver Present / Unknown if Driver Present
96	--	--	Not Reported
97	97	97	Vision Obscured – No Details
98	98	98	Other Visual Obstruction
99	99	99	Unknown Whether Vision was Obstructed

**The MANEUVER Data File**

The Maneuver data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and VEH\_NO. CASENUM, VEH\_NO and MDRMANAV are the unique identifiers. CASENUM and VEH\_NO should be used to merge the Maneuver data file with the Vehicle data file. MDRMANAV identifies each avoidance attempt (as a separate record) and is described below:

**PC15 Driver Maneuvered to Avoid**

**Definition:** Identifies an action taken by the driver to avoid something or someone in the road. The maneuver may have subsequently contributed to the cause of the crash.

**Additional Information:** This data element has been coded at the Driver level and included in Vehicle/Driver data file (SAS data element DRMAN\_AV) since 1990. Starting in 2002 multiple maneuvers made by each driver are available in the Maneuver data file.

**SAS Name: MDRMANAV****Attribute Codes**

<b>2002-</b> <b>2003</b>	<b>2004-</b> <b>2009</b>	<b>2011-</b> <b>2010</b>	<b>Later</b>	
0	0	0	0	Driver Did Not Maneuver To Avoid
1	1	1	1	Object In Road
2	2	2	2	Poor Road Conditions ( <i>Puddle, Ice, Pot Hole, etc.</i> )
3	3	--	--	Animal In Road
--	--	3	3	Live Animal
4	4	--	--	Vehicle In Road
--	--	4	4	Motor Vehicle
5	5	5	5	Pedestrian, Pedalcyclist, or Other Non-Motorist in the Road
50	50	--	--	Hit & Run ( <i>And No Information</i> )
--	92	92	92	Phantom /Non-Contact Motor Vehicle
93	93	--	--	Not on PAR
94	94	--	--	Not Coded
95	95	95	--	No Driver Present
--	--	--	95	No Driver Present / Unknown if Driver Present
97	97	--	--	Avoidance Maneuver-No Details
--	--	98	98	Not Reported
99	99	99	99	Unknown If Driver Maneuvered To Avoid

**The DISTRACT Data File**

The Distract data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and VEH\_NO. CASENUM, VEH\_NO and MDRDSTRD are the unique identifiers. CASENUM and VEH\_NO should be used to merge the Distract data file with the Vehicle data file. MDRDSTRD identifies each distraction (as a separate record) and is described below:

**PC16 Driver Distracted By**

**Definition:** Identifies all distractions which may have influenced driver performance and contributed to the cause of the crash. The distraction can be either inside the vehicle (internal) or outside the vehicle (external).

**Additional Information:** This data element has been coded at the Driver level and included in Vehicle/Driver data file (SAS data element DR\_DSTRD) since 1990. Starting in 2002 multiple distractions for each driver are available in the Distract data file.

**SAS Name:** MDRDSTRD

**Attribute Codes**

2002- 2003	2004- 2006	2007- 2009	2010	2011- Later	
0	0	0	0	0	Not Distracted
1	1	1	1	1	Looked But Did Not See
3	3	3	3	3	By Other Occupants
4	4	4	4	4	By Moving Object In Vehicle
5	5	5	5	5	While Talking Or Listening To Cellular Phone
6	6	6	6	6	While Dialing Cellular Phone
7	7	7	--	--	While Adjusting Climate Control
--	--	--	7	7	While Adjusting Audio And/or Climate Controls
8	8	8	--	--	While Adjusting Radio, Cassette Or CD
9	9	9	9	9	While Using Other Devices/Controls Integral To Vehicle
10	10	10	--	--	While Using Or Reaching For Other Devices
--	--	--	10	10	While Using Or Reaching For Device/Object Brought into Vehicle
11	11	11	--	--	Sleepy Or Fell Asleep
12	12	12	--	--	Distracted By Outside Person Or Object
--	--	--	12	12	Distracted By Outside Person, Object Or Event
13	13	13	13	13	Eating Or Drinking
14	14	14	14	14	Smoking Related
--	--	15	15	15	Other Cellular Phone Related
--	--	--	--	16	No Driver Present/Unknown if Driver Present
--	--	50	--	--	Hit & Run ( <i>And No Information</i> )
--	92	92	92	92	Distraction Or Inattention, Details Unknown
93	93	93	--	--	Not On PAR
94	94	94	--	--	Not Coded
95	95	95	95	--	No Driver Present
--	--	--	96	96	Not Reported
97	97	97	97	97	Inattentive Or Lost In Thought
98	--	--	--	--	Other Distraction Or Inattention
--	98	98	98	98	Other Distraction
99	99	99	99	99	Unknown If Distracted

**The DRIMPAIR Data File**

The Drimpair data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, PER\_NO, and DRIMPAIR. CASENUM, VEH\_NO, PER\_NO and DRIMPAIR are the unique identifiers. CASENUM, VEH\_NO, and PER\_NO should be used to merge the Drimpair data file with the Person data file. DRIMPAIR identifies each impairment (as a separate record) and is described below:

**D23 Condition (Impairment) at Time of Crash- Driver**

**Definition:** This data element identifies physical impairments to this driver that may have contributed to the crash as identified by law enforcement.

**Additional Information:** This data element has been coded at the person level and included in the Person data file (SAS data element IMPAIRMT) since 1990. From 2002-2010 all impairments of a driver or non-motorist are available in the Impair data file. Starting in 2011 all impairments of a driver are in the Drimpair data file and all impairments of a non-motorist are in the Nmimpair data set.

**SAS Name:** **MIMPAIR**    **2002-2010**  
**DRIMPAIR**    **2011-Present**

**Attribute Codes**

<b>2002-</b> <b>2006</b>	<b>2007-</b> <b>2009</b>	<b>2010-</b> <b>Later</b>	
0	0	--	None
--	--	0	None/Apparently Normal
1	1	1	III, Blackout
2	2	--	Drowsy, Sleepy, Fell Asleep, Fatigued
--	--	2	Asleep or Fatigued
3	3	3	Walking with a Cane or Crutches
4	4	4	Paraplegic or Restricted to Wheelchair
5	5	5	Impaired Due to Previous Injury
6	6	6	Deaf
7	7	7	Blind
--	--	8	Emotional ( <i>Depressed, Angry, Disturbed, etc.</i> )
--	--	9	Under the Influence of Alcohol, Drugs or Medication
--	--	10	Physical Impairment – No Details
--	50	--	Hit & Run ( <i>And No Information</i> )
--	93	--	Not on PAR
--	94	--	Not Coded
97	97	--	Physical Impairment-No Details
98	98	96	Other Physical Impairment
--	--	98	Not Reported
99	99	99	Unknown if Impaired

**The NMIMPAIR Data File**

The Nmimpair data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, PER\_NO, and NMIMPAIR. CASENUM, VEH\_NO, PER\_NO and NMIMPAIR are the unique identifiers. CASENUM, VEH\_NO, and PER\_NO should be used to merge the Nmimpair data file with the Person data file. NMIMPAIR identifies each impairment (as a separate record) and is described below:

**NM14 Condition (Impairment) at Time of Crash- Non-Motorist**

**Definition:** This data element identifies physical impairments to the non-motorist that may have contributed to the crash as identified by law enforcement.

**Additional Information:** This data element has been coded at the person level and included in the Person data file (SAS data element IMPAIRMT) since 1990. From 2002-2010 all impairments of a driver or non-motorist are available in the Impair data file. Starting in 2011 all impairments of a driver are in the Drimpair data file and all impairments of a non-motorist are in the Nmimpair data set.

**SAS Name:** **MIMPAIR**    **2002-2010**  
**NMIMPAIR**    **2011-Present**

**Attribute Codes**

<b>2002-</b> <b>2006</b>	<b>2007-</b> <b>2009</b>	<b>2010-</b> <b>Later</b>	
0	0	--	None
--	--	0	None/Apparently Normal
1	1	1	III, Blackout
2	2	--	Drowsy, Sleepy, Fell Asleep, Fatigued
--	--	2	Asleep or Fatigued
3	3	3	Walking with a Cane or Crutches
4	4	4	Paraplegic or Restricted to Wheelchair
5	5	5	Impaired Due to Previous Injury
6	6	6	Deaf
7	7	7	Blind
--	--	8	Emotional ( <i>Depressed, Angry, Disturbed, etc.</i> )
--	--	9	Under the Influence of Alcohol, Drugs or Medication
--	--	10	Physical Impairment – No Details
--	50	--	Hit & Run ( <i>And No Information</i> )
--	93	--	Not on PAR
--	94	--	Not Coded
97	97	--	Physical Impairment-No Details
98	98	96	Other Physical Impairment
--	--	98	Not Reported
99	99	99	Unknown if Impaired

**The NMCRASH Data File**

The Nmcrash data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, PER\_NO, and MTM\_CRSH. CASENUM, PER\_NO and MTM\_CRSH are the unique identifiers. CASENUM, VEH\_NO and PER\_NO should be used to merge the Nmcrash data file with non-motorists from the Person data file. MTM\_CRSH identifies each action (as a separate record) and is described below:

**NM12 Non-Motorist Action/Circumstances at Time of Crash**

---

**Definition:** This data element describes the action(s) and/or circumstances of the non-motorist that law enforcement indicated may have contributed to the crash.

**Additional Information:** It selects all that apply. This data element is based on the judgment of the law enforcement officer investigating the crash.

**SAS Name:** **MTM\_CRSH**

**Attribute Codes****2010-Later**

- 0 No Improper Action
- 1 Dart/Dash
- 2 Failure to Yield Right-Of-Way
- 3 Failure to Obey Traffic Signs, Signals or Officer
- 4 In Roadway Improperly (*Standing, Lying, Working, Playing*)
- 5 Entering/Exiting Vehicle
- 6 Inattentive (*Talking, Eating, etc.*)
- 7 Improper Turn/Merge
- 8 Improper Passing
- 9 Wrong-Way Riding or Walking
- 10 Driving on Wrong Side of Road
- 12 Improper Crossing of Roadway or Intersection (*Jaywalking*)
- 13 Failing to Have Lights on When Required
- 14 Operating Without Required Equipment
- 15 Improper or Erratic Lane Changing
- 16 Failure to Keep in Proper Lane or Running Off Road
- 17 Making Improper Entry to or Exit from Trafficway
- 18 Operating the Vehicle in Other Erratic, Reckless, Careless or Negligent Manner
- 19 Not Visible (*Dark Clothing, No Lighting, etc.*)
- 20 Passing with Insufficient Distance or Inadequate Visibility or Failing to Yield to Overtaking Vehicle
- 21 Other
- 98 Not Reported
- 99 Unknown

**The NMPRIOR Data File**

The Nmprior data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, PER\_NO, and MPR\_ACT. CASENUM, PER\_NO and MPR\_ACT are the unique identifiers. CASENUM, VEH\_NO and PER\_NO should be used to merge the Nmprior data file with non-motorists from the Person data file. MPR\_ACT identifies each action (as a separate record) and is described below:

**NM11 Non-Motorist Action/Circumstances Prior to Crash**

---

**Definition:** This data element describes the action(s) of the non-motorist immediately prior to their involvement in the crash.

**Additional Information:** It selects all that apply. It is also an indication of whether the non-motorist was walking/cycling to/from school in addition to the action of the non-motorist immediately prior to their involvement in the crash.

**SAS Name:** **MPR\_ACT**

**Attribute Codes**

		2011-
2010		Later
1	1	Going to or from School ( <i>K-12</i> )
2	2	Waiting to Cross Roadway
3	3	Crossing Roadway
4	4	Jogging/Running
5	5	Movement Along Roadway with Traffic ( <i>In or Adjacent to Travel Lane</i> )
6	6	Movement Along Roadway Against Traffic ( <i>In or Adjacent to Travel Lane</i> )
7	7	Movement on Sidewalk
8	8	In Roadway-Other ( <i>Working, Playing, etc.</i> )
9	9	Adjacent to Roadway (e.g., Shoulder, Median)
10	10	Working in Trafficway ( <i>Incident Response</i> )
11	11	Entering/Exiting a Vehicle
12	12	Disabled Vehicle Related ( <i>Working on, Pushing, Leaving/Approaching</i> )
--	14	Other
15	15	None
98	98	Not Reported
99	99	Unknown

### **The SAFETYEQ Data File**

The Safetyeq data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, VEH\_NO, PER\_NO, and MSAFEQMT. CASENUM, PER\_NO and MSAFEQMT are the unique identifiers. CASENUM, VEH\_NO and PER\_NO should be used to merge the Safetyeq data file with non-motorists from the Person data file. MSAFEQMT identifies each item of safety equipment (as a separate record) and is described below:

**NM13 Non-Motorist Safety Equipment Use**

---

**Definition:** Identifies safety equipment worn or carried by the non-motorist.

**Additional Information:** For 2002-2008 it is coded for Person Type (P03) =4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Pedalcyclist), 7 (Other Cyclist), or 8 (Other or Unknown). From 2009 on it is coded for Person Type (P03)= 4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Bicyclist), 7 (Other Cyclist), 8 (Persons on Personal Conveyances), or 19 (Unknown Type of Non-Motorist).

This data element has been coded at the person level and included in Person data file (SAS data element SAF\_EQMT) since 1990. Starting in 2002 all items for a non-motorist are available in the Safetyeq data file. There can be one or more safety equipment responses for each nonmotorist.

**SAS Name:** MSAFEQMT

**Attribute Codes**

**2002- 2010-**

**2009 Later**

0	--	Not Applicable
1	1	None Used
2	--	Bicycle Helmet
--	2	Helmet
3	--	Reflective Equipment
--	3	Reflective Equipment/Clothing ( <i>Jacket, Backpack, etc.</i> )
4	--	Bicycle Helmet and Reflective Equipment
--	4	Protective Pads Used ( <i>Elbows, Knees, Shins, etc.</i> )
--	5	Lighting
8	7	Other Safety Equipment
--	8	Not Reported
9	9	Unknown if Used



**The PARKWORK Data File**

The Parkwork data file includes Vehicle data elements applicable to parked vehicles. The data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, and PJ. CASENUM and VEH\_NO are the unique identifiers. It also contains:

**C4A Number of Vehicles Involved**

---

**Definition:** The number of vehicles involved in the crash.

**Additional Information:**

**SAS Name:** PVE\_FORMS

**Attribute Codes**

*2011-Later*

1-100 Number of Vehicles

**C8 Crash Date**

---

**C8A Month of Crash**

---

**Definition:** The month in which the crash occurred.

**Additional Information:**

**SAS Name:** PMONTH

**Attribute Codes*****2011-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:** The hour at which the crash occurred.

**Additional Information:** Military time is used. Noon is coded as "12."

From 1988-2008 midnight was coded as HOUR=24 and MINUTE=0. Starting in 2009 midnight is coded as HOUR=0 and MINUTE=0. For all years, hour is coded 0 for one minute after midnight to fifty-nine minutes after midnight.

**SAS Name:** PHOUR

**Attribute Codes****2011-Later**

0-23	Hour
99	Unknown

**C9B Minute of Crash**

---

**Definition:** The minutes after the hour at which the crash occurred.

**Additional Information:**

**SAS Name:** PMINUTE

**Attribute Codes****2011-Later**

0-59	Minute
99	Unknown

## C18 First Harmful Event

---

**Definition:** Indicates the first property damaging or injury producing event in the crash.

**Additional Information:**

**SAS Name:** PHARM\_EV

### Attribute Codes

#### 2011-Later

- 1 Rollover/Overtur
- 2 Fire/Explosion
- 3 Immersion
- 4 Gas Inhalation
- 5 Fell/Jumped from Vehicle
- 6 Injured in Vehicle (*Non-Collision*)
- 7 Other Non-Collision
- 8 Pedestrian
- 9 Pedalcyclist
- 10 Railway Vehicle
- 11 Live Animal
- 12 Motor Vehicle in Transport
- 14 Parked Motor Vehicle
- 15 Non-Motorist on Personal Conveyance
- 16 Thrown or Falling Object
- 17 Boulder
- 18 Other Object (*Not Fixed*)
- 19 Building
- 20 Impact Attenuator/Crash Cushion
- 21 Bridge Pier or Support
- 23 Bridge Rail (*Includes Parapet*)
- 24 Guardrail Face
- 25 Concrete Traffic Barrier
- 26 Other Traffic Barrier
- 30 Utility Pole/Light Support
- 31 Other Post, Other Pole, or Other Support
- 32 Culvert
- 33 Curb
- 34 Ditch
- 35 Embankment
- 38 Fence
- 39 Wall
- 40 Fire Hydrant
- 41 Shrubbery
- 42 Tree (*Standing Only*)
- 43 Other Fixed Object
- 44 Pavement Surface Irregularity (*Ruts, Potholes, Grates, etc.*)

**C18 First Harmful Event (continued)**

---

**Attribute Codes****2011-Later**

- 45 Working Motor Vehicle
- 46 Traffic Signal Support
- 48 Snow Bank
- 49 Ridden Animal or Animal-Drawn Conveyance (*Since 1998*)
- 50 Bridge Overhead Structure
- 51 Jackknife (*Harmful to This Vehicle*)
- 52 Guardrail End
- 53 Mail Box
- 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 Motor Vehicle in Motion Outside the Trafficway (*Since 2008*)
- 57 Cable Barrier (*Since 2008*)
- 58 Ground
- 59 Traffic Sign Support
- 60 Cargo/Equipment Loss or Shift (*Non-Harmful*)
- 61 Equipment Failure (*Blown Tire, Brake Failure, etc.*)
- 62 Separation of Units
- 63 Ran Off Road – Right
- 64 Ran Off Road – Left
- 65 Cross Median
- 66 Downhill Runaway
- 67 Vehicle Went Airborne
- 68 Cross Centerline
- 69 Re-Entering Highway
- 70 Jackknife (*Non-Harmful*)
- 72 Cargo/Equipment Loss or Shift (*Harmful To This Vehicle*)
- 98 Not Reported
- 99 Unknown

**C19 Manner of Collision**

---

**Definition:** Indicates the orientation of the vehicles in a collision. If a non-collision, it is classified as such.

**Additional Information:**

**SAS Name:** PMAN\_COLL

**Attribute Codes****2011-Later**

- 0 Not Collision with Motor Vehicle in Transport
- 1 Front-to-Rear
- 2 Front-to-Front
- 6 Angle
- 7 Sideswipe, Same Direction
- 8 Sideswipe, Opposite Direction
- 9 Rear-to-Side
- 10 Rear-to-Rear
- 11 Other
- 98 Not Reported
- 99 Unknown

**V4 Number of Occupants**

---

**Definition:** The number of occupants of this parked/working vehicle.

**Additional Information:**

**SAS Name:** PNUMOCCS

**Attribute Codes**

<b>2005-</b>	<b>2009-</b>	
<b>2008</b>	<b>Later</b>	
0	0	None
1-998	1-95	Number of Occupants Involved
--	96	Ninety-six or More
--	97	Not Reported (2010 Only)
999	99	Unknown

**V5      Unit Type**

---

**Definition:** Indicates the type of parked/working vehicle. A parked vehicle is a motor vehicle which is stopped off the roadway, i.e., parked off the roadway.

**Additional Information:** From 2005 to 2008 working vehicles were defined as transport devices being used as equipment which would be classified under ANSI D16.1-1996 as motor vehicles, if not being used as equipment. In 2009 the definition changed to include only vehicles involved in trafficway maintenance, construction, or utility activities. Also, vehicles performing private maintenance, construction, or utility activities were excluded. For example, a tow truck using its winch for a stalled vehicle would be considered a working vehicle prior to 2009, but not after. Data users are strongly advised to consult the annual NASS GES Coding and Editing Manuals for a detailed discussion.

**SAS Name:** PTYPE

**Attribute Codes****2005-2010**

- 1 Parked Vehicle
- 2 Working Vehicle

**2011-Later**

- 1 Motor Vehicle in Transport (*Inside or Outside the Trafficway*)
- 2 Motor Vehicle Not in Transport Within the Trafficway
- 3 Motor Vehicle Not in Transport Outside the Trafficway
- 4 Working Motor Vehicle (*Highway Construction, Maintenance, Utility Only*)

**V6 Hit and Run**

---

**Definition:** 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:**

**SAS Name:** PHIT\_RUN

**Attribute Codes*****2011-Later***

- |   |              |
|---|--------------|
| 0 | No           |
| 1 | Yes          |
| 8 | Not Reported |
| 9 | Unknown      |

**V9      Vehicle Make**

---

**Definition:** A numerical code indicating the make of the parked/working vehicle.

**Additional Information:** See *Appendix A: Vehicle Make/Model Designation* for more detailed information.

**SAS Name: PMAKE**

**Attribute Codes****2005-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
- 29 Other Domestic Manufacturers
- 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

**V9      Vehicle Make    (*continued*)**

---

**Attribute Codes*****2005-Later***

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
63	Kia
64	Daewoo
65	Mini ( <i>2002-2007 Only</i> )
65	Smart ( <i>2008-Later</i> )
66	Mahindra ( <i>Since 2011</i> )
69	Other Import
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 Rio/Rio
82	Freightliner/White
82/98	White/Autocar, White/GMC
83	FWD
84	International Harvester/Navistar
85	Kenworth
86	Mack
87	Peterbilt
88	Iveco/Magirus
90	Bluebird

**V9      Vehicle Make    (*continued*)**

---

**Attribute Codes*****2005-Later***

91	Eagle Coach
92	Gillig
93	MCI
94	Thomas Built
97	Not Reported
98	Other Make
99	Unknown Make

**V10     Vehicle Model**

---

**Definition:** A numerical code indicating the model of the parked/working vehicle.

**Additional Information:**

**SAS Name:** PMODEL

**Attribute Codes**

**2005-Later**

See Appendix A: *Vehicle Make/Model Designation* for make and model codes.

**V11 Body Type**

**Definition:** The body type of the make of the parked/working vehicle.

**Additional Information:**

**SAS Name:** PBODYTYP

**Attribute Codes**

**2005- 2010-**

**2009 Later** (Exceptions indicated by “ \* ”)

**AUTOMOBILES**

1	1	Convertible ( <i>Excludes Sun-Roof, T-Bar</i> )
2	2	2-Door Sedan, Hardtop, Coupe
3	3	3-Door/2-Door Hatchback
4	4	4-Door Sedan, Hardtop
5	5	5-Door/4-Door Hatchback
6	6	Station Wagon ( <i>Excluding Van And Truck Based</i> )
7	7	Hatchback, Number Of Doors Unknown
17	17	3-Door Coupe
8	--	Other Automobile Type
--	8	Sedan/Hardtop, Number of Doors Unknown
9	--	Unknown Automobile Type
--	9	Other or Unknown Automobile Type

**AUTOMOBILE DERIVATIVES**

10	10	Auto Based Pickup ( <i>Includes El Camino, Caballero, Ranchero, SSR, G8-ST, Baha, Brat, And Rabbit Pickup</i> )
11	11	Auto Based Panel ( <i>Cargo Station Wagon, Auto-Based Ambulance/Hearse</i> )
12	12	Large Limousine ( <i>More Than Four Side Doors Or Stretched Chassis</i> )
13	13	Three Wheel Automobile Or Automobile Derivative

**UTILITY VEHICLES**

14	14	Compact Utility ( <i>ANSI D-16 Utility Vehicle Categories “Small” and “Midsize”</i> )
15	15	Large Utility ( <i>ANSI D-16 Utility Vehicle Categories “Full Size” and “Large”</i> )
16	16	Utility Station Wagon
19	19	Utility Vehicle, Unknown Body Type

**VAN-BASED LIGHT TRUCKS (< 4,536 KG GVWR)**

20	20	Minivan
21	21	Large Van – Includes Van-Based Buses
22	22	Step Van Or Walk-In Van ( $\leq 4,536 \text{ Kg GVWR}$ )
23	--	Van-Based Motor-Home
24	--	Van-Based School Bus
25	--	Van-Based Other Bus
28	28	Other Van Type
29	29	Unknown Van Type

**V11 Body Type (continued)****Attribute Codes****2005- 2010-****2009 Later** (Exceptions indicated by “ \* ”)**LIGHT CONVENTIONAL TRUCKS (PICKUP STYLE CAB, ≤4,536 KG GVWR)**

- 30 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 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 Pickup With Slide-In Camper
- 33 33 Convertible Pickup
- 39 39 Unknown (Pickup Style) Light Conventional Truck

**OTHER LIGHT TRUCKS (≤4,536 KG GVWR)**

- 40 40 Cab Chassis Based (*Included Rescue Vehicle, Light Stake, Dump, And Tow Truck*)
- 41 41 Truck Based Panel
- 45 45 Other Light Conventional Truck Type
- 48 -- Unknown Other Light Truck Type (*Utility, Van, Pickup, Or Other Light Truck*)
- 48 Unknown Light Truck Type (*Not A Pickup*)
- 49 49 Unknown Light Vehicle Type (*Automobile, Utility, Van, Or Light Truck*)

**BUSES (EXCLUDES VAN BASED)**

- 50 50 School Bus (*Designed To Carry Students, Not Cross Country Or Transit*)
- 51 Cross Country/Intercity Bus (*Motor Coach*)
- 52 Transit Bus (*City Bus*)
- 55 Van-Based Bus GVWR > 10,000 lbs. (\*Since 2011)
- 58 58 Other Bus Type (e.g., *Transit, Intercity, Bus Based Motor Home*)
- 59 59 Unknown Bus Type

**MEDIUM/HEAVY TRUCKS (>4,536 KG GVWR)**

- 60 60 Step Van
- 61 Single-Unit Straight Truck (10,000 lbs<GVWR< or =19,500 lbs) (\*2010 Only)
- 61 Single-Unit Straight Truck or Cab-Chassis (10,000 lbs<GVWR< or =19,500 lbs) (\*Since 2011)
- 62 Single-Unit Straight Truck (19,500 lbs<GVWR< or =26,000 lbs) (\*2010 Only)
- 62 Single-Unit Straight Truck or Cab-Chassis (19,500 lbs<GVWR< or =26,000 lbs) (\*Since 2011)
- 63 Single-Unit Straight Truck (GVWR>26,000 lbs) (\*2010 Only)
- 63 Single-Unit Straight Truck or Cab-Chassis (GVWR>26,000 lbs) (\*Since 2011)
- 64 -- Single Unit Straight Truck
- 64 Single Unit Straight Truck or Cab-Chassis (GVWR unknown) (\*Since 2011)
- 66 66 Truck-Tractor (Cab Only, Or With Any Number Of Trailing Units; Any Weight)
- 67 Medium/Heavy Pickup (GVWR > 10,000 lbs) (\*Since 2001)
- 68 Single-Unit Straight Truck (GVWR unknown) (\*2010 Only)

**V11 Body Type (continued)**

---

**Attribute Codes****2005- 2010-****2009 Later**

--	71	Unknown if Single-Unit or Combination-Unit Medium Truck ( $10,000 \text{ lbs} < \text{GVWR} < 26,000 \text{ lbs}$ )
--	72	Unknown if Single-Unit or Combination-Unit Heavy Truck ( $\text{GVWR} > 26,000 \text{ lbs}$ )
78	78	Unknown Medium/Heavy Truck Type
79	79	Unknown Truck Type ( <i>Light/Medium/Heavy</i> )

**MOTOR HOMES**

42	42	Light Truck Based Motor Home ( <i>Chassis Mounted</i> )
65	65	Medium/Heavy Truck-Based Motor Home
--	73	Camper or Motor Home, Unknown Truck Type

**MOTORED CYCLES, MOPEDS, ALL-TERRAIN VEHICLES**

80	80	Motorcycle
81	81	Moped ( <i>Motorized Bicycle</i> )
82	82	Three Wheeled Motorcycle Or Moped
--	83	Off-Road Motorcycle (2-Wheel)
88	88	Other Motored Cycle Type ( <i>Minibike, Motor Scooter, Pocket Motorcycles, Pocket Bikes</i> )
89	89	Unknown Motored Cycle Type
90	90	ATV ( <i>All-Terrain Vehicle; Includes 3 or 4 Wheels</i> )

**OTHER VEHICLES**

91	91	Snowmobile
92	92	Farm Equipment Other Than Trucks
93	93	Construction Equipment Other Than Trucks ( <i>Includes Graders</i> )
--	94	Low Speed Vehicle (LSV)/Neighborhood Electric Vehicle (NEV) (*Since 2011)
97	97	Other Vehicle Type ( <i>Includes Go-Cart, Fork-Lift, City Street Sweeper, Dune/Swamp Buggy, Golf Cart</i> )
--	98	Not Reported
99	99	Unknown Body Type

**V12    Vehicle Model Year**

---

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

**Additional Information:**

**SAS Name:** **PMODELYR** **2010**  
**PMODYEAR** **2011-Later**

**Attribute Codes**

<b>2005-</b>		<b>2011-</b>	
<b>2009</b>	<b>2010</b>	<b>Later</b>	
xxxx	xxxx	xxxx	Actual Model Year
--	7777	9998	Not Reported
9999	9999	9999	Unknown

**V13     Vehicle Identification Number (VIN)**

---

**Definition:** The vehicle identification number 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:** If a character of the VIN is missing or undecipherable, that character is blank. From 1988-2008 the first 11 characters of the VIN are coded; from 2009 onward the first 12 are coded.

**SAS Name:** PVIN

**Attribute Codes**

**2005-2008** (*character data type, length 11*)

**2009-Later** (*character data type, length 12*)

<b>2005-</b> <b>2008</b>	<b>2009</b>	<b>2010-</b> <b>Later</b>	
00000000000	000000000000	000000000000	No VIN
xxxxxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxxxxxxx	Actual VIN
--	--	888888888888	Not Reported
99999999999	999999999999	999999999999	Unknown VIN

**V14     Vehicle Trailing**

---

**Definition:** Indicates if the parked/working vehicle was pulling a trailing unit. A trailer unit can be a horse trailer, fifth wheel trailer, camper, boat, truck trailer, towed vehicle or any other trailer.

**Additional Information:** Prior to 2009 if linkage was non-fixed each unit was considered a separate vehicle, i.e. PTRAILER=no.

**SAS Name:** PTRAILER

**Attribute Codes**

**2005- 2009-**

**2008 Later**

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

**V16 Motor Carrier Identification Number (MCID)**

---

**Definition:** The parked/working vehicle's Carrier's ID is the unique number assigned to the Carrier by the United States Department of Commerce Commission, or the State. This number will be found only on vehicles of interstate for-hire or private carriers in the transportation business. The number can be either a US DOT number (on interstate private carriers) or an ICC MC number (interstate for-hire carriers). Collected for PBODYTYP (PV5) 50-64, 66-79 only.

**Additional Information:**

**SAS Name:** **PCARIDNO** *2005-2010*  
**PMCARR\_ID** *2011-Later*

**Attribute Codes**

<b>2005-</b>		
<b>2009</b>	<b>2010</b>	
0000000000	0000000000	Not Applicable
xxxxxxxxxx	1-999999996	U.S. DOT Number
--	999999997	Not Reported
999999999	999999999	Unknown

***2011-Later***

xxxxxxxxxxxxx 11-Character Combination of MCARR\_I1 followed by MCARR\_I2

**V16A MCID Issuing Authority**

---

**Definition:** This data element records the issuing authority if applicable to this vehicle.

**Additional Information:** This data element is only applicable for the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

**SAS Name:** **PMCARR\_I1**

**Attribute Codes****2011-Later**

00	Not Applicable
01-56	FARS State Code
57	US DOT
58	MC/MX (ICC)
77	Not Reported
88	None
95	Canada
96	Mexico
99	Unknown

**V16B MCID Identification Number**

---

**Definition:** This data element records the motor carrier identification number if applicable to this vehicle.

**Additional Information:** This data element is only applicable for the following vehicles:

- Medium/Heavy Trucks: vehicles with two axles/six tires and/or gross weight greater than 10,000 pounds.
- Buses with 16 or more seats (including the driver)
- Trucks and Vans of any size carrying hazardous cargo.
- Light commercial trucks pulling a trailer with gross combination weight rating (GCWR) greater than 10,000 pounds.

**SAS Name:** **PMCARR\_I2**

**Attribute Codes*****2011-Later***

xxxxxxxxx	Actual 9-Digit Number
000000000	Not Applicable
777777777	Not Reported
888888888	None
999999999	Unknown

**V17 Gross Vehicle Weight Rating/GCWR**

---

**Definition:** This data element identifies the gross vehicle weight rating of this vehicle when applicable.

**Additional Information:** The Gross Vehicle Weight Rating (GVWR) or Gross Combination Weight Rating (GCWR) is a value specified by the manufacturer for a single-unit truck, truck tractor, or trailer. In the absence of a gross vehicle weight rating, an estimate of the gross weight of a fully loaded unit can be substituted.

This data element is the gross vehicle weight of the Power Unit only. The weight of trailers is not added.

**SAS Name:** PGVWR

**Attribute Codes*****2011-Later***

- 0 Not Applicable
- 1 10,000 lbs or Less
- 2 10,001 lbs - 26,000 lbs
- 3 26,001 lbs or More
- 8 Not Reported
- 9 Unknown

## V18 Vehicle Configuration

---

**Definition:** This data element identifies the general configuration of this parked/working vehicle when applicable.

**Additional Information:**

**SAS Name:** PV\_CONFIG

### Attribute Codes

2010	2011- Later	
0	0	Not Applicable
1	1	Single-Unit Truck ( <i>2 axles and GVWR more than 10,000 lbs.</i> )
2	2	Single-Unit Truck ( <i>3 or More axles</i> )
4	4	Truck Pulling Trailer(s)
5	5	Truck Tractor ( <i>Bobtail, i.e., Tractor Only, No Trailer</i> )
6	6	Truck Tractor/Semi-Trailer
7	7	Truck Tractor/Double
8	8	Truck Tractor/Triple
10	10	Vehicle 10,000 lbs or Less Placarded for Hazardous Materials
19	19	Truck More than 10,000 lbs, Cannot Classify
20	20	Bus/Large Van ( <i>Seats for 9-15 Occupants, Including Driver</i> )
21	21	Bus ( <i>Seats for More Than 15 Occupants, Including Driver</i> )
97	98	Not Reported
99	99	Unknown

## V19 Cargo Body Type

---

**Definition:** This data element identifies the primary cargo carrying capability of this parked/working vehicle when applicable.

**Additional Information:** From 1992 to 2008 specific cargo body type was coded only for buses and trucks over 4,500 kg GVWR (PBODYTYP (PV5)= 60, 64, 66-79). All other vehicles were coded "Not applicable." Starting in 2009 passenger vehicles and light trucks that display a hazardous cargo placard are coded "No Cargo Body Type," as are medium/heavy trucks with no cargo carrying capability. "Not Applicable" is coded only for passenger vehicles and light trucks and vans that do not display a hazardous cargo placard. Before 2009 "Unknown" was coded for both unknown cargo body type and unknown vehicle type. Starting in 2009 "Unknown" is coded only for unknown vehicle type. See the annual Coding and Editing Manuals for more information.

**SAS Name:** PCARGTYP

### Attribute Codes

2005-		2010-	
2008	2009	Later	
0	0	0	Not Applicable
1	22	22	Bus
2	1	1	Van/Enclosed Box
3	2	2	Cargo Tank
4	3	3	Flatbed
5	4	4	Dump
6	5	5	Concrete Mixer
7	6	6	Auto Transporter
8	7	7	Garbage/Refuse
--	8	8	Grain/Chips/Gravel
--	9	9	Pole-Trailer
--	10	10	Log
--	11	11	Intermodal Container Chassis
--	12	12	Vehicle Towing Another Vehicle
--	--	28	Not Reported
--	96	96	No Cargo Body
98	97	97	Other
--	98	98	Unknown Cargo Body Type
99	99	99	Unknown

**V20A/HM1 Hazardous Materials Involvement**

---

**Definition:** Indicates whether the vehicle was carrying hazardous materials.

**Additional Information:**

**SAS Name:** PHAZ\_INV

**Attribute Codes**

*2009-Later*

- |   |     |
|---|-----|
| 1 | No  |
| 2 | Yes |

**V20B/HM2 Hazardous Materials Placard**

---

**Definition:** Indicates the presence of hazardous materials and whether the vehicle displayed a hazardous materials placard.

**Additional Information:** Prior to 2009 Yes and No were coded only for buses and trucks over 4,500 kg GVWR (PBODYTYP (PV5)= 60, 64, 66-79). Starting in 2009 body type was not a factor in coding this data element. See the annual Coding and Editing Manuals for more information. From 2005-2008 the data element name was "Parked/Working Vehicle Hazardous Materials Placarded."

**SAS Name:** PHAZ\_MAT *2005-2008*  
PHAZPLAC *2009-Later*

**Attribute Codes**

*2005- 2009-*

*2008 Later*

- |    |    |                |
|----|----|----------------|
| 0  | 0  | Not Applicable |
| 2  | 1  | No             |
| 1  | 2  | Yes            |
| -- | 8  | Not Reported   |
| 9  | -- | Unknown        |

**V20C/HM3 Hazardous Material Identification Number**

---

**Definition:**

**Additional Information:** Prior to 2009 placard numbers were coded only for buses and trucks over 4,500 kg GVWR (PBODYTYP (PV5)= 60, 64, 66-79). Other vehicles were coded "Not Applicable," or "Unknown" if body type was unknown. Starting in 2009 body type was not a factor in coding this data element. From 2005-2008 the data element name was "Parked/Working Vehicle Hazardous Materials Placard Number." See the annual Coding and Editing Manuals for more information.

**SAS Name:** **PHAZM\_NO** *2005-2008*  
**PHAZ\_ID** *2009-Later*

**Attribute Codes**

**2005-** **2009-**  
**2008** **Later**

0	0	Not Applicable
xxxx	xxxx	Actual 4-Digit Number
--	8888	Not Reported
9999	--	Unknown

**V20D/HM4 Hazardous Material Class Number**

---

**Definition:** Indicates the single digit hazardous material class number for the vehicle.

**Additional Information:** This data element was added in 2009 and is coded for all vehicles.

**SAS Name:** **PHAZ\_CNO**

**Attribute Codes**

**2009-Later**

0	Not Applicable
1	Explosives
2	Gases
3	Flammable / Combustible Liquid
4	Flammable Solid, Spontaneously Combustible, and Dangerous When Wet
5	Oxidizer and Organic Peroxide
6	Poison and Poison Inhalation Hazard
7	Radioactive
8	Corrosive
9	Miscellaneous
88	Not Reported

**V20E/HM5      Release of Hazardous Material from the Cargo Compartment**

---

**Definition:** Indicates whether or not any hazardous cargo was released from the parked/working vehicle cargo tank or compartment.

**Additional Information:** Prior to 2009 Yes and No were coded only for buses and trucks over 4,500 kg GVWR (PBODYTYP (PV5)= 60, 64, 66-79 only). Other vehicles were coded Not Applicable, or Unknown if body type was unknown. Starting in 2009 body type is not a factor in coding this data element. Prior to 2009 the data element name was "Parked/Working Vehicle Hazardous Materials Release."

**SAS Name:** **PHAZMA\_R** *2005-2008*  
**PHAZ\_REL** *2009-Later*

**Attribute Codes**

**2005- 2009-**

**2008 Later**

0	0	Not Applicable
2	1	No
1	2	Yes
--	8	Not Reported
9	--	Unknown

**V21 Bus Use**

---

**Definition:** This data element describes the common type of bus service this vehicle was being used as at the time of the crash.

**Additional Information:**

**SAS Name:** PBUS\_USE

**Attribute Codes****2011-Later**

- |    |                                   |
|----|-----------------------------------|
| 0  | Not a Bus                         |
| 1  | School                            |
| 4  | Intercity                         |
| 5  | Charter/Tour                      |
| 6  | Transit/Commuter                  |
| 7  | Shuttle                           |
| 8  | Modified for Personal/Private Use |
| 98 | Not Reported                      |
| 99 | Unknown                           |

**V22 Special Use**

**Definition:** Indicates whether the parked/working vehicle has a special use. Special use means "in use" and not necessarily emergency use.

**Additional Information:** All military vehicles are classified as "4" even if they are police, ambulance, or fire trucks. The Remarks and Attribute descriptions changed considerably in the 2009 Coding and Editing Manual. The analyst should compare the 2008 and 2009 NASS GES Coding and Editing Manuals for more detailed information.

**SAS Name:** PSP\_USE

**Attribute Codes**

2005-			2011-	
2008	2009	2010	Later	
0	0	0	0	No Special Use
1	1	1	1	Taxi
2	2	2	2	Vehicle Used as School Bus
3	3	3	3	Vehicle Used as Other Bus
4	4	4	4	Military
5	5	5	5	Police
6	6	6	6	Ambulance
7	--	7	7	Fire truck
--	7	--	--	Fire Truck and Car
8	--	--	--	Other ( <i>Farm or Construction Equip., etc.</i> )
--	--	8	8	Emergency Services Vehicle
--	10	--	--	Hearse
--	11	--	--	Farm Equipment
--	12	--	--	Construction Equipment
--	--	77	98	Not Reported
9	99	99	99	Unknown

**V23 Emergency Use**

---

**Definition:** Indicates whether a Special Use (PV08) parked/working vehicle is on an emergency run.

**Additional Information:** From 1988-2008 this includes military, police, ambulance, and fire vehicles. In 2009 it also includes emergency services vehicles. Value "0" is coded if the vehicle was not on an emergency run or it was not one of the applicable vehicles.

**SAS Name:** **PEM\_USE**

**Attribute Codes**

<b>2005-</b> <b>2009</b>	<b>2010</b>	<b>2011- Later</b>	
0	--	--	No Emergency Use or Not an Applicable Vehicle
--	0	0	No
1	1	1	Yes
--	7	8	Not Reported
9	9	9	Unknown

**V28 Area of Impact- Initial/Most Damaged**

---

**V28A Initial Point of Impact**

---

**Definition:** The first impact point for the parked/working vehicle that produced property damage or personal injury.

**Additional Information:**

**SAS Name:** **PIMPACT**    **2005-2009**  
**PIMPACT1**    **2010-Later**

**Attribute Codes****2005-2009**

- |    |                                 |
|----|---------------------------------|
| 1  | Front                           |
| 2  | Right Side                      |
| 3  | Left Side                       |
| 4  | Back                            |
| 5  | Top                             |
| 6  | Undercarriage                   |
| 11 | Front Right Corner              |
| 12 | Front Left Corner               |
| 13 | Back Right Corner               |
| 14 | Back Left Corner                |
| 99 | Initial Point of Impact Unknown |

**2010**              **2011-Later**

- |       |      |                                   |
|-------|------|-----------------------------------|
| 0     | 0    | Non-Collision                     |
| 21-32 | 1-12 | Clock points                      |
| 33    | 13   | Top                               |
| 34    | 14   | Undercarriage                     |
| 38    | 18   | Set-in-Motion (Not a Clock Point) |
| 61    | 61   | Left                              |
| 62    | 62   | Left-Front Half                   |
| 63    | 63   | Left-Back Half                    |
| 81    | 81   | Right                             |
| 82    | 82   | Right-Front Half                  |
| 83    | 83   | Right-Back Half                   |
| 97    | 98   | Not Reported                      |
| 99    | 99   | Unknown                           |

**V28B Area of Impact- Most Damaged**

---

**Definition:** This data element identifies the area on the parked/working vehicle that was most damaged during an event it underwent in the crash.

**Additional Information:** The striking vehicle, not the vehicle struck, determines the underride/override condition. After the crash, in the case of an override or underride one vehicle is over the other. If the striking vehicle is over the other, then the crash is an override. If the striking vehicle is under the other, the crash is an underride.

**SAS Name:** PIMPACT2

**Attribute Codes**

<b>2010</b>	<b>2011- Later</b>	
0	0	Non-Collision
21-32	1-12	Clock points
33	13	Top
34	14	Undercarriage
38	18	Set-in-Motion (Not a Clock Point)
61	61	Left
62	62	Left-Front Half
63	63	Left-Back Half
81	81	Right
82	82	Right-Front Half
83	83	Right-Back Half
97	98	Not Reported
99	99	Unknown

**V29 Extent of Damage**

---

**Definition:** Reports the severity of the parked/working vehicle damage.

**Additional Information:**

**SAS Name:** PVEH\_SEV

**Attribute Codes**

**2005-**

**2008**

0	None
1	Minor ( <i>And Not Towed Due To Damage</i> )
2	Moderate
3	Severe
9	Unknown

			<b>2011-</b>
<b>2009</b>	<b>2010</b>	<b>Later</b>	
0	0	0	No Damage
2	2	2	Minor Damage
4	4	4	Functional Damage
6	6	6	Disabling Damage
--	7	8	Not Reported
9	9	9	Unknown

**V30     Vehicle Removal**

---

**Definition:** Indicates the disposition of the vehicle at the crash scene.

**Additional Information:** Prior to 2009 only the power unit of an articulated combination was considered, i.e. if only the trailing unit was towed then PTOWED=Driven. Starting in 2009 the disposal status of the trailing unit is also considered.

**SAS Name:** **PTOWED**

**Attribute Codes**

<b>2005- 2009</b>	<b>2010</b>	<b>2011- Later</b>	
1	1	1	Driven Away
2	2	2	Towed Due to Disabling Damage
3	3	3	Towed Not Due to Disabling Damage
4	4	4	Abandoned/Left at Scene
--	7	8	Not Reported
9	9	9	Unknown

**V32 Most Harmful Event**

---

**Definition:** This data element identifies the event that resulted in the most severe injury or, if no injury, the greatest property damage involving this motor vehicle.

**Additional Information:****SAS Name:** PM\_HARM**Attribute Codes****2011-Later****NONCOLLISION**

- 1 Rollover/Overturn
- 2 Fire/Explosion
- 3 Immersion
- 4 Gas Inhalation
- 5 Fell/Jumped from Vehicle
- 6 Injured in Vehicle (*Non-Collision*)
- 7 Other Noncollision
- 16 Thrown or Falling Object
- 44 Pavement Surface Irregularity (*Ruts, Potholes, Grates, etc.*)
- 51 Jackknife (*Harmful to This Vehicle*)
- 72 Cargo/Equipment Loss or Shift (*Harmful to This Vehicle*)

**COLLISION WITH OBJECT NOT FIXED**

- 8 Pedestrian
- 9 Pedalcyclist
- 10 Railway Vehicle
- 11 Live Animal
- 14 Parked Motor Vehicle
- 15 Non-Motorist on Personal Conveyance
- 18 Other Object Not Fixed
- 45 Working Motor Vehicle
- 49 Ridden Animal or Animal Drawn Conveyance

**COLLISION WITH FIXED OBJECT**

- 17 Boulder
- 19 Building
- 20 Impact Attenuator/Crash Cushion
- 21 Bridge Pier or Support
- 23 Bridge Rail (*Includes Parapet*)
- 24 Guardrail Face
- 25 Concrete Traffic Barrier
- 26 Other Traffic Barrier
- 30 Utility Pole/Light Support
- 31 Other Post, Other Pole or Other Supports
- 32 Culvert
- 33 Curb
- 34 Ditch

**V32 Most Harmful Event (continued)**

---

**Attribute Codes****2011-Later**

- 35 Embankment
- 38 Fence
- 39 Wall
- 40 Fire Hydrant
- 41 Shrubbery
- 42 Tree (*Standing Only*)
- 43 Other Fixed Object
- 46 Traffic Signal Support
- 48 Snow Bank
- 50 Bridge Overhead Structure
- 52 Guardrail End
- 53 Mail Box
- 57 Cable Barrier
- 58 Ground
- 59 Traffic Sign Support

***COLLISION WITH MOTOR VEHICLE IN TRANSPORT***

- 12 Motor Vehicle In-Transport
- 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 Motor Vehicle in Motion Outside the Trafficway

***NOT REPORTED AND UNKNOWN***

- 99 Unknown

**V34 Fire Occurrence**

---

**Definition:** Indicates whether or not a parked/working vehicle sustained fire damage.

**SAS Name:** PFIRE

**Attribute Codes****2005-2008**

- 0 No Fire Noted on PAR
- 1 Fire Occurred in Parked/Working Vehicle

**2009-Later**

- 0 No or Not Reported
- 1 Yes

## Discontinued PARKWORK Data Elements

### **Number of Occupants Coded (discontinued)**

---

**Definition:** The number of occupants coded for this parked/working vehicle.

**Additional Information:** The number of persons coded and the number persons involved are not always the same because, for example, some PARs have information only for injured occupants.

**SAS Name:** **POCCINVL**

#### **Attribute Codes**

##### **2005-2010**

x Number of Occupants Coded

**Number of Axles, Including Trailers (discontinued)**

---

**Definition:** Coded for parked/working buses and trucks over 4,500 kg GVWR Collected for PBODYTYP (V5) 50-64, 66-79 only.)

**Additional Information:** This data element was deleted in 2009.

**SAS Name:** PAXLES

**Attribute Codes****2005-2008**

- |      |                 |
|------|-----------------|
| 0    | Not Applicable  |
| 2-20 | Number of Axles |
| 99   | Unknown         |

**Rollover (discontinued)**

---

**Definition:** Indicates if a rollover occurred (tripped or untripped) for the parked/working vehicle. Rollover is defined as any vehicle rotation of 90 degrees or more about any true longitudinal or lateral axis. Rollover can occur at any time during the crash.

**Additional Information:****SAS Name:** PROLLOVR**Attribute Codes**

**2005- 2009-**  
**2008 2010**

0	0	No Rollover
--	1	Rollover, Tripped By Object/Vehicle
20	--	Tripped Rollover-By Curb
21	--	Tripped Rollover-By Guardrail
22	--	Tripped Rollover-By Ditch
23	--	Tripped Rollover-By Soft Soil
28	--	Tripped Rollover-Other
29	--	Tripped Rollover-Unknown Mechanism
10	2	Rollover, Untripped
99	9	Rollover, Unknown Type

**Location of Rollover (discontinued)**

---

**Definition:** Identifies the location of the start, or trip point, of the vehicle's roll.

**Additional Information:**

**SAS Name:** PROLINLOC

**Attribute Codes****2009-2010**

- 0 No Rollover
- 1 On Roadway
- 2 On Shoulder
- 3 On Median/Separator
- 4 In Gore
- 5 On Roadside
- 6 Outside of Trafficway
- 9 Unknown

**Vehicle Location (discontinued)**

---

**Definition:** This data element identifies the attribute which best describes the location of the parked/working vehicle.

**Additional Information:** This data element was discontinued in 2011. However, the location of a parked/working vehicle involved in the first harmful event can still be found in Accident.REL\_ROAD.

**SAS Name:** PREL\_RWY

**Attribute Codes**

**2005-**

**2009    2010**

1	1	On Roadway
2	2	On Shoulder
3	3	On Median
4	4	On Roadside
5	5	Outside Trafficway
6	6	Off Roadway, Location Unknown
7	7	In Parking Lane
8	8	Gore
9	9	Continuous Left Turn Lane
10	10	Separator
--	97	Not Reported
99	99	Unknown



**The NMACTION Data File**

The Nmaction data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, PER\_NO, and MACTION. CASENUM, PER\_NO and MACTION are the unique identifiers. CASENUM and PER\_NO should be used to merge the Impair data file with non-motorists from the Person data file.

This data file was discontinued in 2010 and replaced with two files: Nmprior and Nmcrash.

**Non-Motorist Action (discontinued)**

---

**Definition:** Identifies non-motorist actions that may have contributed to the cause of the crash.

**Additional Information:** For 2002-2008 it is coded for Person Type (P03) =4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Pedalcyclist), 7 (Other Cyclist), or 8 (Other or Unknown). From 2009 on it is coded for Person Type (P03)= 4 (Occupant of a Non-Motor Vehicle Transport Device), 5 (Pedestrian), 6 (Bicyclist), 7 (Other Cyclist), 8 (Persons on Personal Conveyances), or 19 (Unknown Type of Non-Motorist).

This data element has been coded at the person level and included in Person data file (SAS data element ACTION) since 1990. Starting in 2002 all actions for a non-motorist are available in the Nmaction data file.

This data element was replaced in 2010 with *P25 Non-Motorist Action/Circumstances Prior to Crash* and *P26 Non-Motorist Action/Circumstances at Time of Crash*.

**SAS Name: MACTION****Attribute Codes****2002-2009**

0 No Action

**NON-MOTORIST VEHICLE OPERATOR:**

- 1 Failing to Have Lights on When Required
- 2 Operating without Required Equipment
- 3 Improper or Erratic Lane Changing
- 4 Failure to Keep in Proper Lane or Running Off Road
- 5 Making Improper Entry to or Exit from Trafficway
- 6 Operating the Vehicle in Erratic, Reckless, Negligent Manner
- 7 Failure to Yield Right of Way
- 8 Failure to Obey Traffic Signs/Control Devices/Officers, Failure to Observe Safety Zone
- 9 Making Other Improper Turn
- 10 Driving on Wrong Side of Road

**OTHER NON-MOTORIST:**

- 21 Darting or Running into Road
- 22 Improper Crossing of Roadway or Intersection (*Jaywalking*)
- 24 Inattentive (*Talking, Eating, etc.*)
- 25 Jogging
- 26 Non-Motorist Pushing Vehicle
- 27 Walking with Traffic
- 28 Walking Against Traffic
- 29 Playing, Working, Sitting, Lying, Standing, Etc. In Roadway
- 98 Other Action
- 99 Unknown Action

### **The TRAFCON Data File**

The Trafcon data file includes the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and VEH\_NO. CASENUM, VEH\_NO and MTRAFCON are the unique identifiers. CASENUM and VEH\_NO should be used to merge the Trafcon data file with the Vehicle data file. MTRAFCON identifies each traffic control device for motor vehicles (as a separate record).

This data file was discontinued in 2010.

**Traffic Control Device – Vehicles (discontinued)**

---

**Definition:** Indicates whether or not traffic control devices were present for a motor vehicle and the type of traffic control device.

**Additional Information:** This data element has been coded at the Accident level and included in Accident data file (SAS data element TRAF\_CON) since 1988. Starting in 2002 each traffic control device for a vehicle is in the Trafcon data file and each traffic control device for a cyclist is in the Biketraf data file. Also starting in 2002 a single, selected, traffic control device for a vehicle is available on the Vehicle data file (SAS data element VTRAFCON).

This data file was discontinued in 2010. The data element is still coded on the Vehicle level, and the information is available in the Accident and Vehicle SAS data files.

**SAS Name:** MTRAFCON

**Attribute Codes****2002-2009**

0 No Controls

**NOT AT RAILROAD GRADE CROSSING***TRAFFICWAY TRAFFIC SIGNALS:*

- 1 Traffic Control Signal (*On Colors*)
- 4 Flashing Traffic Control Signal or Flashing Beacon
- 8 Other Traffic Signal
- 9 Unknown Traffic Signal

*REGULATORY, SCHOOL ZONE SIGNS:*

- 21 Stop Sign
- 22 Yield Sign
- 23 School Zone Related Sign
- 28 Other Sign
- 29 Unknown Sign

*WARNING SIGNS:*

- 40 Advisory Speed Sign
- 41 Warning Sign For Road Conditions (*Hill, Steep Grade, etc.*)
- 42 Warning Sign For Road Construction
- 43 Warning Sign For Environment/Traffic (*Fog Ahead, Wind, Crash Ahead, etc.*)
- 49 Unknown Type Warning

*MISCELLANEOUS, NOT AT RAILROAD CROSSING:*

- 51 Officer, Crossing Guard, Flagman, etc

**AT RAILROAD GRADE CROSSING:**

- 61 Active Devices (*e.g., Gates, Flashing Lights, Traffic Signal*)
- 62 Passive Devices (*e.g., Stop Sign, Cross Bucks*)

**OTHER:**

- 97 Traffic Control Present-No Details
- 98 Other Traffic Control (*Whether Or Not At RR Grade Crossing*)
- 99 Unknown

**The BIKETRAF Data File**

The Biketraf data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, PJ, and PER\_NO. CASENUM, PER\_NO and BTRAFCON are the unique identifiers. CASENUM and PER\_NO should be used to merge the Biketraf data file with cyclists in the Person data file (PER\_TYPE=6). BTRAFCON identifies each traffic control device for cyclists (as a separate record) and is described below:

This data file was discontinued in 2011.

**Traffic Control Device – Cyclist (discontinued)**

**Definition:** Indicates whether or not traffic control devices were present for a cyclist and the types of traffic control device.

**Additional Information:** This data element has been coded at the Accident level and included in the Accident data file (SAS data element TRAF\_CON) since 1988. Starting in 2002 each traffic control device for a vehicle is in the Trafcon data file and each traffic control device for a cyclist is in the Biketraf data file. Also starting in 2002 a single, selected, traffic control device for a vehicle is available on the Vehicle data file (SAS data element VTRAFCON).

**SAS Name:** BTRAFCON

**Attribute Codes**

**2002- 2010-**

**2009 Later**

0 0 No Controls

**NOT AT RAILROAD GRADE CROSSING***TRAFFICWAY TRAFFIC SIGNALS:*

1	--	Traffic Control Signal ( <i>On Colors</i> )
--	1	Traffic Control Signal ( <i>On Colors</i> ) Without Pedestrian Signal
--	2	Traffic Control ( <i>On Colors</i> ) With Pedestrian Signal
--	3	Traffic Control Signal ( <i>On Colors</i> ) Not Known if Pedestrian Signal
4	--	Flashing Traffic Control Signal or Flashing Beacon
--	4	Flashing Traffic Control Signal
8	8	Other Highway Traffic Signal
9	9	Unknown Highway Traffic Signal

*REGULATORY, SCHOOL ZONE SIGNS:*

21	21	Stop Sign
22	22	Yield Sign
23	23	School Zone Sign/Device
28	28	Other Regulatory Sign
29	29	Unknown Regulatory Sign
--	5	Land Use Control Signal

*WARNING SIGNS:*

40	--	Advisory Speed Sign
41	--	Warning Sign For Road Conditions ( <i>Hill, Steep Grade, etc.</i> )
42	--	Warning Sign For Road Construction
43	--	Warning Sign For Environment/Traffic ( <i>Fog Ahead, Wind, Crash Ahead, etc.</i> )
--	44	Warning Sign
49	--	Unknown Type Warning

*MISCELLANEOUS, NOT AT RAILROAD CROSSING:*

51	--	Officer, Crossing Guard, Flagman, etc
--	51	Person

**Traffic Control Device – Cyclist (continued)**

---

**AT RAILROAD GRADE CROSSING:**

61 -- Active Devices (e.g., Gates, Flashing Lights, Traffic Signal)  
62 -- Passive Devices (e.g., Stop Sign, Cross Bucks)  
-- 63 Railway Crossing Device

**OTHER:**

97 -- Traffic Control Present-No Details  
-- 97 Not Reported  
98 -- Other Traffic Control (*Whether or Not At RR Grade Crossing*)  
-- 98 Other  
99 99 Unknown

**The PARKEVNT Data File**

The Parkevnt data file contains the data elements CASENUM, PSU, STRATUM, REGION, WEIGHT, and PJ. It also contains the data elements listed below. CASENUM is used to merge with crashes in the Accident data file. To merge with the Event data file, use CASENUM and EVENTNUM. To merge with the Person data file, use CASENUM and PVEHNO.

This data file was discontinued in 2011.

**Parked/Working Vehicle Number (discontinued)**

---

**Definition:** The identification number assigned to the parked/working vehicle.

**Additional Information:**

**SAS Name:** PVEHNO

**Attribute Codes**

**2005-Later**

1-30 Parked/Working Vehicle Number

**Parked/Working Vehicle Event Number (discontinued)**

---

**Definition:** The number of the event that the parked/working vehicle was involved in.

**Additional Information:** The Event and Parkevnt data files can be merged by CASENUM and EVENTNUM to get a listing of all events in which parked/working vehicles were involved. This listing can identify the specific vehicles involved (in-transport and parked/working) along with the general area of damage for both types of vehicle.

**SAS Name:** EVENTNUM

**Attribute Codes*****2005-Later***

- Event Number that the parked/working vehicle was involved in

**Parked/Working Vehicle Point of Impact (discontinued)**

---

**Definition:** Indicates the impact point that produced property damage or personal injury for the parked/working vehicle involved in the event.

**Additional Information:****SAS Name: PGAD****Attribute Codes****2005-2009**

- |    |                         |
|----|-------------------------|
| 1  | Front                   |
| 2  | Right Side              |
| 3  | Left Side               |
| 4  | Back                    |
| 5  | Top                     |
| 6  | Undercarriage           |
| 11 | Front Right Corner      |
| 12 | Front Left Corner       |
| 13 | Back Right Corner       |
| 14 | Back Left Corner        |
| 99 | Point of Impact Unknown |

**2010-Later**

- |       |                  |
|-------|------------------|
| 21-32 | Clock Points     |
| 33    | Top              |
| 34    | Undercarriage    |
| 61    | Left             |
| 62    | Left-Front Half  |
| 63    | Left-Back Half   |
| 81    | Right            |
| 82    | Right-Front Half |
| 83    | Right-Back Half  |
| 97    | Not Reported     |
| 99    | Unknown          |

**Appendices**

*Appendix A: Vehicle Make/Model Designation*

*Appendix B: V23 Accident Type Diagram*

*Appendix C: Summary Statistics*

*Appendix D: Statistical Methods*

*Appendix E: Analytical Data Classification of Select NASS GES Data Element*

*Appendix F: Rules for Derived Data Elements*

*Appendix G: Summary of the 2010 NASS GES Changes*

*Appendix H: 2011 Changes to Locator Codes*

*Appendix I: Pedestrian and Bicyclist Data Availability Change*

**Appendix A:  
Vehicle Make/Model Designation**

**NOTE:** This appendix of the 2011 NASS GES Analytical User's Manual has been revised as of July 22, 2013. Updates and corrections have been made to the Vehicle Make/Model/Model year values. During the FARS/NASS GES Data Standardization process for 2011, GES vehicle models and their associated codes were changed to match the FARS vehicle models and codes. This change was implemented for GES data collection in 2011 when the data entry systems were consolidated and these changes are reflected in this version of the manual. For historical GES models and codes prior to 2011, you must refer to the [2010 NASS GES Analytical User Manual](#). Additionally, the applicable model years for vehicles have been updated in this version to match the ranges in the FARS Coding and Validation Manual.

**PASSENGER CARS**

<b>Acura</b>		<b>(54)</b>	<b>(ACUR)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>AUTOMOBILES</i></b>				
031	Integra	GS, LS, RS, GS-R, Type R	1986-2001, 9999	03-05,07,09
032	Legend	L, LS, GS, Special Edition, GS-R	1986-95,9999	02,04,08-09
033	NSX	NSX-T	1991-2005, 2011, 9999	02
034	Vigor		1992-94,9999	04
035	TL	3.2, 3.7, SH-AWD	1996-2011, 9999	04
036	RL	3.5, 3.7	1996-2011, 9999	04
037	CL	2.2, 2.3, 3.0, 3.2, Type S	1997-2003, 9999	02
038	RSX	2.0, Type S	2002-06,9999	03
039	TSX	2.4, 3.5, Hybrid	2004-11,9999	04, 06, 09
040	ZDX	3.7, SH-AWD	2010-11,9999	05
398	Other (automobile)		1986-2011, 9999	02-05,07-09
399	Unknown (automobile)		1986-2011, 9999	02-05,07-09
<b><i>LIGHT TRUCKS</i></b>				
401	SLX		1996-2000, 9999	14
402	RDX	2.3, SH-AWD	2007-11,9999	14
421	MDX		2001-11,9999	15
499	Unknown (light truck)		1996-2011, 9999	19
999	Unknown (ACURA)		1986-2011, 9999	49

<b>Alfa Romeo</b>		<b>(31)</b>	<b>(ALFA)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Spider (Spyder)	Roadsters, Veloce, Quadrifoglio, Duetto, Graduate, 1600/1750/1900/2000 roadsters, Giulia, Giulietta, Giulietta Veloce, Tipo	1933-94,9999	01-02,09
032	Sports Sedan	4-door sedans (except 164); Milano, Giulietta, Super, Berlina, Alfetta, Giulia 1750/1900/2000/2600 sedans, Alpha 90	1933-89,9999	04
033	Sprint/Special	2-door coupes; Alfetta GT, Monteal, 1750/1900/2000/ 2600 GTV, Sprint GT, GT Veloce, Giulia, Giulietta, Super, GTA, GTV, GTZ, TZ2	1933-80,9999	02
034	GTV-6		1981-86,9999	02
035	164 (Alpha 164)	LS, Q, Quadrifoglio	1990-95,9999	04
036	8c	Competizione, Spyder	2009-11,9999	01,03,09
398	Other (automobile)	Alfa, Montreal	1933-95, 2009-11,9999	01-04,08-09
399	Unknown (automobile)		1933-95, 2009-11,9999	01-04,08-09

<b>AM General</b>		<b>(03)</b>	<b>(AMGN)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
401	Dispatcher	Post Office (Jeep)	1965-94,9999	14
402	Hummer	H3 (Base, Luxury, Adventure, Limited Edition), x, Alpha	2006-11,9999	14
421	Hummer (SUV from 1993-2003; see 431 for 2004 on) (for Pickup, see model 481)	Slantback-HMSB, H1, H2	1993-2003, 9999	15
431	Hummer (2004 on; see model 421 for 1993-2003)	H1 (Base, Luxury, Adventure), H2 (Base, Luxury, Adventure), Limousine	2004-11,9999	16
466	Dispatcher	DJ-series-Post Office Van	1965-91,9999	22
481	Hummer (Pickup) (for SUV see model 421 for 1993-2003; see 431 for 2004 on)	H1, H2 (Base, Luxury, Adventure, Limited Edition), Alpha	2002-11,9999	31
482	Hummer	H3T (Adventure, Luxury, Alpha)	2009-11,9999	31
498	Other (light truck)		1940-2011, 9999	14-16,19,22, 31-33,39-42, 45, 48
499	Unknown (light truck)		1940-2011, 9999	14-16,19,22, 31-33,39-42, 45, 48-49
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
884	Medium/Heavy Truck	Military off-road	1965-2011, 9999	60-64,71-72, 78
898	Other (medium/heavy truck)		1965-94,9999	60-64,71-72, 78
<b><u>BUSES</u></b>				
983	Bus: Rear engine, Flat front	Transit	1965-94,9999	52
988	Other (bus)		1965-94,9999	50-52,58-59
989	Unknown Bus Type		1965-94,9999	50-52,58-59
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1965-94,9999	91-93,97
999	Unknown (AM GENERAL)		1965-2011, 9999	49,79,99

<b>American Motors</b>		<b>(01)</b>	<b>(AMER)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
001	Rambler American	Rogue, 220, 330, 440, 440-H, Scrambler Deluxe, Custom, Super, Classic, Brougham, SC	1954-69,9999	01-02,04,06, 08-09
002	Rebel	Mariner, Briarcliff, Westerner, The Machine, SST, 550, Grant, King	1967-70,9999	01-02,04,06, 08-09
002	Matador	Brougham, X, Oleg Cassini, Barcelona, Police, The Machine	1971-78,9999	02,04,06, 08-09
002	Marlin	Black, Radar, Tahiti, Marlin II	1965-67,9999	02,08-09
003	Ambassador	800, 880, 990, SST, DPL, Brougham, DDL, Limited	1958-74,9999	02,04,06, 08-09
004	Pacer	D/L, X, Limited	1975-80,9999	02-03,06,09
005	AMX	(2-seater only)	1968-70,9999	02-03,09
006	Javelin	SST, AMX (1971-1974)	1968-74,9999	02-03,09
007	Hornet	SST, Sportabout, AMX D/L, SC-360, Gucci Edition, Levi Trim Package, X	1970-77,9999	02-04,06, 08-09
007	Concord	AMX Limited, D/L, Levi Trim, Sport, Base, Sundancer	1978-83,9999	01-04,06, 08-09
008	Gremlin	Base, X, Levi Trim, GT, AMX	1970-78,9999	03,09
008	Spirit	GT, AMX, D/L, SST	1979-83,9999	02-03,09
009	Eagle	Sport, Series 30, Sundancer, Limited	1980-88,9999	01-04,06, 08-09
010	Eagle SX-4	50 Series, Kammback, Sport	1981-84,9999	02-03,09
398	Other (automobile)		1940-88,9999	01-04,06, 08-09
399	Unknown (automobile)		1940-88,9999	01-04,06, 08-09

<b>Audi</b>		<b>(32)</b>	<b>(AUDI)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Super 90		1966-72,9999	02,04,06, 08-09
032	100	S, CS, LS, GL, Quattro (1989-on)	1970-77; 1989-94,9999	02,04,06, 08-09
033	Fox		1973-79,9999	02,04,06, 08-09
034	4000	Quattro, Coupe, Coupe GT, CS, S	1980-93,9999	02,04,08-09
035	5000	Quattro, CS, S, CS Turbo Quattro, T	1978-93,9999	04,06,09
036	80/90	Quattro, Coupe Quattro	1988-95,9999	04
037	200	Turbo Quattro	1989-92,9999	04,06,09
038	V-8 Quattro	100 series	1990-94,9999	04
039	Coupe Quattro	4000 series	1990-91,9999	02-03,09
040	S4/S6	Quattro, Avant Quattro (Wagon), 3.0, 4.2 Saloon, Avant (2.7), RS4, Special Edition, V10, 5.6, 5.2	1992-95; 2000-11,9999	01,04,06,09
041	Cabriolet (1994-1998)		1994-98,9999	01
042	A6	Avant Quattro Wagon (3.0L, 3.0T), Quattro (2.7T, 4.2), FrontTrak (2.8, 3.0L), RS6, 3.2, S Line, 3.0T, (Premium, Premium Plus, Prestige)	1995-2011, 9999	04,06,09
043	A4	Avant Wagon (1.8T, 2.0T, 2.8, 3.0, 3.2), Avant Quattro Wagon, FrontTrak (1.8, 2.8, 3.0), Quattro (1.8T, 2.0T, 3.0, 3.2), Special Edition, S Line, (Premium, Premium Plus, Prestige)	1996-2011, 9999	01,04,06,09
044	A8	4.2 Quattro, L, W12	1997-2011 9999	04
045	TT/TTS	FWD, Quattro AWD, 180, 225 Quattro Roadster, FrontTrak (180), 1.8L, 2.0, 3.2L, S Line, RS (Premium, Premium Plus, Prestige)	2000-11,9999	01-03, 09
046	S8	4.2 Quattro, 5.2	2001-03; 2007-09, 9999	02,04,09
047	Allroad	QuattroWagon, 2.7T, 4.2	2001-05,9999	06
048	A3	2.0T/FSI, 3.2 S Line (Premium, Premium Plus), TDI	2006-11,9999	05
049	A5	2.0, 2.0T, 3.2, (Premium, Premium Plus, Prestige)	2008-11,9999	01-02,09
050	R8	4.2, 5.2, Spyder	2008-11,9999	01,02,09
051	A7		2008-10,9999	04
052	S5	4.2, 3.0 (Premium Plus, Prestige)	2008-11,9999	01,02,09

<b>Audi (continued)</b>		<b>(32)</b>	<b>(AUDI)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES (continued)</u></b>				
053	A2		2009	05
054	RS5		2010	02
398	Other (automobile)		1970-2011, 9999	01-06,08-09
399	Unknown (automobile)		1970-2011, 9999	01-06,08-09
<b><u>LIGHT TRUCKS</u></b>				
401	Q7	3.6/4.2 Premium, Hybrid, 3.0T, TDI, S Line, Premium Plus, Prestige	2007-11,9999	14
402	Q5	2.0T, 3.2, Premium, Premium Plus, Prestige	2008-11,9999	14
403	Q3	S Line	2012-13,9999	14
499	Unknown (light truck)		2007-12,9999	14
999	Unknown (AUDI)		1966-2012, 9999	49, 99

<b>Austin/Austin Healey</b>		<b>(33)</b>	<b>(AUST)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Marina	GT	1973-75,9999	01-04,08-09
032	America		1968-72,9999	02
033	Healey Sprite	Mark II, MKIV/Princess (Special Order)	1958-70,9999	01,04,09
034	Healey 100/3000	M, S, Mark III	1953-67,9999	01
035	Mini/Mini Cooper/Mini Moke	850, S	1960-69,9999	01-02,06,09
398	Other (automobile)	A35, A40, Westminster, Cambridge, Somerset, Seven, Hereford, Sports, Sheerline, Atlantic, Countryman, Dorset, Devon	1947-75,9999	01-04,06,08-09
399	Unknown (automobile)		1947-75,9999	01-04,06,08-09

<b>BMW</b>		<b>(34)</b>	<b>(BMW)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	1600/1800/2000/2002	Ti, Tii, Tilux, TR, CS, 1600-2, SA, Turbo, A, 1500, 2600, 501, 502	1955-76,9999	01-04,08-09
032	Coupe (before 1975)	2800CS, 3.0CS, 3.0csi, 3.0csl, 3200, 503, 507, M1, 1802, 2000c/cs, 2002	1956-76,9999	01-03,09
033	Bavarian Sedan	2500, 2800, 2.8 Barvarian	1969-74,9999	04
034	3-series	3.0s/si, 318i/is/ti/ic, 320i, 323iS/iC/iCi, 325e/es/i/iS/ii/ C/Ci/Cic/xi/iT/xiT, Sport Wagon (iT/xiT), 328i/iS/ti/ iC/Ci/xi, xDrive, 330i/Ci/ Cic/xi, 335i/is/xi/d, xDrive, M3	1971-2011, 9999	01-04,06, 08-09
035	5-series	524i,525i/xi,528i/iT/xi, xDrive, 530i/iT/xi,533i, 535i/xi,xDrive, 550i 540/i/iA/iT, TD Sport Wagon,525i/iT, (wagon 1992-93), M5, 545i, 550i/ix, Gran Turismo	1975-2011, 9999	04-06,09
036	6-series	630, 633, 635, csi, M6, L6, 645Ci, 650i, Neiman Marcus Edition	1976-89, 2004-12,9999	01-02,09
037	7-series	733i, 735i, L7, 740i/L/iL/iA /Li Protection,750 i/L/Li/ ix Protection,745i/Li,760i/Li, Alpina B7, Individual	1978-2011, 9999	04
038	8-series	840Ci/cia, 850i/iS/Ci/Cia	1991-97,9999	02
039	Z3	2.3/2.8/2.5i/3.0i Roadster, MRoadster, MCoupe, 2.8/3.0i Coupe	1996-2003, 9999	01-03, 09
040	Z8		2000-03,9999	01
041	V5		2007-08,9999	06
042	Z4	2.5i, 3.0i/si, 35i/is, Z4M/s	2003-11,9999	01-02,09
043	1-Series	128i, 135i	2008-11,9999	01-02,09
044	X6	35i, 50i, ActiveHybrid, M	2008-11,9999	05
398	Other (automobile)		1955-2012, 9999	01-04,06, 08-09
399	Unknown (automobile)		1955-2012, 9999	01-04,06, 08-09
<b><u>LIGHT TRUCKS</u></b>				
401	X5	3.0i/si, 4.0is, 4.4i, 4.6is, 4.8is, M, 35d, Premium, 35i, 50i, Sport Activity	2000-11,9999	14
402	X3	2.5i, 3.0i/xDrive, 4.8is, M Sports Package	2004-11,9999	14
403	X1		2012	14
499	Unknown (light truck)		2000-12,9999	14

<b><i>BMW (continued)</i></b>		<b>(34)</b>	<b><i>(BMW)</i></b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>MOTORCYCLES</i></b>				
703	125-349cc		1948-66,9999	80
705	450-749cc		1950-2003; 2006-11,9999	80
706	750cc and over		1969-2011, 9999	80
709	Unknown cc		1948-2011, 9999	80
999	Unknown (BMW)		1948-2012, 9999	99

<b>Buick</b>		<b>(18)</b>	<b>(BUIC)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b>AUTOMOBILES</b>				
001	Special/Skylark	GS (350, 400, 455), Deluxe GS California, Sport Wagon, Custom Roadmaster (1946-59), Skylark Edition	1936-73, 9999	01-02,04,06, 08-09
002	LeSabre/Centurion/Wildcat	Estate Wagon, Invicta, Custom, Limited, T-Type, Ltd, C.M.I, LE, Celebration Edition, Best Seller	1959-2005, 9999	01-02,04,06, 08-09
003	Electra/Electra 225/Park Avenue (1991-on)	Limited, Park Avenue, Ultra, Base, Prestige, SE	1959-2005, 9999	01-02,04,06, 08-09
004	Roadmaster	Estate Wagon, Limited	1991-96,9999	04,06,09
005	Riviera	S-Type, T-Type, Coupe Anniversary Edition, Silver Arrow	1963-93; 1995-99,9999	01-02,09
007	Century	Luxus, T-Type, FWD (82-on), Custom, Regal (72-77), Limited, LE, SE, Base, Special	1954-2005, 9999	01-02,04,06, 08-09
008	Apollo/Skylark	Skylark (75), S/R	1973-76,9999	02-04,08-09
010	Regal (RWD only)	Turbo, Luxus, Grand National GNX, T-Type	1978-88,9999	02,04,06, 08-09
012	Skyhawk	S-Type, Roadhawk, T-Type, GT	1975-80; 1982-89,9999	02-04,06, 08-09
015	Skylark (76-85)	S/R, S, Limited, Sport, T-Type	1975-85,9999	02-04,08-09
018	Somerset/Skylark	Skylark (86-on), Sommerset, GS, Regal, Custom, Limited, T-Type	1985-98,9999	02,04,08-09
019	Regal (2011 on)	GS, CXL, Turbo	2011	04
020	Regal (FWD)	Limited, Custom, Gold, Grand Sport GS, LS, Sport	1987-2004, 9999	02,04,08-09
021	Reatta		1988-91,9999	01-02,09
022	LaCrosse	CX, CXL (FWD/AWD), CXS, Super	2005-11,9999	04
023	Lucerne	CX, CXL V6, CXL V8, CXS, Super, Special Edition	2006-11,9999	04
024	Enclave	CX, CXL (FWD/AWD)	2008-11,9999	06
031	Opel Kadett		1965-72,9999	02,04,06, 08-09
032	Opel Manta	1900, Luxus, Ralley, Sports Coupe	1966-75,9999	02,04,06, 08-09
033	Opel GT		1969-75,9999	02
034	Opel Isuzu	Deluxe, Sport	1976-79,9999	02,04,08-09
398	Other (automobile)		1965-2011, 9999	01-04,06, 08-09
399	Unknown (automobile)		1950-2011, 9999	01-04,06, 08-09

<b>Buick (continued)</b>		<b>(18)</b>	<b>(BUIC)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
401	Rendezvous	CX, CXL, Ultra, Plus	2002-07,9999	14
402	Rainier	CXL, CXL Plus	2004-07,9999	14
441	Terraza	CX, CXL	2005-07,9999	20
499	Unknown (light truck)		2002-07,9999	14,20
999	Unknown (BUICK)		1946-2011, 9999	49

<b>Cadillac</b>		<b>(19)</b>	<b>(CADI)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
003	Deville/Fleetwood (except Limousine)	Coupe de Ville, Sedan de Ville, Fleetwood Brougham, Fleetwood 60 Special, d'Elegance, Concours, DHS, DTS	1940-2005, 9999	01-02,04, 08-09
004	Limousine	Fleetwood 75, Formal, Deville-based, DTS	1940-2011, 9999	12
005	Eldorado	Biarritz, El-doro, Touring Coupe, ESC, ETC	1967-2003, 9999	01-02,09
006	Commercial Series	Ambulance/Hearse, Professional	1940-2011, 9999	09-12
009	Allante'		1987-93,9999	01-02,09
014	Seville	Elegante, STS, SLS	1976-2004, 9999	04
016	Cimarron	D'Oro	1982-88,9999	04
017	Catera	Sport	1997-2001, 9999	04
018	CTS/CTC	Luxury, Luxury Sport, V-Series, 2.8L, 3.0L, 3.6L, 6.2L Supercharged, Premium, Performance	2003-11,9999	02,04,06,09
019	XLR	Neiman Marcus Edition, V-Series, Standard, Plantinum	2004-09,9999	01
020	SRX	V6, V8, Sports Package, 2.8L Turbo, 3.0L, Luxury, Performance, Premium	2004-11,9999	06
021	STS	V6, V8, V-Series, Luxury, Premium, Standard, Platinum, 3.6L	2005-11,9999	04
022	DTS	Luxury I, II, III, V8, 3.6L, Performance, Platinum	2006-11,9999	04
398	Other (automobile)		1965-2011, 9999	01-02,04,06, 08-09,12
399	Unknown (automobile)		1950-2011, 9999	01-02,04,06, 08-09,12
<b><u>LIGHT TRUCKS</u></b>				
421	Escalade/ESV (from 2004 on; see 431 for 2003)	4WD, 2WD, Standard, Platinum, Limousine, Hybrid, Luxury, Premium	1999-2000; 2002-11,9999	15
431	Escalade ESV (2003 only)	Luxury, Premium, Platinum	2003, 9999	16
480	Escalade EXT (from 2002-2006; for 2007 on see 481)	4WD, 2WD	2002-06,9999	31
481	Escalade EXT (from 2007 on; see 480 for 2002-2006)	4WD, 2WD, Luxury, Premium	2007-11, 9999	31
499	Unknown (light truck)		1999-2000; 2002-11,9999	19,39,49
999	Unknown (CADILLAC)		1940-2011, 9999	49

<b>Chevrolet</b>		<b>(20)</b>	<b>(CHEV)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b>AUTOMOBILES</b>				
001	Chevelle/Malibu (thru '83)	Classic, Councours, Laguna, S-3, Greenbriar, Estate, 300, SS-396/454, Deluxe	1963-83,9999	01-02,04,06, 08-09
002	Impala/Caprice	Biscayne, Belair, Super Sport, Classic, Classic Brougham, Townsman, Brookwood, Kingswood, LS, LT, LTZ, Sport, SS, Luxury	1955-96; 2000-11,9999	01-02,04,06, 08-09
004	Corvette	Stingray, C5, Z06, Z06-R 50 <sup>th</sup> Anniversary Edition, Commemorative Edition, Indy Pace Car, ZR1, Grand Sport	1953-82; 1984-2011, 9999	01-03,09
006	Corvair	Monza, Corsa, 500, Yenko	1960-69,9999	01-02,04,06, 08-09
007	El Camino	Royal Knight, SS	1958-94,9999	10
008	Nova (-'79)	Chevy II, LN, LE, Concours, SS-350/396, Rally	1962-79,9999	01-04,06,09
009	Camaro	SS, RS, LT, Berlinetta, Iroc-Z, Z28, LS, LT	1967-2002, 2010-11, 9999	01-03,09
010	Monte Carlo (thru '88)	LS, SS, Aerocoupe, Landau, Z34	1970-88,9999	02
011	Vega	GT, Cosworth	1971-77,9999	02-04,06, 08-09
012	Monza	Spyder, 2 + 2, Towne Coupe	1974-80,9999	02-04,06, 08-09
013	Chevette	S, Scooter, CS	1976-87,9999	03-05,07,09
015	Citation	X-11, Citation II	1980-85,9999	02-05,07,09
016	Cavalier	CS, RS, Z24, LS, Sport, Special Value Package	1982-2005, 9999	01-04,06, 08-09
017	Celebrity	CS, Eurosport, VR	1982-90,9999	02,04,06, 08-09
019	Beretta/Corsica	GT, GTZ, LT, LTZ, PX, QX, KX, LX, MX, Z26	1982-96,9999	02,04-05, 08-09
020	Lumina	Z-34, Euro, LTZ, LS	1990-2001, 9999	02,04,06, 08-09
022	Cobalt	LS, LT, LTZ, SS, SS, Base Supercharged, Sport, VL	2005-10,9999	02,04,09
023	HHR	LS, 1LT, 2LT, SS, Panel	2006-11,9999	06
024	Traverse	LS, LT, LTZ	2009-11,9999	06
025	Cruze	LS, LT, LTZ, ECO	2011	02, 04, 09
026	Volt		2011	05
027	Caprice PPV		2011	04
031	Spectrum		1985-89,9999	02-05,08-09
032	Nova/Geo Prism/Prism	CL, NUMMI-built vehicles, LSi	1985-2002, 9999	02-05,07-09
033	Sprint/Geo Sprint	(Cultus - foreign)	1985-89,9999	03,05,07,09

<b>Chevrolet (continued)</b>		<b>(20)</b>	<b>(CHEV)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES (continued)</u></b>				
034	Geo Metro/Metro	Lsi, Xfi	1989-2001, 9999	01,03-05,07,09
035	Geo Storm	Gsi	1985-93,9999	02-03,09
036	Monte Carlo (1995 on)	FWD, LS, Z34, LS, LT, LTZ, SS, Sport Edition	1995-2007, 9999	02
037	Malibu/Malibu Maxx	Base, LS, LT, LTZ, SS, Hybrid	1997-2011, 9999	04-06, 09
038	SSR	Signature Series, LS, LS5, 1SS, 2SS, 3SS	2004-06,9999	10
039	Aveo/Aveo 5	Base, LS, LT, Special Value	2004-11,9999	04-05,09
398	Other (automobile)	Fleetmaster, Fleetline, Styline Special, One-fifty, Bel-Air, Del Ray, Biscayne	1930-2011, 9999	01-11
399	Unknown (automobile)		1930-2011, 9999	01-11
<b><u>LIGHT TRUCKS</u></b>				
401	S-10 Blazer/TrailBlazer (2002 only; for 2003 on, see 403)	S-10 p/u based,LS,LT,ZR2 TrailBlazer, Xtreme, ZR2, LS, LT, LTZ, EXT	1982-2005, 9999	14
402	Geo Tracker/Tracker	Lsi, LT, ZR2	1989-2004, 9999	14
403	TrailBlazer (from 2003 on; for 2002, see 401)	LS, LT, LTZ, North Face Edition, EXT, SS (LS/LT)	2003-09,9999	14
404	Equinox	LS, LT, LTZ, Sport	2005-11,9999	14
421	Fullsize Blazer/Tahoe	K-series, fullsize p/u based, LS, LT, LTD, LTZ, 4WD, Z71, Hybrid	1969-2011, 9999	15
422	Suburban (from 2004 on; see 431 for 1950-2003)	LS, LT, LTZ, Z71	2004-11,9999	15
431	Suburban (from 1950-2003; see 422 for 2004 on)	all models (C1500/2500, K1500/2500), LS, LT, Z71	1950-2003, 9999	16
441	Astro Van	Minivan, Cargo, Passenger, LT, LS, Conversion	1985-2005, 9999	20
442	Lumina APV	Minivan, MPV	1990-96,9999	20
443	Venture	Cargo, Passenger, Plus, LS, LT, Value, Value Plus, Extended, W. B. Edition, Entertainer	1997-2005, 9999	20
444	Uplander	Base, LS, LT, LT(AWD), LT Entertainer	2005-08,9999	20
461	G-series van	Beauville, Chevy Van, Sport Van, G10-G30, Express, G1500/2500/3500, LT, LS	1957-2011, 9999	21-22,28-29
466	P-series van		1965-99,9999	22,28-29
470	Van derivative	Parcel Van, Hi-cube	1965-2011, 9999	28-29
471	S-10/T-10 Pickup	4 x 4, Fleetside, Extended, Crew, LS, S-10, Xtreme, ZR2, ZR5, electric pickup	1982-2005, 9999	30,32,40,42

<b>Chevrolet (continued)</b>		<b>(20)</b>	<b>(CHEV)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS (continued)</u></b>				
472	LUV	Imported pickup	1972-91,9999	30,32,40,42
473	Colorado	Z71, Z85, Sport, LS, LT, Work, Value	2004-11,9999	30
481	C, K, R, V-Series pickup/Silverado	C10-C30, K10-K30, R10-R30, V10-V30, Silverado: 1500 (C-K, HD), 2500 (C-K, HD), 3500 (CK), ST, LS, LT, Z71, Fleetside, Sportside, CrewCab, SS, Hybrid, LTZ, WT	1940-2011, 9999	31-32,39-40, 42
482	Avalanche	1500/2500 Premium, North Face Edition, Z71, Z66, LS, LT, LTZ	2002-11,9999	31
498	Other (light truck)		1940-2011, 9999	14-16,19-22, 28-32,39-40, 42, 45,48
499	Unknown (light truck)		1932-2011, 9999	14-16,19-22, 28-32,39-40, 42, 45,48-49
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck-based	1949-2011, 9999	65,73
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
870	Medium/Heavy Van-Based Vehicle	Express 3500/4500	1957-2011, 9999	55, 61-64
880	Medium/Heavy Pickup (pickup-style only – over 10,000 lbs)		1953-2011, 9999	67
881	Medium/Heavy – CBE	C50/60/65; M60/65; H70/80/90; J70/80/90; Bison 90; Kodiak (C4500) all other CBE	1955-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry	T60/65, all other COE low entry	1960-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry	Titan 90, all other COE high entry	1971-80,9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1951-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1965-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1949-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)	S-60 series	1967-2011, 9999	50-52,58-59
988	Other (bus)		1965-2011, 9999	50-52,58-59

<b>Chevrolet (continued)</b>		<b>(20)</b>	<b>(CHEV)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1934-2011, 9999	91-93,97
999	Unknown (CHEVROLET)		1933-2011, 9999	49,79,99

<b><i>Chrysler/DaimlerChrysler</i></b>		<b>(06)</b>	<b>(CHRY)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
009	Cordoba	Crown, 300, LS	1975-83,9999	02
010	New Yorker (thru 78)/ Newport/5th Avenue/ Imperial (1979-83) (excludes all FWD)	Town and Country, Brougham, Custom, Royal, 300 (thru 1971) Frank Sinatra editions (FS), Royal Limo, Windsor Wagon/ Ambulance	1946-89,9999	01-02,04,06, 08-09,11-12
014	New Yorker/E-Class/ Imperial (1990-93)/ Fifth Avenue	FWD vehicles, Turbo, Salon	1980-93,9999	02,04,08-09
015	Laser	Turbo, XE, XT	1984-86,9999	03
016	LeBaron	Premium, Salon (RWD), Landau, LX, Town and Country cars and wagon, Medallion, FWD except GTS or GTC Sport Coupe	1977-94,9999	01-09
017	LeBaron GTS/GTC	GT, GTS-Turbo, GTC- Sport Coupe	1982-95,9999	01-09
018	200	Limited, LX, Touring	2011	01,04,09
031	TC (Maserati Sport)	Turbo Convertible	1988-91,9999	01-03,09
035	Conquest	TSI, Turbo	1987-89,9999	03
041	Concorde	LX, LXi, Limited	1993-2004, 9999	04
042	LHS	New Yorker (1994-on)	1994-97; 1999-2001, 9999	04
043	Sebring	JX, JXi, LX, LXi,GTC, TSi, Limited, Plus, Platinum, Touring, Signature Series	1995-2010, 9999	01-02,04, 08-09
044	Cirrus	LX, LXi	1995-2000, 9999	04
050	Executive	Sedan and Limo	1983-87,9999	04,09,11-12
051	300M/300/300C	Special, Platinum, Touring, Limited, SRT, Signature Series, SRT8, LX, SRT, Heritage, Great American, Walter P. Chrysler Executive Series	1999-2011, 9999	04
052	PT Cruiser	Base, Touring, Limited, GT, Turbo, Dream Cruiser, Platinum, Series 4, Signature Series, Street Cruiser, Pacific Coast Highway, LX, Sunset Blvd.	2001-10,9999	01,06,09
053	Prowler (2002 on) (1997,1999-01 see Plymouth)	Roadster, Black Tie Edition	2002	01
054	Pacifica	Premium, Luxury, Touring, Signature Series, LX	2004-08,9999	06
055	Crossfire	Limited, SRT6, Standard	2004-08,9999	01-02,09
398	Other (automobile)		1946-2011, 9999	01-09,11-12
399	Unknown (automobile)		1946-2011, 9999	01-09,11-12

<b><i>Chrysler/DaimlerChrysler (continued) (06)</i></b>			<b>(CHRY)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
421	Aspen	Limited, Signature, Hybrid	2007-09,9999	15
441	Town and Country	Minivan, SX, LX, LXi, Ltd., SWB, LWB, AWD, FWD, eL, eX, Touring, Platinum, Signature Series, Limited	1990-2011, 9999	20
442	Voyager (2000 on; 1984-00 see Plymouth)	Base, Popular, Value, LX, eC	2000-03,9999	20
499	Unknown (light truck)		1990-2011, 9999	15,20,29
999	Unknown (CHRYSLER)		1946-2011, 9999	49

<b>Daewoo</b>		<b>(64)</b>	<b>(DAEW)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Lanos	S, SE, SX, Sport	1999-2002, 9999	03-04,09
032	Nubira	SX, CDX, SE	1999-2002, 9999	04-06,09
033	Leganza	SE, SX, CDX	1999-2002, 9999	04
398	Other (automobile)		1999-2002, 9999	03-07,09
399	Unknown (automobile)		1999-2002, 9999	03-07,09

<b>Daihatsu</b>		<b>(60)</b>	<b>(DAIH)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Charade		1988-94,9999	03-04,09
<b><u>LIGHT TRUCKS</u></b>				
401	Rocky		1990-92,9999	14

<b>Dodge</b>		<b>(07)</b>	<b>(DODG)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b>AUTOMOBILES</b>				
001	Dart	170, 270, Custom, GT, Swinger, Demon, 340, 360, Special, Sport, Special Edition	1960-76,9999	01-02,04,06, 08-09
002	Coronet/Magnum/ Charger (thru 1978)	Brougham, Custom, Superbee, 500, Crestwood, Deluxe, XE, R/T, 440, SE, Police	1964-79,9999	01-02,04,06, 08-09
003	Polara/Monaco/ Royal Monaco	Custom, Special, Police, Taxi, Crestwood, Brougham	1964-78,9999	01-02,04,06, 08-09
004	Viper	RT/10, GTS, ACR, SRT-10	1992-2010, 9999	01-02,09
005	Challenger	R/T, T/A, Rallye	1970-74,9999	01-02,09
006	Aspen	Custom, Special Edition, Police, R/T, Sport	1976-80,9999	02,04,06, 08-09
007	Diplomat	Medallion, S, Salon, SE	1977-89,9999	02,04,06, 08-09
008	Omni/Charger (1983 on)	024, DeTomaso, Miser, Charger 2.2, GLH, Custom, Shelby, GLHS, America, Expo, SE	1978-90,9999	03,05,07,09
009	Mirada		1980-83,9999	02
010	St Regis	Police, Taxi	1979-81,9999	04
011	Aries (K)	Custom, SE, LE	1981-89,9999	02,04,06, 08-09
012	400	LS	1982-83,9999	01-02,04, 08-09
013	Rampage (car-based pickup)	2.2, GT, Sport	1982-84,9999	10
014	600	ES, Turbo, SE	1983-88,9999	01-02,04, 08-09
015	Daytona	Turbo Z, C/S Competition, Shelby Z/CSX, Pacifica, IROC R/T	1984-93,9999	03
016	Lancer	Pacifica, Turbo, ES, Shelby	1985-89,9999	02-09
017	Shadow	ES, Turbo, America	1987-94,9999	01-03,05,07, 09
018	Dynasty		1988-93,9999	02,04,08-09
019	Spirit	ES, Shelby, R/T	1989-95,9999	01-02,04, 08-09
020	Neon	Competition, Highline, SE, ES, ACR R/T, SRT-4, SXT	1995-2005, 9999	02,04,08-09
021	Magnum	SE, SXT, R/T, SRT8	2005-08,9999	06
024	Charger	Daytona, SRT8, R/T, SE, SXT, SuperBee, 3.5L, Rallye, Plus, Max, Road and Track	2006-11,9999	04
025	Caliber	SE, SXT, R/T, SRT4, Sport, Heat, Mainstreet, Rush, Uptown, Express	2007-11,9999	05
026	Avenger	SE, SXT, R/T, Heat, Express	2008-11,9999	04

<b>Dodge (continued)</b>		<b>(07)</b>	<b>(DODG)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES (continued)</u></b>				
027	Journey	SE, SXT, R/T, Heat, Hero, Uptown, Express, Crew, Mainstreet, Lux	2009-11,9999	06
028	Challenger	SRT8, SE, R/T, Plum Crazy Edition, Classic	2008-11,9999	02
033	Challenger	all import	1978-83,9999	02
034	Colt (includes 2WD Vista)	GT, Custom, Carousel, Premier, Deluxe, E, DL, GTS, Turbo, RS	1974-94,9999	02-09
035	Conquest	Turbo	1984-89,9999	03
039	Stealth	RT, ES	1991-96,9999	02-03,09
040	Monaco		1990-92,9999	02,04,08-09
041	Intrepid	ES, R/T, S, SE, SXT	1993-2004, 9999	04
042	Avenger	ES	1995-2000, 9999	02
043	Stratus	ES, SE, R/T, Plus, SXT	1995-2007, 9999	02,04,08-09
398	Other (automobile)		1946-2011, 9999	01-10,12
399	Unknown (automobile)		1946-2011, 9999	01-10,12
<b><u>LIGHT TRUCKS</u></b>				
401	RaiderSport	Sport	1986-94,9999	14
402	Durango (1998-2003 only; see model 422 for 2004 on)	Sport, R/T, SLT, SXT, Plus	1998-2003, 9999	14
403	Nitro	SLT, SXT, R/T, SE, Heat, Detonator, Shock	2007-11,9999	14
421	Ramcharger		1974-93,9999	15
422	Durango (2004 on; see 402 for 1998-2003 models)	ST, SLT, Limited, SXT, Adventurer, Hybrid, Express, Crew, LUX, Citadel	2004-11,9999	15
441	Vista Van	4x4 (Only)	1984-91,9999	20
442	Caravan/Grand Caravan	Mini Ram Van, 112 & 19 WB, SE, ES, LE, Sport, EX, eC, eL, AWD, Sport, EPIC-elec SXT, C/V, Special Edition, Cargo, Hero	1984-2011, 9999	20
461	B-Series Van/Ram Van/Ram Wagon	Sportsman, Royal, Maxiwagon, Ram, B1500-B3500, Tradesman, Ram Maxivan (1500, 2500, 3500), Ram Wagon (1500, 2500, 3500) Conversion, Cargo Van (1500: van, non-maxi van, maxi van; 2500: non-maxi, maxi van; 3500: non-maxi), Dodge Wagon (1500, 2500, 3500)	1963-2003, 9999	21,28,40-42, 48
462	Sprinter	Cargo, Passenger	2003-09,9999	21,28
470	Van Derivative	Kary Van, Parcel Van	1971-2011, 9999	28-29
471	D50, Colt pickup, Ram 50/Ram 100		1979-93,9999	30,32

<b>Dodge (continued)</b>		<b>(07)</b>	<b>(DODG)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS (continued)</u></b>				
472	Dakota	R/T, Limited Edition, Quad Cab, Club Cab, Plus, SLT, ST, SXT, Sport, Laramie, TRX, SE, Big Horn, Lone Star, TRX4	1987-2011, 9999	30-33,39,40
481	D, W-Series pickup	Custom, Royal, Ram, Miser, D100-D350, W100-W350	1955-93,9999	31-32,40,42
482	Ram Pickup	1500,2500,3500, Quad Cab, SLT, SLT+, ST, SRT-10, Laramie, Rumble Bee, Power Wagon, Daytona, TRX Off-Road, Sport,	1994-2011, 9999	31-32,40,42
498	Other (light truck)		1979-2011, 9999	14-15,19, 20-22,28-33, 39-42,45, 48
499	Unknown (light truck)		1949-2011, 9999	14-15,19, 20-22,28-33, 39-42,45, 48-49
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck-based	1952-2011, 9999	65,73
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
870	Medium/Heavy Van-Based Vehicle	Sprinter	1971-2009, 9999	55,61-64
880	Medium/Heavy Pickup (pickup-style only – over 10,000 lbs)		1953-2011, 9999	67
881	Medium/Heavy – CBE		1966-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry		1967-77,9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1967-77,9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1962-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1965-77,9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1930-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)	(not van based)	1966-77,9999	50-52,58-59
988	Other (bus)		1965-77,9999	50-52,58-59

<b>Dodge (continued)</b>		<b>(07)</b>	<b>(DODG)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1965-2011, 9999	91-93,97
999	Unknown (DODGE)		1952-2011, 9999	49,79,99

<i>Eagle</i>		(10)	(EGIL)	
Codes	Model	Includes	Model Years	Body Types
<b><u>AUTOMOBILES</u></b>				
034	Summit (excludes wagon)	DL, LX, ES, ESi	1989-96,9999	02-04,08-09
037	Talon	FWD, Tsi, Tsi-FWD, Esi	1990-98,9999	02-03,09
040	Premier	LX, ES, ES Limited	1988-92,9999	02,04,08-09
041	Vision	Esi, Tsi	1993-97,9999	04
044	Medallion	DL, LX	1988-89,9999	04,06,09
045	Summit Wagon	FWD, AWD, DX, LX (Mitsubishi)	1992-96,9999	06
398	Other (automobile)		1988-98,9999	02-04,06, 08-09
399	Unknown (automobile)		1988-98,9999	02-04,06, 08-09

<b>Fiat</b>		<b>(36)</b>	<b>(FIAT)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	124 (Coupe/Sedan)	Sport	1967-75,9999	01-02,04,06, 08-09
032	124 Spider/Racer	Spider 2000/1500	1968-83,9999	01-02,09
033	Brava/131		1975-82,9999	02,04,06, 08-09
034	850 (Coupe/Spider)		1967-73,9999	01-02,09
035	128		1972-79,9999	01-02,04,06, 08-09
036	X-1/9		1975-83,9999	01-02,09
037	Strada		1979-83,9999	03,05,07,09
038	500	c, Abarath	2012	03
398	Other (automobile)	600, 1100	1967-83, 9999	01-09
399	Unknown (automobile)		1967-83, 9999	01-09
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
882	Medium/Heavy – COE low entry		1967-83,9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1967-83,9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1967-83,9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1967-83,9999	60-64,66, 71-72,78
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1967-83,9999	91-93,97
999	Unknown (FIAT)		1967-83,2012, 9999	99

<b>Ford</b>		<b>(12)</b>	<b>(FORD)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b>AUTOMOBILES</b>				
001	Falcon	FuturaSprint, GT, Futura	1960-70,9999	02,04,06, 08-09
002	Fairlane	Torino (1968-70), 500, Brougham	1955-70,9999	01-02,04,06, 08-09
003	Mustang/Mustang II	Mach(I), Boss, Grande, Cobra (SVT), Ghia, SVO, GT (Premium, Base, Cal Spec. Pkg.), LX, Shelby (GT500, GT500KR), Deluxe, Premium, Bullitt, V6 (Base, Premium, Pony)	1964-2011, 9999	01-03,09
004	Thunderbird (all sizes)	Landau, Heritage, Turbo coupe, Elan, Fila, Sport, LX, SC, Deluxe, Premium, Pacific Coast Edition, 50 <sup>th</sup> Anniversary Edition	1955-98; 2002-05,9999	01-02,04, 08-09
005	LTD II	S, Squire, Brougham	1977-79,9999	02,04,06, 08-09
006	LTD/Custom/Galaxy (all sizes)	XL, Landau, Ranch Wagon, Country Squire, S, 500, Brougham, XL, GT	1963-86,9999	01-02,04,06, 08-09
007	Ranchero	Falcon/Fairlane based Torino/LTD II based	1960-79,9999	10
008	Maverick	Grabber	1969-78,9999	02,04,08-09
009	Pinto	Pony, MPG, ESS	1971-80,9999	02-03,06,09
010	Torino/Gran Torino/Elite	GT, Cobra, Sport, Squire, Brougham	1971-76,9999	01-02,04,06, 08-09
011	Granada	ESS, Ghia	1975-82,9999	02,04,06, 08-09
012	Fairmont	Futura, Sport Coupe	1978-83,9999	02,04,06, 08-09
013	Escort/EXP/ZX2	L, GL, GLX, SS, GT, LX, LXE, SE, ZX2, Deluxe, Premium, Standard	1981-2003, 9999	02-09
015	Tempo	L, GL, GLX, Sport, 4X4	1984-94,9999	02,04,08-09
016	Crown Victoria	LX, LTD Crown Victoria, LX Sport	1981-2011, 9999	02,04,06, 08-09
017	Taurus/Taurus X	MT-5, L, GL, LX, SHO, G, SE, SVG, SES, SEL, Limited, Eddie Bauer, Police Interceptor	1986-2011, 9999	04,06,09
018	Probe	GL, LX, GT	1988-97,9999	03
021	Five Hundred	SE, SEL, Limited	2005-07,9999	04
022	Freestyle	SE, SEL, Limited	2005-07,9999	06
023	Fusion	I4 S/SE/SEL, V6 SE/SEL, Sport, Hybrid	2006-11,9999	04
024	Edge	SE, SEL, SEL Plus, Limited, Sport	2007-11,9999	06
025	Flex	SE, SEL, Limited, Titanium	2009-11,9999	06
026	City		2000-02, 9999	02, 04, 09

<b>Ford (continued)</b>		<b>(12)</b>	<b>(FORD)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES (continued)</u></b>				
031	English Ford	Cortina, Anglia, Zephyr/ Zodiac Mark III	1946-70,9999	02,04,06, 08-09
032	Fiesta	Sport, Ghia, S, SE, SES, SEL	1978-80,2011, 9999	03-05,09
033	Festiva	L, GL	1988-93,9999	03
034	Laser		1993-94,9999	02-03,09
035	Contour	Sport, LX, SE, SVT	1994-2001, 9999	04
036	Aspire		1994-97,9999	03,05,07,09
037	Focus	ZX3, LX, SE, ZTS, SVT, ZX4, ZX4, ST, ZX5, ZXW, S, SES, SEL, SE, Titanium	2000-12,9999	02-06,09
038	GT		2004-06,9999	01
398	Other (automobile)	Deluxe, Ford Six, Mainline, Crestline, Futura, Galaxie, Model A	1924-2012, 9999	01-11
399	Unknown (automobile)		1924-2012, 9999	01-11
<b><u>LIGHT TRUCKS</u></b>				
401	Bronco (thru 1977)/ Bronco II/Explorer/ Explorer Sport	Eddie Bauer, XL, XLT, Explorer, (1990 on) Eddie Bauer, Limited, XL, XLT, XLS, Explorer Sport (Value, Choice Premium), NBX, Adrenalin, Ironman, Police Interceptor	1966-77; 1983-2011, 9999	14
402	Escape	XLS (Value, Sport, V6 Choice/Premium), XLT (Choice, Premium, Sport), Hybrid (Base, Limited), No Boundaries, Limited	2001-11,9999	14
421	Bronco-fullsize (1978-on)	Eddie Bauer, Custom, XL, XLT	1978-96,9999	15
422	Expedition	EL, XLS, XLT (4x4,4x2), Eddie Bauer (4x4,4x2), NBX, Sport, NBX, Limited, King Ranch, Funk Master Flex Edition, XL	1996-2011, 9999	15
423	Excursion	XLT, Limited (LTD), Ultimate, Premium, XLS, Eddie Bauer	2000-05,9999	16
441	Aerostar	XLT, Cargo Van	1985-97,9999	20
442	Windstar	GL, LX, XLT, Splash, Cargo Limited, SE, SEL	1995-03,9999	20
443	Freestar	Base, LX, SE, S, SEL, SES, Limited	2004-07,9999	20
444	Transit Connect	XL, XLT, Premium	2010-11, 9999	20
461	E-Series Van/Econoline	Clubwagon (XL, XLT), Chateau, (XL,XLT), Parcel Van, Econoline Wagon E150 (XL/XLT); E350 XL/XLT), E250 (EXT), Premium	1960-2011, 9999	21-22,28,29
470	Van Derivative		1960-2011, 9999	28-29

<b>Ford (continued)</b>		<b>(12)</b>	<b>(FORD)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS (continued)</u></b>				
471	Ranger	Supercab, 4x4, STX, SL, SLT, Splash, XL (Standard/ Super Cab), XLT, Tremor (Standard/Super Cab/Off-Road/FX4), Edge (Regular/Super Cab), EV (electric), Level II, Sport	1982-2011, 9999	30-32,40,42
473	Explorer Sport Trac	2WD/4WD, Value, Choice, Premium, XLS, XLT, Adrenalin, Limited	2001-11,9999	30
481	F-Series pickup	F100, F150-F350, (XL, XLT, Crew Cab, Super Cab, Regular Cab, Lariat, Super Duty, Flareside, Styleside, SVT Lightning, Fireside, Harley-Davidson Edition, King Ranch, SuperCrew, STX, Heritage Edition, Sport Edition, FX4, FX2), F450 (10,000 GVWR and under) (see model 880 for F450 >10,000 GVWR), Amarillo Package, Platinum, Cabela's, STX, SVT Raptor	1940-2011, 9999	31-32,39,40,42
498	Other (light truck)		1972-2011, 9999	14-16,20,28-32,40-42,45, 48
499	Unknown (light truck)		1928-2011, 9999	14-16,19-22,28-32,39-42,45, 48-49
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck-based, F-550	1956-2011, 9999	65,73
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
870	Medium/Heavy Van-Based Vehicle	Econoline E350, E450	1956-2011, 9999	55, 61-64
880	Medium/Heavy Pickup (pickup-style only – over 10,000 lbs)	Super Duty 350, F450/550, Lariat	1953-2011, 9999	67
881	Medium/Heavy – CBE	F-5 thru F-8, L-series, FT-series, Super Duty F-Series: 450/550/650/750/800 (does not include pickup style)	1953-2011, 9999	60-64,66,71-72,78
882	Medium/Heavy – COE low entry	C/CT series, LCF	1964-2011, 9999	60-64,66,71-72,78
883	Medium/Heavy – COE high entry	C/CLT series, LCF	1967-2011, 9999	60-64,66,71-72,78
884	Medium/Heavy – Unknown engine location		1956-2011, 9999	60-64,66,71-72,78
890	Medium/Heavy – COE entry position unknown		1956-2011, 9999	60-64,66,71-72,78

<b>Ford (continued)</b>		<b>(12)</b>	<b>(FORD)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS (continued)</u></b>				
898	Other (medium/heavy truck)		1965-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)	B-series (not van based), F Series	1964-2011, 9999	50,52, 58-59
988	Other (bus)		1940-2011, 9999	50,52, 58-59
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1940-2011, 9999	91-93,97
999	Unknown (FORD)		1940-2011, 9999	49,79,99

<b>GMC</b>		<b>(23)</b>	<b>(GMC )</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
007	Caballero		1965-87,9999	10
008	Acadia	SLE, SLT, Denali, SL	2007-11,9999	06
399	Unknown (automobile)		1965-2011, 9999	06,10
<b><u>LIGHT TRUCKS</u></b>				
401	Jimmy/Typhoon/Envoy	S-15 based, (100.5 WB), T15, SLE, SL, SLS, SLT, XL, XUV, Denali	1983-2009, 9999	14
402	Terrain	SLE, SLT	2010-11, 9999	14
421	Fullsize Jimmy/Yukon	Fullsize pickup based, K5, K18, SL, SLE, SLT, SLS, Diamond Edition, Yukon Denali, Denali, Hybrid	1969-2011, 9999	15
422	Suburban/Yukon XL (2004 on; see 431 for 1950- 2003)	Yukon XL (Denali -1500-2500), SLE, SLT, Hybrid	2004-11,9999	15
431	Suburban/Yukon XL (1950-2003 only; see 422 for 2004 on)	all models, SLE, C16, C26, K16, K26, C1500-2500, K1500-2500, Yukon XL (Denali -1500-2500)	1950-2003, 9999	16
441	Safari (Minivan)	SLT, SLX, SLE, M15, L15, SL	1985-2005, 9999	20
461	G-series van/Savana	Rally Van, Vandura, G15-G35, Savana (G1500-3500) SLT, Extended, SLE, LS, LT, Uplifter, WT	1965-2011, 9999	21-22,28-29
466	P-series van		1965-2011, 9999	22,28-29
470	Van derivative	Hicube, Magna Van, Value Van, Parcel Van	1965-2011, 9999	28-29
471	S15/T15/Sonoma	4 X 4, Cyclone, SL, SLS, SLE, Extended/Crew Cab, ZR2, ZRX, ZR5	1982-2004, 9999	30,32,40,42
472	Canyon	Base, SLE, SL, SLT, Z71, Z85, Work Truck	2004-11, 9999	30
481	C, K, R, V-series pickup/ Sierra	Excluding Yukon, C15-C35, K15-K35, R15-R35, V15-V35, Sierra, C/K1500, 2500, 3500, Sportside, X81, SL, Special, SLE, Classic, Extended Cab, Denali, 1500HD/2500HD, C3, Hybrid, SLT, Work Truck, 5SA	1940-2011, 9999	31-32,39-40, 42
498	Other (light truck)		1930-2011, 9999	14-16,20-22, 28-29,40,42, 45, 48
499	Unknown (light truck)		1951-2011, 9999	14-16,19-22, 28-29,39-40, 42,45,48-49

<b>GMC (continued)</b>		<b>(23)</b>	<b>(GMC )</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MOTOR HOME</u></b>				
850	Motor Home		1950-2011, 9999	65,73
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
870	Medium/Heavy Van-Based Vehicle	Savana 3500, 4500	1965-2011, 9999	55,61-64
880	Medium/Heavy Pickup (pickup-style only – over 10,000 lbs)		1953-2011, 9999	67
881	Medium/Heavy – CBE	W5000/6000/7000 series, Kodiak Brigadier/General models, Top Kick	1967-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry	W6000/W7000, all other COE, low entry, W/WT Series	1968-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry	Astro 95, all other COE, high entry, T Series	1969-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1948-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1967-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1930-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)	B6000	1950-2011, 9999	50-52,58-59
988	Other (bus)		1965-2011, 9999	50,58-59
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1965-2011, 9999	91-93,97
999	Unknown (GMC)		1940-2011, 9999	49,79,99

<b>Grumman/Grumman-Olson</b>		<b>(25)</b>	<b>(GRUM)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
401	LLV	Postal vehicle	1987-2004, 9999	22
441	Step-in van	Multi-stop, step van	1987-2004, 9999	22
498	Other (light truck)		1987-2004, 9999	22
499	Unknown (light truck)		1987-2004, 9999	22
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE		1987-2004, 9999	60-64,66, 71-72,78
882	Medium/Heavy - COE low entry		1987-2004, 9999	60-64,66, 71-72,78
883	Medium/Heavy - COE high entry		1987-2004, 9999	60-64,66, 71-72,78
884	Medium/Heavy - engine location unknown		1987-2004, 9999	60-64,66, 71-72,78
890	Medium/Heavy - entry position unknown		1987-2004, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1987-2004, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
983	Bus: Flat front, rear engine	Transit	1950-2004, 9999	50-52,58-59
988	Other (bus)		1950-2004, 9999	50-52,58-59
999	Unknown (GRUMMAN/GRUMMAN-OLSON)		1950-2004, 9999	79,99

<b>Honda (Acura: See "54")</b>		<b>(37)</b>	<b>(HOND)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Civic/CRX, del Sol	1300, 1500, CVCC, DX, EX, VX, CX, FE, CRX, CRX Si, S, Si, HF, LX, 4WD Wagon, GX (NGV), HX, VTEC, VP, Si, Civic, Hybrid, Special Edition, EX-L, DX-VP, LX-S	1973-2011, 9999	02-09
032	Accord	LX (V-6, ULEV), LXI, DX, CVCC, SE-i, LX-i, V-6, SJE, SME, SMH, SMK, EX (Wagon, ULEV, V-6), SE (ULEV), Special Edition, Hybrid, Value Package, LX-S, LX-P, EX-L, Crosstour (EX, EX-L), Premium	1976-2011, 9999	02-09
033	Prelude	S, Si, VTEC, SNF, SH, SE	1979-2001, 9999	02
034	600	Coupe, Sedan	1968-72, 9999	02
035	S2000	Roadster, CR	2000-09, 9999	01
036	EV Plus	Electric vehicle (EV+)	1997-2000, 9999	03
037	Insight	(Gasoline-Electric), MT/CVT, LX, EX	2000-06, 2011, 9999	03,05,09
038	FCX	Hydrogen vehicle, Clarity	2004-11, 9999	03-05,09
039	Fit	Base, Sport	2006-11, 9999	05
041	CR-Z	EX, Hybrid	2010-11, 9999	03
398	Other (automobile)		1968-2011, 9999	01-09
399	Unknown (automobile)		1968-2011, 9999	01-09
<b><u>LIGHT TRUCKS</u></b>				
401	Passport	LX, EX, DX, EX-L	1994-2002, 9999	14
402	CR-V	LX, EX, Special Edition (SE), SC, EX-L	1997-2011, 9999	14
403	Element	DX, EX, EX-P, LX, SC, Dog Friendly	2003-11, 9999	14
421	Pilot	EX, EX-L, LX, SE, Value Package, Touring	2003-11, 9999	15
441	Odyssey	LX, EX, EX-L (Res, NAVI), Touring, Elite	1995-2011, 9999	20
471	Ridgeline	RT, RTL, RTS, RTX	2006-11, 9999	30
499	Unknown (light truck)		1994-2011, 9999	14-15,19-20, 30, 49
<b><u>MOTORCYCLES</u></b>				
701	0-50 cc		1978-2011, 9999	80-81,83, 88-89
702	51-124 cc		1965-2011, 9999	80-81,83, 88-89
703	125-349 cc		1965-2011, 9999	80,83,88-89
704	350-449 cc		1965-2011, 9999	80,83,88-89

<b>Honda (continued)</b>		<b>(37)</b>	<b>(HOND)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MOTORCYCLES (continued)</u></b>				
705	450-749 cc		1970-2011, 9999	80,83,88-89
706	750 cc or greater		1970-2011, 9999	80,82-83, 88-89
709	Unknown cc		1965-2011, 9999	80-81,83, 88-89
<b><u>ALL TERRAIN VEHICLES</u></b>				
732	51-124cc	includes all ATVs/ATCs/TRXs	1972-2011, 9999	90
733	125-349cc	designed solely for off-road use and have 3 or 4 wheels.	1972-2011, 9999	90
734	350cc or greater		1996-2011, 9999	90
739	Unknown cc		1972-2011, 9999	90
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)	Go Carts	1968-2011, 9999	97
999	Unknown (HONDA)		1965-2011, 9999	49,99

<b>Hyundai</b>		<b>(55)</b>	<b>(HYUN)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Pony	Pony Excel (Foreign)	1979-88,9999	02-03,09
032	Excel	GL, GLS, GS	1984-94,9999	03-05,07,09
033	Sonata	GL, GLS, LX, SE, Limited, Hybrid, 2.0T	1989-2011, 9999	04
034	Scoupe	LS, Turbo	1991-95,9999	02
035	Elantra	GLS, GL, GT, Limited, SE, Touring (GLS, SE)	1992-2011, 9999	04-06,09
036	Accent	L, GL, GS, Gsi, GT, GLS, SE	1995-2011, 9999	03-05,07,09
037	Tiburon	FX, GT, GS, SE, Limited	1997-2008, 9999	02-03,09
038	XG300 (2001)/ XG350 (2002 on)	L	2001-05,9999	04
039	Azera	SE, Limited, GLS	2006-11,9999	04
040	Equus	Signature, Ultimate	2011	04
041	Genesis	3.8, 4.6, 2.0T, R-Spec, Grand Touring, Premium, Track	2009-11,9999	02,04,09
398	Other (automobile)		1984-2011, 9999	02-09
399	Unknown (automobile)		1984-2011, 9999	02-09
<b><u>LIGHT TRUCKS</u></b>				
401	Santa Fe	GL, GLS, LX, Limited, SE	2001-11,9999	14
402	Tucson	GL, GLS, LX, Limited, SE	2005-11,9999	14
403	Veracruz (2007 only)	GLS, Limited, SE	2007	14
421	Veracruz (2008 on; see 403 for 2007 only)	GLS, Limited, SE	2008-11,9999	15
441	Entourage	GLS, Limited, SE	2007-09,9999	20
499	Unknown (light truck)		2001-11,9999	14-15, 19-20
999	Unknown (HYUNDAI)		1979-2011, 9999	49, 99

<i><b>Imperial</b></i>		<i><b>(08)</b></i>	<i><b>(CHRY)</b></i>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
010	Imperial	LeBaron, Mark Cross, Crown Imperial	1954-75,9999	01-02,04, 08-09
398	Other (automobile)		1965-75,9999	01-09
399	Unknown (automobile)		1965-75,9999	01-09

<i><b>Infiniti</b></i>		<i><b>(58)</b></i>	<i><b>(INFI)</b></i>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	M30		1990-92,9999	01-02,09
032	Q45	Standard Touring, Q45t, Luxury , Sport, Premium	1990-2006, 9999	04
033	G20	G20t, Touring, Standard, Luxury	1991-96; 1999-2002, 9999	04
034	J30		1993-97,9999	04
035	I30	Standard, Touring, Luxury	1996-2001, 9999	04
036	I35	Touring, Luxury	2002-04,9999	04
037	G25/G35/G37	x, 6MT, Journey, Sport, Special Edition, IPL	2003-11,9999	01-02,04,09
038	M35/M37/M45/M56	Sport, x	2003-11,9999	04
039	FX35/FX45/FX50		2003-11,9999	06
040	EX35	Journey	2008-11,9999	06
398	Other (automobile)		1990-2011, 9999	01-02,04,06, 08-09
399	Unknown (automobile)		1990-2011, 9999	01-02,04,06, 08-09
<b><u>LIGHT TRUCKS</u></b>				
401	QX4	Luxury	1997-2003, 9999	14
421	QX56		2004-11,9999	15
499	Unknown (light truck)		1997-2011, 9999	14-15
999	Unknown (INFINITI)		1990-2011, 9999	49, 99

<b>Isuzu</b>		<b>(38)</b>	<b>(ISU )</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	I-Mark	S, RS, Turbo, DOHC	1981-90,9999	02-04,08-09
032	Impulse	Turbo, RS	1983-92,9999	02-03,09
033	Stylus		1991-94,9999	04
398	Other (automobile)		1981-94,9999	02-04,08-09
399	Unknown (automobile)		1981-94,9999	02-04,08-09
<b><u>LIGHT TRUCKS</u></b>				
401	Trooper/Trooper II	Deluxe, LS, S, LTD	1984-2002, 9999	14
402	Rodeo/ Rodeo Sport	S, LS, LSE	1991-2004, 9999	14
403	Amigo		1989-94; 1998-2000, 9999	14
404	VehiCROSS	VXO	1999-2001, 9999	14
405	Axiom	XS	2002-04,9999	14
421	Ascender	LS, S, Limited, Luxury	2003-08,9999	15
441	Oasis	S, LS	1996-99,9999	20
471	P'up (pickup)	4 X 4	1976-95,9999	30,32
472	Hombre	S, XS, XS Space Cab	1996-2000, 9999	30,32,40,42
473	i-280/i-290	S, LS, Luxury	2006-2008, 9999	30
474	i-350/i-370	LS, Limited, S	2006-2008, 9999	30
498	Other (light truck)		1981-2008, 9999	14-15,20, 30,32,40,42
499	Unknown (light truck)		1981-2008, 9999	14-15,19-20, 30,32,39-40, 42,48-49
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE		1981-2004, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry	NOR, NPR,NQR, N Series	1981-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE, high entry	FRR, FRRI, FSR, FTR, FVR, F Series	1981-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1981-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1981-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1981-2011, 9999	60-64,66, 71-72,78,97

<i><b>Isuzu (continued)</b></i>		<i><b>(38)</b></i>	<i><b>(ISU )</b></i>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1981-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1981-2011, 9999	50-52,58-59
983	Bus: Rear engine Flat front		1981-2011, 9999	50-52,58-59
988	Other (bus)		1981-2011, 9999	50-52,58-59
999	Unknown (ISUZU)		1981-2011, 9999	49,79,99

<b>Jaguar</b>		<b>(39)</b>	<b>(JAGU)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	XJ-S, XK8 Coupe	S, SC, GT, H.E.	1976-2008, 9999	01-02,09
032	XJ/XJL/XJ6/12/XJR/XJ8/ XJ8L Sedan/Coupe	Mk II, Mk X, XJ, 3.85, 3.8, 340/420 Sedan; XJ8(LWB, L, Vanden Plas, Sport); XJ6(L), C, L, Vanden Plas, III, GT, Super 8, Limited, Portfolio, Supersport, Supercharged	1949-2011, 9999	02,04,08-09
033	XK-E	V12, Roadster, 120, 140, 150, 2+2	1946-74, 9999	01-03,09
034	S-Type	3.0, 4.0, 4.2, Base, Sport, L, R, VDP Edition	2000-08, 9999	04
035	XKR/XK	Victory Edition, Portfolio, 175 Limited Edition, Black Pack	2000-11, 9999	01-03,09
036	X-Type	2.5, 3.0, Sport, VDP Edition	2002-08, 9999	04,06,09
037	XF/XFR	4.2 Luxury, Premium Luxury, Supercharged,	2008-11, 9999	04
398	Other (automobile)		1949-2011, 9999	01-04,06, 08-09
399	Unknown (automobile)		1949-2011, 9999	01-04,06, 08-09

**Jeep (Includes Willys/Kaiser-Jeep) (02) (AMER)**

<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
001	Compass	Base, Sport, Limited, Latitude	2007-11,9999	06
<b><u>LIGHT TRUCKS</u></b>				
401	CJ-2/CJ-3/CJ-4	Military	1940-66,9999	14
402	CJ-5/CJ-6/CJ-7/CJ-8	Scrambler, Renegade, Golden Eagle, Laredo, Wrangler,	1967-93,9999	14
403	YJ series/Wrangler	Wrangler (SE, Sport, Sahara, X, Rubicon), Unlimited, Islander, Call of Duty: Black Ops Edition	1986-95; 1997-2011, 9999	14
404	Cherokee (1984-on)	Limited, Laredo, Pioneer, Sport, Grand Cherokee, TSi, Briarwood, Country, RHD, SE, Classic, Overland, Special Edition, SRT8, Summit	1984-2011, 9999	14
405	Liberty	Sport, Limited Edition, Renegade, Columbia Edition, Rocky Mountain Edition, CRD, Special Edition, Latitude, Jet	2002-11,9999	14
406	Commander	Base, Limited, Overland, Sport, Rocky Mountain	2006-10,9999	14
407	Patriot	Sport, Limited, Latitude, X	2007-11,9999	14
421	Cherokee (thru 1983)	Wide Track, Chief, Commando, Jeepster	1969-83,9999	15
431	Grand Wagoneer	Custom, Brougham Limited, Wagoneer	1971-91; 1993, 9999	15
481	Pick-up	J-10, J-20, Honcho	1940-93,9999	31-32,40,42
482	Comanche	Chief	1986-92,9999	31-32,40,42
498	Other (light truck)		1940-2011, 9999	14-15,19,31-32,40-42,45,48-49
499	Unknown (light truck)		1940-2011, 9999	14-15,19,31-32,39-42,45,48-49
999	Unknown (JEEP)		1940-2011, 9999	49

<b>KIA</b>		<b>(63)</b>	<b>(KIA)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Sephia	RS, LS, GS	1994-01,9999	04
032	Rio/Rio5	Cinco (Wagon), LX, SX	2001-11,9999	04-06,09
033	Spectra/Spectra5	GS, GSX, GX, LS, LX, EX, SX	2000-09,9999	04-05,09
034	Optima	LX, SE, V6, EX, SX, Turbo	2001-11,9999	04
035	Amanti		2004-10,9999	04
036	Rondo	EX, LX	2007-10,9999	06
037	Soul	Base, sport, +, !, White Tiger	2009-11,9999	06
038	Forte	2.0 (EX, LX, SX) 2.4 (SX), Koup (EX, LX, SX)	2010-11,9999	02,04-05, 09
039	Cadenza		2011	04
399	Unknown (automobile)		1994-2011, 9999	04-06,09
<b><u>LIGHT TRUCKS</u></b>				
401	Sportage	EX, LX, 4WD, Limited	1995-03, 2005-11,9999	14
402	Sorento	EX, LX, SX	2003-11, 9999	14
421	Borrego	EX, LX, LTD	2008-10,9999	15
441	Sedona	EX, LX	2002-11,9999	20
499	Unknown (light truck)		1995-2011, 9999	14-15, 20
999	Unknown (KIA)		1994-2011, 9999	49

<i>Lancia</i>		(40)	<i>(LNCI)</i>	
Codes	Model	Includes	Model Years	Body Types
<b><u>AUTOMOBILES</u></b>				
031	Beta Sedan – HPE	Zagato	1976-82,9999	02,04,06, 08-09
032	Zagato		1976-82,9999	01-02,09
033	Scorpion	(Mote Carlo- Europe Only)	1977	02
398	Other (automobile)	Stratos, Fulvia, Flavia, Appia, Aurelia, Aprilia	1946-82,9999	01-09
399	Unknown (automobile)		1946-82,9999	01-02,04,06, 08-09

<i>Land Rover</i>		(62)	<i>(LNDR)</i>	
Codes	Model	Includes	Model Years	Body Types
<b><u>LIGHT TRUCKS</u></b>				
401	Discovery	SD, SE, SE7, LE, LSE, Series II, Kalahari Edition, S, HSE, G-4 Edition	1994-2004, 9999	14
402	Defender	90	1993-95; 1997, 9999	14
403	Freelander (2004 on; see 422 for 2002-03.)	HSE, SE, S, SE3, G4 Edition	2004-05,9999	14
404	Range Rover Evoque	Pure, Prestige, Dynamic	2012	14
421	Range Rover	County, County SE, Great Divide, Hunter, LSE, County LWB, 4.0SE, 4.6HSE, S, SE, HSE, Westminster, Limited Edition, Sport, Supercharged, HSE-LUX, Autobiography	1987-2011, 9999	15
422	Freelander (2002-03 only; see 403 for 2004 on)	HSE, SE, S, SE3	2002-03,9999	15
423	LR4	HSE, SE, LUX, Plus, V8	2005-11,9999	15
424	LR2	i6, TD4, HSE, LUX, Plus	2007-11,9999	15
498	Other (light truck)	Land Rover (1948-1990), Range Rover (before 1987)	1948-2012, 9999	14-15
499	Unknown (light truck)		1948-2012, 9999	14-15,19

<b>Lexus</b>		<b>(59)</b>	<b>(LEXS)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	ES-250/300/330/350	Black Diamond Edition, Premium Plus, Ultra Luxury	1990-2011, 9999	04
032	LS	400/430/460/L/600h/L	1990-2011, 9999	04
033	SC-400/300	2-Door Coupe	1992-2000, 9999	02
034	GS-300/350/400/430/450h/460	Hybrid	1993-2011, 9999	04
035	IS-250/300/350/500	SportCross, Sport, F, C	2001-11,9999	01,04-05,09
036	SC-430	Special Edition, Pebble Beach	2002-10,9999	01
037	HS 250h	Premium	2010-11,9999	04
038	CT 200h		2011	05
039	LFA		2012	01-02,09
398	Other (automobile)		1990-2012, 9999	01-02,04-05,09
399	Unknown (automobile)		1990-2012, 9999	01-02,04-05,08-09
<b><u>LIGHT TRUCKS</u></b>				
401	RX300/350	2WD, 4WD	1999-03,9999	14
402	GX470	Sport, Premium	2003-09,9999	14
403	RX330/350/400h/450h	Hybrid, Thundercloud, Mark Levinson Package	2004-11,9999	14
404	GX460	Sport, Premium	2010-11, 9999	14
421	LX450/470/570		1996-2011, 9999	15
499	Unknown (light truck)		1996-2011, 9999	14-15,19
999	Unknown (LEXUS)		1990-2012, 9999	49

<b><i>Lincoln</i></b>		<b>(13)</b>	<b>(LINC)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
001	Continental (thru '81)/ Town Car	Continental, (thru '81), Signature/Designer Series, Town Car ('81 on, body 04 only), Cartier, Executive, L, Premium, Ballistic Protection Edition, Ultimate, Designer Series, Limited	1940-2011, 9999	01-02,04, 08-09, 11-12
002	Mark	I, II, III, IV, V, VI, VII, VIII LSC, Signature/Designer Series	1956-98,9999	01-02,04, 08-09
005	Continental ('82 on)	Signature/Designer Series, Luxury	1982-2002, 9999	02,04,08-09, 12
011	Versailles		1977-80,9999	04
012	LS	Convenience, Premium, Sport, Luxury, Ultimate	2000-06,9999	04
013	Zephyr/MKZ	FWD, AWD, Hybrid	2006-11,9999	04
014	MKX	FWD, AWD	2007-11,9999	06
015	MKS	Ecoboost	2008-11,9999	04
016	MKT	Ecoboost	2010-11,9999	06
398	Other (automobile)	Cosmopolitan, Capri, Premiere	1940-2011, 9999	01-12
<b><u>LIGHT TRUCKS</u></b>				
401	Aviator	Premium, Luxury, Ultimate, Kitty Hawk Edition	2003-06,9999	14
421	Navigator	2WD, 4WD, Premium, Luxury, Ultimate, L	1997-2011, 9999	15
481	Blackwood		2002	31
482	Mark LT	2WD, 4WD	2006-08,9999	31
499	Unknown (light truck)		1997-2011, 9999	14-15, 49
999	Unknown (LINCOLN)		1990-2011, 9999	49

***Mahindra (prior to 2011, see 69-061) (66)***

Codes	Model	Includes	Model Years	Body Types
<b><i>LIGHT TRUCKS</i></b>				
401	Scorpio	Lx, Sle, Vls, Vlx	2011	14
403	RX2		2011	14
481	TR	TR20, TR40, EX	2011	30
499	Unknown (light truck)		2011	14, 30

<b>Mazda</b>		<b>(41)</b>	<b>(MAZD)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	RX2		1970-74,9999	02,04,06, 08-09
032	RX3		1970-78,9999	02,04,06, 08-09
033	RX4		1974-78,9999	02,04,06, 08-09
034	RX7	S, GS, GSL, SE	1979-96,9999	01-03,09
035	323/GLC/Protégé/ Protégé5	DX, Protégé (1990-on), DX, LX, ES, Mazdaspeed	1977-2003, 9999	03-07,09
036	Cosmo		1976-78,9999	02
037	626	GT,GS,GSL,SE,DX,LX,ES	1979-2002, 9999	02,04-05, 08-09
038	808		1972-77,9999	02,04,06, 08-09
039	Mizer		1976	02,04,06, 08-09
040	R-100		1950-72,9999	02
041	616/618		1968-72,9999	02,04,08-09
042	1800		1968-72,9999	04,06,09
043	929		1988-95,9999	04
044	MX-6	Turbo, LS, M-Edition	1988-97,9999	02
045	Miata/MX-5	Miata (LS), SE, SV, Mazdaspeed, Sport, Touring, Grand Touring, Club Special, Special Edition, PRHT	1990-97; 1999-2011, 9999	01
046	MX-3	GS	1992-95,9999	02
047	Millenia	L, S, P, Millennium Edition	1995-02,9999	04
048	MP3	Limited Edition	2001	04
049	RX-8	Sport AT, Shinka, Touring, Grand Touring, R3, Plus	2003-11,9999	04
050	Mazda6	i, s, Grand Touring, Sport, Mazdaspeed6, Grand Sport, SV, Plus	2003-11,9999	04-06,09
051	Mazda3	i, s, SP23, Sport, Touring, Grand Touring, Touring Value, Mazdaspeed3, iSV	2004-11,9999	04-06,09
052	Mazda5	Sport, Touring, Grand Touring	2006-11,9999	06
053	CX-7	i, s, Sport, Touring, Grand Touring, SV	2007-11,9999	05
054	CX-9	Sport, Touring, Grand Touring	2007-11,9999	06
055	Mazda2	Sport, Touring	2011	05
398	Other (automobile)	1200, 616	1950-2011, 9999	02-03,09
399	Unknown (automobile)		1950-2011, 9999	01-09

<b>Mazda (continued)</b>		<b>(41)</b>	<b>(MAZD)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
401	Navajo		1991-94,9999	14
402	Tribute	DX, DX-V6, LX-V6, ES-V6, ES, LX, i, s, Hybrid, Sport, Grand Touring, Touring	2001-11,9999	14
441	MPV	LX, ES, DX, All Sport, LX-SV	1989-98; 2000-06,9999	20
471	Pickup/ B-Series Pickup	B2000, B2200, B2300, SE-5, LX, SE (2WD, 4WD), SX, DS, Cab Plus, B2500/B2600/ B3000/B4000, Dual Sport Cab	1972-2009, 9999	30,32,40,42
498	Other (light truck)		1965-2011, 9999	14,20,30,32, 40,42
499	Unknown (light truck)		1965-2011, 9999	14,20,30,32, 39-40,42, 48-49
999	Unknown (MAZDA)		1950-2011, 9999	49

<b>Mercedes Benz</b>		<b>(42)</b>	<b>(MERZ)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b>AUTOMOBILES</b>				
031	200/220/230/240/ 250/260/280/300/ 320/420	Sedan and 5-passenger "C" only; SE,CD,D,SD,TD,TE, CE,E; DOES NOT include 280 SE (1975 on) or 300 SD-see code 037;C-Class up to 1993, E-Class up to 1997	1950-97,9999	01-02,04,06, 08-09,12
032	230/280 SL	2-seater only	1964-71,9999	01-02,09
033	300/350/380/450/500/ 560 SL	2-seater only; 300/500 SL (1990 on)	1972-94,9999	01-02,09
034	350/380/420/450/560 SLC		1973-94,9999	02
036	300/380/420/450/500/ 560/SEL & 500/560, 600 SEC & 300/350 SDL		1973-94,9999	02,04,06,08- 09
037	300/380/450 SE	280 S, 280 SE (1975 on), 300 SD Sedan/350 SD	1968-94,9999	01-02,04,08- 09
038	600, 6.9 Sedan	Pullman	1978-87,9999	04,12
039	190	D, E, 2.3, 2.5	1984-93,9999	04,06,09
040	300	CE Cabriolet	1993-94,9999	01
041	400/500E		1992-94,9999	01-02,04,06, 08-09
042	C Class (94 on)	C220/C230 (Kompressor)/ C240/C280/C320/C300/ C350/C36/C43, C32/55/63 AMG	1994-2011, 9999	02,04,06,09
043	S Class (95 on)	S320/350/400/420/430/450/ 500/550/600, S55/63/65 (AMG), Hybrid	1995-2011, 9999	02,04,08-09
044	SL Class (95 on)	SL 320/500/550/600, Silver Arrow Edition, SL55/63/65 AMG	1995-2011, 9999	01-02, 09
045	SLK	SLK230/280/300/320/350, Kompressor, SLK 32/55 (AMG), Special Edition	1998-2011, 9999	01
046	CL Class	CL 500/550/600, CL55/63/ 65 AMG	1998-2011, 9999	02
047	CLK	CLK 320/350/430/500/550, Cabriolet, CLK 55/63/65 AMG	1998-2011, 9999	01-02, 09
048	E Class (97 on)	300/TD, 320 (Wagon) 350/420/430/500/550, 55/63 AMG, E320CDI	1996-2011, 9999	01,04,06,09
049	SLR	McLaren, 722 Edition	2005-10,9999	01-02, 09
050	R Class	R320/350/500, R63 AMG	2006-11,9999	06
051	CLS Class	CLS500/550, CLS55/63 AMG	2006-11,9999	04
052	SLS Class	AMG	2011	02
398	Other (automobile)		1946-2011, 9999	01-12
399	Unknown (automobile)		1946-2011, 9999	01-12

<b><i>Mercedes Benz (continued)</i></b>		<b>(42)</b>	<b>(MERZ)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
401	M/ML Class	ML320/350/430/450/500/ 550, ML55/63 (AMG), Special Edition, Hybrid	1998-2011, 9999	14
402	G Class	G500, G550, G55 (AMG)	2002-11,9999	14
403	GLK Class	220/280/320/350	2010-11,9999	14
421	GL Class	GL320/350/450/550	2007-11,9999	15
461	Sprinter	(2004-2010 on see "Freightliner" and "Dodge")	2002-03, 2010-11, 9999	21-22,28-29
470	Van derivative	Kurbstar	1982-2011, 9999	28-29
498	Other (light truck)		1946-2011, 9999	14-16,19, 21-22,31-32, 40-42, 45, 48
499	Unknown (light truck)		1946-2011, 9999	14-16,19, 21-22,28-29, 31-32,40-42, 45,48-49
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
870	Medium Heavy Van-Based Vehicle	Sprinter	2002-03, 2010-11, 9999	55, 61-64
881	Medium/Heavy – CBE		1965-91,9999	60-64,78
882	Medium/Heavy – COE low entry		1965-91,9999	60-64,78
883	Medium/Heavy – COE high entry		1965-91,9999	60-64,78
884	Medium/Heavy – Unknown engine location		1965-91,9999	60-64,78
890	Medium/Heavy – COE entry position unknown		1965-91,9999	60-64,78
898	Other (medium/heavy truck)		1965-91,9999	60-64,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1965-91,9999	50-52,58-59
988	Other (bus)		1965-91,9999	50-52,58-59
989	Unknown (bus)		1965-91,9999	91-93,97
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1965-2011, 9999	49,79,99
999	Unknown (MERCEDES BENZ)		1950-2011, 9999	49,79,99

<b>Mercury (Merkur: See "56")</b>		<b>(14)</b>	<b>(MERC)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
002	Cyclone	GT, CJ, Spoiler	1964-70,9999	01-02,09
003	Capri-domestic (1967 see 008)	RS, Turbo, GS, Black Magic, 5.0	1979-86; 1989-94,9999	01,03,09
004	Cougar/XR7 (1967-1997)	Villager, Brougham, RS, LS, GS, Eliminator, XR-7	1967-97,9999	01-02,04,06, 08-09
006	Marquis/Monterey (car version; for van version 2004 on see code 444)/ Grand Marquis	Marauder (prior to 2003, 2003 on see code 039), Montclair, X-100, 5-55, Parklane, S-55, Custom, Brougham Grand Marquis (GS, LS), Medalist, Turnpike, Colony Park, GS, LS, LSE, Limited Edition, Palm Beach Edition	1952-2011, 9999	01-02,04,06, 08-09
008	Comet	Caliente, Capri (1967), GT, Voyager, 202, 404, Villager Wagon	1960-79,9999	01-02,04,06, 08-09
009	Bobcat	Runabout, Villager Wagon	1975-80,9999	03,06,09
010	Montego (prior to 1976; for 2005 on see code 020)	GT, MX, Villager, Brougham, Comet (1968-1970)	1968-76,9999	01-02,04,06, 08-09
011	Monarch	Ghia	1975-80,9999	02,04,08-09
012	Zephyr	GS, Z-7	1978-83,9999	02,04,06, 08-09
013	Lynx/LN7	L, LS, GS, RS, XR-3	1981-87,9999	03,05-07,09
015	Topaz	L, LS, GS, 4x4, XR5, LTS, Sport	1984-94,9999	02,04,08-09
017	Sable	LS, GS (Premium), GS Plus, Platinum Edition, Premier, Base	1986-2005, 2008-09,9999	04,06,09
020	Montego (2005 on)	Luxury, Premier	2005-07,9999	04
021	Milan	I-4, V6 (Base/Premier), Hybrid	2006-11,9999	04
031	Capri-foreign	Capri II, 2+2	1970-77,9999	03
033	Pantera-foreign	deTomaso	1972-74,9999	01-10
036	Tracer	L, GL, LTS, GS, LS	1988-99,9999	03-06,09
037	Mystique	GS, LS	1995-2000, 9999	04
038	Cougar (1999-2002)	V-6, I-4, S, Sport, CR, XR	1999-2002, 9999	02-03,09
039	Marauder	M75, 300A	2003-04,9999	04
398	Other (automobile)		1962-2011, 9999	01-10
399	Unknown (automobile)		1952-2011, 9999	01-10
<b><u>LIGHT TRUCKS</u></b>				
401	Mountaineer	Convenience, Luxury, Premier (4.0/4.6L)	1996-2010, 9999	14
402	Mariner	Convenience, Luxury, Premier, Hybrid	2005-11,9999	14
443	Villager	LS, GS, Nautica, Estate, Sport, Sport Plus, Popular	1993-2002, 9999	20

<i><b>Mercury (continued)</b></i>		<i><b>(14)</b></i>	<i><b>(MERC)</b></i>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>LIGHT TRUCKS (continued)</i></b>				
444	Monterey (van version; for car version prior to 2004 see code 006)	Convenience, Luxury, Premier	2004-07, 9999	20
498	Other (light truck)		1993-2011, 9999	14, 20
499	Unknown (light truck)		1993-2011, 9999	49
999	Unknown (MERCURY)		1950-2011, 9999	49

<b>Merkur</b>		<b>(56)</b>	<b>(MERK)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	XR4Ti	Turbo	1985-89,9999	03
032	Scorpio	Turbo	1988-90,9999	05
398	Other (automobile)		1985-90,9999	03-05,07,09
399	Unknown (automobile)		1985-90,9999	03-05,07,09

<b>MG</b>		<b>(43)</b>	<b>(MG)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Midget	GAN I/II/III/4/5, MK I, MK II, MKIII	1962-80,9999	01
032	MGB	MK I/II/IV, 600 Limited, V-8	1955-80,9999	01-02,09
033	MGB	GT, MK III	1967-74,9999	02-03,09
034	MGA	1500, 1600, YT,TC,TD/II, MK I/II, A	1945-62,9999	01-02,09
035	TA/TC/TD/TF	Y-Type, 430, TDC	1945-62,9999	01-02,09
036	MGC	GT	1968-69,9999	01-02,09
037	Magnette/Sports Sedans	ZB,ZA/YA/YB, MK III, MK IV, 1100, 1300	1945-66,9999	02,04,08-09
398	Other (automobile)		1945-80,9999	01-04,08-09
399	Unknown (automobile)		1945-80,9999	01-04,08-09

<b>Mitsubishi</b>		<b>(52)</b>	<b>(MITS)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Starion	2+2, LE, Turbo, ESI	1982-89,9999	03
032	Tredia	L, LS, Turbo	1982-88,9999	04
033	Cordia	L, Turbo	1982-88,9999	03
034	Galant	ECS, Sigma (thru 88), ES, LS, DE, GTS-V6, I-4, Special Edition, Ralliart, Sport Edition, SE	1985-2011, 9999	04
035	Mirage	L, Turbo, GS, LS, DS, DE, ES	1985-2002, 9999	02-04, 08-09
036	Precis		1987-94,9999	03, 05, 07, 09
037	Eclipse	GS, DOHL, Turbo, GS-T, GSX, Spyder, RS, GT, GTS, GS, Remix Edition, SE, Sport	1990-2011, 9999	01-03, 09
038	Sigma	(prior '89 see 034)	1989-90,9999	04
039	3000 GT	SL, VR-4, Spyder	1991-99,9999	01-03, 09
040	Diamante	LS, ES, LE, VR-X	1992-2004, 9999	04, 06, 09
041	iMEV	ES, SE	2012	05
045	Expo Wagon	LRV, Sport	1992-95,9999	06
046	Lancer/Lancer Sportback/Lancer Evolution	ES, LS, O-Z, Rally, Evolution VII/VIII/IX/X, Sport, Ralliart LS, MR Edition, DE, GSR, GTS, Touring, SE	2002-11,9999	04-06, 09
047	Outlander	ES, LS, SE, XLS, Limited, GT, Sport	2003-11,9999	06
398	Other (automobile)	500, 1000, Debonair, Galant (1969)	1960-2012, 9999	01-09
399	Unknown (automobile)		1960-2012, 9999	01-09
<b><u>LIGHT TRUCKS</u></b>				
401	Montero/Montero Sport	Sport, LS, SR, XLS, ES, LTD, 20 <sup>th</sup> Anniversary Edition, SE	1983-2006, 9999	14
402	Endeavor	LS, SE, XLS, Limited	2004-11,9999	14
441	Mini-Van	LS	1987-90,9999	20
471	Pickup	Mighty Max, SPX, 4x4	1983-96,9999	30, 32, 40, 42
472	Raider	LS, Durocross, XLS	2006-10,9999	31
498	Other (light truck)		1983-2011, 9999	14, 20, 30-32, 40, 42
499	Unknown (light truck)		1983-2011, 9999	14, 20, 30-32, 40, 42, 48-49
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
882	Medium/Heavy – COE low entry	FUSO FE/FG/FH/FK/FM	1983-2011, 9999	60-64, 66, 71-72, 78
898	Other (medium/heavy truck)		1983-2011, 9999	60-64, 66, 71-72, 78

<i>Mitsubishi (continued)</i>		(52)	(MITS)	
Codes	Model	Includes	Model Years	Body Types
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1981-2004, 9999	50-52,58-59
982	Bus: Front engine, Flat Front		1981-2004, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1981-2004, 9999	50-52,58-59
988	Other (bus)		1981-2004, 9999	50-52,58-59
999	Unknown (MITSUBISHI)		1983-2012, 9999	49,79,99

<b>Nissan/Datsun</b>		<b>(35)</b>	<b>(NISS) - (DATS)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	F-10		1977-78,9999	03,05-07,09
032	200SX/240SX	SE, SE-R, LE	1977-98,9999	01-03,09
033	210/1200/B210	110 series, Honeybee	1971-82,9999	02-04,06, 08-09
034	Z-car, ZX	240/260/280Z&ZX, 300 ZX, 2+2, Turbo	1970-96,9999	01-03,09
035	310	SPL	1979-82,9999	02-03,05,07, 09
036	510	PL,WPL	1968-73; 1978-81,9999	02-09
037	610	PL, HL	1973-76,9999	02-04,06, 08-09
038	710	PL	1974-77,9999	02-04,06, 08-09
039	810/Maxima	SE (Titanium Special), GXE, GLE, 3.5SE/SL/SEL /S/SV, Platinum Edition	1977-2011, 9999	04,06,09
040	Roadster	SPL311, SRL311, 1500, 1600, 2000, convertible, Fairlady	1950-70,9999	01
041	311/411	1000, Bluebird, PL311/ PL312/PL410/PL411/RL411	1959-67,9999	04,06,09
042	Stanza	XE	1982-93,9999	03-07,09
043	Sentra	E, XE, GXE, SE, SE-R (Spec V), GLE, CA, 2.5LE, 1.8, 1.8S, 2.0/S/SL/SR, Special Edition, SE-R, Platinum Edition, Spec-V	1982-2011, 9999	02,04,06, 08-09
044	Pulsar	NX, EXA (1986 on)	1983-90,9999	02-03,05,07, 09
045	Micra		1987-94,9999	01-05,07-09
046	NX 1600/2000	T-bar coupe	1991-94,9999	02-03,09
047	Altima	XE, GXE, SE, GLE, 2.5 S/SL, 3.5 S/SE/SL/SR, SE-R, Hybrid	1993-2011, 9999	02,04, 09
048	350Z/370Z	Enthusiast, Performance, Touring, Track, Base, 35 <sup>th</sup> Anniversary, Grand Touring, Nismo, 40 <sup>th</sup> Anniversary	2003-11,9999	01-02,09
049	Murano	SE, SL, S, LE, SV, CrossCabriolet	2003-11,9999	01,06,09
050	Versa	1.8S/SL, 1.6	2007-11,9999	04-05, 09
051	Rogue	S, SL, SV, Krom Edition	2008-11,9999	06
052	Cube	1.8 S/SL, Krom Edition	2009-11,9999	06
053	GT-R	Base, Premium	2009-11,9999	02
055	Leaf		2011	05

<b>Mitsubishi (continued)</b>		<b>(52)</b>	<b>(MITS)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES (continued)</u></b>				
398	Other (automobile)	110 sedan, K110	1955-11,9999	01-10
399	Unknown (automobile)		1955-11,9999	01-10
<b><u>LIGHT TRUCKS</u></b>				
401	Pathfinder	MPV, 4X4, XE, LE, SE, S, Off-Road, FE+, SV, Silver Edition	1986-2011, 9999	14
402	Xterra	XE (I-4), SE, (S/C), SE-R, Spec V, X, S, Off-Road, Pro4-X	2000-11,9999	14
403	Juke	S, SL, SV	2011	14
421	Pathfinder Armada	LE, SE, SE Off-Road, Titanium, Platinum, SV	2004-11,9999	15
441	Van	XE, GXE	1987-91,9999	20
442	Axxess		1989-90,9999	20
443	Quest	XE, GXE, SE, GLE, 3.5 S/SE/SL, Special Edition, SV, LE	1993-2002; 2004-09, 2011,9999	20
444	Altra EV	(electric vehicle)	1998-2005, 9999	20
445	NV	1500, 2500, 3500	2011	21-22, 29
471	Datsun/Nissan Pickup (1955-1997)	120,620 series, King Cab, Hardbody, XE, SE	1955-97,9999	30,32,40,42
472	Frontier (1998 on)	XE, SE, S/C (Regular Cab, King Cab, Desert Runner, Crew Cab), Open-Sky, SVE, Nismo, Pro-4X, LE, SV	1998-2011, 9999	30,32,40,42
473	Titan (from 2004-06; see 481 for 2007 on)	E, LE, SE, XE	2004-06,9999	31
481	Titan (from 2007 on; see 473 for 2004-06)	LE, SE, XE, PRO-4X, S, SV, SL	2007-11,9999	31
498	Other (light truck)	Patrol (1960)	1955-2011, 9999	14-15,20, 30-32
499	Unknown (light truck)		1955-2011, 9999	14-15,19-20, 30-32,39-40, 42, 48-49
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
883	Medium/Heavy – COE high entry		1986-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1986-2011, 9999	60-64,66, 71-72,78
999	Unknown (NISSAN/DATSUN)		1950-2011, 9999	49,79,99

<b>Oldsmobile</b>		<b>(21)</b>	<b>(OLDS)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
001	Cutlass (RWD-only)	Supreme, S, LS, Salon, Brougham Vista Cruiser, F85 (thru 1972), Rallye 350, Hurst Olds, 442, Calais (thru 1985), Classic (88)	1960-88,9999	01-02,04,06, 08-09
002	Delta 88/LSS	Royale, Custom, Delta, Jetstar 88, Delmont 88, Starfire (Thru 1966), Custom Cruiser, Jetfire, Eighty-Eight (LS, 50 <sup>th</sup> Anniv. Edition)	1949-99,9999	01-04,06, 08-09
003	Ninety-Eight/Regency	Luxury, Futuramic, Brougham	1949-99,9999	01-02,04, 08-09
005	Toronado	XS,XSR, Trofeo, Brougham Custom	1966-92,9999	02
006	Commercial Series	Ambulance/Hearse	1940-2003, 9999	09-12
012	Starfire	SX, GT, ST	1975-80,9999	01-03,09
015	Omega	X-body type, Brougham	1973-85,9999	02-04,08-09
017	Ciera	Cutlass Ciera, Cutlass Cruiser, Brougham, ES (International)	1982-96,9999	01-02,04,06, 08-09
018	Calais	GT, ES, 500	1985-91,9999	02,04,08-09
020	Cutlass (FWD)	Supreme (Excludes Ciera),GLS, GL	1988-99,9999	01-02,04, 08-09
021	Achieva/Alero	SC, SL, GX, GL (1,2,4), GLS	1992-2004, 9999	02,04,08-09
022	Aurora	3.5L, 4.0L,Collector's Series	1995-99; 2001-03,9999	04
023	Intrigue	GL, GX, GLS	1997-2002, 9999	02,04,08-09
398	Other (automobile)	66/68/70/90, Dynamic 70	1930-2004, 9999	01-12
399	Unknown (automobile)		1930-2004, 9999	01-12
<b><u>LIGHT TRUCKS</u></b>				
401	Bravada	2WD, 4WD, Collector's Series	1991-94; 1996-2004, 9999	14
441	Silhouette	GL, GLS, Series I, Series II, GS Premier Edition, Collector's Series	1990-2004, 9999	20
499	Unknown (light truck)		1932-2004, 9999	14,20,49
999	Unknown (OLDSMOBILE)		1932-2004, 9999	49

<b>Peugeot</b>		<b>(44)</b>	<b>(PEUG)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	304		1971-72,9999	04-06,09
032	403	Station Wagon	1955-67,9999	01,04,06,09
033	404	Station Wagon	1961-70,9999	01,04,06,09
034	504/505	STI, STX, Turbo, S, STI, STX, GL, GLS Liberte, Station Wagon, DSL, DL, GLX	1970-91,9999	04-06,09
035	604	SL, D	1977-84,9999	04
036	405	Mi-16, DL, S	1989-91,9999	04,06,09
398	Other (automobile)	202, 203	1945-91,9999	01-09
399	Unknown (automobile)		1945-91,9999	01-09
<b><u>MOTORCYCLES</u></b>				
701	0-50 cc		1965-83,9999	81
702	51-124cc		1965-83,9999	81
709	Unknown cc		1965-83,9999	81
999	Unknown (PEUGEOT)		1960-91,9999	99

<b>Plymouth</b>		<b>(09)</b>	<b>(PLYM)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b>AUTOMOBILES</b>				
001	Valiant/Scamp/Duster (thru 1976)	100, 200, Brougham, Signet, Custom, Special, 340, 360, Twister	1960-76,9999	01-02,04,06, 08-09
002	Satellite/Belvedere	Belvedere I/II, GTX, Roadrunner (through 1974), Brougham, Sebring, Sebring Plus, Superbird	1951-74,9999	01-02,04,06, 08-12
003	Fury (Fury Gran thru '78)	I, II, III, Roadrunner (1975), Suburban, Salon, VIP, Sport	1957-78,9999	01-02,04,06, 08-09
004	Gran Fury ('80 on)	Sedan, Coupe, Salon	1980-89,9999	02,04,06, 08-09
005	Barracuda	Formula, S, 340, Gran Coupe, AAR, Cuda	1964-74,9999	01-02,09
006	Volare'	Custom, Premier, Roadrunner (1976 on), Police	1976-80,9999	02,04,06, 08-09
007	Caravelle	Turbo, SE	1985-88,9999	04
008	Horizon/Turismo	TC-3, Turismo 2.2, Miser, America, Custom, SE, Duster (1985 on), Expo	1978-90,9999	03,05,07,09
011	Reliant (K)	SE, LE, Reliant America, Limited	1981-89,9999	02,04,06, 08-09
013	Scamp-(car-based p/u)	GT, 2.2	1982-84,9999	10
017	Sundance	RS, Turbo, Sundance Duster, America	1987-94,9999	03,05,07,09
019	Acclaim	LX, LE	1989-95,9999	04
020	Neon (2002 and on, see Dodge)	Sport, Competition, Highline	1995-2001, 9999	02,04,08-09
031	Cricket		1971-72,9999	04,06,09
032	Arrow	GS, GT, Fire Arrow	1976-80,9999	03
033	Sapporo	all imported	1978-83,9999	02-03,09
034	Champ/Colt import (includes 2WD Vista)	Turbo, Custom, GL, SE, DL, E Station wagon (1984 on)	1979-94,9999	02-09
035	Conquest	TSI	1984-87,9999	03
037	Laser	RS, Turbo	1989-94,9999	02-03,09
038	Breeze		1996-2000, 9999	04
039	Prowler (2002 and on, see Chrysler)	Roadster, Black Tie Edition	1997;1999-2001, 9999	01
398	Other (automobile)	Regant, Fleet, Savoy, Concord, Cambridge	1930-95,9999	01-12
399	Unknown (automobile)		1965-2001, 9999	01-12

<b>Plymouth (continued)</b>		<b>(09)</b>	<b>(PLYM)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
421	Trailduster		1974-93,9999	15
441	Vista Van	4X4 (only)	1987-94,9999	20
442	Voyager (minivan) (2000 and on, see Chrysler)	SE, LX, Grand Voyager, SE Expresso, EPIC-electric	1984-2001, 9999	20
461	Van-fullsize (B-series)	Voyager (thru 1983), Sport, Premier	1965-95,9999	21
471	Arrow pickup (foreign)		1975-91,9999	30,32
498	Other (light truck)		1965-2001, 9999	15,20-21, 28-29,30,32, 42,45,48
499	Unknown (light truck)		1974-2001, 9999	15,20-21, 29-30,32, 48-49
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1965-2001, 9999	91-93,97
999	Unknown (PLYMOUTH)		1957-2001, 9999	49

<b>Pontiac</b>		<b>(22)</b>	<b>(PONT)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
001	Lemans/Tempest (thru 1970)	Safari, T-37, Luxury, Grand Sport, GTO (thru 1973), GT-37, Sprint, Judge, Grand AM (73-75), Grand Lemans	1961-81,9999	01-02,04,06, 08-09
002	Bonneville/Catalina/ Parisienne	Brougham, Grand Safari, Safari, Grandville, 2+2, Executive, Starchief, SE, SSE, SSEi, G, SLE, GXP	1954-2005, 9999	01-02,04,06, 08-09
005	Fiero	2M4, 2M6, GT, SE	1984-89,9999	02
008	Ventura/GTO	II, SJ, Sprint, GTO (74-77), Custom, Base, LS2	1971-77; 2004-06,9999	02-04,09
009	Firebird/Trans AM	Esprit, Formula, GTA, Redbird, Yellowbird, Skybird, SE, Bandit, TransAm	1967-2002, 9999	01-03,09
010	Grand Prix (RWD)	J, LJ, SJ, Brougham, 2+2, GT, STE, SE	1962-87,9999	01-02,09
011	Astre	Safari, SJ, Custom	1975-77,9999	02-03,06,09
012	Sunbird (thru 1980; 1985 on see model 016)	Safari, Sport, Formula	1976-80,9999	01-09
013	T-1000/1000	2T	1981-87,9999	03,05,07,09
015	Phoenix	LJ, SJ	1977-84,9999	02-05,07-09
016	Sunbird (1985-1994)/ J-2000/Sunfire (1995 on)	LE, SE, GT, 2000 Convertible, 2J, S, SE, GT, 1SA, 1SB, 1SC, 1SV	1982-2005, 9999	01-09
017	6000	STE, SE, LE	1982-91,9999	02,04,06, 08-09
018	Grand AM	SE, LE, GT, GT1, SE1, SE2, SC/T Package	1973-2005, 9999	02,04,08-09
019	G5	Base, GT	2007-10,9999	02
020	Grand Prix (FWD)	LE, SE, STE, GT, McLaren Turbo, GTP, Limited Edition, 40 <sup>th</sup> Anniversary Edition, GXP	1988-2008, 9999	01-02,04, 08-09
022	G6	Base, GT, GTP, Value Leader, GXP	2005-10,9999	01-02,04,09
023	Solstice	GXP	2006-09,9999	01-02, 09
024	G8	GT, GXP	2008-09,9999	04
025	G3		2009-10,9999	04-05,09
031	Lemans (1988-on)	LE, SE, Tempest Canadian)	1988-93,9999	01-09
032	Vibe	GT, AWD, HB	2003-10,9999	06
398	Other (automobile)	Torpedo, Streamliner, Chieftain Star Chief, Super Chief	1946-2010, 9999	01-10
399	Unknown (automobile)		1926-2010, 9999	01-10

<b>Pontiac (continued)</b>		<b>(22)</b>	<b>(PONT)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
401	Aztek	GT, SE, 1SA, 1SB, 1SC, Rally Edition	2001-05,9999	14
403	Torrent	GXP	2006-09,9999	14
441	Trans Sport/ Montana/SV6	SE, Montana, Extended, Versatrak, 1SV, 1SA, 1SX, 1SY, 1SE, Chrome Sport,	1990-2006, 9999	20
499	Unknown (light truck)		1990-2009, 9999	14,20,49
999	Unknown (PONTIAC)		1951-2010, 9999	49

<b>Porsche</b>		<b>(45)</b>	<b>(PORS)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	911/996	L, S, E, T, SC, Carrera (2, 4, Cabriolet, Targa), GT, Slopenose, 4S, Targa, Speedster, Turbo, B series, S-Coupe, Cabriolet (S), GT2, GT3 (RS), Carrera GT	1965-2011, 9999	01-02,09
032	912	1600, E, T	1966-69; 1976,9999	01-02,09
033	914	1.7, 1.8, 2.0, S, 914/4/6	1970-76,9999	01
034	924	Turbo, S	1977-88,9999	01-03,09
035	928	S, S4, GT, GTS	1978-95,9999	02-03,09
036	930	Turbo	1979	02
037	944	Turbo, S, S2	1983-91,9999	01-03,09
038	959	Not Imported to U.S.	1989-94,9999	01-03,09
039	968		1992-95,9999	01-02,09
040	986/Boxster	Boxster, Boxster Cabriolet, S Roadster, S Anniversary, Limited Edition, Spyder	1997-2011, 9999	01
041	Cayman	S	2006-11,9999	02
042	Panamera	S, 4, 4S, Turbo	2010-11,9999	05
398	Other (automobile)	Spyder, Speedster (prior to '65), 356 (A,B,C) Grund, America, Super, 1500	1948-2011, 9999	01-03,05,09
399	Unknown (automobile)		1948-2011, 9999	01-03,05,09
<b><u>LIGHT TRUCKS</u></b>				
421	Cayenne	Turbo, S, Titanium, GTS (PD Edition), Transsyberia, Hybrid	2003-11,9999	15
999	Unknown (PORSCHE)		1965-2011, 9999	99

<b>Renault</b>		<b>(46)</b>	<b>(RENA)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	LeCar	R-5, R5TL, GTL, TL, DLX	1976-83,9999	02-05,07-09
032	Dauphine/10/R-8 Caravelle	all models, R-1190, R8-1100	1955-71,9999	01-02,04,08-09
033	12	R-12L, R-12TL/GTL	1972-77,9999	04,06,09
034	15	R-15TL	1973-76,9999	02-03,09
035	16	R-16, R-1152	1969-72,9999	06
036	17	R17, Gordini Coupe, R17TL	1972-80,9999	01-02,09
037	18i/Sportwagon	R18i, Deluxe, DLX	1981-86,9999	04,06,09
039	Alliance/Encore GTA, Convertible	L, DL, Limited, X-37	1983-87,9999	01-05,07-09
041	Alpine	GT, GTA Coupe, Not imported to U.S.	1971-90,9999	02-03,09
044	Medallion	DL, LX	1987	04,06,09
045	Premier		1987	04
398	Other (automobile)	Juvaquatre, 4CV, Fregate, Domaine	1946-90,9999	01-11
399	Unknown (automobile)		1946-90,9999	01-11

<b>Saab</b>		<b>(47)</b>	<b>(SAA)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	99/99E/900	S,GL, GLE, L, LE, 2CM, 4CM Turbo, Cabriolet, 2EM, 4EM, CM, SE	1969-98,9999	01-05,07-09
032	Sonnett	II, III, 97	1967-74,9999	02
033	95/96	V-4, M, S, M-S, Special	1959-73,9999	02,06,09
034	9000	S, Turbo, CS, CD, CDE, E, AERO,CSE	1985-98,9999	04-05,09
035	9-3	SE (Hot), Viggen, Linear Arc, Vector, Aero, 2.0T, SportCombi	1999-2011, 9999	01,03-07,09
036	9-5	SE, Aero, 2.3T, Set, Arc, Linear, Aero, SportCombi, 2.5T, Turbo X	1999-2011, 9999	02,04,06, 08-09
037	9-2x	Linear, Aero	2005-06,9999	05
038	9-4X		2009-11,9999	06
398	Other (automobile)	Monte Carlo 850, GT850, GT750, 92/93	1950-2011, 9999	01-09
399	Unknown (automobile)		1950-2011, 9999	01-09
<b><u>LIGHT TRUCKS</u></b>				
401	9-7x	Arc, Linear, 4.2i, 5.3i, Altitude Edition, Aero	2005-2011, 9999	14
999	Unknown (SAAB)		1950-2011, 9999	49

<b>Saturn</b>		<b>(24)</b>	<b>(STRN)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
001	SL	SL, SL1, SL2	1991-2002, 9999	04
002	SC	SC1, SC2	1991-2002, 9999	02
003	SW	SW1, SW2	1993-2001, 9999	06
004	EV1/EGV1	Electric Vehicle (Gen II)	1997-2003, 9999	02
005	LS	LS, LS1, LS2, L100/L200/ L300, L300-1/2/3	2000-05,9999	04
006	LW	LW1, LW2, LW200/ LW300-1/2/3	2000-04,9999	06
007	Ion	Quad-coupe, 1/2/3, Red Line	2003-07,9999	04
008	Sky	Red Line	2007-10,9999	01
009	Aura	XE, XR, Hybrid	2007-10,9999	04
010	Outlook	XE, XR	2007-10,9999	06
011	Astra	XE, XR, Sport	2008-10,9999	03,05,09
398	Other (automobile)		1991-2010, 9999	02-06,08-09
399	Unknown (automobile)		1991-2010, 9999	02-06,08-09
<b><u>LIGHT TRUCKS</u></b>				
401	Vue	Red Line, 4, V6, Green Line, XE, XR-4, XR-V6	2002-10,9999	14
441	Relay	2, 3	2005-07,9999	20
499	Unknown (light truck)		2002-10,9999	14,20
999	Unknown (SATURN)		1991-2010, 9999	49

<b>Smart</b>		(65)		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Fortwo	Pure, Passion, BRABUS	2008-11,9999	01-02,09
032	Forfour		2011	05
398	Other (automobile)		2008-11,9999	01-02,09
399	Unknown (automobile)		2008-11,9999	01-02,09

<b>Sterling</b>		<b>(61)</b>	<b>(STLG)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	827	Li, SL, S, SLI	1987-91,9999	04-05,09
398	Other (automobile)	825, S, SL, Oxford Edition	1987-91,9999	04-05,09
399	Unknown (automobile)		1987-91,9999	04-05,09

<b>Subaru</b>		<b>(48)</b>	<b>(SUBA)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Loyale (1990 on)/DL/ FE/G/GF/GL/GLF/STD	4-wheel drive, S, 1300, 1400, 1600, 1800, A15L, A44L, Touring Wagon, Turbo	1972-94,9999	02-09
032	Star	FF -1 Star, 1100	1971	02,04,06, 08-09
033	360		1958-70,9999	02
034	Legacy/Outback (prior to 2003 only; see 045 for 2003 on)	L, LS, LSI, 4WD, Outback (Limited, Ltd, Sport, VDC, L.L. Bean Edition), GT, Brighton, Sport Utility Sedan (Ltd.), 30 <sup>th</sup> Anniv. Outback, H-6, 35 <sup>th</sup> Anniv., 2.5, 2.5i/GT, spec. B, 3.0R, Limited, Premium, 3.6R	1990-2011, 9999	04-06,09
035	XT/XT6	4WD Turbo, convertible, DL, GL	1985-91,9999	01-02,09
036	Justy	DL, GL, 4WD	1987-94,9999	03,05,07,09
037	SVX	LS, LSL, XR, Lsi	1992-97,9999	02
038	Impreza	L, LS, Brighton, Outback Sport, RS, L-Sport, LX, 2.5i/ RS/TS/ GT, WRX, WRX Sport/STI/ TR, Limited Edition, Premium	1993-2011, 9999	02,04-06, 08-09
039	RX		1986-89,9999	03-04,09
043	Brat	DL, GL	1978-87,9999	10
044	Baja	Sport, Turbo	2003-07,9999	10
045	Outback (2003 on; see 034 for prior to 2003)	H6-VDC, 35 <sup>th</sup> Anniversary Edition, 2.5, 2.5i, 2.5XT, 3.0R, Special Edition, VDC Limited, Sport, L.L. Bean Edition, 3.0R. Premium, 3.6R	2003-11,9999	04-06,09
398	Other (automobile)		1968-2011, 9999	01-10
399	Unknown (automobile)		1968-2011, 9999	01-10
<b><u>LIGHT TRUCKS</u></b>				
401	Forester	L, S, 2.5X, 2.5XS, 2.5XT, L.L. Bean Edition, Limited, Sport, Premium	1997-2011, 9999	14
402	B9 Tribeca	Base, Limited, Special Edition, Premium, Touring	2006-11,9999	14
499	Unknown (light truck)		1997-2011, 9999	14
999	Unknown (SUBARU)		1958-2011, 9999	49

<b>Suzuki</b>		<b>(53)</b>	<b>(SUZI)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Swift/SA310	Gti, GTX, GLX, GA, GT, GL	1989-2001, 2010, 9999	03-05,07,09
032	Esteem	GL, GLX, GLX+	1995-2002, 9999	04,06,09
033	Aero	S,G,LX,SX (Wagon), Luxury	2002-07,9999	04,06,09
034	Forenza	S, LX, EX, Premium, Convenience, Popular	2004-08,9999	04,06,09
035	Verona	S, LX, EX, Luxury	2004-06,9999	04
036	Reno	S, LX, EX, Premium, Convenience	2005-08,9999	05
040	SX4/SX4 Crossover	Base, Sport, Convenience, Touring, S, SE, GTS, LE	2007-11,9999	04-05,09
041	Kizashi	GTS, S, SE, SLS	2010-11,9999	04
398	Other (automobile)	800 Fronte, Alto	1981-2011, 9999	03-07,09
399	Unknown (automobile)		1981-2011, 9999	03-07,09
<b><u>LIGHT TRUCKS</u></b>				
401	Samurai	Standard, Deluxe, JL	1986-96,9999	14
402	Sidekick/Vitara/ Vitara V6	JS, JX, JLX, JLS, Sport, Grand Vitara (1999-2002 only; see model 404 for 2003 on) (JS, JLX, JLS, Ltd.) XL-7 (2002 only; see model 405 for 2003 on) LX	1989-2004, 9999	14
403	X-90		1996-98,9999	14
404	Grand Vitara (2003 on; see model 402 for models prior to 2003)	JS, JLX, JLS, Limited, GX, LX, XV6, Premium, Xsport, Luxury, Special Edition	2003-11,9999	14
405	XL-7 (2003 on; see 402 for 2002 model year)	Standard, Touring, Limited, GX, LX, Premium, Luxury	2003-09,9999	14
481	Equator	Comfort, Premium, Sport, RMZ	2009-11,9999	31
498	Other (light truck)	Jimmy	1981-2011, 9999	14, 31
499	Unknown (light truck)		1981-2011, 9999	14, 31
<b><u>MOTORCYCLES</u></b>				
701	0-50cc		1970-2011, 9999	80-81,83, 88-89
702	51-124cc		1970-2011, 9999	80-81,83, 88-89
703	125-349cc		1969-2011, 9999	80,83,88-89
704	350-449cc		1970-93; 2000-11,9999	80,83,88-89
705	450-749cc		1969-2011, 9999	80,83,88-89
706	750cc-over		1970-2011, 9999	80,83,88-89
709	Unknown cc		1969-11,9999	80-83,88-89

<i>Suzuki</i>		(53)	(SUZI)	
Codes	Model	Includes	Model Years	Body Types
<b><u>ALL TERRAIN VEHICLES</u></b>				
731	0-50cc	includes all ATVs designed solely for off-road use and have 3 or 4 wheels.	1969-87; 2002-04,9999	90
732	51-124cc		1969-2004, 9999	90
733	125-349cc		1969-2011, 9999	90
734	350cc or greater		1969-93; 1999-2011, 9999	90
739	Unknown cc		1969-2011, 9999	90
999	Unknown (SUZUKI)		1969-2011, 9999	49,99

<b>Toyota</b>		<b>(49)</b>	<b>(TOYT)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Corona	Mark II, Custom, 1900, 2000, Deluxe	1966-83,9999	02,04,06, 08-09
032	Corolla	1100, 1200, 1600, SR-5, LE, DX, CE, Deluxe, Custom, FX, FX16, Sport, GTS, VE, S, XRS, XLE	1969-2011, 9999	02-09
033	Celica	1900, 2000, GT, ST, GTS, VE, GT-S	1971-2005, 9999	01-03,09
034	Supra	Celica Supra, Soarer, Turbo	1979-98,9999	03
035	Cressida		1978-92,9999	04-06,09
036	Crown	2300, 2600, Toyopets	1958-71,9999	02,04,06, 08-09
037	Carina	2000	1972-73,9999	02
038	Tercel	Corolla Tercel, 4WD, EZ, DX, LE, DLX, CE	1980-99,9999	02-09
039	Starlet		1981-84,9999	03
040	Camry	LE, Deluxe, XLE, DLX, SE, All-Trac, CE, SE, Limited Edition, LE, Hybrid,	1983-2011, 9999	02,04-06, 08-09
041	MR-2/MR Spyder	Super Charged	1984-95; 2000-05,9999	01-02,09
042	Paseo	Turbo, T-bar	1992-97,9999	01-02,09
043	Avalon	XL, XLS, Limited, Touring	1995-2011, 9999	04
044	Solara	Camry Solara (SE, SLE, Sport)	1999-2011, 9999	01-02,09
045	ECHO		2000-05,9999	02,04,09
046	Prius	Electric hybrid, Touring, II, III, IV, V	2001-11,9999	04-05,09
047	Matrix	Base, XR, XRS, STD, S	2003-11,9999	06
048	Scion xA	RS 1.0	2004-07,9999	05
049	Scion xB	1.0, 2.0 Series	2004-11,9999	06
050	Scion tC	1.0 Series	2005-11,9999	03
051	Yaris	Liftback, S	2007-11,9999	03-05, 09
052	Scion xD		2008-11,9999	05
053	Venza		2009-11,9999	05
054	Scion iQ		2010-11,9999	04
398	Other (automobile)	2000 GT Coupe (1960s), Sports 800, Viper, Tiara	1960-2011, 9999	01-10
399	Unknown (automobile)		1960-2011, 9999	01-10
<b><u>LIGHT TRUCKS</u></b>				
401	4-Runner	SR5, Limited, Sport, Trail	1984-2011, 9999	14
402	RAV4	L, EVs-electric, Sport, Limited	1996-11,9999	14
403	Highlander	Limited, Hybrid, Sport, SE	2001-11,9999	14
404	FJ Cruiser	Baja 1000, FJ, SE, TRD	2007-11,9999	14

<b>Toyota (continued)</b>		<b>(49)</b>	<b>(TOYT)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS (continued)</u></b>				
421	Land Cruiser	4WD	1964-2011, 9999	15
422	Sequoia	SR5, Limited, Platinum	2001-11,9999	15
441	Minivan (1984-90)/ Previa (1991 on)	LE, Cargo, DX, XLE	1984-97,9999	20
442	Sienna	CE, LE, XLE, Symphony, Limited, SE	1998-2011, 9999	20
471	Pickup	SR-5, Extra Cab, Sport, LN44, Chinook, Wonder Wagon	1974-95,9999	30-32,40,42
472	Tacoma	SR5, Xtracab, Limited, PreRunner, Side Step, Double Cab, S-Runner, 2.7L, 4.0L X-Runner	1995-2011, 9999	30,32,40,42
481	T-100	DX, SR5, Limited, Xtracab	1993-98,9999	31-32,40,42
482	Tundra	SR5 (Access Cab), LTD, (Access Cab), Double Cab, Darrell Waltrip Special Edition, CrewMax, 4.0L, 4.6L, 5.7L	1999-2011, 9999	31-32, 40,42
498	Other (light truck)		1970-2011, 9999	14-15,19-20, 29-30,32,39
499	Unknown (light truck)		1973-2011, 9999	14-15,19-20, 30-32,39-40, 42,48-49
999	Unknown (TOYOTA)		1966-2011, 9999	49

<b>Triumph</b>		<b>(50)</b>	<b>(TRIU)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Spitfire	I, II, III, IV, 1500	1962-81,9999	01-02,09
032	GT-6	MK3	1967-73,9999	01-02,09
033	TR4	TR2, TR3, TR4A	1958-68,9999	01-02,09
034	TR6		1969-76,9999	01-02,09
035	TR7/TR8		1975-81,9999	01-02,09
036	Herald	Vitesse	1960-74,9999	01-02,06,09
037	Stag		1971-73,9999	01-02,09
398	Other (automobile)	1800,2000,Mayflower, Renown,1200	1946-81,9999	01-02,04, 08-09
399	Unknown (automobile)		1946-81,9999	01-02,04, 08-09
<b><u>MOTORCYCLES</u></b>				
701	0-50cc		1965-83,9999	80
702	51-124cc		1965-83,9999	80
703	125-349cc		1950-74,9999	80
704	350-449cc		1950-71,9999	80
705	450-749cc		1950-83; 2000-11,9999	80
706	750cc or greater		1950-74; 1983-2011, 9999	80
709	Unknown cc		1950-2011, 9999	80
799	Unknown (motored cycle)		1950-2011, 9999	80
999	Unknown (TRIUMPH)		1950-2011, 9999	99

<b>Volkswagen</b>		<b>(30)</b>	<b>(VOLK)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Karmann Ghia		1954-75,9999	01-02,09
032	Beetle 1300/1500	Flat windshield, 94.5 WB	1948-77,9999	01-02,09
033	Super Beetle	Curved windshield 95.3 WB	1971-80,9999	01-02,09
034	411/412	Squareback/Fastback	1971-74,9999	03-04,09
035	Squareback/Fastback	Type 3, 1600	1965-74,9999	02
036	Rabbit	L, GTI, Sport, LS, Custom, DL, Deluxe, S	1975-84, 2007-09,9999	01,03,05-07, 09
037	Dasher		1974-81,9999	03,05-07,09
038	Scirocco	16V	1975-88,9999	02
040	Jetta	Jetta III, GL (TDI, 1.9L, 2.0L), GLI (VR6), GLS (1.8T,1.8L/1.9L/2.0L/2.8L/ TDI/VR6),GT, Carat, TDI, GLX (VR6/2.8L), Turbo Diesel, Wolfsburg Edition, 2.5L S/SE/SEL, Value Edition. 2.0T, 3.6	1981-2011, 9999	02,04,06, 08-09
041	Quantum	Syncro	1982-88,9999	02,04,06, 08-09
042	Golf/Cabriolet/Cabrio/ GTI/ GLI	Golf II, GTI (GLS, GLX 1.8T/2.8L), GT, GL(1.8T/ VR6/2.0L/1.9L/ TDI), Golf III, GLS (1.8T/1.8L/1.9L/ 2.0/TDI), Wolfsburg, Cabrio (GL, GLS, GLX), 20 <sup>th</sup> Anniversary, R32, MkV	1985-2011, 9999	01,03-04, 05-07, 09
043	Rabbit Pickup	car-based pickup	1980-83,9999	10
044	Fox	GL	1987-94,9999	02,04,06, 08-09
045	Corrado		1989-94,9999	02
046	Passat	GL,GLS(1.8T,Synchro,V6),TDI,GLX( 1.8T, 2.0T, W8, Synchro,V6), 4MOTION, 3.6 GL, Value Edition, CC	1990-2011, 9999	04,06,09
047	New Beetle	GL GLS TDI, 1.8T/1.8L/ 1.9L/2.0L/2.5/2.5L Syncro/ V6, GLX (1.8T), Turbo S	1998-2011, 9999	01,03,09
048	Phaeton	3.2L, 4.2L, V6, V8,W12	2003-06,9999	04
051	Eos	2.0T, 3.2L, Komfort, Lux, VR6	2007-11,9999	01
398	Other (automobile)		1965-2011, 9999	01-10
399	Unknown (automobile)		1956-2011, 9999	01-10

<b>Volkswagen (continued)</b>		<b>(30)</b>	<b>(VOLK)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
401	The Thing (181)		1973-75,9999	14
402	Tiguan	S, SE, SEL	2008-11,9999	14
421	Touareg/Touareg 2	V6, V8, V10, VR6 FSI	2003-11,9999	15
441	Vanagon/Camper	Bus, Kombi, Van	1955-91,9999	20
442	Eurovan	GLS, MV, Camper, Weekender Package	1992-04,9999	20
443	Routan	S, SE, SEL Premium/RSE	2009-11,9999	20
498	Other (light truck)		1967-80,9999	14-15,20
499	Unknown (light truck)		1965-2011, 9999	14-15,20,49
<b><u>OTHER VEHICLE</u></b>				
998	Other (vehicle)		1965-2011, 9999	91-93,97
999	Unknown (VOLKSWAGEN)		1956-2011, 9999	49

<b>Volvo</b>		<b>(51)</b>	<b>(VOLV)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	122	S	1958-68,9999	02,04,06, 08-09
032	140/142/144/145	S, E, GL, GLS, Deluxe	1968-74,9999	02,04,06, 08-09
033	164	S, E	1970-75,9999	04
034	240 series/DL/GL/GLT	242, 244, 245, DL, GL, GLT, Deluxe	1975-93,9999	02,04,06, 08-09
035	260 series/GLE	264,265,262, c, Volvo Coupe, Volvo Diesel	1976-82,9999	02,04,06, 08-09, 12
036	1800	E, S, ES, P1800	1960-73,9999	02,06,09
037	PV544	PV444	1947-65,9999	04,06,09
038	760/780	GLE, Turbo, Bertone Coupe	1983-92,9999	02,04,06, 08-09, 12
039	740	GLE, GT, Turbo, GL, SE	1983-92,9999	04,06,09
040	940	GLE, Turbo, SE	1991-95,9999	04,06,09,12
041	960		1992-97,9999	04,06,09,12
042	850	GLT, Turbo, T-5, GTAS, GTMS Cross Country	1993-97,9999	04,06,09
043	70 Series	C70 (LT, HT,T5), S70 (GLT, T5, AWD) V70 (R, SC Cross Country, GLT, T-5, XC70, M, 2.4T, 2.4, 2.5T, T-6, R, 3.2) LPT, HPT	1998-2011, 9999	01-02,04,06, 09
044	90 Series	S90, V90	1998	04,06,09
045	80 Series	S80 (2.9, T6, Executive, Premier) 2.5, 2.5T, 3.2, V8	1999-2011, 9999	04
046	40 Series	S40,V40,LSE, 2.5i, T5, 2.4i, R-Design	2000-11,9999	04,06,09
047	60 Series	S60 (2.4T, 2.4, 2.5 AWD, T5), 2.4M, 2.5T, R, T5,	2001-11,9999	04
048	V50	2.4i, T5, R-Design	2005-11,9999	06
049	C30	1.0, 2.0, T5, R-Design	2008-11,9999	03
050	XC60	3.2, T6	2008-11,9999	06
398	Other (automobile)		1958-2011, 9999	01-12
399	Unknown (automobile)		1958-2011, 9999	01-12
<b><u>LIGHT TRUCKS</u></b>				
401	XC90	2.5T(AWD), T6(AWD), V8, 3.2, R-Design	2003-11,9999	14

<b>Volvo (continued)</b>		<b>(51)</b>	<b>(VOLV)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE		1981-93; 1996-2011, 9999	60-64,66,78
882	Medium/Heavy – COE low entry		1981-93; 1996-2004, 9999	60-64,66,78
883	Medium/Heavy – COE high entry		1981-93; 1996-2004, 9999	60-64,66,78
884	Medium/Heavy – Unknown engine location		1981-93; 1996-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1981-93; 1996-2011, 9999	60-64,66,78
898	Other (medium/heavy truck)		1981-93; 1996-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1981-2005, 9999	50-52,58-59
988	Other (bus)		1965-2005, 9999	50-52,58-59
999	Unknown (VOLVO)		1958-2011, 9999	79,99

Yugo		(57)	(YUGO)	
Codes	Model	Includes	Model Years	Body Types
<b><u>AUTOMOBILES</u></b>				
031	GV/GVL/GVX	All models, Cabriolet	1986-92,9999	01-03,09

<b><i>Other Domestic Manufacturers</i></b>		<b>(29)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
001	Studabaker/Avanti	Lark, Gran Turismo, Hawk, Cruiser, all associated subseries, light pick-up, Studebaker XUV/XUT, Lister	1940-91; 2001-07,9999	01-02,04,06, 08-09,16,31, 39
002	Checker	Marathon, Superba, Taxi, Aerobus	1965-82,9999	04,06,09,12
003	Panoz	Esperante (Magnussen Edition), GTS, GTLM, JRD	2000-11,9999	01-02,09
004	Saleen	S7, S281, 435S	2001-11,9999	02
398	Other (automobile)	Desoto, Excaliber, Stutz, FiberFab, Hudson, Packard, Consulier, Gatsby, Auburn, Phaeton, Citicar, Clenet	1930-91,9999	01-13
399	Unknown Make		1940-2011, 9999	01-13,16,39

<i><b>Other Import</b></i>		<i><b>(69)</b></i>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>AUTOMOBILES</u></b>				
031	Aston Martin	Lagonda, Vantage, Volante, Saloon, DB Mark III, DB4, DB4GT, DB5, DB6, DB7 (Heritage, Vantage, Volante), V12 Vanquish S, V8, DB9, Rapide, DBS, Cygnet, Carbon Black, One-77	1950-2011, 9999	01-09
032	Bricklin		1965-91,9999	02
033	Citroen		1965-91,9999	02-09
034	DeLorean		1981-83,9999	02
035	Ferrari	F355 (Berlinetta, GTS, Spider, F1), F430, F456 (GTA, M, GT, MGTA), F550 (Maranello, Barchetta Pininfarina), 360/430 (Spider, Modena, Challenge) Maranello, Berlinetta, MGT (Vintage), Enzo, Challenge Stradale, 575M, 612 Scaglietti, Superamerica, 599 GTB, California, 418 Italia	1965-2011, 9999	01-05,07-09
036	Hillman		1965-91,9999	01-09
037	Jensen	Healy-Interceptor, 541R	1965-91,9999	01-05,07-09
038	Lamborghini	Countach, 5000S, Jalpa, Diablo, Miura, Murciélagos (LP640), Gallardo, LP 550-2, LP 560-4, LP 570-4 LP-670-4	1965-2011, 9999	01-02,04, 08-09
039	Lotus	Europe, Esprit (V8, GT-3, V8-GT) Elise, Exige, Evora, California, Club Racer, Sport	1967-2011, 9999	01-02,04, 08-09
040	Maserati	Biturbo, Ghibli, 3200 GT, Quattroporte, Spyder GT, Sports GT, Executive GT, 90th Anniversary, MC12, GranSport, GranTurismo	1965-99; 2002-11,9999	01-05,07-09
041	Morris	Minor	1965-91,9999	01-10
042	Rolls Royce/Bentley	Rolls Royce: Cloud/Shadow series, Silver Spur, Silver Dawn, Silver Spirit, Silver Seraph, Corniche, Park Ward); Bentley: (Arnage, Azure, Continental, Mulliner), Phantom, Brooklands, Goodwood, Ghost	1926-2011, 9999	01-02,04, 08-09
044	Simca		1965-91,9999	01-09
045	Sunbeam		1965-91,9999	01-02,04, 08-09
046	TVR		1965-91,9999	01-02,09
048	Desta		1985-99,9999	14-15,19
049	Reliant		1960-91,9999	01-09
052	Bertone	X/19	1989-91,9999	01-02,09
053	Lada		1965-91,9999	01-09

***Other Import (continued)*****(69)**

<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>AUTOMOBILES (continued)</i></b>				
054	Mini-Cooper	Mark I,II,III, S, SE, Sport, MC40, Traveller, John Cooper Works, Clubman, Countryman	1961-74; 2002-11,9999	01,03,06,09
055	Morgan (2003 on; Prior to 2003 see 398)	Aero 8, Plus 8, V6, Classic Range, AeroMax, 4/4 Sport, Super Sports Junior	2003-11,9999	01
056	Maybach	57, 57S, 62, 62S, LaDualet, Zeppelin	2003-11,9999	04
057	Spyker	C8, Base, T, Laviolette, Aileron, Spyder, Double 12R, Double 12S, C12 Zagato, LM85	2005-11,9999	01-02,09
058	Koenigsegg	CC8S, CCR, CCX, CCXR, CCGT, Trevita	2007-11,9999	01
059	Tesla		2008-11,9999	01
060	Yes	Roadster	2009-11,9999	01
061	Mahindra (2011 on, see Make 66 - Mahindra)	Scorpio (Lx, Sle, Vls, Vlx)	2010	14
062	Caterham	Classic, Roadsport, Academy, Superlight (R300/R400/R500), CSR	2011	01
063	McLaren	MP4-12C	2011	01
398	Other (automotive)	Morgan (Prior to 2003; 2003 on see 055), Singer, Gazelle, Fisker	1965-91, 2010-11, 9999	01-13
399	Unknown Make		1928-2011, 9999	01-10,19

**MOTORED CYCLES**

**NOTE:** Refer to Passenger Car section of this appendix for motored cycles produced by automobile manufacturers (BMW, Honda, Peugeot, Suzuki, Triumph).

<b>BSA</b>		<b>(70)</b>	<b>(BSA )</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MOTORCYCLES</u></b>				
701	0-50cc		1950-72,9999	80-81,83, 88-89
702	51-124cc		1950-72,9999	80-81,83, 88-89
703	125-349cc		1950-72,9999	80,83,88-89
704	350-449cc		1950-72,9999	80,83,88-89
705	450-749cc		1950-72,9999	80,83,88-89
706	750cc or greater		1950-72,9999	80,83,88-89
709	Unknown cc		1950-72,9999	80,83,88-89

<b>Ducati</b>		<b>(71)</b>	<b>(DUCA)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MOTORCYCLES</u></b>				
701	0-50cc		1958-65,9999	80-81,88-89
702	51-124cc		1958-65,9999	80-81,88-89
703	125-349cc		1958-65,9999	80,88-89
704	350-449cc		1958-65,9999	80,88-89
705	450-749cc		1958-93; 1997-2006, 9999	80,88-89
706	750cc or greater		1958-2011, 9999	80,88-89
709	Unknown cc		1958-2011, 9999	80-83,88-89

<b><i>Harley-Davidson</i></b>		<b>(72)</b>	<b>(HD)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>MOTORCYCLES</i></b>				
701	0-50cc		1965-66,9999	80-81
702	51-124cc		1948-78,9999	80-81,88-89
703	125-349cc		1948-88,9999	80,88-89
704	350-449cc		1969-74,9999	80,88-89
705	450-749cc		1971-78,9999	80,88-89
706	750cc or greater		1932-2011, 9999	80,82,88-89
709	Unknown cc		1932-2011, 9999	80,82,88-89

<b><i>Kawasaki</i></b>		<b>(73)</b>	<b>(KAWK)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>MOTORCYCLES</i></b>				
701	0-50cc		1965-82,9999	80-81,83, 88-89
702	51-124cc		1965-2011, 9999	80-81,83, 88-89
703	125-349cc		1965-2011, 9999	80,83,88-89
704	350-449cc		1975-98; 2003-04; 2006-11, 9999	80,83,88-89
705	450-749cc		1972-2011, 9999	80,83,88-89
706	750cc or greater		1972-2011, 9999	80,83,88-89
709	Unknown cc		1965-2011, 9999	80-83,88-89
<b><i>ALL TERRAIN VEHICLES</i></b>				
731	0-50cc		2003-11,9999	90
732	51-124cc	includes all ATVs designed solely for off-road use and have 3 or 4 wheels.	1970-88; 2003-11,9999	90
733	125-349cc		1970-2011, 9999	90
734	350cc or greater		1970-2011, 9999	90
739	Unknown cc		1970-2011, 9999	90

<b>Moto-Guzzi</b>		<b>(74)</b>	<b>(MOGU)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MOTORCYCLES</u></b>				
704	350-449cc		1965-76,9999	80,88-89
705	450-749cc		1965-87; 2004-11,9999	80,88-89
706	750cc or greater		1965-2011, 9999	80,88-89
709	Unknown cc		1965-2011, 9999	80,88-89

<b>Norton</b>		<b>(75)</b>	<b>(NORT)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MOTORCYCLES</u></b>				
704	350-449cc		1950-76,9999	80,83,88-89
705	450-749cc		1950-76,9999	80,83,88-89
706	750cc or greater		1950-76,9999	80,83,88-89
709	Unknown cc		1950-76,9999	80,83,88-89

<b>Victory</b>		<b>(77)</b>	<b>(VCTY)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MOTORCYCLES</u></b>				
706	750cc or greater		1998-2011, 9999	80,88-89
709	Unknown cc		1998-2011, 9999	80,88-89

<b><i>Yamaha</i></b>		<b>(76)</b>	<b>(YAMA)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>MOTORCYCLES</i></b>				
701	0-50cc		1979-2011, 9999	80-81,83, 88-89
702	51-124cc		1972-2011, 9999	80-81,83, 88-89
703	125-349cc		1969-2011, 9999	80,83,88-89
704	350-449cc		1972-2011, 9999	80,83,88-89
705	450-749cc		1971-2011, 9999	80,83,88-89
706	750cc or greater		1974-2011, 9999	80,83,88-89
709	Unknown cc		1969-2011, 9999	80,88-89
<b><i>ALL TERRAIN VEHICLES</i></b>				
731	0-50cc	includes all ATVs designed solely for off-road use and have 3 or 4 wheels	1965-91, 2005-11, 9999	90
732	51-124cc	.	1965-2011, 9999	90
733	125-349cc		1965-2011, 9999	90
734	350cc or greater		1993-2011, 9999	90
739	Unknown cc		1965-2011, 9999	90
998	Other (Vehicle)	Snowmobiles, Golf Car	1965-2011, 9999	91,97

**TRUCKS**

<b>Brockway</b>	<b>(80)</b>	<b>(BROC)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>MEDIUM/HEAVY TRUCKS</i></b>				
881	Medium/Heavy – CBE		1965-77,9999	60-64,66, 71-72,78
882	Medium/Heavy - COE low entry		1965-77,9999	60-64,66, 71-72,78
883	Medium/Heavy - COE high entry		1965-77,9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1965-77,9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1965-77,9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1965-77,9999	60-64,66, 71-72,78
<b><i>BUSES</i></b>				
981	Bus: Conventional (Engine out front)		1965-77,9999	50-52,58-59
982	Bus: Front engine, Flat front		1965-77,9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-77,9999	50-52,58-59
988	Other (bus)		1965-77,9999	50-52,58-59
<b><i>MOTOR HOME</i></b>				
850	Motor Home	Truck based	1965-77,9999	65,73
998	Other (vehicle)		1965-77,9999	91-93,97
999	Unknown (BROCKWAY)		1965-77,9999	99

<b>Diamond Reo or Reo</b>		<b>(81)</b>	<b>(DIAR)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE	DC101,C116	1954-75,9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry		1954-75,9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry	C054-C088	1954-75,9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1954-75,9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1954-75,9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1954-75,9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1954-75,9999	50-52,58-59
982	Bus: Front engine, Flat front		1954-75,9999	50-52,58-59
983	Bus: Rear engine, Flat front		1954-75,9999	50-52,58-59
988	Other (bus)		1954-75,9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1954-75,9999	65,73
998	Other (vehicle)		1954-75,9999	91-93,97
999	Unknown (DIAMOND REO or REO)		1954-75,9999	99

<b><i>Freightliner</i></b>		<b>(82)</b>	<b><i>(FRHT)</i></b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>LIGHT TRUCKS</i></b>				
461	Sprinter/Advantage	2500 (HC/SHC), 3500 (HC/SHC)	2002-11,9999	21-22,28-29
<b><i>MEDIUM/HEAVY TRUCKS</i></b>				
870	Medium Heavy Van-Based Vehicle	Sprinter	2002-11,9999	55, 61-64
881	Medium/Heavy – CBE		1965-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry		1968-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1965-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1963-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1965-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1965-2011, 9999	60-64,66, 71-72,78
<b><i>BUSES</i></b>				
981	Bus: Conventional (Engine out front)		1965-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1965-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2011, 9999	50-52,58-59
988	Other (bus)		1965-2011, 9999	50-52,58-59
<b><i>MOTOR HOME</i></b>				
850	Motor Home	Truck based	1965-2011, 9999	65,73
998	Other (vehicle)		1963-2011, 9999	91-93,97
999	Unknown (FREIGHTLINER)		1963-2011, 9999	99

<b>FWD</b>		<b>(83)</b>	<b>(FWD )</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE		1965-2001, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry		1965-2001, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1965-2001, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1965-2001, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1965-2001, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1965-2001, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1965-2001, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1965-2001, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2001, 9999	50-52,58-59
988	Other (bus)		1965-2001, 9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1965-2001, 9999	65,73
998	Other (vehicle)		1965-2001, 9999	91-93,97
999	Unknown (FWD)		1965-2001, 9999	99

<b>International Harvester/Navistar</b>		<b>(84)</b>	<b>(INTL) - (NAVI)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
421	Scout	Scout II, Utility pickup, SS-2, Roadster, 800 series, Traveler, Terra Traveltop,	1962-80,9999	15
431	Travelall	1010-1210, 100-200	1963-75,9999	16
466	Multistop Van	Metro RM, MS1510, 120-160, MS1210	1960-84,9999	22,28-29
481	Pickup	R-100-500, 900A-1500C/D, 1010-1510	1951-76,9999	31,33
498	Other (light truck)		1960-84,9999	15-16,22, 28-29
499	Unknown (light truck)		1951-84,9999	15-16,19,22, 28-29
<b><u>MEDIUM/HEAVY TRUCK</u></b>				
881	Medium/Heavy – CBE	Loadstar/Fleetstar, Paystar, CBE Transtar, 4200, S-series Mixer, 8100, 8500, 9100, 9200, 9300, 9400, 9900, CXT, RXT, MXT	1963-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry	CO, VCO, DCO, 190-1950, Cargostar, LFM, 5370 (Garbage), CF500/600	1973-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry	DCO, DCOT, UCO, VCOT, 405-series, COE Transtar, Unistar, Conco 707B, 9600	1961-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1948-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1964-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)	Fire truck - R140-R306, CO 8190	1955-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)	R153-1853 Loadstar, 1603-1853	1953-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front	173FC, 183FC	1972-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front	183RE, 193RE-transit	1965-2011, 9999	50-52,58-59
988	Other (bus)		1953-2011, 9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1965-2011, 9999	65,73
998	Other (vehicle)		1954-2011, 9999	91-93,97
999	Unknown (INTL. HARVESTER/ NAVISTAR)		1951-2011, 9999	79,99

<b>Kenworth</b>		<b>(85)</b>	<b>(KW)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE	520, 540, T400, T600,T800, C500-550, W900, T300	1947-2011, 9999	60-64,66, 71-72, 78
882	Medium/Heavy – COE low entry	L700	1972-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry	K100, K100E, K300	1965-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1954-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1964-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1965-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1965-2004, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1965-2004, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2004, 9999	50-52,58-59
988	Other (bus)		1965-2004, 9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1965-2011, 9999	65,73
998	Other (vehicle)		1965-2011, 9999	91-93,97
999	Unknown (KENWORTH)		1965-2011, 9999	99

<b>Mack</b>		<b>(86)</b>	<b>(MACK)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE		1968-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry		1965-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1977-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1956-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1972-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1971-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1965-2004, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1976-2004, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2004, 9999	50-52,58-59
988	Other (bus)		1965-2004, 9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1965-2011, 9999	65,73
998	Other (vehicle)		1965-2011, 9999	91-93,97
999	Unknown (MACK)		1965-2011, 9999	99

<b>Iveco/Magirus</b>		<b>(88)</b>	<b>(IVEC)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE	LCF	1980-91,9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry	FL, FS	1980-91,9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1980-91,9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1980-91,9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1980-91,9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1980-91,9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1980-91,9999	50-52,58-59
982	Bus: Front engine, Flat front		1980-91,9999	50-52,58-59
983	Bus: Rear engine, Flat front		1980-91,9999	50-52,58-59
988	Other (bus)		1980-91,9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1980-91,9999	65,73
998	Other (vehicle)		1980-91,9999	91-93,97
999	Unknown (IVECO/MAGIRUS)		1980-91,9999	99

<b>Peterbilt</b>		<b>(87)</b>	<b>(PTRB)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE	357-379, 387, 385	1974-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry	270	1965-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry	362, 320	1965-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1961-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1964-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1965-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1965-2004, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1965-2004, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2004, 9999	50-52,58-59
988	Other (bus)		1965-2004, 9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1965-2011, 9999	65,73
998	Other (vehicle)		1965-2011, 9999	91-93,97
999	Unknown (PETERBILT)		1965-2011, 9999	99

<b>White/Autocar-White/GMC</b>		<b>(89)</b>	<b>(WHIT) – (WHGM)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
881	Medium/Heavy – CBE		1965-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry		1968-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1965-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1963-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1965-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1965-2011, 9999	60-64,66, 71-72,78
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1965-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1965-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2011, 9999	50-52,58-59
988	Other (bus)		1965-2011, 9999	50-52,58-59
<b><u>MOTOR HOME</u></b>				
850	Motor Home	Truck based	1965-2011, 9999	65,73
998	Other (vehicle)		1963-2011, 9999	91-93,97
999	Unknown (WHITE/AUTOCAR-WHITE/GMC)		1963-2011, 9999	99

**BUSES**

**NOTE:** Refer to the PASSENGER CAR section for buses manufactured by Chevy, Dodge, Ford, GMC, Grumman, Isuzu, Mercedes, Mitsubishi and Volvo. Refer to the TRUCK section for buses manufactured by Brockway, Diamond Reo, Freightliner, FWD, International Harvester, Kenworth, Mack, Peterbilt, and White/Autocar-White/GMC. Refer to the OTHER MAKE section for buses manufactured by Neoplan, Carpenter Industries, DINA, Mid Bus, Orion, and Van Hool. Hino and Scania buses are located under OTHER MAKE (Medium/Heavy Trucks) since those manufacturers also make trucks.

<b>Bluebird</b>		(90)	(BLUI)	
Codes	Model	Includes	Model Years	Body Types
<b><u>LIGHT TRUCKS</u></b>				
461	Van Based	van-based school bus, shuttle bus	1927-2011, 9999	21
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1927-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1927-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1927-2011, 9999	50-52,58-59
988	Other (bus)		1927-2011, 9999	50-52,58-59
989	Unknown (bus)		1927-2011, 9999	50-52, 58-59
999	Unknown (BLUEBIRD)		1927-2011, 9999	99

<b>Eagle Coach</b>		(91)		
Codes	Model	Includes	Model Years	Body Types
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1948-2001, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1948-2001, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1948-2001, 9999	50-52,58-59
988	Other (bus)		1948-2001, 9999	50-52,58-59
989	Unknown (bus)		1948-2001, 9999	50-52, 58-59

<b>Gillig</b>		<b>(92)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1932-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1932-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1932-2011, 9999	50-52,58-59
988	Other (bus)		1932-2011, 9999	50-52,58-59
989	Unknown (bus)		1932-2011, 9999	50-52, 58-59

<b>MCI</b>		<b>(93)</b>	<b>(MCIN)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1963-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1963-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1963-2011, 9999	50-52,58-59
988	Other (bus)		1963-2011, 9999	50-52,58-59
989	Unknown (bus)		1963-2011, 9999	50-52, 58-59

<b>Thomas Built</b>		<b>(94)</b>	<b>(THMS)</b>	
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><u>LIGHT TRUCKS</u></b>				
461	Van Based	van-based school bus, shuttle bus	1936-2011, 9999	21
<b><u>BUSES</u></b>				
981	Bus: Conventional (Engine out front)		1936-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1936-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1936-2011, 9999	50-52,58-59
988	Other (bus)		1936-2011, 9999	50-52,58-59
999	Unknown (THOMAS BUILT)		1936-2011, 9999	99

**OTHER MAKE**

<b>Other Make</b>		<b>(98)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>AUTOMOBILES (Unknown if DOMESTIC or FOREIGN)</i></b>				
301	Think	City	2009-11,9999	03
302	Meyers Motor	NmG	2008-11,9999	02
398	Other (automobile)	Solectra (electric: Force)	1945-2011, 9999	01-13
<b><u>LIGHT TRUCKS</u></b>				
498	Other (light truck)	Solectra (electric: Citivan Flash)	1960-2011, 9999	14-16,19-22, 28-33,39-42, 45, 48
<b>LSV/NGV</b>				
598	Other (LSV/NGV)	Tomberlin, Ford, Fly Bo	2000-11,9999	94
<b><u>MOTORCYCLES</u></b>				
701	0-50cc	(Includes: ATK, Beta, Buell, Cagiva, Cobra Trike, Jawa,	1965-2011, 9999	80-81,88-89
702	51-124cc	Husqvarna, KTM, Aprilia, Maely, Riva, Strociek, BMC,	1965-2011, 9999	80-83,88-89
703	125-349cc	MV Agusta, Bimota, Husaberg, Indian Scout, Indian, Laverda,	1965-2011, 9999	80-83,88-89
704	350-449cc	Big Dog, Titan, Twin Eagle, Viza, Viper)	1965-2011, 9999	80-83,88-89
705	450-749cc		1965-2011, 9999	80-83,88-89
706	750cc or greater		1965-2011, 9999	80-83,88-89
709	Unknown cc		1945-2011, 9999	80-83,88-89
<b><u>ALL TERRAIN VEHICLES</u></b>				
731	0-50cc	includes all ATVs designed solely for off-road use and have 3 or 4 wheels. Includes: Polaris	1965-2011, 9999	90
732	51-124cc		1965-2011, 9999	90
733	125-349cc		1965-2011, 9999	90
734	350cc or greater		1965-2011, 9999	90
739	Unknown cc		1965-2011, 9999	90
<b><u>MEDIUM/HEAVY TRUCKS</u></b>				
802	Auto-Union-DKW		1965-88 9999	60-64,66, 71-72,78
803	Divco		1963-88,9999	60-64,66, 71-72,78
804	Western Star		1965-2011, 9999	60-64,66, 71-72,78
805	Oshkosh	(includes trucks & buses)	1965-2011, 9999	50,52-59,60- 64,66,71-72, 78

<b><i>Other Make (continued)</i></b>		<b>(98)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>MEDIUM/HEAVY TRUCKS (continued)</i></b>				
806	Hino	(includes trucks & buses)	1985-2011, 9999	50-52,58,59, 60-64,66, 71-72,78
807	Scania	(includes trucks & buses)	1986-2004, 9999	50-52,58,59, 60-64,66, 71-72,78
808	UD		1986-2011, 9999	60-64,66, 71-72,78
809	Sterling		1998-2011, 9999	60-64,66, 71-72,78
881	Medium/Heavy – CBE	DINA	1965-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry	DINA	1965-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1965-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1965-2011, 9999	60-64,66, 71-72,78
870	Medium/Heavy Van-Based Vehicle		1965-2011, 9999	55, 61-64
890	Medium/Heavy – COE entry position unknown		1965-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)	e.g., Marmon, Ward LaFrance	1945-2011, 9999	60-64,66, 71-72,78
<b><i>BUSES</i></b>				
902	Neoplan		1950-2011, 9999	50-52,58-59
903	Carpenter		1923-2000, 9999	21,50-52,58- 59
904	Collins Bus		1967-2011, 9999	21
905	DINA		1989-2004, 9999	50-52,58-59
906	Mid Bus		1963-2011, 9999	21
907	Orion		1978-2011, 9999	50-52,58-59
908	Van Hool		1947-2011, 9999	50-52,58-59
981	Bus: Conventional (Engine out front)		1965-2011, 9999	50-52,58-59
982	Bus: Front engine, Flat front		1976-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2011, 9999	50-52,58-59
988	Other (bus)	(see following page)	1945-2011, 9999	50-52,58-59

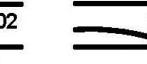
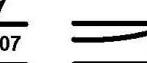
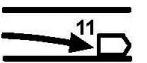
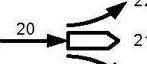
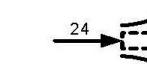
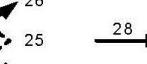
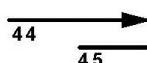
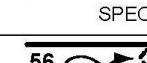
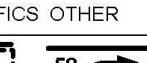
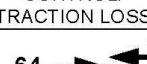
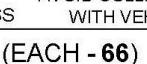
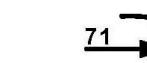
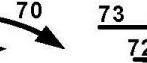
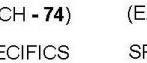
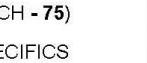
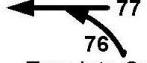
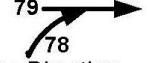
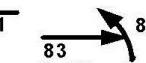
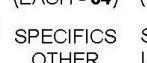
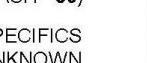
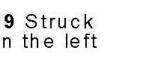
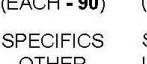
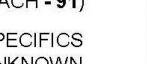
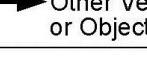
<b><i>Other Make (continued)</i></b>		<b>(98)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>MOTOR HOME</i></b>				
850	Motor Home	Truck-based	1965-2011, 9999	65,73
998	Other (vehicle)	(e.g., farm vehicle, snowmobile, go-cart, golf carts)	1940-2011, 9999	91-93,97
999	Unknown (OTHER MAKE)		1940-2011, 9999	49,79,99

**UNKNOWN MAKE**

<b><i>Unknown Make</i></b>		<b>(99)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>AUTOMOBILES</i></b>				
399	Unknown (automobile)		1945-2011, 9999	01-13
<b><i>LIGHT TRUCKS</i></b>				
499	Unknown (light truck)		1945-2011, 9999	14-16,19-22, 28-33,35, 39-42, 45, 48
<b><i>LSV/NGV</i></b>				
598	Unknown (LSV/NGV)		2000-11,9999	94
<b><i>MOTORCYCLES</i></b>				
701	0-50cc		1965-2011, 9999	80-83,88-89
702	51-124cc		1965-2011, 9999	80-83,88-89
703	125-349cc		1965-2011, 9999	80-83,88-89
704	350-449cc		1965-11,9999	80-83,88-89
705	450-749cc		1965-2011, 9999	80-83,88-89
706	750cc or greater		1965-2011, 9999	80-83,88-89
709	Unknown cc		1945-2011, 9999	80-83,88-89
<b><i>ALL TERRAIN VEHICLES</i></b>				
731	0-50cc	includes all ATVs designed solely for off-road use and have 3 or 4 wheels.	1965-2011, 9999	90
732	51-124cc		1965-2011, 9999	90
733	125-349cc		1965-2011, 9999	90
734	350cc or greater		1965-2011, 9999	90
739	Unknown cc		1965-2011, 9999	90
<b><i>MEDIUM/HEAVY TRUCKS</i></b>				
870	Medium Heavy Van-Based Vehicle		1965-2011	55, 61-64
881	Medium/Heavy – CBE		1965-2011, 9999	60-64,66, 71-72,78
882	Medium/Heavy – COE low entry		1965-2011, 9999	60-64,66, 71-72,78
883	Medium/Heavy – COE high entry		1965-2011, 9999	60-64,66, 71-72,78
884	Medium/Heavy – Unknown engine location		1965-2011, 9999	60-64,66, 71-72,78
890	Medium/Heavy – COE entry position unknown		1965-2011, 9999	60-64,66, 71-72,78
898	Other (medium/heavy truck)		1965-2011, 9999	60-64,66, 71-72,78

<b><i>Unknown Make (continued)</i></b>		<b>(99)</b>		
<b>Codes</b>	<b>Model</b>	<b>Includes</b>	<b>Model Years</b>	<b>Body Types</b>
<b><i>BUSES</i></b>				
981	Bus: Conventional (Engine out front)		1965-2011, 9999	50-52,58-59
982	Bus: Front engine. Flat front		1976-2011, 9999	50-52,58-59
983	Bus: Rear engine, Flat front		1965-2011, 9999	50-52,58-59
988	Other (bus)		1945-2011, 9999	50-52,58-59
989	Unknown (bus)		1945-2011, 9999	50-52,58-59
<b><i>MOTOR HOME</i></b>				
850	Motor Home	Truck based	1965-2011, 9999	65,73
998	Other (vehicle)	(e.g., farm vehicle, snowmobile, go-cart)	1943-2011, 9999	91-93,97
999	Unknown (as to automobile, motored cycle, light truck or truck)		1945-2011, 9999	49,79,99

Appendix B:  
V23 Accident Type Diagram

Category		Configuration	CRASH TYPES (includes intent)								
I  Single Driver	A Right Roadside Departure		01 DRIVE OFF ROAD		02 CONTROL/TRACTION LOSS		03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN		
	B Left Roadside Departure		06 DRIVE OFF ROAD		07 CONTROL/TRACTION LOSS		08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN		
	C Forward Impact		11 PARKED VEH.		12 STA OBJECT		13 PEDESTRIAN/ANIMAL	14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN	
II  Same Trafficway Same Direction	D Rear End		20 STOPPED 21, 22, 23		24 SLOWER 25, 26, 27		26 DECEL. 29, 30, 31	28 29 30 31	(EACH - 32) SPECIFICS OTHER	(EACH - 33) SPECIFICS UNKNOWN	
	E Forward Impact		34 CONTROL/TRACTION LOSS		36 CONTROL/TRACTION LOSS		38 AVOID COLLISION WITH VEH.	40 41 42 43	(EACH - 42) SPECIFICS OTHER	(EACH - 43) SPECIFICS UNKNOWN	
	F Angle, Sideswipe		44 45 46 47		46 47 48 49		48 49 50 51	(EACH - 48) SPECIFICS OTHER	(EACH - 49) SPECIFICS UNKNOWN		
III  Same Trafficway Opposite Direction	G Head-On		50 51 52 53		54 55 56 57 58 59 60 61		55 57 59 61 62 63	(EACH - 52) SPECIFICS OTHER	(EACH - 53) SPECIFICS UNKNOWN		
	H Forward Impact		54 CONTROL/TRACTION LOSS		56 CONTROL/TRACTION LOSS		58 AVOID COLLISION WITH VEH.	60 AVOID COLLISION WITH OBJECT	(EACH - 62) SPECIFICS OTHER	(EACH - 63) SPECIFICS UNKNOWN	
	I Angle, Sideswipe		64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 98 99 00						(EACH - 66) SPECIFICS OTHER	(EACH - 67) SPECIFICS UNKNOWN	
IV  Change Trafficway Vehicle Turning	J Turn Across Path		68 Initial Opposite Directions		70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 98 99 00					(EACH - 74) SPECIFICS OTHER	(EACH - 75) SPECIFICS UNKNOWN
	K Turn Into Path		77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 98 99 00						(EACH - 84) SPECIFICS OTHER	(EACH - 85) SPECIFICS UNKNOWN	
V  Intersect Paths	L Straight Paths		86 Striking from the Right		87 Struck on the Right		88 Striking from the Left	89 Struck on the Left	(EACH - 90) SPECIFICS OTHER	(EACH - 91) SPECIFICS UNKNOWN	
VI  Misc.	M Backing, Etc.		92 Backing Veh. or Object		93 Other Veh. or Object		98 99 00	Other Accident Type Unknown Accident Type No Impact			

## Appendix C: Summary Statistics

The following two tables provide a summary of descriptive statistics from the NASS GES data files. Table 1 represents the actual number of records or unweighted sample and Table 2 represents the national estimates or weighted sample for years 1988 - 2011. These statistics provide the analyst a benchmark to compare against numbers obtained from the analytical data files.

**Table 1:** Unweighted Sample

Year	Crashes	Vehicles	People	Drivers	Occupants	Pedestrians	Pedalcyclists
1988	48,831	83,633	122,738	82,708	119,914	1,554	1,021
1989	44,105	74,778	110,896	74,354	107,447	1,880	1,315
1990	46,290	80,154	117,141	79,716	113,439	1,995	1,468
1991	42,600	73,833	108,955	73,481	105,580	1,723	1,348
1992	46,197	80,566	118,933	80,152	115,346	1,891	1,415
1993	55,644	96,544	143,525	96,209	138,759	2,589	1,845
1994	55,759	97,441	143,743	97,109	139,221	2,442	1,715
1995	53,749	95,803	140,512	95,477	136,890	1,909	1,336
1996	56,030	100,861	147,903	100,500	144,332	1,820	1,305
1997	55,562	100,032	145,890	99,688	142,366	1,838	1,266
1998	54,006	97,362	141,372	97,074	138,545	1,593	1,165
1999	52,913	94,846	137,048	94,549	134,095	1,736	1,108
2000	57,382	102,551	146,596	102,268	143,530	1,703	1,128
2001	55,964	100,161	143,281	99,893	140,147	1,732	1,005
2002	54,291	96,424	139,614	96,070	136,362	1,734	1,154
2003	59,156	105,295	151,167	104,951	147,730	1,895	1,122
2004	60,974	108,413	156,143	108,119	152,428	2,014	1,280
2005	54,597	96,340	137,884	96,059	134,523	1,778	1,207
2006	56,055	98,929	141,412	98,689	137,731	2,007	1,220
2007	61,282	107,202	152,727	106,935	148,370	2,356	1,446
2008	55,946	96,546	137,303	96,268	133,042	2,160	1,599
2009	44,645	77,594	110,990	77,389	107,469	1,778	1,305
2010	46,391	81,406	116,020	81,200	112,329	1,874	1,301
2011	55,166	96,608	136,652	96,349	132,098	2,421	1,593

Drivers: PERSON TYPE = 1

Occupants: PERSON TYPE IN (1,2,9)

Pedestrians: PERSON TYPE = 5

Pedalcyclists: PERSON TYPE = 6 (6 or 7 in 2009 and Later)

**Table 2:** Weighted Sample

Year	Crashes	Vehicles	People	Drivers	Occupants	Pedestrians	Pedalcyclists
1988	6,876,780	12,007,970	17,247,886	11,851,683	17,005,088	121,474	82,535
1989	6,644,549	11,556,267	16,612,033	11,485,928	16,361,647	121,403	85,193
1990	6,462,126	11,315,087	16,298,795	11,252,874	16,061,886	116,405	86,059
1991	6,109,931	10,711,298	15,593,416	10,658,830	15,368,100	98,849	77,045
1992	5,992,938	10,535,596	15,339,372	10,485,244	15,136,291	94,646	71,084
1993	6,094,772	10,725,032	15,767,005	10,688,211	15,546,338	102,261	78,438
1994	6,489,122	11,487,378	16,836,682	11,451,723	16,617,814	101,781	70,862
1995	6,690,061	11,979,882	17,517,709	11,937,794	17,309,929	92,350	74,751
1996	6,761,051	12,082,760	17,704,717	12,043,981	17,490,909	89,992	67,892
1997	6,611,906	11,834,167	17,280,356	11,798,756	17,083,876	83,174	64,599
1998	6,325,242	11,386,502	16,521,887	11,354,181	16,338,158	73,829	59,581
1999	6,271,524	11,220,598	16,068,665	11,182,321	15,910,909	90,768	56,668
2000	6,389,310	11,346,184	16,113,394	11,317,668	15,952,464	83,156	56,350
2001	6,314,117	11,187,914	15,914,491	11,159,551	15,732,540	83,129	50,730
2002	6,304,493	11,168,656	15,737,226	11,129,037	15,569,434	74,491	51,684
2003	6,317,752	11,175,816	15,756,262	11,142,663	15,588,774	74,335	51,028
2004	6,169,998	10,945,334	15,341,895	10,916,913	15,183,714	73,478	44,436
2005	6,146,907	10,838,878	15,160,503	10,813,148	15,003,907	68,193	50,232
2006	5,964,194	10,571,511	14,695,390	10,545,598	14,532,697	65,404	48,524
2007	6,015,938	10,539,204	14,595,063	10,511,751	14,407,390	77,149	51,008
2008	5,801,228	10,096,536	13,914,399	10,066,779	13,729,518	73,417	57,439
2009	5,497,506	9,630,224	13,384,796	9,604,259	13,215,739	62,094	54,448
2010	5,408,612	9,551,084	13,216,589	9,526,827	13,029,817	74,649	55,513
2011	5,326,445	9,395,385	12,880,206	9,373,775	12,704,500	75,000	52,152

Drivers: PERSON TYPE = 1

Occupants: PERSON TYPE IN (1,2,9)

Pedestrians: PERSON TYPE = 5

Pedalcyclists: PERSON TYPE = 6 (6 or 7 in 2009 and Later)

**Appendix D:  
Statistical Methods****National Estimates:**

The national estimates produced from the NASS GES data may differ from the true population values because they are based on a probability sample of police-reported crashes that involve injury or major property damage, rather than a census of these types of crashes. The size of these differences may vary depending on the makeup of the sample which is selected. The standard error of an estimate is a measure of the precision or reliability with which an estimate from this particular NASS GES sample approximates the result of a census.

**Generalized Estimated Sampling Errors**

It is impractical to compute and provide a standard error for each national estimate. Instead, generalized standard errors for estimates of totals are presented in the following tables for 1988 to the current NASS GES year. The following steps produced the generalized standard errors:

3. The standard errors for selected estimates were calculated using Taylor series approximations. Generalized standard errors were calculated separately for crash, vehicle, and person characteristics.
4. Using regression techniques, three equations were found that best fit the separate standard errors for crash, vehicle, and person estimates.
5. The equations were used to generate approximate standard errors for the three types of estimates.

The NASS GES estimates and an estimate of one standard error are given in the following tables. By adding and subtracting the standard error to the associated estimate, a 95 percent confidence interval for an estimate can be created.

For example, if the estimated number of injured or killed pedestrians in 1995 was 90,000 (rounded to the nearest 1,000). To calculate one standard error for this person estimate, use the table on page 238. Look under the Person Estimate column for the value of 90,000. Look under the Person Standard Error column to the right for the corresponding person error value. For the person estimate of 90,000 the person standard error value is 7,100. The 95 percent confidence interval for this estimate would be approximately  $90,000 + or - 1.96 * (7,100)$  or 76,000 to 104,000.

If the person estimate falls between the values shown on the table linear interpolation will be required. For example, had the person estimate been 92,000 instead of 90,000 the person standard error would need to be calculated. Use linear interpolation from the standard error values for 90,000 and 100,000. One approximate standard error would be  $7,100 + 120 = 7,220$ . The 95 percent confidence interval for this estimate would be approximately  $92,000 + or - 1.96 * (7,220)$  or 78,000 to 106,000.

More information on standard error estimates can be obtained from the National Center for Statistics and Analysis.

1988 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	600	1,000	500	1,000	500
5,000	1,400	5,000	1,200	5,000	1,200
10,000	2,100	10,000	1,800	10,000	1,800
20,000	3,200	20,000	2,900	20,000	2,9000
30,000	4,200	30,000	3,800	30,000	3,800
40,000	5,200	40,000	4,700	40,000	4,700
50,000	6,100	50,000	5,500	50,000	5,600
60,000	6,900	60,000	6,300	60,000	6,400
70,000	7,800	70,000	7,100	70,000	7,200
80,000	8,600	80,000	7,900	80,000	8,000
90,000	9,400	90,000	8,600	90,000	8,800
100,000	10,200	100,000	9,400	100,000	9,500
200,000	17,600	200,000	16,500	200,000	17,000
300,000	24,600	300,000	23,400	300,000	24,200
400,000	31,400	400,000	30,100	400,000	31,300
500,000	38,100	500,000	36,700	500,000	38,300
600,000	44,800	600,000	43,400	600,000	45,400
700,000	51,300	700,000	50,000	700,000	52,500
800,000	57,900	800,000	56,600	800,000	59,500
900,000	64,400	900,000	63,200	900,000	66,600
1,000,000	71,000	1,000,000	69,900	1,000,000	73,800
1,500,000	103,700	2,000,000	137,400	2,000,000	146,800
2,000,000	136,500	3,000,000	207,300	3,000,000	223,000
2,500,000	169,600	4,000,000	279,300	4,000,000	302,200
3,000,000	203,100	5,000,000	353,400	5,000,000	384,000
3,500,000	236,900	6,000,000	429,500	6,000,000	468,200
4,000,000	271,000	7,000,000	507,300	7,000,000	554,700
4,500,000	305,400	8,000,000	586,800	8,000,000	643,300
5,000,000	340,200	9,000,000	667,900	9,000,000	733,900
5,500,000	375,400	10,000,000	750,500	10,000,000	826,300
6,000,000	410,800	11,000,000	834,500	11,000,000	920,600
7,000,000	482,600	12,000,000	919,900	12,000,000	1,016,600
$* SE = e^{a/2+b/2(\ln X)^{**2}}$ , where $a = 9.63$ $b = .067$		$**SE = e^{a/2+b/2(\ln X)^{**2}}$ , where $a = 9.16$ $b = .069$		$***SE = e^{a/2+b/2(\ln X)^{**2}}$ , where $a = 9.04$ $b = .070$	

1989 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	600	1,000	500	1,000	500
5,000	1,400	5,000	1,200	5,000	1,200
10,000	2,100	10,000	1,800	10,000	1,800
20,000	3,200	20,000	2,900	20,000	2,900
30,000	4,200	30,000	3,800	30,000	3,800
40,000	5,200	40,000	4,700	40,000	4,700
50,000	6,100	50,000	5,500	50,000	5,600
60,000	6,900	60,000	6,300	60,000	6,400
70,000	7,800	70,000	7,100	70,000	7,200
80,000	8,600	80,000	7,900	80,000	8,000
90,000	9,400	90,000	8,600	90,000	8,800
100,000	10,200	100,000	9,400	100,000	9,500
200,000	17,600	200,000	16,500	200,000	17,000
300,000	24,600	300,000	23,400	300,000	24,200
400,000	31,400	400,000	30,100	400,000	31,300
500,000	38,100	500,000	36,700	500,000	38,300
600,000	44,800	600,000	43,400	600,000	45,400
700,000	51,300	700,000	50,000	700,000	52,500
800,000	57,900	800,000	56,600	800,000	59,500
900,000	64,400	900,000	63,200	900,000	66,600
1,000,000	71,000	1,000,000	69,900	1,000,000	73,800
1,500,000	103,700	2,000,000	137,400	2,000,000	146,800
2,000,000	136,500	3,000,000	207,300	3,000,000	223,000
2,500,000	169,600	4,000,000	279,300	4,000,000	302,200
3,000,000	203,100	5,000,000	353,400	5,000,000	384,000
3,500,000	236,900	6,000,000	429,500	6,000,000	468,200
4,000,000	271,000	7,000,000	507,300	7,000,000	554,700
4,500,000	305,400	8,000,000	586,800	8,000,000	643,300
5,000,000	340,200	9,000,000	667,900	9,000,000	733,900
5,500,000	375,400	10,000,000	750,500	10,000,000	826,300
6,000,000	410,800	11,000,000	834,500	11,000,000	920,600
7,000,000	482,600	12,000,000	919,900	12,000,000	1,016,600

\*  $SE = e^{a/2+b/2(\ln X)^{**2}}$ , where  
     a = 9.63  
     b = .067

\*\*  $SE = e^{a/2+b/2(\ln X)^{**2}}$ , where  
     a = 9.16  
     b = .069

\*\*\*  $SE = e^{a/2+b/2(\ln X)^{**2}}$ , where  
     a = 9.04  
     b = .070

1990 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	700	1,000	400	1,000	400
5,000	1,400	5,000	1,000	5,000	1,000
10,000	2,100	10,000	1,600	10,000	1,500
20,000	3,300	20,000	2,500	20,000	2,400
30,000	4,200	30,000	3,400	30,000	3,100
40,000	5,100	40,000	4,200	40,000	3,900
50,000	5,900	50,000	4,900	50,000	4,500
60,000	6,800	60,000	5,700	60,000	5,200
70,000	7,500	70,000	6,400	70,000	5,800
80,000	8,300	80,000	7,100	80,000	6,500
90,000	9,000	90,000	7,800	90,000	7,100
100,000	9,700	100,000	8,500	100,000	7,700
200,000	16,400	200,000	15,000	200,000	13,400
300,000	22,600	300,000	21,300	300,000	18,900
400,000	28,600	400,000	27,500	400,000	24,300
500,000	34,400	500,000	33,700	500,000	29,600
600,000	40,000	600,000	39,900	600,000	34,800
700,000	45,700	700,000	46,100	700,000	40,100
800,000	51,200	800,000	52,200	800,000	45,300
900,000	56,700	900,000	58,400	900,000	50,600
1,000,000	62,200	1,000,000	64,700	1,000,000	55,800
1,500,000	116,200	2,000,000	128,300	2,000,000	108,800
2,000,000	169,800	3,000,000	194,500	3,000,000	163,200
2,500,000	223,700	4,000,000	263,100	4,000,000	219,100
3,000,000	278,000	5,000,000	334,000	5,000,000	276,400
3,500,000	332,800	6,000,000	406,900	6,000,000	335,200
4,000,000	388,100	7,000,000	481,600	7,000,000	394,900
4,500,000	444,000	8,000,000	558,200	8,000,000	455,900
5,000,000	500,400	9,000,000	636,400	9,000,000	518,100
5,500,000	557,300	10,000,000	716,100	10,000,000	581,300
6,000,000	614,700	11,000,000	797,400	11,000,000	645,500
7,000,000	672,500	12,000,000	808,100	12,000,000	710,600

\*  $SE = e^{(a/2)+(b/2)(\ln(x))^2}$ , where  
     a = 9.93401  
     b = 0.06362

\*\*  $SE = e^{(a/2)+(b/2)(\ln(x))^2}$ , where  
     a = 8.83524  
     b = 0.06977

\*\*\*  $SE = e^{(a/2)+(b/2)(\ln(x))^2}$ , where  
     a = 8.88000  
     b = 0.06800

1991 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	600	1,000	500	1,000	400
5,000	1,400	5,000	1,100	5,000	1,000
10,000	2,100	10,000	1,600	10,000	1,500
20,000	3,200	20,000	2,600	20,000	2,400
30,000	4,200	30,000	3,500	30,000	3,200
40,000	5,000	40,000	4,300	40,000	4,000
50,000	5,900	50,000	5,000	50,000	4,700
60,000	6,700	60,000	5,800	60,000	5,400
70,000	7,500	70,000	6,500	70,000	6,100
80,000	8,200	80,000	7,200	80,000	6,800
90,000	9,000	90,000	7,900	90,000	7,500
100,000	9,700	100,000	8,600	100,000	8,200
200,000	16,500	200,000	15,200	200,000	14,600
300,000	22,800	300,000	21,600	300,000	20,900
400,000	29,000	400,000	27,800	400,000	27,200
500,000	34,900	500,000	34,000	500,000	33,400
600,000	40,800	600,000	40,200	600,000	39,700
700,000	46,600	700,000	46,400	700,000	46,000
800,000	52,400	800,000	52,600	800,000	52,300
900,000	58,100	900,000	58,900	900,000	58,600
1,000,000	63,800	1,000,000	65,100	1,000,000	65,000
2,000,000	120,300	2,000,000	128,600	2,000,000	130,600
3,000,000	176,900	3,000,000	194,600	3,000,000	199,700
4,000,000	234,000	4,000,000	262,900	4,000,000	271,800
5,000,000	291,700	5,000,000	333,200	5,000,000	346,600
6,000,000	350,200	6,000,000	405,500	6,000,000	423,900
7,000,000	409,400	7,000,000	479,600	7,000,000	503,500
8,000,000	469,300	8,000,000	555,400	8,000,000	585,200
9,000,000	529,900	9,000,000	632,700	9,000,000	668,900
10,000,000	591,100	10,000,000	711,600	10,000,000	754,500
11,000,000	652,900	11,000,000	791,900	11,000,000	842,000
12,000,000	715,400	12,000,000	873,600	12,000,000	931,100

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.900441  
     b = 0.032292

\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.460186  
     b = 0.034701

\*\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.291460  
     b = 0.035576

1992 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,100	5,000	1,000	5,000	900
6,000	1,200	10,000	1,500	10,000	1,400
7,000	1,300	20,000	2,500	20,000	2,200
8,000	1,400	30,000	3,300	30,000	3,000
9,000	1,600	40,000	4,100	40,000	3,700
10,000	1,700	50,000	4,800	50,000	4,400
20,000	2,700	60,000	5,600	60,000	5,100
30,000	3,600	70,000	6,300	70,000	5,800
40,000	4,400	80,000	7,000	80,000	6,500
50,000	5,200	90,000	7,700	90,000	7,200
60,000	6,000	100,000	8,400	100,000	7,800
70,000	6,800	200,000	15,200	200,000	14,200
80,000	7,600	300,000	21,800	300,000	20,600
90,000	8,300	400,000	28,300	400,000	26,900
100,000	9,100	500,000	34,900	500,000	33,200
200,000	16,200	600,000	41,500	600,000	39,600
300,000	23,200	700,000	48,100	700,000	46,000
400,000	30,100	800,000	54,700	800,000	52,400
500,000	36,900	900,000	61,400	900,000	59,000
600,000	43,800	1,000,000	68,100	1,000,000	65,500
700,000	50,700	2,000,000	137,500	2,000,000	134,100
800,000	57,600	3,000,000	210,800	3,000,000	207,100
900,000	64,600	4,000,000	287,500	4,000,000	284,000
1,000,000	71,600	5,000,000	367,200	5,000,000	364,400
2,000,000	143,600	6,000,000	449,700	6,000,000	447,900
3,000,000	219,200	7,000,000	534,700	7,000,000	534,200
4,000,000	298,000	8,000,000	622,100	8,000,000	623,200
5,000,000	379,700	9,000,000	711,700	9,000,000	714,700
6,000,000	464,000	10,000,000	803,400	10,000,000	808,500
6,500,000	507,100	11,000,000	897,100	11,000,000	904,600

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.413218  
     b = 0.035447

\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.294210  
     b = 0.035807

\*\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.132995  
     b = 0.036452

1993 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	900
6,000	1,200	10,000	1,500	10,000	1,400
7,000	1,300	20,000	2,400	20,000	2,200
8,000	1,400	30,000	3,200	30,000	3,000
9,000	1,500	40,000	4,000	40,000	3,700
10,000	1,600	50,000	4,700	50,000	4,400
20,000	2,600	60,000	5,400	60,000	5,100
30,000	3,500	70,000	6,100	70,000	5,700
40,000	4,300	80,000	6,800	80,000	6,400
50,000	5,100	90,000	7,500	90,000	7,000
60,000	5,800	100,000	8,100	100,000	7,600
70,000	6,600	200,000	14,600	200,000	13,700
80,000	7,300	300,000	20,900	300,000	19,600
90,000	8,000	400,000	27,100	400,000	25,400
100,000	8,700	500,000	33,300	500,000	31,300
200,000	15,600	600,000	39,500	600,000	37,100
300,000	22,300	700,000	45,800	700,000	43,000
400,000	29,000	800,000	52,100	800,000	48,900
500,000	35,600	900,000	58,400	900,000	54,800
600,000	42,200	1,000,000	64,700	1,000,000	60,800
700,000	48,800	2,000,000	130,200	2,000,000	122,200
800,000	55,400	3,000,000	199,100	3,000,000	186,900
900,000	62,100	4,000,000	271,000	4,000,000	254,400
1,000,000	68,800	5,000,000	345,600	5,000,000	324,400
2,000,000	137,800	6,000,000	422,700	6,000,000	396,800
3,000,000	210,100	7,000,000	502,000	7,000,000	471,300
4,000,000	285,500	8,000,000	583,500	8,000,000	547,800
5,000,000	363,600	9,000,000	667,000	9,000,000	626,200
6,000,000	444,100	10,000,000	752,400	10,000,000	706,300
6,500,000	485,200	11,000,000	839,600	11,000,000	788,200
7,000,000	526,900	12,000,000	928,600	12,000,000	871,700

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.388598  
     b = 0.035368

\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.285811  
     b = 0.035587

\*\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.222608  
     b = 0.035587

1994 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	900
6,000	1,200	10,000	1,500	10,000	1,400
7,000	1,300	20,000	2,500	20,000	2,300
8,000	1,400	30,000	3,300	30,000	3,100
9,000	1,500	40,000	4,200	40,000	3,800
10,000	1,600	50,000	4,900	50,000	4,500
20,000	2,600	60,000	5,700	60,000	5,200
30,000	3,500	70,000	6,500	70,000	5,900
40,000	4,400	80,000	7,200	80,000	6,500
50,000	5,200	90,000	7,900	90,000	7,200
60,000	6,000	100,000	8,600	100,000	7,800
70,000	6,700	200,000	15,600	200,000	14,100
80,000	7,500	300,000	22,500	300,000	20,300
90,000	8,300	400,000	29,300	400,000	26,400
100,000	9,000	500,000	36,100	500,000	32,600
200,000	16,300	600,000	42,900	600,000	38,700
300,000	23,300	700,000	49,800	700,000	44,900
400,000	30,400	800,000	56,800	800,000	51,100
500,000	37,400	900,000	63,700	900,000	57,400
600,000	44,500	1,000,000	70,800	1,000,000	63,700
700,000	51,500	2,000,000	143,700	2,000,000	128,900
800,000	58,700	3,000,000	220,900	3,000,000	197,800
900,000	65,900	4,000,000	301,900	4,000,000	270,000
1,000,000	73,100	5,000,000	386,300	5,000,000	345,200
2,000,000	147,900	6,000,000	473,700	6,000,000	422,900
3,000,000	227,000	7,000,000	564,000	7,000,000	503,100
4,000,000	309,800	8,000,000	656,800	8,000,000	585,600
5,000,000	395,900	9,000,000	752,200	9,000,000	670,300
6,000,000	485,000	10,000,000	849,800	10,000,000	756,900
6,500,000	530,700	11,000,000	949,700	11,000,000	845,500
7,000,000	577,000	12,000,000	1,051,700	12,000,000	935,900

* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.347699$ $b = 0.035898$	** $SE = e^{a+b(\ln X)^2}$ , where $a = 4.283883$ $b = 0.036063$	*** $SE = e^{a+b(\ln X)^2}$ , where $a = 4.206542$ $b = 0.035915$
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1995 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	900
6,000	1,200	10,000	1,600	10,000	1,400
7,000	1,300	20,000	2,500	20,000	2,300
8,000	1,400	30,000	3,300	30,000	3,100
9,000	1,500	40,000	4,200	40,000	3,800
10,000	1,600	50,000	4,900	50,000	4,500
20,000	2,600	60,000	5,700	60,000	5,100
30,000	3,500	70,000	6,400	70,000	5,800
40,000	4,300	80,000	7,100	80,000	6,400
50,000	5,100	90,000	7,800	90,000	7,100
60,000	5,900	100,000	8,500	100,000	7,700
70,000	6,600	200,000	15,300	200,000	13,700
80,000	7,400	300,000	22,000	300,000	19,600
90,000	8,100	400,000	28,500	400,000	25,300
100,000	8,800	500,000	35,100	500,000	31,000
200,000	15,800	600,000	41,700	600,000	36,800
300,000	22,700	700,000	48,200	700,000	42,500
400,000	29,400	800,000	54,900	800,000	48,300
500,000	36,200	900,000	61,500	900,000	54,000
600,000	43,000	1,000,000	68,200	1,000,000	59,800
700,000	49,800	2,000,000	137,300	2,000,000	119,300
800,000	56,600	3,000,000	210,100	3,000,000	181,500
900,000	63,500	4,000,000	286,100	4,000,000	246,100
1,000,000	70,400	5,000,000	365,000	5,000,000	313,000
2,000,000	141,700	6,000,000	446,500	6,000,000	381,900
3,000,000	216,800	7,000,000	530,400	7,000,000	452,600
4,000,000	295,200	8,000,000	616,700	8,000,000	525,100
5,000,000	376,500	9,000,000	705,000	9,000,000	599,300
6,000,000	460,600	10,000,000	795,400	10,000,000	675,100
6,500,000	503,600	11,000,000	887,700	11,000,000	752,300
7,000,000	547,200	12,000,000	981,900	12,000,000	831,000

* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.362086$ $b = 0.035627$	** $SE = e^{a+b(\ln X)^2}$ , where $a = 4.329914$ $b = 0.035631$	*** $SE = e^{a+b(\ln X)^2}$ , where $a = 4.289002$ $b = 0.035157$
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1996 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	500	1,000	400	1,000	400
5,000	1,100	5,000	1,000	5,000	1,000
6,000	1,200	10,000	1,600	10,000	1,500
7,000	1,300	20,000	2,500	20,000	2,300
8,000	1,500	30,000	3,300	30,000	3,100
9,000	1,600	40,000	4,100	40,000	3,800
10,000	1,700	50,000	4,900	50,000	4,400
20,000	2,600	60,000	5,600	60,000	5,100
30,000	3,500	70,000	6,300	70,000	5,700
40,000	4,300	80,000	7,000	80,000	6,300
50,000	5,000	90,000	7,700	90,000	6,900
60,000	5,800	100,000	8,400	100,000	7,500
70,000	6,500	200,000	14,900	200,000	13,100
80,000	7,200	300,000	21,300	300,000	18,500
90,000	7,900	400,000	27,500	400,000	23,700
100,000	8,500	500,000	33,800	500,000	28,900
200,000	15,000	600,000	40,000	600,000	34,100
300,000	21,100	700,000	46,200	700,000	39,200
400,000	27,100	800,000	52,500	800,000	44,300
500,000	33,100	900,000	58,800	900,000	49,400
600,000	39,000	1,000,000	65,100	1,000,000	54,600
700,000	44,900	2,000,000	129,800	2,000,000	106,400
800,000	50,800	3,000,000	197,400	3,000,000	159,600
900,000	56,700	4,000,000	267,600	4,000,000	214,300
1,000,000	62,700	5,000,000	340,300	5,000,000	270,300
2,000,000	122,600	6,000,000	415,200	6,000,000	327,700
3,000,000	184,300	7,000,000	492,100	7,000,000	386,200
4,000,000	247,800	8,000,000	570,900	8,000,000	445,900
5,000,000	313,000	9,000,000	651,500	9,000,000	506,700
6,000,000	379,800	10,000,000	733,900	10,000,000	568,500
6,500,000	413,700	11,000,000	817,800	11,000,000	631,300
7,000,000	448,000	12,000,000	903,300	12,000,000	695,100

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.521508  
     b = 0.034180

\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.374631  
     b = 0.035149

\*\*\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.417590  
     b = 0.034001

1997 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,100	5,000	1,000	5,000	1,000
6,000	1,200	10,000	1,600	10,000	1,600
7,000	1,300	20,000	2,500	20,000	2,500
8,000	1,400	30,000	3,300	30,000	3,300
9,000	1,500	40,000	4,100	40,000	4,100
10,000	1,600	50,000	4,900	50,000	4,800
20,000	2,600	60,000	5,600	60,000	5,600
30,000	3,500	70,000	6,400	70,000	6,300
40,000	4,300	80,000	7,100	80,000	7,000
50,000	5,100	90,000	7,800	90,000	7,700
60,000	5,900	100,000	8,500	100,000	8,300
70,000	6,600	200,000	15,200	200,000	14,800
80,000	7,400	300,000	21,800	300,000	21,000
90,000	8,100	400,000	28,300	400,000	27,200
100,000	8,800	500,000	34,800	500,000	33,300
200,000	15,700	600,000	41,300	600,000	39,400
300,000	22,400	700,000	47,800	700,000	45,600
400,000	29,000	800,000	54,400	800,000	51,700
500,000	35,500	900,000	60,900	900,000	57,800
600,000	42,100	1,000,000	67,600	1,000,000	64,000
700,000	48,600	2,000,000	135,900	2,000,000	127,200
800,000	55,200	3,000,000	207,700	3,000,000	193,100
900,000	61,800	4,000,000	282,600	4,000,000	261,400
1,000,000	68,500	5,000,000	360,400	5,000,000	332,000
2,000,000	136,500	6,000,000	440,800	6,000,000	404,700
3,000,000	207,600	7,000,000	523,500	7,000,000	479,300
4,000,000	281,500	8,000,000	608,400	8,000,000	555,700
5,000,000	358,000	9,000,000	695,500	9,000,000	633,700
6,000,000	436,800	10,000,000	784,500	10,000,000	713,400
6,500,000	477,000	11,000,000	875,300	11,000,000	794,600
7,000,000	517,000	12,000,000	968,000	12,000,000	877,200

* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.424135$ $b = 0.035154$	** $SE = e^{a+b(\ln X)^2}$ , where $a = 4.331394$ $b = 0.035572$	*** $SE = e^{a+b(\ln X)^2}$ , where $a = 4.390740$ $b = 0.034978$
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1998 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	500
5,000	1,000	5,000	1,000	5,000	1,000
6,000	1,100	10,000	1,500	10,000	1,600
7,000	1,300	20,000	2,500	20,000	2,400
8,000	1,400	30,000	3,300	30,000	3,200
9,000	1,500	40,000	4,000	40,000	3,900
10,000	1,600	50,000	4,800	50,000	4,600
20,000	2,500	60,000	5,500	60,000	5,200
30,000	3,300	70,000	6,200	70,000	5,900
40,000	4,100	80,000	6,900	80,000	6,500
50,000	4,900	90,000	7,500	90,000	7,100
60,000	5,600	100,000	8,200	100,000	7,700
70,000	6,300	200,000	14,600	200,000	13,200
80,000	7,000	300,000	20,800	300,000	18,400
90,000	7,600	400,000	26,800	400,000	23,500
100,000	8,300	500,000	32,900	500,000	28,500
200,000	14,700	600,000	38,900	600,000	33,400
300,000	20,900	700,000	45,000	700,000	38,300
400,000	27,000	800,000	51,100	800,000	43,100
500,000	33,000	900,000	57,100	900,000	48,000
600,000	39,000	1,000,000	63,200	1,000,000	52,800
700,000	45,000	2,000,000	125,800	2,000,000	101,200
800,000	51,100	3,000,000	191,000	3,000,000	150,200
900,000	57,100	4,000,000	258,600	4,000,000	200,200
1,000,000	63,200	5,000,000	328,600	5,000,000	251,000
2,000,000	125,000	6,000,000	400,500	6,000,000	302,800
3,000,000	189,300	7,000,000	474,400	7,000,000	355,400
4,000,000	255,900	8,000,000	550,100	8,000,000	408,800
5,000,000	324,500	9,000,000	627,500	9,000,000	463,000
6,000,000	395,100	10,000,000	706,400	10,000,000	517,900
6,500,000	431,000	11,000,000	786,900	11,000,000	573,600
7,000,000	467,400	12,000,000	868,900	12,000,000	629,900

* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.415376$ $b = 0.034778$	* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.371851$ $b = 0.035013$	* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.551937$ $b = 0.033125$
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1999 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	1,000
6,000	1,100	10,000	1,500	10,000	1,500
7,000	1,300	20,000	2,400	20,000	2,300
8,000	1,400	30,000	3,200	30,000	3,100
9,000	1,500	40,000	3,900	40,000	3,800
10,000	1,600	50,000	4,600	50,000	4,400
20,000	2,500	60,000	5,300	60,000	5,100
30,000	3,300	70,000	6,000	70,000	5,700
40,000	4,100	80,000	6,700	80,000	6,300
50,000	4,800	90,000	7,300	90,000	6,900
60,000	5,500	100,000	8,000	100,000	7,500
70,000	6,200	200,000	14,200	200,000	13,000
80,000	6,900	300,000	20,200	300,000	18,200
90,000	7,600	400,000	26,100	400,000	23,300
100,000	8,300	500,000	32,000	500,000	28,400
200,000	14,600	600,000	37,800	600,000	33,400
300,000	20,800	700,000	43,700	700,000	38,300
400,000	26,800	800,000	49,600	800,000	43,300
500,000	32,800	900,000	55,500	900,000	48,200
600,000	38,800	1,000,000	61,400	1,000,000	53,200
700,000	47,700	2,000,000	122,100	2,000,000	103,000
800,000	50,700	3,000,000	185,400	3,000,000	154,000
900,000	56,700	4,000,000	251,000	4,000,000	206,200
1,000,000	62,700	5,000,000	318,800	5,000,000	259,600
2,000,000	124,100	6,000,000	388,600	6,000,000	314,100
3,000,000	187,800	7,000,000	460,300	7,000,000	369,600
4,000,000	253,800	8,000,000	533,600	8,000,000	426,200
5,000,000	321,800	9,000,000	608,600	9,000,000	483,700
6,000,000	391,700	10,000,000	685,200	10,000,000	542,100
6,500,000	427,300	11,000,000	763,100	11,000,000	601,400
7,000,000	463,300	12,000,000	842,600	12,000,000	661,500

* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.414534$ $b = 0.034746$	* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.348017$ $b = 0.034987$	* $SE = e^{a+b(\ln X)^2}$ , where $a = 4.452860$ $b = 0.033682$
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2000 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	1,000
6,000	1,100	10,000	1,500	10,000	1,500
7,000	1,200	20,000	2,400	20,000	2,400
8,000	1,300	30,000	3,100	30,000	3,100
9,000	1,400	40,000	3,900	40,000	3,800
10,000	1,500	50,000	4,600	50,000	4,500
20,000	2,400	60,000	5,300	60,000	5,100
30,000	3,200	70,000	5,900	70,000	5,700
40,000	4,000	80,000	6,600	80,000	6,300
50,000	4,700	90,000	7,200	90,000	6,900
60,000	5,400	100,000	7,900	100,000	7,500
70,000	6,100	200,000	14,000	200,000	13,000
80,000	6,800	300,000	19,900	300,000	18,200
90,000	7,500	400,000	25,700	400,000	23,200
100,000	8,200	500,000	31,500	500,000	28,200
200,000	14,600	600,000	37,300	600,000	33,200
300,000	20,800	700,000	43,100	700,000	38,100
400,000	26,900	800,000	48,900	800,000	43,000
500,000	33,300	900,000	54,700	900,000	47,900
600,000	39,100	1,000,000	60,600	1,000,000	52,800
700,000	45,300	2,000,000	120,400	2,000,000	101,800
800,000	51,400	3,000,000	182,800	3,000,000	151,900
900,000	57,600	4,000,000	247,400	4,000,000	203,000
1,000,000	63,800	5,000,000	314,300	5,000,000	255,200
2,000,000	127,300	6,000,000	383,100	6,000,000	308,400
3,000,000	193,900	7,000,000	453,600	7,000,000	362,700
4,000,000	263,100	8,000,000	525,900	8,000,000	417,800
5,000,000	334,800	9,000,000	599,800	9,000,000	473,800
6,000,000	408,700	10,000,000	675,200	10,000,000	530,700
6,500,000	446,400	11,000,000	752,100	11,000,000	588,400
7,000,000	484,600	12,000,000	830,300	12,000,000	646,900

\*  $SE = e^{a+b(\ln X)^2}$ , where  
 $a = 4.336620$   
 $b = 0.035240$

\*  $SE = e^{a+b(\ln X)^2}$ , where  
 $a = 4.335260$   
 $b = 0.034980$

\*  $SE = e^{a+b(\ln X)^2}$ , where  
 $a = 4.481530$   
 $b = 0.033490$

2001 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	1,000
6,000	1,100	10,000	1,500	10,000	1,400
7,000	1,200	20,000	2,300	20,000	2,200
8,000	1,300	30,000	3,100	30,000	2,900
9,000	1,400	40,000	3,800	40,000	3,600
10,000	1,500	50,000	4,500	50,000	4,200
20,000	2,400	60,000	5,200	60,000	4,800
30,000	3,200	70,000	5,900	70,000	5,400
40,000	4,000	80,000	6,500	80,000	6,000
50,000	4,700	90,000	7,100	90,000	6,500
60,000	5,400	100,000	7,800	100,000	7,100
70,000	6,100	200,000	13,800	200,000	12,200
80,000	6,800	300,000	19,600	300,000	17,100
90,000	7,400	400,000	25,300	400,000	21,900
100,000	8,100	500,000	30,900	500,000	26,500
200,000	14,400	600,000	36,600	600,000	31,100
300,000	20,500	700,000	42,200	700,000	35,700
400,000	26,500	800,000	47,900	800,000	40,300
500,000	32,500	900,000	56,600	900,000	44,900
600,000	38,500	1,000,000	59,300	1,000,000	49,400
700,000	44,500	2,000,000	117,500	2,000,000	95,200
800,000	50,500	3,000,000	178,000	3,000,000	141,700
900,000	56,500	4,000,000	240,800	4,000,000	189,100
1,000,000	62,600	5,000,000	305,500	5,000,000	237,500
2,000,000	124,600	6,000,000	372,100	6,000,000	286,800
3,000,000	189,400	7,000,000	440,400	7,000,000	337,000
4,000,000	256,600	8,000,000	410,300	8,000,000	388,100
5,000,000	326,100	9,000,000	581,700	9,000,000	439,900
6,000,000	397,700	10,000,000	654,600	10,000,000	492,400
6,500,000	432,200	11,000,000	728,800	11,000,000	545,700
7,000,000	471,200	12,000,000	804,300	12,000,000	599,700

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.350780$$

$$b = 0.035070$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.337980$$

$$b = 0.034850$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.443040$$

$$b = 0.033350$$

2002 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	1,000
6,000	1,100	10,000	1,600	10,000	1,500
7,000	1,200	20,000	2,500	20,000	2,300
8,000	1,300	30,000	3,300	30,000	3,100
9,000	1,400	40,000	4,100	40,000	3,700
10,000	1,500	50,000	4,800	50,000	4,400
20,000	2,500	60,000	5,500	60,000	5,000
30,000	3,300	70,000	6,200	70,000	5,600
40,000	4,100	80,000	6,900	80,000	6,200
50,000	4,800	90,000	7,500	90,000	6,800
60,000	5,500	100,000	8,200	100,000	7,300
70,000	6,300	200,000	14,500	200,000	12,600
80,000	6,900	300,000	20,600	300,000	17,600
90,000	7,600	400,000	26,500	400,000	22,500
100,000	8,300	500,000	32,500	500,000	27,300
200,000	14,800	600,000	38,400	600,000	32,200
300,000	21,100	700,000	44,300	700,000	36,700
400,000	27,400	800,000	50,200	800,000	41,400
500,000	33,600	900,000	56,100	900,000	46,000
600,000	39,800	1,000,000	62,000	1,000,000	50,700
700,000	46,100	2,000,000	122,600	2,000,000	95,200
800,000	52,300	3,000,000	185,400	3,000,000	144,500
900,000	58,600	4,000,000	250,500	4,000,000	192,600
1,000,000	64,900	5,000,000	317,500	5,000,000	241,600
2,000,000	129,600	6,000,000	386,300	6,000,000	291,600
3,000,000	197,200	7,000,000	456,900	7,000,000	342,300
4,000,000	267,700	8,000,000	529,000	8,000,000	393,900
5,000,000	340,500	9,000,000	602,700	9,000,000	446,200
6,000,000	415,600	10,000,000	677,800	10,000,000	499,300
6,500,000	454,000	11,000,000	754,300	11,000,000	553,000
7,000,000	492,800	12,000,000	832,000	12,000,000	607,500

\*  $SE = e^{a+b(\ln X)^2}$ , where  
 $a = 4.355970$   
 $b = 0.035230$

\*  $SE = e^{a+b(\ln X)^2}$ , where  
 $a = 4.414370$   
 $b = 0.034690$

\*  $SE = e^{a+b(\ln X)^2}$ , where  
 $a = 4.498340$   
 $b = 0.033190$

2003 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	900	5,000	900	5,000	900
6,000	1,000	10,000	1,500	10,000	1,400
7,000	1,100	20,000	2,300	20,000	2,200
8,000	1,200	30,000	3,100	30,000	2,900
9,000	1,300	40,000	3,900	40,000	3,500
10,000	1,400	50,000	4,600	50,000	4,200
20,000	2,300	60,000	5,300	60,000	4,800
30,000	3,100	70,000	6,000	70,000	5,400
40,000	3,900	80,000	6,600	80,000	5,900
50,000	4,600	90,000	7,300	90,000	6,500
60,000	5,300	100,000	8,000	100,000	7,100
70,000	6,000	200,000	14,300	200,000	12,300
80,000	6,700	300,000	20,400	300,000	17,400
90,000	7,400	400,000	26,500	400,000	22,300
100,000	8,000	500,000	32,600	500,000	27,200
200,000	14,500	600,000	38,600	600,000	32,000
300,000	20,900	700,000	44,700	700,000	36,800
400,000	27,200	800,000	50,900	800,000	41,600
500,000	33,500	900,000	57,000	900,000	46,500
600,000	39,900	1,000,000	63,200	1,000,000	51,300
700,000	46,300	2,000,000	126,900	2,000,000	99,900
800,000	52,700	3,000,000	194,000	3,000,000	149,900
900,000	59,200	4,000,000	263,900	4,000,000	201,200
1,000,000	65,700	5,000,000	336,400	5,000,000	253,800
2,000,000	133,500	6,000,000	411,300	6,000,000	307,600
3,000,000	205,200	7,000,000	488,400	7,000,000	362,600
4,000,000	280,500	8,000,000	567,500	8,000,000	418,600
5,000,000	359,000	9,000,000	648,600	9,000,000	475,700
6,000,000	440,200	10,000,000	731,500	10,000,000	533,700
6,500,000	481,900	11,000,000	816,100	11,000,000	592,600
7,000,000	524,100	12,000,000	902,400	12,000,000	652,400

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.208860$$

$$b = 0.036070$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.272400$$

$$b = 0.035530$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.357200$$

$$b = 0.033990$$

## 2004 NASS GES ESTIMATES AND STANDARD ERRORS

Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	900	5,000	900	5,000	900
6,000	1,000	10,000	1,400	10,000	1,400
7,000	1,100	20,000	2,300	20,000	2,100
8,000	1,200	30,000	3,100	30,000	2,800
9,000	1,300	40,000	3,800	40,000	3,500
10,000	1,400	50,000	4,500	50,000	4,100
20,000	2,300	60,000	5,200	60,000	4,700
30,000	3,100	70,000	5,900	70,000	5,300
40,000	3,800	80,000	6,600	80,000	5,800
50,000	4,600	90,000	7,200	90,000	6,400
60,000	5,300	100,000	7,900	100,000	6,900
70,000	6,000	200,000	14,200	200,000	12,200
80,000	6,700	300,000	20,300	300,000	17,200
90,000	7,300	400,000	26,300	400,000	22,200
100,000	8,000	500,000	32,400	500,000	27,100
200,000	14,600	600,000	38,500	600,000	31,900
300,000	21,000	700,000	44,600	700,000	36,800
400,000	27,400	800,000	50,700	800,000	41,600
500,000	33,800	900,000	56,900	900,000	46,500
600,000	40,300	1,000,000	63,100	1,000,000	51,400
700,000	46,900	2,000,000	127,200	2,000,000	100,700
800,000	53,400	3,000,000	194,700	3,000,000	151,700
900,000	60,100	4,000,000	265,200	4,000,000	204,200
1,000,000	66,700	5,000,000	338,500	5,000,000	258,100
2,000,000	136,300	6,000,000	414,200	6,000,000	313,400
3,000,000	210,300	7,000,000	492,200	7,000,000	370,000
4,000,000	288,100	8,000,000	572,400	8,000,000	427,800
5,000,000	369,400	9,000,000	654,500	9,000,000	486,600
6,000,000	453,800	10,000,000	738,600	10,000,000	546,600
6,500,000	497,100	11,000,000	824,400	11,000,000	607,500
7,000,000	541,000	12,000,000	912,000	12,000,000	669,400

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.168580$$

$$b = 0.036360$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.240450$$

$$b = 0.035690$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.297920$$

$$b = 0.034310$$

2005 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	900
6,000	1,100	10,000	1,500	10,000	1,400
7,000	1,200	20,000	2,400	20,000	2,300
8,000	1,300	30,000	3,200	30,000	3,000
9,000	1,400	40,000	4,000	40,000	3,700
10,000	1,500	50,000	4,700	50,000	4,300
20,000	2,400	60,000	5,400	60,000	5,000
30,000	3,200	70,000	6,100	70,000	5,600
40,000	4,000	80,000	6,800	80,000	6,200
50,000	4,700	90,000	7,500	90,000	6,800
60,000	5,400	100,000	8,200	100,000	7,400
70,000	6,200	200,000	14,700	200,000	12,900
80,000	6,900	300,000	21,000	300,000	18,200
90,000	7,500	400,000	27,300	400,000	23,400
100,000	8,200	500,000	33,600	500,000	28,500
200,000	14,900	600,000	39,800	600,000	33,600
300,000	21,300	700,000	46,200	700,000	38,700
400,000	27,800	800,000	52,500	800,000	43,800
500,000	34,200	900,000	58,900	900,000	48,900
600,000	40,700	1,000,000	65,300	1,000,000	54,000
700,000	47,200	2,000,000	131,600	2,000,000	105,700
800,000	53,700	3,000,000	201,300	3,000,000	158,800
900,000	60,300	4,000,000	274,200	4,000,000	213,600
1,000,000	66,900	5,000,000	350,000	5,000,000	269,800
2,000,000	135,400	6,000,000	428,200	6,000,000	327,300
3,000,000	207,800	7,000,000	508,800	7,000,000	386,200
4,000,000	283,700	8,000,000	591,600	8,000,000	446,200
5,000,000	362,600	9,000,000	676,500	9,000,000	507,400
6,000,000	444,400	10,000,000	763,300	10,000,000	596,600
6,500,000	486,200	11,000,000	852,000	11,000,000	362,900
7,000,000	528,700	12,000,000	942,500	12,000,000	697,100

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.254750$$

$$b = 0.035920$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.278620$$

$$b = 0.035670$$

$$* SE = e^{a+b(\ln X)^2}, \text{ where}$$

$$a = 4.372960$$

$$b = 0.034180$$

2006 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	900	5,000	900
6,000	1,100	10,000	1,500	10,000	1,400
7,000	1,200	20,000	2,400	20,000	2,200
8,000	1,300	30,000	3,200	30,000	3,000
9,000	1,400	40,000	4,000	40,000	3,600
10,000	1,500	50,000	4,800	50,000	4,300
20,000	2,400	60,000	5,500	60,000	4,900
30,000	3,200	70,000	6,200	70,000	5,500
40,000	4,000	80,000	6,900	80,000	6,200
50,000	4,800	90,000	7,600	90,000	6,700
60,000	5,500	100,000	8,300	100,000	7,300
70,000	6,300	200,000	15,200	200,000	13,000
80,000	7,000	300,000	21,800	300,000	18,300
90,000	7,700	400,000	28,500	400,000	23,700
100,000	8,400	500,000	35,200	500,000	28,900
200,000	15,300	600,000	41,900	600,000	34,200
300,000	22,000	700,000	48,700	700,000	39,400
400,000	28,700	800,000	55,500	800,000	44,600
500,000	35,400	900,000	62,400	900,000	49,900
600,000	42,200	1,000,000	69,300	1,000,000	55,200
700,000	49,100	2,000,000	141,400	2,000,000	108,800
800,000	55,900	3,000,000	218,000	3,000,000	164,300
900,000	62,900	4,000,000	298,500	4,000,000	221,800
1,000,000	69,800	5,000,000	382,600	5,000,000	280,900
2,000,000	142,400	6,000,000	469,800	6,000,000	341,600
3,000,000	219,700	7,000,000	559,900	7,000,000	403,800
4,000,000	300,900	8,000,000	652,800	8,000,000	467,400
5,000,000	385,600	9,000,000	748,200	9,000,000	532,300
6,000,000	473,600	10,000,000	846,100	10,000,000	598,400
6,500,000	518,700	11,000,000	946,200	11,000,000	665,700
7,000,000	564,500	12,000,000	1,048,500	12,000,000	734,100

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.223400  
     b = 0.036310

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.217860  
     b = 0.036300

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.315770  
     b = 0.034590

2007 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	900	5,000	900	5,000	900
6,000	1,000	10,000	1,400	10,000	1,400
7,000	1,100	20,000	2,300	20,000	2,200
8,000	1,200	30,000	3,200	30,000	3,000
9,000	1,400	40,000	3,900	40,000	3,700
10,000	1,500	50,000	4,700	50,000	4,400
20,000	2,400	60,000	5,500	60,000	5,000
30,000	3,200	70,000	6,200	70,000	5,700
40,000	4,000	80,000	6,900	80,000	6,300
50,000	4,800	90,000	7,600	90,000	7,000
60,000	5,600	100,000	8,300	100,000	7,600
70,000	6,300	200,000	15,300	200,000	13,600
80,000	7,100	300,000	22,200	300,000	19,500
90,000	7,800	400,000	29,100	400,000	25,300
100,000	8,500	500,000	36,100	500,000	31,100
200,000	15,700	600,000	43,200	600,000	36,900
300,000	22,800	700,000	50,300	700,000	42,700
400,000	29,900	800,000	57,500	800,000	48,600
500,000	37,100	900,000	64,700	900,000	54,500
600,000	44,400	1,000,000	72,000	1,000,000	60,400
700,000	51,700	2,000,000	148,800	2,000,000	121,400
800,000	59,200	3,000,000	231,300	3,000,000	185,600
900,000	66,700	4,000,000	318,700	4,000,000	252,700
1,000,000	74,200	5,000,000	410,300	5,000,000	322,200
2,000,000	153,800	6,000,000	505,800	6,000,000	394,000
3,000,000	239,400	7,000,000	604,800	7,000,000	468,000
4,000,000	330,200	8,000,000	707,000	8,000,000	544,000
5,000,000	425,500	9,000,000	812,400	9,000,000	621,800
6,000,000	524,800	10,000,000	920,800	10,000,000	701,400
6,500,000	575,900	11,000,000	1,031,900	11,000,000	782,700
7,000,000	628,000	12,000,000	1,145,600	12,000,000	865,600

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.133760  
     b = 0.037100

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.128400  
     b = 0.036970

\*  $SE = e^{a+b(\ln X)^2}$ , where  
     a = 4.217410  
     b = 0.035580

2008 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	900	5,000	1,000	5,000	900
6,000	1,000	10,000	1,500	10,000	1,400
7,000	1,100	20,000	2,400	20,000	2,300
8,000	1,300	30,000	3,300	30,000	3,000
9,000	1,400	40,000	4,100	40,000	3,800
10,000	1,500	50,000	4,800	50,000	4,400
20,000	2,400	60,000	5,600	60,000	5,100
30,000	3,200	70,000	6,300	70,000	5,800
40,000	4,000	80,000	7,100	80,000	6,400
50,000	4,800	90,000	7,800	90,000	7,000
60,000	5,500	100,000	8,500	100,000	7,700
70,000	6,300	200,000	15,400	200,000	13,700
80,000	7,000	300,000	22,200	300,000	19,400
90,000	7,700	400,000	29,000	400,000	25,200
100,000	8,400	500,000	35,800	500,000	30,900
200,000	15,500	600,000	42,600	600,000	36,600
300,000	22,400	700,000	49,500	700,000	42,300
400,000	29,400	800,000	56,500	800,000	48,000
500,000	36,400	900,000	63,500	900,000	53,700
600,000	43,500	1,000,000	70,500	1,000,000	59,500
700,000	50,600	2,000,000	143,700	2,000,000	118,700
800,000	57,800	3,000,000	221,600	3,000,000	180,500
900,000	65,100	4,000,000	303,400	4,000,000	244,800
1,000,000	72,400	5,000,000	388,800	5,000,000	311,300
2,000,000	149,300	6,000,000	477,300	6,000,000	379,900
3,000,000	231,700	7,000,000	568,900	7,000,000	450,300
4,000,000	318,800	8,000,000	663,200	8,000,000	522,400
5,000,000	410,000	9,000,000	760,000	9,000,000	596,200
6,000,000	505,100	10,000,000	859,400	10,000,000	671,600
6,500,000	553,900	11,000,000	961,000	11,000,000	748,400
7,000,000	603,600	12,000,000	1,064,900	12,000,000	826,700
* $SE = e^{a + b(\ln x)^2}$ , where $a = 4.158710$ $b = 0.036840$		** $SE = e^{a + b(\ln x)^2}$ , where $a = 4.238660$ $b = 0.036280$		*** $SE = e^{a + b(\ln x)^2}$ , where $a = 4.283070$ $b = 0.035160$	

2009 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	1,000	5,000	1,000	5,000	1,000
6,000	1,100	10,000	1,500	6,000	1,100
7,000	1,200	20,000	2,400	7,000	1,200
8,000	1,300	30,000	3,200	8,000	1,300
9,000	1,400	40,000	4,000	9,000	1,400
10,000	1,500	50,000	4,800	10,000	1,500
20,000	2,500	60,000	5,500	20,000	2,500
30,000	3,300	70,000	6,200	30,000	3,300
40,000	4,100	80,000	6,900	40,000	4,100
50,000	4,900	90,000	7,600	50,000	4,900
60,000	5,600	100,000	8,300	60,000	5,600
70,000	6,300	200,000	15,000	70,000	6,300
80,000	7,000	300,000	21,500	80,000	7,000
90,000	7,700	400,000	28,000	90,000	7,700
100,000	8,400	500,000	34,500	100,000	8,400
200,000	15,200	600,000	41,000	200,000	15,200
300,000	21,800	700,000	47,500	300,000	21,800
400,000	28,300	800,000	54,100	400,000	28,300
500,000	34,800	900,000	60,700	500,000	34,800
600,000	41,300	1,000,000	67,300	600,000	41,300
700,000	47,800	2,000,000	136,200	700,000	47,800
800,000	54,400	3,000,000	208,900	800,000	54,400
900,000	61,000	4,000,000	285,100	900,000	61,000
1,000,000	67,700	5,000,000	364,400	1,000,000	67,700
2,000,000	136,400	6,000,000	446,400	2,000,000	136,400
3,000,000	208,900	7,000,000	530,900	3,000,000	208,900
4,000,000	284,500	8,000,000	617,900	4,000,000	284,500
5,000,000	363,100	9,000,000	707,100	5,000,000	363,100
6,000,000	444,400	10,000,000	798,400	6,000,000	444,400
6,500,000	486,000	11,000,000	891,700	6,500,000	486,000
7,000,000	528,100	12,000,000	987,000	7,000,000	528,100
$*SE = e^{a + b(\ln x)^2}$ , where $a = 4.310860$ $b = 0.035690$		$**SE = e^{a + b(\ln x)^2}$ , where $a = 4.310860$ $b = 0.035690$		$***SE = e^{a + b(\ln x)^2}$ , where $a = 4.310860$ $b = 0.035690$	

2010 NASS GES ESTIMATES AND STANDARD ERRORS					
Crash Estimate (x)	Crash Standard Error (SE)*	Vehicle Estimate (x)	Vehicle Standard Error (SE)**	Person Estimate (x)	Person Standard Error (SE)***
1,000	400	1,000	400	1,000	400
5,000	900	5,000	1,100	5,000	900
6,000	1,000	10,000	1,700	10,000	1,400
7,000	1,100	20,000	2,800	20,000	2,200
8,000	1,200	30,000	3,800	30,000	2,900
9,000	1,300	40,000	4,700	40,000	3,500
10,000	1,400	50,000	5,600	50,000	4,100
20,000	2,300	60,000	6,400	60,000	4,700
30,000	3,000	70,000	7,300	70,000	5,300
40,000	3,700	80,000	8,100	80,000	5,900
50,000	4,400	90,000	8,900	90,000	6,400
60,000	5,100	100,000	9,700	100,000	7,000
70,000	5,700	200,000	17,700	200,000	12,100
80,000	6,300	300,000	25,500	300,000	16,900
90,000	7,000	400,000	33,300	400,000	21,600
100,000	7,600	500,000	41,100	500,000	26,200
200,000	13,500	600,000	48,900	600,000	30,700
300,000	19,200	700,000	56,800	700,000	35,300
400,000	24,900	800,000	64,800	800,000	39,800
500,000	30,500	900,000	72,800	900,000	44,300
600,000	36,100	1,000,000	80,900	1,000,000	48,800
700,000	41,800	2,000,000	164,900	2,000,000	94,000
800,000	47,400	3,000,000	254,100	3,000,000	140,100
900,000	53,100	4,000,000	348,000	4,000,000	187,100
1,000,000	58,800	5,000,000	445,900	5,000,000	235,100
2,000,000	117,300	6,000,000	547,500	6,000,000	284,000
3,000,000	178,400	7,000,000	652,500	7,000,000	333,700
4,000,000	242,000	8,000,000	760,700	8,000,000	384,300
5,000,000	307,700	9,000,000	871,800	9,000,000	435,700
6,000,000	375,400	10,000,000	985,700	10,000,000	487,900
6,500,000	410,000	11,000,000	1,102,300	11,000,000	540,800
7,000,000	445,000	12,000,000	1,221,500	12,000,000	594,400
$*SE = e^{a + b(\ln x)^2}$ , where $a = 4.271330$ $b = 0.035160$		$**SE = e^{a + b(\ln x)^2}$ , where $a = 4.375840$ $b = 0.036280$		$***SE = e^{a + b(\ln x)^2}$ , where $a = 4.420770$ $b = 0.033400$	

**Appendix E:**  
**Analytical Classification of Select NASS GES Data Elements**

Several data elements in the NASS GES are classified or collapsed according to analytical needs. In various NCSA's published reports and analysis, select NASS GES data elements have been given a standard classification. This section will attempt to show how NASS GES data elements are classified, assisting users in understanding and duplicating statistics presented in NCSA's published reports.

Earlier publications using only NASS GES data included the fatal crash data from the NASS GES, but this method is no longer in practice. For analytical purposes, fatal crashes and fatalities are extracted from the Fatality Analysis Reporting System (FARS), not NASS GES. FARS contains data on a census of fatal traffic crashes within the 50 states, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway customarily open to the public and result in the death of a person (occupant of a vehicle or nonmotorist) within 30 days of the crash. Since FARS contains records on all fatal crashes, it's a more accurate representation of fatal crashes and fatalities than the sample contained in NASS GES.

It is important to note that these are NCSA's classifications and are subject to modification.

The following tables show the specific coding scheme of select NASS GES data elements that are used in NCSA's publications and analysis:

**Time of Day/Day of Week**

<b>Classification</b>	<b>Data Year and Code</b>
	<b>1988-Later</b>
<b>Time of Day</b>	<b>HOUR (Military)</b>
Daytime (6:00 a.m. – 5:59 p.m.)	6-17
Nighttime (6:00 p.m. – 5:59 a.m.)	0-5, 18-24*
Unknown	NA
<b>Day of Week</b>	<b>WKDY_I w/ HOUR_I</b>
Weekday 6 a.m. Monday thru 5:59 p.m. Friday	(WKDY_I =2 and 6<=HOUR_I<=23) or (WKDY_I in (3,4,5)) or (WKDY_I =6 and (0<= HOUR_I <=17 or HOUR_I=24*))
Weekend 6 p.m. Friday thru 5:59 a.m. Monday	(WKDY_I =6 and 18<= HOUR_I <=23) or (WKDY_I in (1,7)) or (WKDY_I =2 and (0<= HOUR_I <=5 or HOUR_I=24*))
Unknown	NA

\* Hour 24 is the beginning of the day. In 2009 attribute 24 was dropped since 0 meant the same thing.

**Univariate Maximum Injury Severity in Crash**

NASS GES Description	Data Year and Code	Crash Severity Class
	1988 - Later	
No Injury	0	Property-Damage-Only Crash
Possible Injury	1	Injury Crash
Nonincapacitating	2	Injury Crash
Incapacitating	3	Injury Crash
Fatal*	4	Fatal Crash
Unknown Injury Severity	5	Injury Crash
Died Prior	6	Property-Damage-Only Crash
No Person Coded in the Crash	8	Property-Damage-Only Crash

\* Fatal counts from the FARS are used in NCSA's publications and analysis.

**Injury Severity**

NASS GES Description	Data Year and Code	Injury Severity Class
	1988 - Later	
No Injury (O)	0	Not Injured
Possible Injury (C)	1	Injured
Nonincapacitating (B)	2	Injured
Incapacitating (A)	3	Injured
Fatal (K)*	4	Killed
Unknown Injury Severity (U)	5	Injured
Died Prior	6	Not Injured

\* Fatality counts from the FARS are used in NCSA's publications and analysis.

**Vehicle Body Type**

NASS GES Description	Data Year and Code					
	1988-1991	1992-1998	1999-2008	2009	2010-Later	
	(BDYTyp_H, BDYTyp_IM, BODY_TYP)					
Passenger Cars	01-11, 17 <sup>(1)</sup>					
Light Trucks & Vans <sup>(6)</sup>	14, 20-41, 47 <sup>(8)</sup> , 48	14, 15, 16, 19, 20, 21, 22 <sup>(2)</sup> , 24 <sup>(3)</sup> , 25 <sup>(4)</sup> , 28, 29, 30, 31, 32, 33, 39, 40, 41, 45, 48			60-63, 64 <sup>(9)</sup> , 66, 67, 68, 71, 72, 78	
Large Trucks	60, 65, 68	60, 64, 66, 78			60-63, 64 <sup>(9)</sup> , 66, 67, 68, 71, 72, 78	
Motorcycles	70-79	80-89				
Buses	50-59 (55 Van-based Bus- GVWR > 10,000 lbs since 2011)					
Other/Unknown Vehicles	12, 13, 42, 63, 80-89	12, 13, 23, 42, 65, 73, 90-97, 98 (since 2010)				
Passenger Vehicles	01-11, 14, 15, 16, 17 <sup>(1)</sup> , 19, 20, 21, 22 <sup>(2)</sup> , 24 <sup>(3)</sup> , 25 <sup>(4)</sup> , 28, 29, 30, 31, 32, 33, 39, 40, 41, 45, 47 <sup>(8)</sup> , 48					
Utility Vehicles (a.k.a. On/Off Road)	14	14-16, 19				
Pickups	30-39					
Vans	20, 21, 22 <sup>(2)</sup> , 28, 29	20, 21, 22, 24 <sup>(3)</sup> , 25 <sup>(4)</sup> , 28, 29				
Medium Trucks	(60, 68) and (Trailer=0 or 9)	(60, 64, 78) and (Trailer=0 or 9)	(60, 64, 78) and (Trailer <sup>(5)</sup> =1 or 6)	(60, 64, 78) and (Tow_veh <sup>(5)</sup> in 0,5,6,9)	60-62, 64 <sup>(9)</sup> , 67, 68, 71	
Heavy Trucks	((60, 68) and (Trailer in 1-4)) or 65	((60, 64, 78) and (Trailer in 1-4)) or 66	((60, 64, 78) and (Trailer <sup>(5)</sup> in 2-5)) or 66	((60, 64, 78) and (Tow_veh <sup>(5)</sup> in 1-4)) or 66	63, 66, 72, 78	
Combination Trucks	((60, 68) and (Trailer in 1-4)) or 65	((60, 64, 78) and (Trailer in 1-4)) or 66	((60, 64, 78) and (Trailer <sup>(5)</sup> in 2-5)) or 66	((60, 64, 78) and (Tow_veh <sup>(5)</sup> in 1-4)) or 66	((60-63, 64 <sup>(9)</sup> , 67, 68, 71, 72, 78) and (Tow_veh <sup>(5)</sup> in 1-4)) or 66	
Single Unit Trucks	(60, 68) and (Trailer=0 or 9)	(60, 64, 78) and (Trailer=0 or 9)	(60, 64, 78) and (Trailer <sup>(5)</sup> =1 or 6)	(60, 64, 78) and (Tow_veh <sup>(5)</sup> in 0,5,6,9)	(60-63, 64 <sup>(9)</sup> , 67, 68, 71, 72, 78, 79) and (Tow_veh <sup>(5)</sup> in 0,5,6,9)	
Unknown (not in Imputed Body Type)	99					98, 99

**Vehicle Body Type (*continued*)**

- (1) Body type code 17 (*3-door coupe*) was added in 1999. There appears to be no occurrences of this vehicle on the 1999 data file.
- (2) Body type code 22 (*step van or walk-in van*) was added in 1990.
- (3) Body type code 24 (*van-based school bus*) was added in 1993. When defining School Buses be sure to include body type code 24.
- (4) Body type code 25 (*van-based transit bus*) was added in 1993. When defining Transit Buses be sure to include body type code 25.
- (5) The attributes for the Vehicle Trailing (TRAILER) data element were modified in 1999. In 2009, the data element name changed to TOW\_VEH and attributes were revised to match FARS for compatibility purposes.
- (6) “Light Trucks & Vans” is frequently referred to as just “Light Trucks.”
- (7) There is no distinction between heavy trucks and combination trucks in GES.
- (8) Body type code 47 (other light conventional truck type (not a pickup)) only exists in 1988 and 1989. It was dropped in 1990.
- (9) Body type attribute 64 (single unit straight truck) was deleted in 2010 and re-issued in 2011 as 64 (Single-unit straight truck or Cab-Chassis (GVWR unknown)).

Body type codes 49, 69, and 99 are imputed in the 1988 through 1992 data files. Body type codes 49, 79, and 99 are imputed in the 1993 through 1999 data files. Therefore, these values do not exist within the BDYTYP\_H (2009 and prior) or BDYTYP\_IM (2010 and later).

**Person Type**

NASS GES Description	Data Year and Code		Classification
	1988-2008	2009-2011	
	(PER_TYPE)	(PER_TYP)	
<b>Occupants</b>			
Driver of a motor vehicle in-transport	1	01	Driver
Passenger of a motor vehicle in-transport	2	02	Passenger
Unknown occupant type of a motor vehicle in-transport <sup>(1)</sup>	9	09	Passenger
Not reported occupant type*	-	77 (2010)	Passenger
<b>Nonoccupants</b>			
Occupant of a motor vehicle not in-transport <sup>(2)</sup>	3	03	Other nonoccupant
Occupant of a non-motor vehicle transport device <sup>(3)</sup>	4	04	Other nonoccupant
Pedestrian	5	05	Pedestrian
Cyclist	6	-	Pedalcyclist
Bicyclist	-	06	Pedalcyclist
Other Cyclist	-	07	Pedalcyclist
Person in or on working motor vehicle	7 (new in 2005) <sup>(8)</sup>	-	Other nonoccupant
Persons on personal conveyances	-	08	Other nonoccupant
Persons in/on buildings	-	10	Other nonoccupant
Other or unknown nonoccupant	8	-	Other or unknown nonoccupant type
Unknown type of nonoccupant	-	19	Unknown nonoccupant type
Not reported nonoccupant type*		78 (2010)	Unknown nonoccupant type

\*Not reported occupant type (77) and nonoccupant type (78) were introduced in 2010. However, there were only two occurrences of 77 and no occurrences of 78 on the file in 2010. These attributes were deleted in 2011.

**Person Type (*continued*)**

- (<sup>1</sup>) Customarily, “Unknown Occupant” is placed in the “Passenger” category, unless they need to be distinguished from “Passengers”.
- (<sup>2</sup>) “Occupant of motor vehicle not in-transport” refers to occupants of parked motor vehicles (any motor vehicle stopped off the roadway). In 2005, this definition was expanded to include parked/stopped off roadway/working motor vehicles and occupants of motor vehicles in motion outside the trafficway boundaries. Prior to 2005, occupants of working motor vehicles (working highway maintenance vehicles, cherry pickers, etc.) were coded “08.” At that time, code “08” was labeled “Other Pedestrians.”
- (<sup>3</sup>) “Occupant of non-motor vehicle transport device” refers to persons riding in an animal-drawn conveyance, on an animal, or injured occupants of railway trains, etc.
- (<sup>8</sup>) A person in or on a working motor vehicle. Working motor vehicles are transport devices being used as equipment which would be classified under ANSI as motor vehicles, if not being used as equipment (e.g., a tow truck while using its winch, a pickup truck while being used to power a saw, a truck with cherry picker being used to repair or maintain a traffic signal or a concrete truck while discharging its load).

### FARS and NASS GES “Person Type” and Entry System/Manual Differences

In FARS before 2005 only vehicle records for motor vehicles in-transport were collected. Any person involved in the crash that was not in a motor vehicle in-transport had records, but only needed to be classified using the general grouping of “NON-MOTORIST”. A non-motorist by definition is any person who is not an occupant of a motor vehicle in-transport.

In 2005, FARS began to include records for motor vehicles not in-transport. At that point people had to be classified as OCCUPANTS or NON-OCCUPANTS. This was done so that persons in motor vehicles not in-transport could be coded with the vehicle they occupied even though they are “non-motorists” by definition.

When Ped-Bike Typing and additional data elements meant for non-occupants (e.g. Non-motorist Action at Time of Crash, Non-motorist Safety Equipment) were added to FARS for in 2010, separate Person Levels for people in motor vehicles and people not in motor vehicles were created. This is tied to the case organization and file structuring in MDE. FARS’ split Person Type data element (P7 and NM7) reflects this separation of Person Types. The Person Type, 03- Occupant of a Motor Vehicle Not In-Transport, has a special quality of being both a NON-MOTORIST by definition and a person in a motor vehicle.

The 2010 GES entry system follows a scheme of breaking out persons as motorists or non-motorists. The “Long Names” of their data elements reflect this and the input system is structured around this. While the manual and entry systems reflect a difference in the organization of people in a case, FARS and GES both have the same Person Type attributes in total. It is because of the differences in the two entry systems and handling of persons in structuring of the case that the data elements are presented differently.

This principally affects the Person Type of “03 – Occupant of a Motor Vehicle Not In-transport”. So while the Person Type attribute list is the same in total, P03 (Occupant) in GES does not match exactly with FARS P7 because FARS includes “03 – Occupant of a Motor Vehicle Not In-transport”. It is the same situation but in reverse for GES P03 (Non-motorist) and FARS NM7. This difference ended in 2011 because of the entry systems being the same.

This difference affects how persons are counted in a case by Person Number but not the selection of Person Type for the individuals. For example, if a motor vehicle in-transport with just one occupant departed the roadway and struck a pedestrian and then a parked motor vehicle with one occupant both FARS and GES would have Person Level information for all three people and would utilize the same Person Type attribute to identify them. However, FARS would count two MOTOR VEHICLE OCCUPANTS, one NON-OCCUPANT and GES would count two NON-MOTORISTS and one NON-MOTORIST.

## Restraint System Use

NASS GES Description	Data Year and Code					Classification
	1988-1989	1990-1991	1992-1994	1995-2009	2010	
	(SAF_EQMT)	(REST_SYS)				
Nonoccupant	00	-	-	-	-	Not Applicable
None used	10	-	-	-	-	Not Used
None available	11	-	-	7		
None used or Not applicable	-	0	0	0	-	
Not applicable	-	-	-	-	30	
None used – motor vehicle occupant	-	-	-	-	31	
No helmet	-	-	-	-	41	
Manual shoulder and lap belt	04	-	-	-	-	
Lap/shoulder belt	-	1	1	1	-	
Manual lap belt	02	-	-	-	-	
Lap belt	-	2	2	2	-	
Manual shoulder belt only	03	-	-	-	-	
Shoulder belt	-	3	3	3	-	
Shoulder and lap belt used	-	-	-	-	21	
Shoulder belt only	-	-	-	-	23	
Lap belt only	-	-	-	-	22	
Automatic belt used	05	-	-	-	-	

Restraint System Use (*continued*)

NASS GES Description	Data Year and Code					Classification
	1988-1989	1990-1991	1992-1994	1995-2009	2010	
	(SAF_EQMT)	(REST_SYS)				
Air bag deployed	06	4	-	-	-	
Air bag deployed and lap/shoulder belt	-	5	-	-	-	
Child safety seat	01	6	6	6	-	
Child restraint system – forward facing	-	-	-	-	37	
Child restraint system – rear facing	-	-	-	-	38	
Booster seat	-	-	-	-	39	
Child restraint – type unknown	-	-	-	-	40	
Motorcycle helmet	07	7	7	5	-	
DOT-compliant motorcycle helmet	-	-	-	-	42	
Other helmet	-	-	-	-	43	
Other restraint/safety equipment used	08	-	-	-	98	
Restraint used – type unknown	09	-	-	-	28	
Restraint used – specifics unknown or other	-	8	8	8	-	
Not reported	-	-	-	-	97	
Unknown if used	99	9	9	9	99	Unknown

**Univariate Traffic Control Device**

Control Device Class	Data Year and Code	
	1988-1989	1990-Later
None	00	
Traffic Signal	01, 02, 03, 04, 08, 09	01, 04, 08, 09
Stop Sign	11	21
Other	12-14, 18,19,21,31,32,97,98	22,23,28,29, 40-43,49,51,61,62,97,98

**Appendix F:**  
**Rules for Derived Data Elements**

**Injury Severity, Number Injured and Alcohol Involvement**

**Maximum Injury Severity in Crash**

Accident.MAX\_SEV

Attribute Labels	GES
No Injury	0
Possible Injury	1
Non-incapacitating	2
Incapacitating	3
Fatal	4
Injury, unknown injury severity	5
Died Prior	6
No person involved in the crash	8
Unknown if Injured/ Not Reported	9

**Logic of Derivation:**

Note that this translation will need to be modified for 2010 to account for “Not Reported”. All GES.Person records linked to the person are used. If there are no records, then the value is assigned 8. If there is a single record, then the SAS code for Person.INJ\_SEV is used. If multiple records, all SAS Codes are obtained and prioritized. The value earliest in the following list will be used: 4, 3, 2, 1, 5, 0, 6 and 9.

**Number Known Injured in Crash**

Accident.NUM\_INJ

Attribute Labels	GES
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:**

Note that this translation will need to be modified for 2010 to account for "Not Reported". All GES.Person records linked to the person are used. If there are no records, then the value is assigned 98. If the SAS code for Person.INJ\_SEV is 9 for all persons in the crash, then the value is 99. If not, the value assigned is the number of GES.Person records where the SAS code for Person.INJ\_SEV is between 1 and 5.

**Alcohol Involved in Crash**

Accident.ALCOHOL

Attribute Labels	1988-1990	1991-1998	1999-Later
Alcohol Involved	1	1	1
No Alcohol involved	2	2	2
No applicable person	8	--	8
Unknown	9	9	9

Alcohol Involvement is a derived data element based on police-reported alcohol involvement from the Person data file. This data element indicates alcohol use for drivers, pedestrians, cyclists and other type of non-motorists (except occupants of motor vehicles not in-transport) involved in the crash.

The police reported alcohol involvement (Person.DRINKING, Person.PER\_ALCH PRIOR TO 2011) is as follows:

**Attribute Codes**

1988-1989	1990-1998	1999-2001	2002-2008	2009-Later	Label
0		1	1	0	No (Alcohol Not Involved)
	0				Alcohol Not Involved or N/A
		0	0		Not Applicable
1	1	2	2	1	Yes (Alcohol Involved)
			6		Not on PAR
			7		Not Coded
	7				Alcohol and/or Drugs Involved
8	8	8		8	Not Reported
9	9	9	9	9	Unknown (Police-Reported)

**The following order of alcohol involvement is used from 1999 through 2001.**

We have Oracle data for NASS GES cases starting with 1999. From 1999 through 2001, the data files were built from the Oracle cases using the 4 data file format of previous years (ACCIDENT, VEHICLE, PERSON and VINVEH, with EVENT added for 2002). Alcohol Involvement was a calculated field based on all persons coded in the crash. Note that persons that had a role other than driver would have an Oracle POLICE\_ALCOHOLID value of 26720 ('Not Applicable', SAS value '0').

The SAS value for the case was determined by:

1. Alcohol Involved  
If "Police Reported Alcohol Involvement" is 'Yes' for any of the involved active participants (drivers or nonmotorists [except occupants of motor vehicles not in-transport]) in the crash then alcohol involvement in the crash should be "Yes".
2. No Alcohol Involved  
If NOT #1 (Alcohol Involved) and "Police Reported Alcohol Involvement" is 'No' for any of the involved active participants in the crash, then alcohol involvement in the crash should be "No".
9. Unknown  
If NOT #1 (Alcohol Involved) and NOT #2 (No Alcohol Involved) and "Police Reported Alcohol Involvement" is 'Unknown' or 'Not Reported' for ANY of the involved active participants then alcohol involvement in the crash should be "Unknown".
8. No Applicable Person  
Default value if no active participants coded for this case.

**From 2002 through 2008, the data files were expanded to a 14 file format, but the translation remained the same, with 'Not Reported' being replaced by 'Not On PAR' and 'Not Coded' in 2002:**

1. Alcohol Involved  
If "Police Reported Alcohol Involvement" is 'Yes' for any of the involved active participants (drivers or nonmotorists [except occupants of motor vehicles not in-transport]) in the crash then alcohol involvement in the crash should be "Yes".
2. No Alcohol Involved  
If NOT #1 (Alcohol Involved) and "Police Reported Alcohol Involvement" is 'No' for any of the involved active participants in the crash, then alcohol involvement in the crash should be "No".
9. Unknown  
If NOT #1 (Alcohol Involved) and NOT #2 (No Alcohol Involved) and "Police Reported Alcohol Involvement" is 'Unknown' or 'Not Reported' for ANY of the involved active participants then alcohol involvement in the crash should be "Unknown".
8. No Applicable Person  
Default value if no active participants coded for this case.

**From 2009 and on, the priority is different; it follows the logic below:**

1. Alcohol Involved  
If "Police Reported Alcohol Involvement" is 'Yes' for any of the involved active participants (drivers or nonmotorists [except occupants of motor vehicles not in-transport]) in the crash then alcohol involvement in the crash should be "Yes".
2. No Alcohol Involved  
If "Police Reported Alcohol Involvement" is 'No' for ALL of the involved active participants in the crash then alcohol involvement in the crash should be "No".
9. Unknown  
If NOT #1 (Yes) and "Police Reported Alcohol Involvement" is 'Unknown' or 'Not Reported' for ANY of the involved active participants then alcohol involvement in the crash should be "Unknown".

**Examples:**

Case 1: *V1 Driver, alcohol is no, V2 Driver, alcohol is unknown, one nonmotorist, alcohol is no, V3, with the situation that three unknown occupants with none coded the role of driver, alcohol for occ1 is yes, alcohol for occ2 is no, occ3 for alcohol is unknown.*

Alcohol involvement for the crash is 'Unknown'.

Case 2: *V1 driver, alcohol is unknown, one nonmotorist, alcohol is no,*  
Alcohol involvement for the crash is 'Unknown'.

Case 3: *V1 driver, alcohol is no, one nonmotorist, alcohol is unknown,*  
Alcohol involvement for the crash is 'Unknown'.

Note that for a single vehicle crash, if an in-transport vehicle is listed as having a driver present, but no occupant is coded with the role of driver, then alcohol involved in crash equals unknown code '9' unless all the occupants are coded 'no (alcohol not involved)' or all the occupants are coded 'yes (alcohol involved).' In the case where all occupants are coded 'no (alcohol not involved)' then alcohol involved in crash is 'no (alcohol not involved)'. In the case where all occupants are coded 'yes (alcohol involved)' then alcohol involved in crash is 'yes (alcohol involved)'. In the case where not all occupants are coded 'Yes' or 'No', then alcohol involved in crash equals 'Unknown', code '9'.

For the multi-vehicle crash or having nonmotorists involved in the crash, we will take the alcohol value for each vehicle in the case and each applicable nonmotorist and then takes the highest priority value among these values, as listed above.

**Maximum Injury Severity in Vehicle**

Vehicle.MAX\_VSEV

Attribute Labels	GES
No Injury	0
Possible Injury	1
Non-incapacitating	2
Incapacitating	3
Fatal	4
Injury, unknown injury severity	5
Died Prior	6
No person involved in the Vehicle	8
Unknown if Injured/ Not Reported	9

**Logic of Derivation:**

Note that this translation will need to be modified for 2010 to account for “Not Reported”. All GES.Person records linked to the vehicle are used. If there are no records, then the value is assigned 8. If there is a single record, then the SAS code for Person.INJ\_SEV is used. If multiple records, all SAS Codes are obtained and prioritized. The value earliest in the following list will be used: 4, 3, 2, 1, 5, 0, 6 and 9.

**Number Injured in Vehicle**

Vehicle.NUM\_INJV

Attribute Labels	GES
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:**

Note that this translation will need to be modified for 2010 to account for “Not Reported”. All GES.Person records linked to the vehicle are used. If there are no records, then the value is assigned 98. If the SAS code for Person.INJ\_SEV is 9 for all persons in the crash, then the value is 99. If not, the value assigned is the number of GES.Person records where the SAS code for Person.INJ\_SEV is between 1 and 5.

**Driver Drinking in Vehicle**

Vehicle.VEH\_ALCH

Attribute Labels	GES
Alcohol Involved	1
No Alcohol involved	2
No Driver Present/Unknown if Driver Present	8
Unknown	9

**Logic of Derivation:**

- If Driver Presence equals 0 (No Driver Present/Not Applicable) or 9 (Unknown), Then Driver Drinking in Vehicle is set to 8 (No Driver Present/Unknown if Driver Present).
- If Driver Presence equals 1 (Yes) and there is a person in the vehicle where Person Type equals 1 (Driver of a Motor Vehicle In Transport), Then Police-Reported Alcohol Involvement for the driver is used for the derivation of Driver Drinking in Vehicle as follows:

<u>Police-Reported Alcohol Involvement</u>		<u>Driver Drinking in Vehicle</u>
▪ 0 No (Alcohol Not Involved)	→	2 No Alcohol Involved
▪ 1 Yes (Alcohol Involved)	→	1 Alcohol Involved
▪ 8 Not Reported	→	9 Unknown
▪ 9 Unknown (Police-Reported)	→	9 Unknown

- If Driver Presence equals 1 (Yes) and there is **not** a person in the vehicle where Person Type equals 1 (Driver of a Motor Vehicle In-Transport), Then
  - If Police Reported Alcohol Involvement is the same for the occupants of the vehicle where Person Type equals 9 (Unknown Occupant Type in a Motor Vehicle In Transport), Then Driver Drinking in Vehicle is derived from Police Reported Alcohol Involvement as shown above,
  - Else Driver Drinking in Vehicle is set to 9 (Unknown).

The derivation is also provided in table format on the next page.

IF	THEN
Vehicle.DR_PRES = 0 or 9	→ Vehicle.VEH_ALCH = 8
Vehicle.DR_PRES = 1 and Person.PER_TYP = 1	
Person.PER_ALCH = 1	→ Vehicle.VEH_ALCH = 1
Person.PER_ALCH = 0	→ Vehicle.VEH_ALCH = 2
Person.PER_ALCH = 8 or 9	→ Vehicle.VEH_ALCH = 9
Vehicle.DR_PRES = 1 and Person.PER_TYP = 9 and Person.PER_ALCH = [Same value for all]	
Person.PER_ALCH = 1	→ Vehicle.VEH_ALCH = 1
Person.PER_ALCH = 0	→ Vehicle.VEH_ALCH = 2
Person.PER_ALCH = 8 or 9	→ Vehicle.VEH_ALCH = 9
Vehicle.DR_PRES = 1 and Person.PER_TYP = 9 and Person.PER_ALCH = [NOT same value for all]	→ Vehicle.VEH_ALCH = 9
<i>Other combinations are not valid</i>	

**Example:**

V1 Driver, alcohol is no, V2 Driver, alcohol is unknown, one nonmotorist, alcohol is no, V3 (driver present), with the situation that three unknown occupants with none coded the role of driver, alcohol for occ1 is yes, alcohol for occ2 is no, occ3 for alcohol is unknown.

Alcohol involvement for V1 is 'No'; for V2 is 'Unknown' for V3 is 'Unknown'.

If an in-transport vehicle is listed as having a driver present, but no occupant is coded with the role of driver, then driver drinking in vehicle equals unknown code '9' unless all the unknown occupant types are coded 'no (alcohol not involved)' or all the unknown occupant types are coded 'yes (alcohol involved)'. In the case where all the unknown occupant types are coded 'no (alcohol not involved)' then driver drinking in vehicle is 'no (alcohol not involved)'. In the case where all the unknown occupant types are coded 'yes (alcohol involved)' then driver drinking in vehicle is 'yes (alcohol involved)'. For example, if there is a vehicle where there is a driver present and there are two unknown occupant types, both coded 'yes (alcohol involved)' but neither is coded as the driver; then driver drinking in vehicle equals 'yes (alcohol involved)', code '1'). Another example: if there is a vehicle where there is a driver present and there are two unknown occupant types (neither coded as the driver--that is, the police report indicates it is unknown who was actually driving), and one is coded 'yes (alcohol involved)' and the other is coded 'no (alcohol not involved)'; then driver drinking in vehicle equals 'unknown', code '9').

**Atmospheric Conditions**

Accident.WEATHER

Attribute Labels	2009 GES	2010- Later GES
No Additional Atmospheric Conditions	1	0
Clear		1
Cloudy		10
Rain	2	2
Sleet, Hail (Freezing Rain or Drizzle)	3	3
Snow	4	4
Blowing Snow	5	11
Rain and Fog	6	
Sleet and Fog	7	
Fog, Smog, Smoke		5
Severe Crosswinds		6
Blowing Sand, Soil, Dirt		7
Other	8	8
Not Reported		98
Unknown	9	99

**Logic of Derivation:**

Follow the priority ranking of each attribute as follows:

- Snow
- Blowing Snow
- Sleet, Hail (Freezing Rain or Drizzle)
- Rain
- Fog, Smog, Smoke
- Severe Crosswinds
- Blowing Sand, Soil, Dirt
- Other
- Cloudy
- Clear
- Not Reported
- Unknown
- No Additional Atmospheric Conditions

**Trafficway Description**

Accident.TRAF\_WAY (deleted in 2011 Accident data file)

Attribute Labels	2009 GES	2010 GES
Non-Trafficway Area		0
Not Physically Divided (Center 2-way Left Turn Lane)	0	
Not Physically Divided (Two Way Trafficway)	1	
Divided Highway (Median Strip, Barrier)	2	
Two-Way, Not Divided		1
Two-Way, Not Divided with a continuous left turn lane		5
Two-Way, Divided, Unprotected (painted >4feet) Median		2
Two-Way, Divided, Positive Median Barrier		3
One Way Trafficway	3	4
Entrance/Exit ramp		6
Not Reported		8
Unknown	9	9

This information is coded on the vehicle level. The ACCIDENT level data element is derived by selecting one vehicle and using the coded values for that vehicle. The vehicle is chosen by the following process:

If there is only one vehicle, use that vehicle. If there is only one vehicle involved in the first event, then that vehicle is selected. If there are two vehicles in the first event, and the second vehicle has a larger number of travel lanes, and if that value is not 8, then the second vehicle is selected.

In 2010, with the change to allow non-harmful events as the first event, the above derivation rule changed to use the first coded \*harmful\* event.

**Logic of Derivation:**

Follow the priority ranking of each attribute as follows:

- Two-Way, Divided, Positive Median Barrier
- Two-Way, Divided, Unprotected (Painted > 4 Feet) Median
- Two-Way, Not Divided With a Continuous Left-Turn Lane
- Two-Way, Not Divided
- One-Way Trafficway
- Entrance/Exit Ramp
- Non-Trafficway Area
- Not Reported
- Unknown

**Total Lanes in Roadway**

Accident.NO\_LANES (deleted in 2011 Accident data file)

Attribute Labels	2009 GES	2010 GES
Non-Trafficway Area		0
One Lane	1	1
Two Lanes	2	2
Three Lanes	3	3
Four Lanes	4	4
Five Lanes	5	5
Six Lanes	6	6
Seven or More Lanes	7	7
Not Reported		8
Unknown	9	9

This information is coded on the vehicle level. The ACCIDENT level data element is derived by selecting one vehicle and using the coded values for that vehicle. The vehicle is chosen by the following process:

If there is only one vehicle, use that vehicle. If there is only one vehicle involved in the first event, then that vehicle is selected. If there are two vehicles in the first event, and the second vehicle has a larger number of travel lanes, and if that value is not 8, then the second vehicle is selected.

In 2010, with the change to allow non-harmful events as the first event, the above derivation rule changed to use the first coded \*harmful\* event.

**Logic of Derivation:**

Follow the priority ranking of each attribute as follows:

- Seven or More Lanes
- Six Lanes
- Five Lanes
- Four Lanes
- Three Lanes
- Two Lanes
- One Lane
- Non-Trafficway Area
- Not Reported
- Unknown

**Roadway Alignment**

Accident.ALIGNMNT (deleted in 2011 Accident data file)

Attribute Labels	2009 GES	2010 GES	2010 GES Accident
Non-Trafficway Area		0	
Straight	1	1	1
Curve	2		2
Curve Right		2	
Curve Left		3	
Curve -Unknown Direction		4	
Not Reported		8	8
Unknown	9	9	9

This information is coded on the vehicle level. The ACCIDENT level data element is derived by selecting one vehicle and using the coded values for that vehicle. The vehicle is chosen by the following process:

If there is only one vehicle, use that vehicle. If there is only one vehicle involved in the first event, then that vehicle is selected. If there are two vehicles in the first event, and the second vehicle has a larger number of travel lanes, and if that value is not 8, then the second vehicle is selected.

In 2010, with the change to allow non-harmful events as the first event, the above derivation rule changed to use the first coded \*harmful\* event.

**Logic of Derivation:**

At crash level, combine the codes curve right, curve left and curve-unknown direction into one code, 'curve'. Then follow the priority ranking of 1, 'straight', 2 'curve', 8 'not reported', 9 'unknown'.

Follow the priority ranking of each attribute as follows:

- Curve
- Straight
- Non-Trafficway Area
- Not Reported
- Unknown

**Roadway Grade**

Accident.PROFILE (deleted in 2011 Accident data file)

Attribute Labels	2009 GES	2010 GES	2010 GES Accident
Non-Trafficway Area		0	0
Level	1	1	1
Grade	2		2
Grade, Unknown slope		2	
Hillcrest	3	3	3
Uphill		5	
Downhill		6	
Sag	8		
Sag (Bottom)		4	4
Not reported		8	8
Unknown	9	9	9

This information is coded on the vehicle level. The ACCIDENT level data element is derived by selecting one vehicle and using the coded values for that vehicle. The vehicle is chosen by the following process:

If there is only one vehicle, use that vehicle. If there is only one vehicle involved in the first event, then that vehicle is selected. If there are two vehicles in the first event, and the second vehicle has a larger number of travel lanes, and if that value is not 8, then the second vehicle is selected.

In 2010, with the change to allow non-harmful events as the first event, the above derivation rule changed to use the first coded \*harmful\* event.

**Logic of Derivation:**

At the crash level the codes uphill, downhill, grade, unknown slope are combined into one code, 'grade'. Follow the priority ranking of Grade, Hillcrest, Sag (bottom), level, non-trafficway area, not reported, unknown.

Follow the priority ranking of each attribute as follows:

- Grade
- Hillcrest
- Sag (Bottom)
- Level
- Non-Trafficway Area
- Not Reported
- Unknown

**Roadway Surface Condition**

Accident.SUR\_COND (deleted in 2011 Accident data file)

Attribute Labels	2009 GES	2010 GES
Non-Trafficway Area		0
Dry	1	1
Wet	2	2
Snow or Slush	3	
Snow		3
Slush		10
Ice	4	
Ice/Frost		4
Water (Standing, Moving)		6
Sand, Dirt, Oil	5	
Sand		5
Mud, dirt, gravel		11
Oil		7
Other	8	8
Not Reported		98
Unknown	9	99

This information is coded on the vehicle level. The ACCIDENT level data element is derived by selecting one vehicle and using the coded values for that vehicle. The vehicle is chosen by the following process:

If there is only one vehicle, use that vehicle. If there is only one vehicle involved in the first event, then that vehicle is selected. If there are two vehicles in the first event, and the second vehicle has a larger number of travel lanes, and if that value is not 8, then the second vehicle is selected.

In 2010, with the change to allow non-harmful events as the first event, the above derivation rule changed to use the first coded \*harmful\* event.

**Logic of Derivation:**

Follow the priority ranking of each attribute as follows:

- Snow
- Slush
- Ice/Frost
- Water (Standing, Moving)
- Wet
- Sand
- Mud, Dirt, Gravel
- Oil

- 
- Other
  - Dry
  - Non-Trafficway Area
  - Not Reported
  - Unknown

**Traffic Control Device**

Accident.TRAF\_CON (deleted in 2011 Accident data file)

Attribute Labels	2009 GES	2010 GES
Officer, Crossing Guard, Flagman, Etc.	51	
Person		51
Traffic Control Signal (On Colors)	1	
Traffic control signal (on colors) without pedestrian signal		1
Traffic control signal (on colors) with pedestrian signal		2
Traffic control signal (on colors) not known if ped signal		3
Flashing Traffic Control Signal Or Flashing Beacon	4	
Flashing Traffic Control Signal		4
Lane Use Control Signal		5
Other highway traffic signal	8	8
Unknown Highway Traffic Signal	9	9
Stop Sign	21	21
Yield Sign	22	22
School Zone sign/ Device	23	23
Other Regulatory Sign	28	28
Unknown Regulatory Sign	29	29
Advisory Speed Sign	40	
Warning Sign For Road Conditions (Hill, Steep Grade, etc.)	41	
Warning Sign For Road Construction	42	
Warning Sign For Environment/Traffic (Fog Ahead, Wind)	43	
Unknown Type Warning Sign	49	
Warning Sign		44
Active Device At RR Crossing (e.g., Gates, Flashing Lights)	61	
Passive Device At RR Crossing (e.g., Stop Sign, Cross Bucks)	62	
Railway Crossing Device		63
Other Traffic Control (Whether Or Not At RR Grade Crossing)	98	
Other Traffic Control		98
Traffic Control Present - No Details	97	
Not Reported		97
Unknown	99	99
No Controls	0	0

**Logic of Derivation:**

In 2009 and before, all GES.Vehicle.VTRAFCON SAS code values for vehicles linked to the case, as well as all GES.Biketraf.BTRAFCON values are used. If there are no values, then 00 is assigned. If there is a single record, then that SAS code is assigned. If there are multiple records, then the minimum SAS code is assigned, with the following exceptions. If there is a record with a 0 SAS code, and any other record with a value other than 0, then the record with the 0 SAS code record is ignored (all other values take precedence over 0). If there is a record with SAS code value of 51, then 51 is assigned (51 takes precedence over all other values). SAS code 98 takes precedence over SAS code 97.

If the crash involves vehicles and cyclists subject to different traffic control devices, the device coded is based on the following priority:

- 51 - Officer, Crossing Guard, Flagman, etc
- The lowest numbered device shown below
- No traffic control device.

In 2010, a single traffic control which best described the vehicle's environment just prior to this vehicle's critical precrash event was chosen. The roadway used for coding this data element is the one this vehicle departed if it is off the roadway just prior to its critical precrash event. If this vehicle is in a junction just prior to its critical precrash event, this data element is coded based on the roadway this vehicle was on before entering the junction. The value indicated in the case materials is coded if it directly matches.

If more than one device is present, the highest device (lowest number on list) most related to the crash is coded. There are two exceptions:

1. One exception is Person which includes a law enforcement officer, crossing guard, flagman, etc. Person takes precedence over the entire list.
2. The other exception is an Other Regulatory Sign which includes a Regulatory Speed Limit Sign.

**Speed Limit**

Accident.SP\_LIMIT (deleted in 2011 Accident data file)

Attribute Labels	2009 GES	2010 GES
No Statutory Limit	0	
No Statutory Limit/Non-Trafficway Area		0
Actual speed Limit		05-75
Actual speed Limit (mph increments of 5)	05-75	
Not Reported		97
Unknown	99	99

**Logic of Derivation:**

Speed Limit is coded on the vehicle level. The derivation takes the largest non-unknown value for all the coded vehicles. If all the values are unknown, then the value is assigned 999.

Follow the priority ranking of each attribute as follows:

- Largest non-unknown values
- Not Reported
- Unknown
- No Limit

**Contributing Circumstances**

Vehicle.FACTOR (deleted in 2010 Vehicle data file)

Attribute Labels	GES
None	0
Tires	1
Brake System	2
Steering	3
Suspension	4
Power Train	5
Exhaust System	6
Head lights	7
Signal lights	8
Other lights	9
Wipers	10
Wheels	11
Mirrors	12
Driver seating and control	13
Windows/Windshield	
Body, doors	14
Trailer Hitch	15
Truck Coupling/Trailer hitch/Safety chains	
Safety Systems	
Hit and Run Vehicle	50
Vehicle Contributing Factors – No Details	97
Other	98
Not Reported	
Unknown	99

**Logic of Derivation:**

All records from GES.Factor are used. If there are no records, then the value 00 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned.

**Violations Charged**

Vehicle.VIOLATN (deleted in 2010 Vehicle data file)

Attribute Labels	GES
None	0
<b><u>Reckless/Careless/Hit-and-Run Type Offenses</u></b>	
Manslaughter or homicide	1
Willful reckless driving; driving to endanger; negligent driving	2
Unsafe reckless (not willful, wanton reckless) driving	3
Inattentive, careless, improper driving	4
Fleeing or eluding police	5
Fail to obey police, fireman, authorized person directing traffic	6
Hit-and-run, fail to stop after crash	7
Fail to give aid, information, wait for police after crash	8
Serious violation resulting in death	9
<b><u>Impairment Offenses</u></b>	
Driving while intoxicated (alcohol or drugs) or BAC above limit (any detectable BAC for CDLs)	11
Driving while impaired	12
Driving under influence of substance not intended to intoxicate	13
Drinking while operating	14
Illegal possession of alcohol or drugs	15
Driving with detectable alcohol	16
Refusal to submit to chemical test	18
Alcohol, drug or impairment violations generally	19
<b><u>Speed-Related Offenses</u></b>	
Racing	21
Speeding (above the speed limit)	22
Speed greater than reasonable & prudent (not necessarily over the limit)	23
Exceeding special limit (e.g.: for trucks, buses, cycles, or on bridge, in school zone, etc.)	24
Energy speed (exceeding 55 mph, non-pointable)	25
Driving too slowly	26
Speed related violations, generally	29

Attribute Labels	GES
<b><u>Rules of the Road – Traffic Sign &amp; Signals</u></b>	
Fail to stop for red signal	31
Fail to stop for flashing red	32
Violation of turn on red (fail to stop & yield, yield to pedestrians before turning)	33
Fail to obey flashing signal (yellow or red)	34
Fail to obey signal, generally	35
Violate RR grade crossing device/regulations	36
Fail to obey stop sign	37
Fail to obey yield sign	38
Fail to obey traffic control device	39
<b><u>Rules of the Road – Turning, Yielding, Signaling</u></b>	
Turn in violation of traffic control (disobey signs, turn arrow or pavement marking; not a right-on-red violation)	41
Improper method & position of turn (too wide, wrong lane)	42
Fail to signal for turn or stop	43
Fail to yield to emergency vehicle	45
Fail to yield, generally	46
Enter intersection when space insufficient	48
Turn, yield, signaling violations, generally	49
<b><u>Rules of the Road – Wrong Side, Passing &amp; Following</u></b>	
Driving wrong way on one-way road	51
Driving on left, wrong side of road, generally	52
Improper, unsafe passing	53
Pass on right (drive off pavement to pass)	54
Pass stopped school bus	55
Fail to give way when overtaken	56
Following too closely	58
Wrong side, passing, following violations, generally	59
<b><u>Rules of the Road – Lane Usage</u></b>	
Unsafe or prohibited lane change	61
Improper use of lane (enter of 3-lane road, HOV designated lane)	62
Certain traffic to use right lane (trucks, slow-moving, etc.)	63
Motorcycle lane violations (more than two per lane, riding between lanes, etc.)	66
Motorcyclist attached to another vehicle	67
Lane violations, generally	69

Attribute Labels	GES
<b><u>Non-Moving – License and Registration Violations</u></b>	
Driving while license withdrawn (including violation of provisions of work permit)	71
Other driver license violations	72
Commercial driver violations (log book, hours, permits carried)	73
Vehicle registration violations	74
Fail to carry insurance card	75
Driving uninsured vehicle	76
Non-moving violations, generally	79
<b><u>Equipment</u></b>	
Lamp violations	81
Brake violations	82
Failure to require restraint use (by self or passengers)	83
Motorcycle equipment violations (helmet, special equipment)	84
Violation of hazardous cargo regulations	85
Size, weight, load violations	86
Equipment violations, generally	89
<b><u>License, Registration &amp; Violations</u></b>	
Parking	91
Theft, unauthorized use of motor vehicle	92
Driving where prohibited (sidewalk, limited access, off truck route)	93
Not Reported	97
Other moving violation (coasting, backing, opening door)	98
Unknown Violation	99

**Logic of Derivation:**

All GES.Violatn records linked to the vehicle are used. If there are no records, then 00 is assigned. If there is a single record, then the SAS code for that record is used. If there are multiple records, then for 2009 and later, the minimum SAS code is used. Prior to 2009, the value that appeared earliest in the following list was used :  
 ('01','02','03','04','05','06','07','97','98','50','96','99','00')

**Driver's Vision Obscured By**  
**Vehicle.VIS\_OBSC (deleted in 2010 Vehicle data file)**

Attribute Labels	GES
No Obstruction Noted	0
Rain, Snow, Fog, Smoke, Sand, Dust	1
Reflected Glare, Bright Sunlight, Headlights	2
Curve, Hill or Other Roadway Design Feature	3
Building, Billboard, Other Structure	4
Trees, Crops, Vegetation	5
In-Transport Motor Vehicle (including load)	6
Not In-Transport Motor Vehicle (parked, working)	7
Splash or Spray of Passing Vehicle	8
Inadequate Defrost or Defog System	9
Inadequate Vehicle Lighting System	10
Obstruction Interior to the Vehicle	11
External Mirrors	12
Broken or Improperly Cleaned Windshield	13
Obstructing Angles on Vehicle	14
No Driver Present	95
Vision Obscured – No Details	97
Other Visual Obstruction	98
Unknown	99

**Logic of Derivation:**

All records from GES.Vision are used. If there are no records, then the value 00 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned.

**Driver Maneuvered To Avoid**

Vehicle.DRMAN\_AV (deleted in 2010 Vehicle data file)

Attribute Labels	GES
Driver Did Not Maneuver To Avoid	0
Object	1
Poor Road Conditions (Puddle, Ice, Pothole, etc.)	2
Live Animal	3
Motor Vehicle	4
Pedestrian, Pedalcyclist or Other Non-Motorist	5
Phantom/Non-Contact Motor Vehicle	92
No Driver Present	95
Hit and Run and no information	50
Avoidance maneuver--no details	97
Not on PAR	93
Not Coded	94
Not Reported	
Unknown	99

**Logic of Derivation:**

All records from GES.Maneuver are used. If there are no records, then the value 00 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned.

**Driver Distracted By**

Vehicle.DR\_DSTRD (deleted in 2010 Vehicle data file)

Attribute Labels	GES
Not Distracted	0
Looked But Did Not See	1
By Other Occupant(s)	3
By Moving Object in Vehicle	4
While Talking or Listening to Cellular Phone	5
While Dialing Cellular Phone	6
Adjusting Audio And/or Climate Controls	
While adjusting climate controls	7
While adjusting radio, cassette, CD	8
While Using Other Device/Controls Integral to vehicle	9
While Using or Reaching For Device/Object Brought into Vehicle	10
Sleepy or fell asleep	11
Distracted by Outside Person, Object or Event	12
Eating or Drinking	13
Smoking Related	14
Other Cellular Phone Related	15
Not on PAR	93
Not coded	94
Hit and Run and no information	50
Inattentive or Lost in Thought	97
Other Distraction	98
Distraction/Inattention, Details Unknown	92
No Driver Present	95
Not Reported	
Unknown if Distracted	99

**Logic of Derivation:**

All records from GES.Distract are used. If there are no records, then the value 0 is assigned. If there is a single record, then the SAS code for that record is assigned. If there are multiple records, then the minimum SAS code of all the records is assigned, with the exceptions that SAS code 98--other distraction has priority over SAS code 92--distraction/inattention, details unknown, 92 has priority over 95, 95 has priority over 96, 96 has priority over 99, and all other values have priority over SAS code 0.

**Condition (Impairment) At Time Of Crash**

Person.MIMPAIR (deleted in 2010 Person data file)

Attribute Labels	GES
None	0
None/Apparently Normal	
III, Blackout	1
Drowsy, Sleepy, Fell Asleep, Fatigued	2
Asleep or Fatigued	
Requires Cane Or Crutches	3
Walking with a Cane or Crutches	
Paraplegic Or Restricted To Wheelchair	4
Impaired Due To Previous Injury	5
Deaf	6
Blind	7
Emotional (Depressed, Angry, Disturbed, etc)	
Under the Influence of Alcohol, Drugs or Medication	
Physical Impairment – No Details	97
Other Physical Impairment	98
Other	
Not Reported	
Not on PAR	93
Not Coded	94
Hit and Run (and no information)	50
Unknown If Physically Impaired	99
Unknown	

**Logic of Derivation:**

All records linked to person in GES.Impair data file are used. If there are no records, then value 0 is assigned. If there is a single record, then the SAS Codes are used. If there are multiple records, then the minimum SAS code for all records is used.

**Non-Motorist Safety Equipment**

Person.SAF\_EQMT (deleted in 2010 Person data file)

Attribute Labels	GES
Not Applicable*	0
None Used	1
Bicycle Helmet	2
Helmet	
Protective Pads Used (elbows, knees, shins, etc.)	
Bicycle Helmet and Reflective Equipment	4
Reflective Equipment/Clothing (jacket, backpack, etc.)	3
Lighting	
Other Safety Equipment	8
Not Reported	
Unknown if Used	9

**Logic of Derivation:**

The translation uses the records in GES.Safetyeq. If no records, then the value is 0. If a single record, then the SAS code for that record is used. If there are multiple records, and there are prioritized by the following SAS code order: 2, 3, 4, 5, 7, 8, 9, 0, and 1. Not Applicable is used when Person Type = 1, 2, 3, 9 or 77.

**Non-Motorist Action**

Person.ACTION (deleted in 2010 Person data file)

**Logic of Derivation:**

It is retired and replaced by P25.Nmprior.MPR\_ACT and P26.Nmcrash.MTM\_CRSH in 2010.

In 2009 and before, all records linked to person in GES.Nmaction data file used. If no records, then value is 0. If there is single record, then that SAS code used. If multiple records, then the minimum SAS code for all the records, with the exception that if SAS code 0 is one of the values, it is excluded from the calculation (all other values take precedence over 0).

The GES.Nmaction is replaced by GES.Nmprior and GES.Nmcrash. They are not derived to the Person data file in 2010.

**Appendix G:  
Summary of the 2010 NASS GES Changes****2010 FARS/NASS GES Standardization**

The purpose of this document is to inform users of NHTSA's Fatality Analysis Reporting System (FARS) and National Automotive Sampling System General Estimates System (NASS GES) data about some of the more significant changes to the 2010 data as a result of the standardization of the data elements between the two systems. In addition to the changes outlined below, a listing of all specific data element changes can be found in the following table:

**2010 Variables with Changes in Definitions, Attributes or SAS Codes**

The FARS/NASS GES Standardization began in 2006, with the second phase being implemented in the 2010 data collection year. The definition and element attribute changes introduced in 2010 are the most substantive and most numerous changes in one year in the reconciliation of the FARS and NASS GES data systems. In the 2011 data collection year – the third and final planned phase of the FARS/NASS GES Standardization – nearly all remaining data element attribute and file structure differences will be addressed. As a single, unified data entry system, FARS/NASS GES will be compatible with the Model Minimum Uniform Crash Criteria (MMUCC), the guideline used by nearly all States to develop and revise their crash forms and databases. Once complete, the FARS/NASS GES Standardization will simplify crash data coding and analysis as well as reduce costs and errors.

Probably the most notable changes were the introduction of precrash information in FARS (already collected in NASS GES) and a change to case structure or how the groups of related data elements are organized. For example, in 2009 a FARS case consisted of Crash, Vehicle, Driver and Person coding forms. In 2010, the Person level form was split into Motor Vehicle Occupant and Non-Motor Vehicle Occupant forms, and the Pre-crash form was added (new to FARS, though not to NASS GES).

These structure changes also include changes to how the data are now stored and made available. For example, for FARS, there are now 16 data tables rather than 4. This results from the changes in the number of coding forms and from changes in specific data elements. Several data elements that used to allow only a specified number of responses now have a "select-all-that-apply" format. There is a separate data table for each of these data elements.

At the Crash level, a Crash Events Table was added to FARS (and modified in NASS GES). In NASS GES, Non-Harmful Events were added to the Crash Events Table.

The precrash information represents not only a new coding form, but more importantly, largely a new concept for FARS, attempting to collect data about the conditions, events and driver actions that preceded and may have contributed to the crash. Pre-crash data is intended to improve crash avoidance research and has been included in NASS GES since 1992.

The new FARS Pre-crash form information consists of 23 data elements, 9 of which were previously coded at the Crash level, 3 each at the Vehicle and Driver levels, and 8 new elements. Nine trafficway descriptor data elements were moved from the crash level to the new precrash level. These elements provide details about the characteristics of the trafficway selected for each vehicle.

A Pedestrian/Bicycle crash typing software application was added to the Non-Motor Vehicle Occupant form for both systems to help identify the precrash actions for parties involved in certain non-motorist-related crashes. (Please see *Appendix I: Pedestrian and Bicyclist Data Availability Change* for updates.)

Type of Intersection was added to both systems. Bus Use and Vehicle Configuration were two Vehicle level elements that are new to NASS GES in 2010 and modified for FARS (element attributes were consolidated and redefined). Condition at Time of Crash was added at the Driver and the Non-Motor Vehicle Occupant levels for both systems. For motor vehicle occupants, there is now an Indication of Misuse of Restraint System or Helmet Use in both systems.

Some of the information that had been collected under FARS Related Factors was redistributed to new data elements. For example, some Person Related Factors have been removed and are now captured in two new Non-Motor Vehicle Occupant elements; Non-Motorist Action/Circumstances Prior to Crash and Non-Motorist Action/Circumstances at Time of Crash. Some Vehicle Related Factors are now captured under the new Precrash elements, Contributing Circumstances, Motor Vehicle and Driver Distracted By. The Driver Level element, Violations Charged, is now a “Select-all-That-Apply” element.

Multiple data elements that are part of the Model Minimum Uniform Crash Criteria (MMUCC) had the attribute “Not Reported” added in 2010 to account for information missing from the case source materials.

To ensure that data quality was not compromised as a result of the standardization, NHTSA refined and enhanced its quality control processes. These enhancements enable the identification of coding discrepancies and development of training tailored to eliminate or reduce these discrepancies.

The final phase of the FARS/NASS GES standardization will occur during the 2011 data collection year, at which point FARS and NASS GES, while remaining separate data systems, will share a single data entry system and uniform set of data elements.

**New in 2010 NASS GES**

There were many changes to the 2010 NASS GES, most of which were the result of NHTSA's efforts to standardize data elements in the NASS GES and the Fatality Analysis Reporting System (FARS). Additions, deletions, and changes are listed below.

More detailed information on each data element can be found in the NASS GES Coding and Editing Manuals, which NHTSA publishes for each year of data collection. While the 2010 changes are addressed in this Analytical User's Manual, data users should compare the 2009 and 2010 Coding and Editing Manuals for a more thorough understanding. Manuals for 1995 to the present can be found at:

<http://www-nrd.nhtsa.dot.gov/cats/listpublications.aspx?Id=k&ShowBy=DocType>.

**General changes to 2010 NASS GES were:**

- Non-harmful events were added to the Cevent (formerly the Event) data file.
- A new data file (Vevent) was added which lists the harmful and non-harmful events for each in-transport motor vehicle.
- The Nmprior and Nmcrash data files were added in 2010; they replaced the Nmaction data file and contain information about what people (who are not occupants of motor vehicles) are doing prior to the crash (Nmprior) and any improper actions or contributing circumstances noted on the PAR (Nmcrash).
- The Trafcon data file was retired in 2010. In prior years (2002-2009) the Trafcon data file could contain multiple traffic controls for each in-transport motor vehicle. In 2010, one traffic control is coded per in-transport motor vehicle eliminating the need for the Trafcon data file. The traffic control coded in 2010 is the one which best describes the traffic controls in the vehicle's environment just prior to its critical precrash event.

**2010 Data Elements with Changes in Definitions, Attributes or SAS Codes****Accident:**

A06	First Harmful Event EVENT1
A07	Manner of Collision MAN_COL
A09	Relation to Junction REL_JCT1/REL_JCT2
A10	Relation to Trafficway REL_ROAD
A11/V_A11	Trafficway Description VTRAFWAY (V41 in 2010)
A12/V_A12	Total Lanes of Roadway VNUM_LAN
A13/V_A13	Roadway Alignment VALIGN
A14/V_A14	Roadway Grade VPROFILE
A15/V_A15	Roadway Surface Conditions VSURCOND
A16/V_A16	Traffic Control Device VTRAFCON
A18/V_A18	Speed Limit VSPD_LIM
A19	Light Condition LGT_COND
A20	Atmospheric Conditions WEATHER/WEATHER1/WEATHER2
A21	School Bus Related SCH_BUS
A25	Work Zone WRK_ZONE

**Cevent/Vevent (only Event in 2009 and prior, modified in 2010):**

E03/V24	Areas of Impact (This Vehicle)/ Areas of Impact – Initial GAD/IMPACT1
E03/V38	Areas of Impact (This Vehicle)/ Areas of Impact – Most Damaged GAD/IMPACT2
E04	Non-Collision Category or Object Contacted (Sequence of Events) OBJCONT
E05/V24	Areas of Impact (Other Vehicle) OBJGAD/IMPACT1
E06/VE06	Action E_ACTION

**Vehicle:**

V02	Hit and Run HIT_RUN
V03	Vehicle Make MAKE
V04	Vehicle Model MODEL
V05	Body Type BODY_TYP
V06	Vehicle Model Year MODEL_YR
V07	Vehicle Identification Number VIN
V08	Special Use SPEC_USE
V09	Emergency Use EMER_USE
V10B	Number of Occupants NUMOCCS
V18	Extent of Damage DEFORMED
V19	Vehicle Removal TOWED
V20	Most Harmful Event V_EVENT
V31	Vehicle Motor Carrier Identification Number MCARR_ID
V33	Cargo Body Type CARGO_BT
V41	Trafficway Description VTRAFWAY (it was V_A11 in 2009)

**Parked:**

PV05	Parked/Working Body Type PBODYTYP
PV06	Parked/Working Vehicle Model Year PMODELYR
PV07	Parked/Working Vehicle Identification Number PVIN
PV08	Parked/Working Special Use PSP_USE

PV10	Parked/Working Number of Occupants Coded POCCINVL
PV10B	Parked/Working Number of Occupants PNUMOCCS
PV18	Parked/Working Extent of Damage PVEH_SEV
PV19	Parked/Working Vehicle Removal PTOWED
PV31	Parked/Working Vehicle Motor Carriers Identification Number PCARIDNO
PV33	Parked/Working Cargo Body Type PCARGTYP
PV34	Parked/Working Hazardous Materials Placard PHAZPLAC
PV37	Parked/Working Vehicle Location PREL_RWY
PV38	Parked/Working Vehicle Areas of Impact – Most Damaged PIMPACT2

**Person:**

P03	Person Type PER_TYP
P04	Seating Position SEAT_POS
P06	Ejection EJECTION
P07	Age AGE
P08	Sex SEX
P09	Injury Severity INJ_SEV
P10	Transported to Medical Facility By HOSPITAL
P11A	Alcohol Test Status ALCHTEST
P11B	Alcohol Test Type ALTSTTYPE
P11C	Alcohol Test Result ALTRSLT
P13	Non-Motorist Location at Time of Crash LOCATN
P15	Restraint System/Helmet Use REST_SYS
P17A	Drug Test Status DRUGTEST
P17B	Drug Test Type DRTSTTYPE
P17C	Drug Test Result DRTRSLT
P21	Air Bag Deployed AIR_BAG

**Safetyeq:**

M_P20	Non-Motorist Safety Equipment Use MSAFEQMT
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**New Data Elements****Accident:**

A28	Type of Intersection TYP_INT
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**Vehicle:**

V_A17	Device Functioning VTCONT_F
V39	Bus Use BUS_USE
V40	Vehicle Configuration V_CONFIG

**Person:**

P24	Any Indication of Mis-use of Restraint System/Helmet Use REST_MIS
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**Parked:**

PV38	Parked/Working Vehicle Areas of Impact – Most Damaged PIMPACT2
PV40	Parked/Working Vehicle Configuration PV_CONFIG

The following were new SAS tables in 2010:

- Vevent
- Nmprior
- Nmcrash

**Deleted Data Elements****Accident:**

A11	Trafficway Description TRAF_WAY
A12	Total Lanes of Roadway NO_LANES
A13	Roadway Alignment ALIGNMNT
A14	Roadway Grade PROFILE
A15	Roadway Surface Conditions SUR_COND
A16	Traffic Control Device TRAF_CON
A18	Speed Limit SP_LIMIT
A24	Pedestrian/Cyclist Crash Type PED_ACC

**Vehicle:**

V22	Vehicle Role VEH_ROLE
V25	Damaged Areas DAM_AREA
D02	Violations Charged VIOLATN
D04	Driver's Vision Obscured By VIS_OBSC
D06	Driver Maneuvered to Avoid DR_MANAV
D07	Driver Distracted By DR_DSTRD

**Person:**

P18	Condition (Impairment) at the Time of Crash IMPAIRMT
P19	Non-Motorist Action ACTION
P20	Non-Motorist Safety Equipment Use SAF_EQMT

**Nmaction (this data file replaced by Nmprior and Nmcrash):**

M_P19	Non-Motorist Action MACTION
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**Trafcon (this data file is not available in 2010):**

M_A16	Traffic Control Device MTRAFCON
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**Other Changes in the 2010 Coding and Editing Manual**

The following data elements had changes to the remarks and/or attribute definitions in 2010.

**Cevent/Vevent (only Event in 2009 and prior, modified in 2010):**

E06/VE06	Action E_ACTION
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**Vehicle:**

V21 Movement Prior to Critical Event P\_CRASH1

**Person:**

P03 Person Type PER\_TYP  
 P13 Non-Motorist Location at Time of Crash LOCATN  
 P15 Restraint System/Helmet Use REST\_SYS

**Parked:**

PV05 Parked/Working Body Type PBODYTYP  
 PV06 Parked/Working Vehicle Model Year PMODELYR  
 PV07 Parked/Working Vehicle Identification Number PVIN  
 PV08 Parked/Working Special Use PSP\_USE  
 PV10 Parked/Working Number of Occupants Coded POCCINV1  
 PV10B Parked/Working Number of Occupants PNUMOCCS  
 PV18 Parked/Working Extent of Damage PVEH\_SEV  
 PV19 Parked/Working Vehicle Removal PTOWED  
 PV31 Parked/Working Vehicle Motor Carriers Identification Number PCARIDNO  
 PV33 Parked/Working Cargo Body Type PCARGTYP  
 PV34 Parked/Working Hazardous Materials Placard PHAZPLAC  
 PV37 Parked/Working Vehicle Location PREL\_RWY  
 PV38 Parked/Working Vehicle Areas of Impact – Most Damaged PIMPACT2  
 PV40 Parked/Working Vehicle Configuration PV\_CONFIG

**Biketraf:**

MB\_A16 Traffic Control Device-Cyclist BTRAFCON

**Summary of the SAS Naming Changes in 2010**

Locator Code	2009 SAS Name	New 2010 SAS Name	Data Element Name
A05	N/A	LAND_USE	Land Use
A09A	REL_JCT	RELJCT1	Relation To Junction -Within Interchange Area?
A09B	REL_JCT	RELJCT2	Relation To Junction -Junction
A11	TRAF_WAY	Deleted this derived data element	Trafficway Description
A12	NO_LANES	Deleted this derived data element	Total Lanes in Roadway
A13	ALIGNMNT	Deleted this derived data element	Roadway Alignment
A14	PROFILE	Deleted this derived data element	Roadway Grade
A15	SUR_COND	Deleted this derived data element	Roadway Surface Condition

Locator Code	2009 SAS Name	New 2010 SAS Name	Data Element Name
A16	TRAF_CON	Deleted this derived data element	Traffic Control Device
A17	N/A	N/A	Traffic Control Device Functioning
A18	SP_LIMIT	Deleted this derived data element	Speed Limit
A24	PED_ACC	Deleted	Ped/Cycle Accident Type
A27	N/A	TYP_INT	Type of Intersection
V12	FACTOR	Deleted in Vehicle data file	Vehicle Contributing Factors (MFACTOR) stored in Factor data file
V22	VEH_ROLE	Deleted in Vehicle data file	Vehicle Role
V24	IMPACT	IMPACT1	Areas of Impact – Initial Damage Area
V31	CARINDUM	MCARR_ID	Carrier's Identification Number
V39	N/A	BUS_USE	Bus Use
V40	N/A	V_CONFIG	Vehicle Configuration
D02	VIOLATN	Deleted in Vehicle data file	Violations Charged (MVIOLATN) stored in Violatn data file
D04	VIS_OBSC	Deleted in Vehicle data file	Violations Charged (MVISOBSC) stored in Vision data file
D06	DRMAN_AV	Deleted in Vehicle data file	Driver Maneuvered to Avoid (MDRMANAV) stored in Maneuver data file
D07	DR_DSTRD	Deleted in Vehicle data file	Driver Distracted By (MDRSTRD) stored in Distract data file

Locator Code	2009 SAS Name	New 2010 SAS Name	Data Element Name
P18	IMPAIRMT	Deleted in Person data file	Condition at Time of Crash (MIMPAIR) stored in Impair data file
P19	ACTION	Deleted in Person data file	Non-Motorist Action (changed in 2010)
P20	SAF_EQMT	Deleted in Person data file	Non-Motorist Safety Equipment Use (MSAFEQMT) stored in Safetyeq data file
P24	N/A	REST_MIS	Indication of Restraints/Helmet Mis-Use
P25	N/A	MPR_ACT	Non-Motorist Actions/Circumstances At Time of Crash (MPR_ACT) stored in Nmcrash data file
P26	N/A	MTM_CRSH	Non-Motorist Actions/Circumstances Prior to Crash (MTM_CRSH) stored in Nmprior data file

The data elements in RED are new to 2010 NASS GES.

The data elements in BLUE are changed in 2010 NASS GES.

## Appendix H: 2011 Changes to Locator Codes

As part of NHTSA's efforts to standardize NASS GES and FARS, both systems began using the same data entry system in 2011 with a common set of data elements. Locator Codes are used to find data elements on the FARS coding forms, on the display of the data entry system and in the FARS-NASS GES Coding Manual. The NASS GES locator codes changed to conform to the shared system. The conversion of these locator codes is shown in the table below:

<b>2010 GES Locator</b>	<b>2011 FARS/GES Locator</b>	<b>Data Element Name</b>
<b><i>Accident:</i></b>		
A01	C8	Crash Date
A02	C9	Crash Time
A03 & A03D*	C4	Number of Vehicle Forms Submitted
A04*	C3	Number of Forms Submitted for Persons Not in MV
A05	C105	Land Use
A06	C18	First Harmful Event
A07	C19	Manner of Collision
A08	C32	Interstate Highway
A09	C20	Relation to Junction
A10	C22	Relation to Trafficway
A19	C24	Light Condition
A20	C25	Atmospheric Conditions
A21	C26	School Bus Related
A22	C34	Police Jurisdiction
A23	C33	Stratum
A25	C23	Workzone
A28	C21	Type of Intersection
A90	C90	Maximum Injury Severity in Crash
A91	C91	Number Known Injured in Crash
A92	C92	Alcohol Involved in Crash

2010 GES Locator	2011 FARS/GES Locator	Data Element Name
<b><i>Vehicle, Parked → Parkwork:</i></b>		
V01, PV01*	V3/D3/PC3/P3	Vehicle Number
V02	V6	Hit and Run
PV02*	V5	Unit Type <i>[formerly Parked/Working Vehicle Type]</i>
V03, PV03	V9	Vehicle Make
V04, PV04	V10	Vehicle Model
V05, PV05	V11	Body Type
V06, PV06	V12	Model Year
V07, PV07	V13	Vehicle Identification Number
V08, PV08	V22	Special Use
V09, PV09	V23	Emergency Use
V10, PV10*	C5, C5A	Number of Persons in Motor Vehicles, Number of Persons in Motor Vehicles in Transport (MVIT), <i>[formerly Number of Occupants Coded]</i>
V10B, PV10B	V4	Number of Occupants
V11	V24	Travel Speed
V13, PV13	V14	Vehicle Trailing
V14	V15	Jackknife
V16, PV16	V34	Fire Occurrence
V18, PV18	V29	Extent of Damage
V19, PV19	V30	Vehicle Removal
V20	V32	Most Harmful Event
V21	PC17	Pre-Event Movement (Prior to Critical Event) <i>[Movement Prior to Critical Event]</i>
V23	PC23	Crash Type <i>[formerly Accident Type]</i>
V24, PV24	V28A	Area of Impact - Initial Point of Impact
V26	PC19	Critical Event – Pre-crash
V27	PC20	Attempted Avoidance Maneuver <i>[formerly Corrective Action Attempted]</i>
V28	PC21	Pre-Impact Stability <i>[formerly Precrash Vehicle Control]</i>

2010 GES Locator	2011 FARS/GES Locator	Data Element Name
V29	PC22	Pre-Impact Location <i>[formerly Precrash Location]</i>
V30, PV30	V26	Rollover
V30A, PV30A	V27	Location of Rollover
V31, PV31	V16	Motor Carrier Identification Number
V33, PV33	V19	Cargo Body Type
V33A, PV33A	V20	Hazardous Material Involvement - HM1
V34, PV34	V20	Hazardous Material Placard - HM2
V35, PV35	V20	Hazardous Material Identification Number - HM3
V35A, PV35A	V20	Hazardous Material Class Number - HM4
V36, PV36	V20	Release of Hazardous Material from the Cargo Compartment - HM5
V38, PV38	V28B	Area of Impact – Most Damaged Area
V39	V21	Bus Use
V40, PV40	V18	Vehicle Configuration
V41, V_A11	PC5	Trafficway Description
V90	V90	Maximum Injury Severity in Vehicle
V91	V91	Number Injured in Vehicle
V92	V92	Driver Drinking in Vehicle
D01	D4	Driver Presence
D08	D6	Driver's Zip Code
D09	D22	Speed Related
V_A12	PC6	Total Lanes in Roadway
V_A13	PC8	Roadway Alignment
V_A14	PC9	Roadway Grade <i>[formerly Roadway Profile]</i>
V_A15	PC11	Roadway Surface Condition
V_A16	PC12	Traffic Control Device
V_A17	PC13	Traffic Control Device Functioning

2010 GES Locator	2011 FARS/GES Locator	Data Element Name
V_A18	PC7	Speed Limit
<b>Person:</b>		
P02*	P4/NM3	Person Number
P03	P7/NM7	Person Type
P04	P9	Seating Position
P06	P13	Ejection
P07	P5/NM5	Age
P08	P6/NM6	Sex
P09	P8/NM8	Injury Severity
P10	P22/NM21	Transported to Medical Facility By <i>[formerly Taken to Hospital or Treatment Facility]</i>
P11	P16/NM15	Police-Reported Alcohol Involvement
P11A	P18/NM17	Alcohol Test Status
P11B	P18/NM17	Alcohol Test Type
P11C	P18/NM17	Alcohol Test Result
P13	NM10	Non-Motorist Location
P15	P10	Restraint System / Helmet Use <i>[formerly Restraint System Use]</i>
P17	P19/NM18	Police Reported Drug Involvement
P17A	P21/NM20	Drug Test Status
P17B	P21/NM20	Drug Test Type
P17C	P21/NM20	Drug Test Result
P21	P12	Air Bag Deployed
P22	NM4	Non-Motorist Striking Vehicle Number
P24	P11	Indications of Misuse of Restraint System/Helmet
<b>Cevent, Vevent:</b>		
E01, VE1	C17	Event Number, Vehicle Event Number
E02, VE2	C17	Vehicle Number (This Vehicle)

2010 GES Locator	2011 FARS/GES Locator	Data Element Name
E03, VE3	C17	Area of Impact (This Vehicle)
E04, VE4	C17	Sequence of Events <i>[formerly Non-Collision Category or Object Contacted]</i>
E05, VE5	C17	Area of Impact (Other Vehicle)
E06, VE6	C17	Vehicle's Action
VE7	N/A	Vehicle Number (Parked/Working Vehicle)
VE8	N/A	Area of Impact (Parked/Working Vehicle)
<b>Factor:</b>		
M_V12	PC4	Vehicle Contributing Factors
<b>Violatn:</b>		
M_D02	D21	Violations Charged
<b>Vision:</b>		
M_D04	PC14	Driver's Vision Obscured By
<b>Maneuver:</b>		
M_D06	PC15	Driver Maneuvered to Avoid
<b>Distract:</b>		
M_D07	PC16	Driver Distracted By
<b>Impair → Drimpair &amp; Nmimpair:</b>		
M_P18	D23 NM14	Condition at Time of Crash- Driver Condition at Time of Crash- Non-Motorist <i>[formerly Condition at Time of Crash]</i>
<b>Nmcrash:</b>		
P26	NM12	Non-Motorist Action/Circumstances at Time of Crash
<b>Nmprior:</b>		
P25	NM11	Non-Motorist Action/Circumstances Prior to Crash
<b>Safetyeq:</b>		
M_P20	NM13	Non-Motorist Safety Equipment Use

\*Not an exact translation



**Appendix I:  
Pedestrian and Bicyclist Data Availability Change**

In 2010, NHTSA added new precrash data elements for pedestrians and bicyclists (non-motorist) to the data collected in the Fatality Analysis Reporting System (FARS) and the National Automotive Sampling System (NASS) General Estimates System (GES). These data are intended for countermeasure research and development. However, NHTSA's National Center for Statistics and Analysis (NCSA) quality control team has identified inconsistencies between the new non-motorist data elements and comparable pre-existing FARS elements that can lead to different results. Consequently, NHTSA has removed the Pdtype data file from the 2010 and 2011 FARS and NASS GES while research is conducted on how improvements can be made. This Pdtype data file includes some non-motorist data (see below). The following data elements have been removed:

- PB30 – Crash Type - Pedestrian
- PB31 – Crash Type Location - Pedestrian
- PB32 – Pedestrian Position
- PB33 – Pedestrian Initial Direction of Travel
- PB34 – Motorist Direction
- PB35 – Motorist Maneuver
- PB36 – Intersection Leg
- PB37 – Pedestrian Scenario
- PB38 – Crash Group – Pedestrian
- PB30B – Crash Type - Bicycle
- PB31B – Crash Location - Bicycle
- PB32B – Bicyclist Position
- PB33B – Bicyclist Direction
- PB38B – Crash Group - Bicyclist