U.S. DEPARTMENT
OF TRANSPORTATION

**National Highway
Traffic Safety
Administration**

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

Analytical User's Manual 1988-2001

NASS GES Analytical User=s Manual
1988 - 2001

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

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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. Good 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 General Estimates System (GES) which began operation in 1988. Providing data about all types of crashes involving all types of vehicles, the GES is used to identify highway safety problems areas, provide a basis for regulatory and consumer information initiatives, and form the basis for cost and benefit analyses of highway safety initiatives.

The GES obtains its data from a nationally representative probability sample selected from the estimated 6.4 million police-reported crashes which occur annually. These crashes include those which 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 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 variables that are contained in the GES and other useful information that will enable the users to become familiar the data system.

GES Operations

The GES is directed by the National Center for Statistics and Analysis, which is a component of Research and Development in NHTSA. The data are obtained by 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. During the visit, the data collectors list all police traffic crash reports (PARs) not previously listed and then select a sample of the listed PARs. The collector obtains copies of these selected PARs and sends them to a contractor for coding. Trained personnel interpret and code data directly from the PARs onto an electronic 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 governments, researchers, motor vehicle manufacturers, insurance companies, and others. The GES data are also used to respond to requests from the international and national highway safety communities, state and local government, the Congress, federal agencies, research organizations, industry, the media, and private citizens. Currently, the 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2001 data files are available.

The GES data are available in SAS and sequential ASCII file formats. Thke files may be obtained by downloading any of the published files from the Internet at ftp://www.nhtsa.dot.gov/ges, or by calling 1-800-934-8517. The files may also be obtained by contacting:

Marjorie Saccoccio, DTS-23
VOLPE National Transportation Systems Center
55 Broadway
Cambridge, MA 02142-1093
TEL: 617-494-2640
FAX: 617-494-2429

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GES Sample Design

The police accident reports (PARs) from which 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 GES was 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 either a central city, a county surrounding a central city, an entire county, or a group of contiguous counties. The U.S. was divided into 1,195 of these PSUs. The PSUs were then grouped into 14 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 the geographic areas. In most areas, the number of police jurisdictions is more than can reasonably be visited by a data collector. All jurisdictions within a PSU were enumerated and the number of crashes investigated by each was determined. A probability sample of jurisdictions within each PSU was selected with probability proportional to the number of crashes investigated, i.e., as the number of crashes investigated increased, the probability of selecting that jurisdiction increased. An average of six or seven police jurisdictions were selected within each area.

The third and final stage is the selection of PARs within the sampled police jurisdictions. The PARs are grouped, or stratified, into one of four groups by the data collector:

- 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 AK@, @A@, @B@, or AC@;
- 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 AK@, @A@, or @B@; and,

- Group 4: NASS crashes not qualifying for *Group 1, 2 or 3*. No one in the crash can receive a AK@, @A@, or @B@ injury.

Within each of these groups a systematic sample of crashes is selected, based on different sampling rations. In some very large police jurisdictions the number of police investigated crashes is too many for reasonable listing. In these jurisdictions the data collector will list a subsample of PARs, with those listed depending on the PAR number.

The data collector obtains copies of the selected PARs and sends them to the NASS zone centers for quality review and processing. The zone centers then code the selected PARs into a common format and create an electronic file. In 2001 approximately 57,000 PARs were sampled and coded.

A thorough discussion of the sample design can be found in the ***National Accident Sampling System General Estimates Technical Note***, DOT HS 807 796. For a copy, write:

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National Center for Statistics and Analysis, NRD-31
400 Seventh Street SW
Washington, D.C. 20590

GES SAS Files

Overview

Once the GES data are coded onto an electronic file, a Statistical Analysis System (SAS) data file is created. SAS is a software system for data analysis.

The SAS data file for 2001 GES consists of four individual data sets: the *Accident File, Vehicle/Driver File, Event File, and Person File*. The *Accident File* contains information describing environmental conditions and roadway characteristics at the time of the crash. The *Vehicle/Driver File* contains information describing the vehicles involved in the crash and their drivers. It includes information such as: make/model of the vehicle, model year of the vehicle, driver maneuvered to avoid, and driver distracted by. The *Person File* contains general information describing all persons involved in the crash: drivers, passengers, pedestrians, pedalcyclists, and non-motorists. It includes information such as age, sex, and injury severity. An innovation in the 2000 GES was the addition of the *Event File*, which contains a brief description of each harmful event in a given crash including the vehicles or objects involved and the general area of vehicle damage. This file enables the analyst to determine the sequence and makeup of the events involved in a crash. The most harmful event number for each vehicle is recorded in the vehicle file, enabling the identification of the vehicle or object involved in the vehicle=s most harmful event.

Using the SAS File

The following SAS program shows how to use the GES file. This program counts injured pedestrians by the severity of their injury and their age.

```
1     LIBNAME GES2001 'path';
2     LIBNAME LIBRARY 'path';
3     DATA PEDES;
4        SET GES2001.PERSON;
5        IF PER_TYPE = 5;
6
7     PROC FREQ;
8     TABLE AGE*INJ_SEV;
9     TITLE "PEDESTRIANS BY INJURY SEVERITY AND AGE";
10    RUN;
```

The LIBNAME statements in line 1 and 2 define the path where the GES2001 data files and library are stored. These statements enable the computer to find the GES SAS data sets and to associate the GES formats with the variables in the data sets.

In line 3, the program creates a working data set called "PEDES".

Line 4 identifies the original data set that the working data will be created from. The first part of "**GES2001**.PERSON" refers back to the line 1. This should be the same as what follows the "LIBNAME" in line 1.

The second part of "GES2001.**PERSON**" refers to the internal SAS data set name saved when the data set was created.

Line 5 keeps only pedestrian records. PER_TYPE = 5 are pedestrians. (See Person Type variable) Lines 7 through 9 produce the output. The PROC FREQ in line 7 counts the frequency of pedestrians by each age and injury severity combination for the just created data set. The TABLE statement in line 8 produces the table containing these frequencies. Line 9 adds a title to the produced table. In this case, the title is "PEDESTRIANS BY INJURY SEVERITY AND AGE".

Line 6 is not required, however, it was added to make the program easy-to-read. Similarly, lines 4 and 5 are indented to signify these lines are executed on the "PEDES" working data set, but do not need to be indented. Lines 8 and 9 are indented to indicate they refer to the "PROC FREQ" statement.

Understanding the GES Imputation Process

GES data are obtained either directly from an item on the PAR or by interpreting the information provided in the report through reviewing the crash diagram, the Officer-s written summary of the crash, or combinations of variables on the PAR. Because of this interpretation, and because the police officer may not have entered some item of information or provide complete information, data can be missing. Two different statistical procedures have been used on GES data to complete values for unknown data: univariate imputation and hot-deck imputation. A thorough discussion of the imputation procedures can be found in ***Imputation in the NASS General Estimates System***, **DOT HS 807 985**. For a copy of the existing documentation, write:

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400 Seventh Street, S.W.
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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 variable. For example, consider the variable *EJECTION*. The values 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 variable, *EJECT_I* would have these values:

No	**63**
Yes	**42**
Total	**105**

Hot-deck imputation was also accomplished using SAS. Hot-decking replaces the unknown values for one variable using information from other correlated variables. For example, the hot-deck imputation program for *SEX* used the following correlated variables: *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 variables similar to the unknown sex record. When that record is found, the *SEX* value is used for the unknown *SEX* record.

Imputed variables can be identified by the A_H@ or A_I@ in their labels. Hot-deck imputed *Body Type* is labeled *BDYTYP_H* and univariate imputed *EJECTION* is labeled *EJECT_I*. All original variables still exist on the data files. The analyst can choose to use the original variables with unknowns or the univariate/hot-deck imputed variables without unknowns.

National Estimates

Since the 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 level crash characteristics, data from each PAR on the file must be weighted. The national weight has been added to the 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 GES was evaluated. Using 1992 state data obtained through state agencies for each of the 1,195 Primary Sampling Units (PSUs), the number of fatal and injury crashes showed an overall increase throughout the geographical and urbanization areas. It was decided that changes were large enough to warrant some type of modification in procedures. PSUs in the 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 would be adjusted to reflect changes. The revised weights were phased into the 1993, 1994 and 1995 GES files. Therefore, estimates from the GES for 1993-95 had been 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 GES, refer to the research note, ***Reweighting of the Primary Sampling Units in the National Automotive Sampling System***, published September 1997.

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

The variable called WEIGHT that produces the national estimates is available on each of the three levels.

To produce weighted frequency distributions, the SAS statements from p. 5 would become:

```
1       LIBNAME GES2001 'path';
2       LIBNAME LIBRARY 'path';
3       DATA PER;
4           SET GES2000.PERSON (KEEP=PER_TYPE AGE INJ_SEV WEIGHT);
5           IF PER_TYPE = 5;
```

```
6
7       PROC FREQ;
8               TABLE AGE * INJ_SEV;
8.1             WEIGHT WEIGHT;
9               TITLE "PEDESTRIAN INJURY SEVERITY BY AGE";
10              RUN;
```

Line 8.1 produces the national estimates.

The national estimates produced from 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 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 are provided in Appendix D.

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

GES Variable List

Listed below are all variables that are contained in the GES data files. From 1988 through the present, quite a few changes were made to the data files. These changes include modifications, deletions, and additions of variables. An asterisk (*) denotes the variables that changed within the 1988 through 2001 operation of the GES. For more detailed information, refer to the ***GES Variables and Definitions*** section of this manual.

ALL LEVELS
(Appears on the Accident, Vehicle, Person, & Event Files)

ACCIDENT FILE

EVENT FILE

VEHICLE/DRIVER FILE

PERSON FILE

2001 Variable Coding Changes

The following coding changes were made in 2001:

EVENT FILE:

E05 SAS Name: OBJGAD: The code for "not a motor vehicle in transport" was changed from "." To 98.

PERSON FILE:
P06 SAS Name: EJECTION: The codes 7, "ejected, unknown degree," and 8, "not applicable" were added.

P07 SAS Name: AGE: Code 97, "97 years old and older" was changed to the person's actual age. The code 999 now represents unknown age, and all other codes are actual ages.

GES Variables and Definitions

The following list includes GES variables and their definitions from the 1988 through 2001 data files. Changes are identified by the appropriate year. The variable definition may have notes attached to help clarify the changes. All variables are numeric with the exception of V7 (VIN). The SAS variable names appear in parentheses "( )". If the SAS variables have associated formats, then the format names appear in brackets A[ ]@. For some variables the format name has changed over the years. If a format name changed in the last four years the change is noted in the brackets below. For format names prior to 1998 a SAS PROC CONTENTS of the data set should be consulted, unless the earlier names are specified below.

The following six variables appear on the Accident, Event, Vehicle, and Person data files.

GES Case Number (CASENUM): This variable is a unique number assigned to each crash. It appears on each of the three files and is used to merge the various information from the files together.

Primary Sampling Unit (PSU): There are 60 possible values ranging from 1 to 97. A PSU is either a large central city, a county surrounding a city, or a group of counties.

Police Jurisdiction (PJ): The number (range 1 through 120) of the police jurisdiction from which the PAR was originally sampled.

Region of the Country (REGION): Indicates the region of the country where the crash occurred. It is based on the primary sampling unit and is defined as follows:

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)

Case Stratum (STRATUM): The number (1 through 4) of the category in which the PAR was originally listed in GES PAR Program or Stratification Record.

GES Case Weight (WEIGHT): This is the variable used to produce national estimates from the data.

ACCIDENT FILE

A1 Month of the Crash

Definition: The month in which the crash occurred.

1988 - Later

SAS Name: (MONTH) [A1Z.]

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

A1B Year of the Crash

Definition: The last two digits of the year in which the crash occurred. **(Note: In 1999 the year of the crash was changed to a four digit code.)**

1988 - Later

SAS Name: (YEAR)

A1C Day of Week

Definition: The day of the week in which the crash occurred. This variable is derived from the SAS AWeekday@ function. The SAS AWeekday@ function returns the day of the week from a date.

1988 - Later

SAS Name: (WEEKDAY) [A1CZ.]

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

A1CI Univariate Imputed Day of Week

Definition: This imputed variable have the same definition and element values as ***Day of Week***, excluding value A9" for unknown day of week. (See ***Understanding the GES Imputation Process*** section of this manual)
1988 - Later

SAS Name: (WKDY_I) [A1CZ.]

A2 Hour of the Crash

Definition: The hour in which the crash occurred. Military time is used. Noon is coded as "12" and midnight is coded as "24". But for one minute after midnight to fifty-nine minutes after midnight the hour is coded as "00". "99" is coded for unknown hour.

1988 - Later

SAS Name: (HOUR) [A2Z.] [no format prior to 2000]

99 = unknown

A2I Univariate Imputed Hour of the Crash

Definition: This imputed variable has the same definition and element values as ***Hour of the Crash***, excluding value A99" for unknown hour. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (HOUR_I) [A2Z.] [no format prior to 2000]

99 = unknown

A2A Minute of the Crash

Definition: The minute in which the crash occurred. Possible values range from A00" to A59", with a value of A99" for unknown.

1988 - Later

SAS Name: (MINUTE) [A2AZ.] [no format prior to 2000]

99 = unknown

2AI Univariate Imputed Minute of the Crash

Definition: This imputed variable has the same definition and element values as ***Minute of the Crash***, excluding value A99" for unknown minutes. (See ***Understanding the GES Imputation Process*** section.)

1988 - Later

SAS Name: (MINUTE_I) [A2AZ.] [no format prior to 2000]

99 = unknown

A3 Number of Vehicles Involved

Definition: The number of vehicles involved in the crash. This number includes hit and run vehicles, but does not include phantom vehicles (a vehicle which may have caused the crash but left the scene).

1988 - Later

SAS Name: (VEH_INVL)

A3A Number of Vehicles Coded*

Definition: This variable is calculated by counting the number of vehicles listed in the vehicle file for a crash. This number may be different from the number of vehicles involved (A3) because information on phantom vehicles is not included in the vehicle file. In most cases, information on phantom vehicles is not available on the PAR. (*** Note: This variable was dropped from the accident file in 1990.**)

1988 - 1989

SAS Name: (VEH_COD)

A3B Number of Persons Involved*

Definition: The number of persons involved in the crash. A value A99" represents unknown number of persons involved. A value A0" 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 A0". **(* Note: This variable was dropped from the accident file in 1990.)**

1988 - 1989

SAS Name: (PER_INVL)

A3C Number of Persons Coded*

Definition: This variable is derived by calculating the number of listed persons in the person file for the crash. A value A0" 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. **(* Note: This variable**

was dropped from the accident file in 1990.)

1988 - 1989

SAS Name: (PER_COD)

A4 Number of Non-Motorists Involved

Definition: 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) . A value "00" is coded if there were no non-motorists involved. **(Note: From 1988 - 1998 the range was 0 - 25 and in 1999 it was changed to 0 - 98.)**

1988 - Later

SAS Name: (NON_INVL)

A4A Number of Non-Motorists Coded*

Definition: This variable is derived by counting the number of listed non-motorists in the person file for the crash. A value A0" is coded when there were no non-motorists coded in the crash. **(* Note: This variable was dropped from the accident file in 1990.)**

1988 - 1989

SAS Name: (NON_COD)

A5 Land Use*

Definition: This variable is based on the police jurisdiction. The coder identifies the name of the city or town where the crash occurred. Depending on the population of the city or town, the coder classifies the city or town accordingly. Population figures were taken from the 1980 County and City Data Book published by the Census. If city or town population is less the 25,000 or the population was not listed in the County/City Book, then A8" is coded. **(*Note: In 1995, population figures were taken from the 1994 County and City Data Book published by the Census. Beginning in 1999, it is based on the population of the area associated with the police agency from which the accident reports are selected.)**

1988 - Later

SAS Name: (LAND_USE) [A5Z.]

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

A5A Percentage Rural*

Definition: This variable is computer generated based on 1980 Census data and the primary sampling unit (PSU). **(*Note: In 1995, population figures were taken from the 1994 County and City Data Book published by the Census. In 1997, this variable was dropped from the accident file.)**

1988 - 1996

SAS Name: (RUR_URB) [A5AZ.]

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

A6 First Harmful Event*

Definition: Indicates the first property damaging or injury producing event in the crash. **(*Note: In 1990, element value A97" *Other - No Details* has been deleted. In 1992, element value A50" *Pavement Surface Irregularity* has been added and element value numbering has been modified. Element value A4" *Gas Inhalation,* has been deleted. In 1999, element A4" Gas Inhalation was added and A50" was renumbered to A7".)**

SAS Name: (EVENT1) [A6NZ. in 2001,2000,1998, V20NZ. in 1999]

1988 - 1991	1992 - 1998	1999 - Later	
Noncollision			*Noncollision*
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion
4		4	Gas Inhalation*
5	5	5	Jackknife
6	6	6	Noncollision Injury (Injured In Vehicle Or Fell From Vehicle)
	50	7	Pavement Surface Irregularity (Ruts, Potholes, Grates,etc.)*
8	8	8	Other Noncollision
9	9	9	Noncollision - No Details
10	10	10	Thrown or Falling Object
Collision with Object Not Fixed			*Collision with Object Not Fixed*
21	21	21	Pedestrian
22	22	22	Cycle or Cyclist (Pedalcyclist or Pedalcycle)
23	23	23	Railway Train
24	24	24	Animal
25	25	25	Motor Vehicle in Transport
26	26	26	Parked Motor Vehicle (or Other M.V. Not in Transport)
27	27	27	Other Type Non-Motorist
28	28	28	Other Object Not Fixed
29	29	29	Object Not Fixed - No Details

Collision with Fixed Object			*Collision with Fixed Object*
31	31	31	Ground
32	32	32	Building
33	33	33	Impact Attenuator/Crash Cushion
34	34	34	Bridge Structure (Bridge Pier/Abutment/Parapet End/Rail)
35	35	35	Guardrail
36	36	36	Concrete Traffic Barrier or Other Longitudinal Barrier Type
37	37	37	Post, Pole or Support (Sign Post, Utility Post)
38	38	38	Culvert or Ditch
39	39	39	Curb
40	40	40	Embankment
41	41	41	Fence
42	42	42	Wall
43	43	43	Fire Hydrant
44	44	44	Shrubbery or Bush
45	45	45	Tree
46	46	46	Boulder
48	58	58	Other Fixed Object*
49	59	59	Fixed Object - No Details*
Other/Unknown			*Other/Unknown*
97			= Other - No Details (1988-1989 only)
99	99	99	Unknown

A6I Univariate Imputed First Harmful Event

Definition: This imputed variable has the same definition as ***First Harmful Event***, excluding value"99" for unknown first harmful event**.** (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (EVENT1_I) [A6NZ. in 2000,2001, V20NZ. in 1999, A6NZ. in 1998]

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A7 Manner of Collision

Definition: Indicates the orientation of the vehicles in a collision. If a non-collision, it is classified as such. **(Note: In 1999 A8, other" Other was removed.)**

1988 - Later

SAS Name: (MAN_COL) [A7N. in 2001, 2000, 1999, A7Z. in 1998]

0 = Not Collision with Motor Vehicle in Transport
1 = Rear-End
2 = Head-On
3 = Rear-to-Rear
4 = Angle
5 = Sideswipe, same direction
6 = Sideswipe, opposite direction
8 = Other* (deleted in 1999)
9 = Unknown

A7I Univariate Imputed Manner of Collision

Definition: This imputed variable has the same definition and element values as "***Manner of Collision***", excluding value "9" for unknown manner of collision. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (MANCOL_I) [A7N. in 2001, 2000, 1999, A7Z. in 1998]

A8 Interstate Highway

Definition: Indicates whether or not the crash occurred on an interstate highway. Interstate highway is a Federal Highway Administration classification.

1988 - Later

SAS Name: (INT_HWY) [A8Z.]

0 = No
1 = Yes
9 = Unknown

A9 Relation to Junction*

Definition: Indicates if the first harmful event is located within a junction or interchange area. If the first harmful event occurs off the roadway, the location classified is the point of departure.. **(* Note: In 1992, this variable has been modified into two categories: *Non-Interchange Area* and *Interchange Area*. Element value numbering has been modified. In 1995, two elements values were added: "06" and "16" On A Bridge. In 1999 "07" and "17" Crossover Related were added.)**.

SAS Name: (REL_JCT) [A9N. in 2001, 2000, 1999, A9NZ. in 1998]

1988 – 1991	**1992 - Later**
	Non-interchange Area
0 = Non-Junction	00 = Non-Junction
1 = Intersection	01 = Intersection
2 = Intersection Related	02 = Intersection Related
3 = Interchange Area	03 = Driveway, Alley Access, Etc.
4 = Driveway, Alley Access, Etc.	04 = Entrance/Exit Ramp
5 = Entrance/Exit Ramp	05 = Rail Grade Crossing
6 = Rail Grade Crossing	06 = On A Bridge* (added in 1995)
	07 = Crossover Related* (added in 1999)
8 = Other	08 = Other, Non-interchange
9 = Unknown	09 = Unknown, Non-interchange
	Interchange Area
	10 = Non-Junction
	11 = Intersection
	12= Intersection Related
	13= Driveway, Alley Access, Etc.
	14 = Entrance/Exit Ramp
	16 = On A Bridge* (added in 1995)

17 = Crossover Related* (added in 1999)
18 = Other Location in Interchange
19 = Unknown, Interchange Area
99 = Unknown if Interchange

A9I Univariate Imputed Relation to Junction

Definition: This imputed variable has the same definition and element values as ***Relation to Junction***, excluding value 9, 19, 99 for unknown relation to junction. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (RELJCT_I) [A9N. in 2001, 2000, 1999, A9NZ. in 1998]

A10 Relation to Roadway

Definition: Indicates the location of the first harmful event. **(*Note: In 1999 the element values were extensively redone.)**

SAS Name: (REL_RWY) [A10N. in 2001, 2000, 1999, A10Z. in 1998]

1988 - 1998	**1999 - Later**
1 = On Roadway	1 = On Roadway
2 = On Shoulder or Parking Lane	2 = On Shoulder*
3 = Off Roadway/Shoulder/Parking Lane	3 = On Median*
4 = On Median	4 = On Roadside*
	5 = Outside Trafficway*
	6 = Off Roadway - Location Unknown*
	7 = In Parking Lane*
8 = Other	8 = Gore*
	10 = Separator*
9 = Unknown	99 = Unknown*

A11 Trafficway Flow

Definition: Indicates whether or not the roadway was divided.

1988 - Later

SAS Name: (TRAF_WAY) [A11Z.]

1 = Not Physically Divided (Two Way Trafficway)
2 = Divided Highway (Median Strip, Barrier)
3 = One Way Trafficway
9 = Unknown

A12 Number of Travel Lanes

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

1988 - Later

SAS Name: (NUM_LAN) [A12Z.]

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

A13 Roadway Alignment

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

1988 - Later

SAS Name: (ALIGN) [A13Z.]

1 = Straight
2 = Curve
9 = Unknown

A13I Univariate Imputed Roadway Alignment

Definition: This imputed variable has the same definition and element values as ***Roadway Alignment***, excluding value "9" for unknown roadway alignment. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (ALIGN_I) [A13Z.]

A14 Roadway Profile

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

1988- Later

SAS Name: (PROFILE) [A14Z.]

1 = Level
2 = Grade
3 = Hillcrest
8 = Other
9 = Unknown

A14I Univariate Imputed Roadway Profile

Definition: This imputed variable has the same as definition and element values as ***Roadway Profile***, excluding value "9" for unknown roadway profile. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988- Later

SAS Name: (PROFIL_I) [A14Z.]

A15 Roadway Surface Condition

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

1988 - Later

SAS Name: (SUR_COND) [A15Z.]

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

A15I Univariate Imputed Roadway Surface Condition

Definition: This imputed variable has the same definition and element values as ***Roadway Surface Condition***, excluding value "9" for unknown roadway surface condition. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (SURCON_I) [A15Z.]

A16 Traffic Control Device*

Definition: Indicates whether or not a traffic control device was present and the type of traffic control device. **(* Note: In 1990, element values "A2" and "A3" have been deleted, element value "A14" *Warning Signs* was separated out into its own category, and element value numbering has changed.)**

SAS Name: (TRAF_CON) [A16N.]

1988 - 1989

00 = No Controls

Not at Railroad Grade Crossing

Traffic Signals:
01 = Traffic Control Signal (on colors) w/o Pedes. Signal
02 = Traffic Control Signal (on colors) w/ Pedes. Signal
03 = Traffic Control Signal (on colors) Pedes. Signal Not Known
04 = Flashing Traffic Control Signal or Flashing Beacon
08 = Other Traffic Signal
09 = Unknown Traffic Signal

Regulatory, School Zone or Warning Signs:
11 = Stop Sign
12 = Yield Sign
13 = School Zone Related Sign
14 = Warning Sign
18 = Other Sign
19 = Unknown Sign

Miscellaneous not at Railroad Crossing:
21 = Officer, Crossing Guard, Flagman, etc

At Railroad Grade Crossing:
31 = Active Devices (e.g., Gates, Flashing Lights, Traffic Signal)
32 = 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

1990 - Later

00 = No Controls

Not at Railroad Grade Crossing

Trafficway Traffic Signals:
01 = Traffic Control Signal (on colors)

04 = Flashing Traffic Control Signal or Flashing Beacon
08 = Other Traffic Signal
09 = Unknown Traffic Signal

Regulatory, School ZoneSigns:
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

A16I Univariate Imputed Traffic Control Device

Definition: This imputed variable has the same definition and element values as ***Traffic Control Device,*** excluding "99" for unknown traffic control device. See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (TRFCON_I) [A16N.]

A17 Traffic Device Functioning*

Definition: Indicates whether or not the traffic control device was functioning. **(* Note: This variable is not available after 1989.)**

1988 - 1989

SAS Name: (DEV_FUNC) [A17Z.]

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

A18 Speed Limit

Definition: Actual posted speed limit in miles per hour.

1988 - Later

SAS Name: (SPD_LIM) [A18Z. in 2001, 2000, 1998, no format in 1999]

0 = No Statutory Limit (parking lot, alley, etc.)
05-75 = (Actual Speed Limit)
99 = Unknown

A18H Hot-deck Imputed Speed Limit

Definition: This imputed variable has the element values as ***Speed Limit***, excluding value "99" for unknown speed limit. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (SPDLIM_H) [A18Z. in 2001, 2000, 1998, no format in 1999]

A19 Light Condition

Definition: General light conditions at the time of the crash, taking into consideration the existence of external roadway illumination fixtures. **(*Note: In 1999 A6" Dawn or Dusk was removed.)**

1988 - Later

SAS Name: (LGHT_CON) [A19N. in 2001, 2000, 1999, A19Z. in 1998]

1 = Daylight
2 = Dark
3 = Dark but Lighted
4 = Dawn
5 = Dusk
6 = Dawn or Dusk* (1988 - 1998 only)
9 = Unknown

A19I Univariate Imputed Light Condition

Definition: This imputed variable has the same definition and element values as ***Light Condition***, excluding value "9" for unknown light condition. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (LGTCON_I) [A19N. in 2001, 2000, 1999, A19Z. in 1998]

A20 Atmospheric Conditions

Definition: General atmospheric conditions at the time of crash.

1988 - Later

SAS Name: (WEATHER) [A20Z.]

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

A20I Univariate Imputed Atmospheric Condition

Definition: This imputed variable has the same definition and element values as ***Atmospheric Conditions***, excluding value "9" for unknown atmospheric conditions. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (WEATHR_I) [A20Z.]

A21 School Bus-Related

Definition: Indicates if a school bus is related to the crash. 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.

1988 - Later

SAS Name: (SCHL_BUS) [A21Z.]

0 = No
1 = Yes

A24 Pedestrian/Cyclist Crash Type*

Definition: Information to code this variable is obtained from the police narrative. The values 1 through 99 pertain to cyclist crash types and 110 through 920 pertain to pedestrian crash types. **(* Note: Starting in 1989, four-digit codes have been added pertaining to wheelchair involved crash types. The codes are similar to the 110-920 codes for pedestrians, with a '1' added as the first-digit. For example, 1110 is wheelchair involved with a commercial bus.) The crash types are prioritized. The lower category number the higher the priority. For example, if after examining the PAR the cyclist crash could be classified as either a 3 or 13, the Crash Type would be classified as a 3.**

1988 - Later

SAS Name: (PED_ACC) [A24Z. in 2001, 2000, no format prior to 2000]

0 = No pedestrian/cyclist involved

Bicyclist Rides out from a Driveway, Alley, or Other Mid-block Location
1 = Cyclist fails to yield to motorist at a residential driveway or alley; pre-crash path perpendicular to roadway.
2 = Cyclist fails to yield to motorist at a commercial driveway or alley; pre-crash path perpendicular to roadway.
3 = Cyclist turns or merges into the path of motorist from a residential driveway or alley; pre-crash path parallel to roadway.
4 = Cyclist fails to yield to motorist at a mid-block location: entry is over curb or shoulder.

Bicyclist Rides out from a Controlled Intersection
5 = Cyclist fails to yield to motorist at an intersection controlled by a stop sign or a flashing red signal.
6 = Cyclist fails to clear intersection controlled by signal before light turns green for cross traffic; motorists' view of cyclist was not obstructed.

7 = Cyclist fails to clear intersection controlled by signal before light turns green for cross traffic; motorists' view of cyclist was obstructed by standing traffic.

Motorist Turns or Drives out in Front of Bicyclist

8 = Motorist exiting from driveway, alley, or other mid-block location fails to yield to cyclist.
9 = At an intersection controlled by a stop sign or flashing red light, motorist obeys the sign but fails to yield to cyclist.
10 = At an intersection controlled by a signal, motorist obeys signal but fails to yield to cyclist while making right turn on red.
11 = Motorist backing from driveway fails to yield to cyclist.
12 = Motorist fails to stop at an intersection controlled by a stop sign.

Motorist Overtakes Bicyclist

13 = Motorist fails to detect cyclist he/she is overtaking.
14 = Motorist loses control of vehicle while overtaking cyclist; in some cases motorist is in uncontrolled slide or spin, but more often, merely loses precise control and veers too far to right.
15 = T he motorist and the cyclist counteract each other's evasive action.
16 = Motorist misjudges space required to pass cyclist.
17 = Cyclist's path is obstructed, causing cyclist to strike obstruction or overtaking motorist.

Bicyclist Makes Unexpected Turn or Swerve

18 = Cyclist turns left in front of motorist proceeding in the same direction.
19 = Cyclist turns left in front of motorist approaching from straight ahead.
20 = Cyclist loses control and swerves into the path of a motorist proceeding in the same direction.
21 = Cyclist riding on wrong side of street makes right turn in path of approaching motorist.

Motorist Make Unexpected Turn

22 = Motorist make left turn in front of cyclist proceeding in the same direction; in some cases cyclist was riding on wrong side of street.
23 = Motorist make left turn in front of cyclist approaching from straight ahead.
24 = Motorist makes right turn in front of cyclist proceeding in a parallel path; bicyclist either proceeding in same direction or from opposite direction (riding on the wrong side of the street).

Other/Infrequent

25 = Vehicles collide at uncontrolled intersection: crossing paths
26 = Vehicles collide head-on: wrong-way bicyclist
27 = Bicyclist overtaking motor vehicle
28 = Vehicles collide head-on; wrong-way motorist
29 = Parking lot, other open area: crossing paths
30 = Vehicles collide head-on: counteractive evasive action
31 = Bicyclist cuts corner when turning left: crossing paths
32 = Bicyclist swings wide when turning right: crossing paths
33 = Motorist cuts corner when turning left: crossing paths
34 = Motorist swings wide when turning right: crossing paths
35 = Motorist drives out from on-street parking
36 = Weird (e.g. motorist/cyclist intentionally causes crash, or cyclist struck by falling cargo)
39 = Motorist overtaking Cyclist (other than elements 13 - 17)
40 = Play vehicle (Big wheel, other tricycle, or bicyclist with training wheels)
41 = Cyclist struck parked vehicle
48 = Drive out - Intersection (Motorist drove out into or in front of cyclist)
49 = Ride out - intersection (Bicyclist)
55 = Controlled intersection - other
97 = Unknown if approach paths are parallel or crossing* (added in 1989)
98 = Parallel path - unknown
99 = Intersecting path - unknown

Pedestrian Crash Types

110 = Commercial Bus
120 = School Bus
130 = Ice Cream Vendor

140 = Mailbox Related
150 = Entering/Exiting
210 = Driverless Vehicle
220 = Backing Vehicle
230 = Hot Pursuit
310 = To/from Disabled Vehicle
320 = Disabled Vehicle Related
330 = Emergency Vehicle Related
410 = Working on Roadway
420 = Play Vehicle-Related
430 = Playing in Roadway
510 = Hitchhiking
520 = Expressway Crossing
531 = Walking along Roadway with Traffic
532 = Walking along Roadway against Traffic
539 = Walking along Roadway Can't Specify
610 = Waiting to Cross At or Near Curb
620 = Pedestrian Not in Roadway
710 = Multiple Threat, Intersection
720 = Vehicle Turn/Merge
730 = Intersection Dash
740 = Trapped
750 = Pedestrian Walked into Vehicle, Intersection
760 = Intersection, Driver Violation
790 = Intersection - other
810 = Multiple Threat, Mid-block
821 = Mid-block Dart-out, First half
822 = Mid-block Dart-out, Second half
829 = Mid-block Dart-out, Can't specify
830 = Mid-block dash
840 = Pedestrian Walked into Vehicle, Mid-block
890 = Mid-block - other
910 = Other - weird
920 = Inadequate information

*Wheelchair Pedestrian Crash Types** (added in 1989)
1620 = Wheelchair - Not in Roadway*
1710 = Wheelchair - Multiple Threat / Intersection*
1720 = Wheelchair - Vehicle Turn/Merge*
1730 = Wheelchair - Intersection Dash*
1740 = Wheelchair - Trapped*
1790 = Wheelchair - Intersection/Other*
1890 = Wheelchair - Mid-block/Other*

A25 Work Zone*

Definition: Indicates if the crash occurred in a construction area or in a Awork zone@. **(*Note: This variable was added to the accident file in 1995.)**

1995 - Later

SAS Name: (WRK_ZONE) [A25Z.]
0 = No
1 = Yes

A26 National Highway System (NHS) Roadway Type*

Definition: This variable was added to indicate whether this roadway is designated as part of the National Highway System. This variable also indicates if this roadway is considered Aurban@, Arural@, or Aurban or rural@. **(*Note: This variable was added to the accident file in 1995 and removed in 1999.)**

1995 - 1998

SAS Name: (NHS_RWTP)[A26Z.]

00 = Not NHS Roadway

Urban
01 = Eisenhower Interstate (EIS)
02 = Congressional High Priority Route
03 = STRAHNET Route
04 = STRAHNET Major Connector
05 = Other NHS Route
09 = Unknown Urban Route

Rural
11 = Eisenhower Interstate (EIS)
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
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

A90 Maximum Injury Severity in Crash

Definition: Indicates the most severe injury of all persons involved in the crash, and is derived from the injury severity variable in the person file. The following order of severity codes was used in 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 Coded in the Crash
From 1999 to 2000 the priority was different: Unknown if Injured had priority over No Injury.

1988 - Later

SAS Name: (MAX_SEV) [A90Z.]

0 = No Injury
1 = Possible Injury
2 = Non-incapacitating
3 = Incapacitating
4 = Fatal

5 = Unknown Injury Severity
6 = Died Prior
8 = No Person Coded in the Crash
9 = Unknown

A90I Univariate Imputed Maximum Injury Severity in Crash

Definition: This imputed variable has the same definition and element values as ***Maximum Injury Severity in Crash***, excluding value "9" for unknown maximum injury severity. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (MAXSEV_I) [A90Z.]

A91 Number Known Injured in Crash

Definition: Derived by counting all the persons with an injury severity of 1, 2, 3, 4, or 5 in an crash.

1988 - Later

SAS Name: (NUM_INJ) [A91N. in 2001, 2000, 1998, no format in 1999]

00 = No Person Injured/Property Damage Only Crash
98 = No Person Coded
99 = Unknown

A91I Imputed Number Known Injured In Crash

Definition: This imputed variable was derived from the hot-deck injury severity variable in the person file. This variable has the same definition and element values as ***Number Known Injured in Crash***, excluding values 98 and 99 for no person coded and unknown number injured, respectively.

1988 - Later

SAS Name: (NO_INJ_I) [A91N. in 2001, 2000, 1998, no format in 1999]

A92 Alcohol Involved in Crash

Definition: This is a derived variable based on police-reported alcohol involvement on the person file. This variable indicates alcohol use for a driver, a pedestrian, or a cyclist in the crash:.

1988 - Later

SAS Name: (ALCOHOL) [A92Z.]

1 = Alcohol Involved
2 = No Alcohol Involved
8 = No Person Coded
9 = Unknown

A92I Imputed Alcohol Involved in Crash

Definition: This variable has the same definition and element values as ***Alcohol Involved in Crash***, excluding element value A9@ for unknown alcohol involvement and element value A8@ was added to element value A2@. This imputed variable was derived from the hot-deck imputed police reported alcohol involvement on the person file.

1988 - Later

SAS Name: (ALCHL_I) [A92Z.]

EVENT FILE

E1 Crash Event Sequence Number

Definition: Number assigned to each harmful event in a crash, in chronological order.

2000 - Later

SAS Name: **(EVENTNUM)**

1 - xx = (Event Number)

E2 Vehicle Number - This vehicle*

Definition: Number assigned to an in transport motor vehicle involved in the event. Example: this vehicle=s (VEHNUM=1) front (GAD=01) impacts the other vehicle=s (OBJCONT=2) right side (OBJGAD=02) .

2000 - Later

SAS Name: **(VEHNUM)**

1 - xx = (Vehicle Number)

E3 General Area of Damage - This vehicle*

Definition: Indicates the impact point that produced property damage or personal injury for this transport motor vehicle involved in the event.

SAS Name: (GAD) [E3Z.]

2000- Later

00 = Non-Collision
01 = Front
02 = Right Side
03 = Left Side
04 = Back
05 = Top
06 = Undercarriage
11 = Front Right Corner
12 = Front Left Corner
13 = Back Right Corner
14 = Back Left Corner
99 = Point of Impact Unknown

E4 Vehicle Number - Other Vehicle or Object Contacted*

Definition: vehicle number of the other vehicle or object hit, or the type of non-collision involved in the event.

SAS Name: (OBJCONT) [E4Z.]

2000 - Later

Collision with Motor Vehicle in Transport:
1-100 Vehicle Number of Other Vehicle

Noncollision
101 Rollover/Overturn
102 Fire/Explosion
103 Immersion
104 Gas Inhalation*
105 Jackknife
106 Noncollision Injury (Injured in Vehicle, or Fell From Veh.)
107 Pavement Surface Irregularity (Ruts, Potholes, Grates,etc.)*
108 Other Noncollision
109 Noncollision - No Details
110 Thrown or Falling Object

Collision with Object Not Fixed
121 Pedestrian
122 Cycle or Cyclist (Pedalcyclist or Pedalcycle)
123 Railway Train
124 Animal
126 Parked Motor Vehicle (or Other M.V. Not in Transport)
127 Other Type Non-Motorist
128 Other Object Not Fixed
129 Object Not Fixed - No Details

Collision with Fixed Object
131 Ground
132 Building
133 Impact Attenuator/Crash Cushion
134 Bridge Structure (Bridge Pier/Abutment/Parapet End/Rail)
135 Guardrail
136 Concrete Traffic Barrier or Other Longitudinal Barrier Type
137 Post, Pole or Support (Sign Post, Utility Post)
138 Culvert or Ditch
139 Curb
140 Embankment
141 Fence
142 Wall
143 Fire Hydrant
144 Shrubbery or Bush
145 Tree
146 Boulder
158 Other Fixed Object*
159 Fixed Object - No Details*

Unknown
999 Unknown

E5 General Area of Damage - Other Vehicle*

Definition: Indicates the impact point for the other in transport motor vehicle involved in the harmful event. In 2001 the code for "Not a Motor Vehicle in Transport" changed from "." to 98.

SAS Name: (OBJGAD) [E5Z.]

2000	**2001**	
01	01	= Front
02	02	= Right Side
03	03	= Left Side
04	04	= Back
05	05	= Top
06	06	= 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

V1 Vehicle Number

Definition: Number assigned to all motor vehicles in transport. Numbers assigned must be consecutive starting with "1" for each crash. (These numbers are computer assigned.)

1988 - Later

SAS Name: **(VEHNO)**

V2 Hit and Run

Definition: Hit and run is coded when a motor vehicle in-transport, or its driver, departs from the scene; therefore, fleeing pedestrians and motor vehicles not in transport are excluded. It does not matter whether the hit-and-run vehicle was striking or struck.

1988 - Later

SAS Name: (HIT_RUN) [V2Z.]

0 = No, Did Not Leave Scene
1 = Yes, Driver or Car and Driver Left Scene
9 = Unknown

V2I Univariate Imputed Hit and Run

Definition: This imputed variable has the same definition and element values as ***Hit and Run***, excluding value "9" for unknown hit and run. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (HITRUN_I) [V2Z.]

V3 Vehicle Make

Definition: A numerical code indicating the make of each motor vehicle in transport. See Appendix A.

1988 - Later

SAS Name: (MAKE) [V3Z.]

V4 Vehicle Model

Definition: A numerical code indicating the model of each motor vehicle in transport. See Appendix A.

1988 - Later

SAS Name: (MODEL)

V5 Body Type*

(* Note: After 1989, there were numerous changes made to this variable.)

1988 - 1989

SAS Name: (BODY_TYP) [V5NZ.]

Automobiles
01 = Convertible (excludes sun-roof, t-bar)
02 = 2-door sedan, hardtop, coupe
03 = 3-door/2-door hatchback
04 = 4-door sedan, hardtop
05 = 5-door/4-door hatchback
06 = Station wagon (excluding van and truck based)
07 = Hatchback, number of doors unknown
08 = Other automobile type
09 = 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

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

V5 Body Type*

(* Note: In 1990, element values A11" and A12" were modified. Element values A13" *Limousine* and A22" *Step Van or Walk-in Van* were added. Element values A33", A34", and A47" were deleted.)

1990 - 1991

SAS Name: (BODY_TYP) [V5NZ.]

Automobiles
01 = Convertible (excludes sun-roof, t-bar)
02 = 2-door sedan, hardtop, coupe
03 = 3-door/2-door hatchback
04 = 4-door sedan, hardtop
05 = 5-door/4-door hatchback
06 = Station wagon (excluding van and truck based)
07 = Hatchback, number of doors unknown
08 = Other automobile type
09 = 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 (≤ 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, ≤ 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)

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

V5 Body Type*

(* Note: In comparing 1992 element values to previous years, there were quite a few changes which include modifications, deletions, and additions of element values. The asterisk (*) denotes change. Element values A11", A12", A13", A14", A20", A21", A30", A31", A60", and A65" have been modified. Element values A15", A16", A17", A19", A23", @33", A45", A64", and A64" were added. Some of the existing element value numbering has changed. In 1993, element values A24" and A25" have been added. Also, for the GVWR, kilograms were used, not pounds. In 1999 A17" was added.)

1992 - Later

SAS Name: (BODY_TYP) [V5N. in 2001, 2000, 1999, V5NZ. in 1998]

Automobiles
01 = Convertible (excludes sun-roof, t-bar)
02 = 2-door sedan, hardtop, coupe
03 = 3-door/2-door hatchback
04 = 4-door sedan, hardtop
05 = 5-door/4-door hatchback
06 = Station wagon (excluding van and truck based)
07 = Hatchback, number of doors unknown
17 = 3-Door Coupe*
08 = Other automobile type
09 = Unknown automobile type

Automobile Derivatives
10 = Auto based pickup (included El Camino, Caballero, Ranchero, Brat, and Rabbit Pickup)*
11 = Auto based panel (Cargo Station Wagon, auto-based ambulance/hearse) *
12 = Large limousine (More than four side doors or stretched chassis)*
13 = Three wheel automobile or automobile derivative*

Utility Vehicles
14 = Compact Utility - (includes Jeep CJ-2 - CJ7, Scrambler, Golden Eagle, Renegade, Laredo, Cherokee (84 and after), Wrangler, Commando, Jeepster, GEO Tracker, Dispatcher, Bronco & Bronco II, 4 Runner, S15 Jimmy, Typhoon, Bravada, Thing, T30, Raider, Pathfinder, Trooper, Trooper II, Amigo, Rodeo, Navajo, RAV-4, Montero, Samurai, Sidekick, Rocky, Passport, Defender, Sportage, Mountaineer, Explorer, and S-10 Blazer)*
15 = Large Utility (Jeep Cherokee (83 & before), Ramcharger, Trail duster, Bronco-full size, Blazer Fullsize, Tahoe, Jimmy Fullsize, Land Cruiser, Rover, Range Rover, Hummer, Expedition, Navigator, Scout, and Yukon)*
16 = Utility Station wagon (Chevrolet Suburban, GMC Suburban, Travelall, Grand Wagoneer, and Suburban Limousin)*
19 = Utility Vehicle, Unknown Body type*

Van-Based Light Trucks (≤ 4,536 kg GVWR)
20 = Minivan (Chrysler Town & Country, Astro, Caravan, Grand Caravan, Plymouth Vista, Aerostar, Safari, Voyager, Mini-Ram, Dodge Vista, Toyota Cargo Van, Toyota Van, Vanagon, VW Bus, Kombi, Previa, Lumina APV, Windstar, Odyssey Oasis, Villager, Silhouette, Transport, Nissan Minivan, Quest, Expo Wagon, Mitsubishi Minivan)*
21 = Large Van (Sportvan, Chevy Van, Club Wagon, Ford Econoline, Ram Van, Chateau, E150-E350, G10-G30, Ram Wagon, Vandura, Rally Voyager (83 and before), Beauville, Sportsman, B150-350, Royal, Maxi-wagon, Tradesman, G15-35)*
22 = Step Van or Walk-in Van (< 4,536 kg GVWR)
23 = Van-based Motor-home*
24 = Van-based School Bus* (added in 1993)
25 = Van-based Other Bus* (added in 1993)
28 = Other Van Type
29 = Unknown Van type
Light Conventional Trucks (Pickup style cab, ≤ 4,536 kg GVWR)

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 = Large 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 = Pickup with slide-in camper
33 = Convertible Pickup*
39 = Unknown (pickup style) light conventional truck

Other Light Trucks (< 4,536 kg 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)
45 = Other light truck type*
48 = Unknown other light truck type (utility, van, pickup, or other light truck)
49 = Unknown light vehicle type (automobile, utility, 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 (>4,536 kg GVWR)
60 = Step van*
64 = Single unit straight truck*
65 = Medium/heavy truck-based motor home*
66 = Truck-tractor (cab only, or with any number of trailing units; any WEIGHT)*
78 = Unknown medium/heavy truck type*
79 = Unknown truck type (light/medium/heavy)*

Motored Cycles (Does not include all terrain vehicles/cycles)
80 = Motorcycle*
81 = Moped (motorized bicycle)*
82 = Three wheeled motorcycle or moped*
88 = Other motored cycle type (minibike, motor scooter)*
89 = Unknown motored cycle type*

Other Vehicles
90 = ATV (all terrain vehicle including dune/swamp buggy) and ATC (all terrain cycle)*
91 = Snowmobile*
92 = Farm equipment other than trucks*
93 = Construction equipment other than trucks (includes graders)*
97 = Other type vehicle (includes go-cart, fork lift, city street sweeper, motorized wheel chair)*
99 = Unknown body type

V5H Hot-deck Imputed Body Type

Definition: This attributes for this imputed variable 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. (See ***Understanding the GES Imputation Process*** section of this manual.)

SAS Name: (BDYTYP_H) [V5N. in 2001, 2000, 1999, V5NZ. in 1998]

V6 Model Year

Definition: The model year of the vehicle(s) involved in the crash. **(*Note: Beginning in 1999 the actual model year was coded for all vehicles.)**

1988 - Later

SAS Name: (MODEL_YR) [V6Z. in 2001, 2000, 1998, no format in 1999]

1940 = all vehicles manufactured for 1940 model year and before.(Changed in 1999)*
1941-2001 = (Actual Value)
9999 = Unknown

V6I Univariate Imputed Model Year

Definition: This imputed variable has the same definition and element values as ***Model Year***, excluding value "9999" for unknown model year. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (MDLYR_I) [V6Z. in 2001, 2000, 1998, no format in 1999]

V7 Vehicle Identification Number

Definition: A vehicle identification number is a number assigned by the vehicle manufacturer. The VIN contains information on the vehicle such as: manufacturer, model year, model, body type, restraint type, etc. For VINs with a length of more than 11 characters, any positions past the 11th character were blanked out. The positions that were blanked out contain the serial number which can uniquely identify the vehicle. For more detailed information on VINs in the GES, see Appendix D.

1988 - Later

SAS Name: (VIN)

00000000000 = No VIN
Actual value (left justified, up to 11 alphanumeric characters)
99999999999 = Unknown VIN

V8 Special Use*

Definition: Indicates if the vehicle has a special use. Special use means "in use" and not necessarily emergency use. All military vehicles are classified as "4" even if they are police, ambulance, or fire trucks.
(* Note: In 1992, element value A7" was modified. Element value A8" was deleted and values A10", A11", and A12" were added.)

SAS Name: (SPEC_USE) [V8N. in 2001, 2000, 1999, V8NZ. in 1998]

1988 - 1991	**1992 - Later**
0 = No Special Use	00 = No Special Use

1 = Taxi	01 = Taxi
2 = Vehicle Used as School Bus	02 = Vehicle Used as School Bus
3 = Vehicle Used as Other Bus	03 = Vehicle Used as Other Bus
4 = Military	04 = Military
5 = Police	05 = Police
6 = Ambulance	06 = Ambulance
7 = Fire truck	07 = Fire Truck and Car*
	10 = Hearse*
8 = Other (Farm or Construction Equip., Etc.)	11 = Farm Equipment*
	12 = Construction Equipment*
9 = Unknown	99 = Unknown

V9 Emergency Use

Definition: Indicates if a "4" through "7" "Special Use" vehicle is on an emergency run. Value "0" is coded if applicable vehicle was not on an emergency run or it was not one of the applicable vehicles.

1988 - Later

SAS Name: (EMCY_USE) [V9Z.]

0 = No
1 = Yes
9 = Unknown

V10 Number of Occupants Involved*

Definition: Indicates the actual number of persons (including drivers) that were occupants of this vehicle and were coded. **(* Note: In 1990, this variable changed. The actual value went up to 30 and the variable became the number of Occupants Coded. In 2000 the number of occupants coded is no longer restricted to 30 or less and 99 no longer represents unknown since the number coded is always known.)**

SAS Name: (OCC_INVL)

1988 - 1989
00-95 = (Actual Value if Total Known)
96 = 96 or more
97 = Unknown - Only Injured Reported
99 = Unknown

1990 - 1999	**2000 - Later**
00-30=(Actual Number of Occupants Coded)*	00- xxx=(Actual Number of Occupants Coded)*
99 = Unknown	

V10A Number of Occupants Coded*

Definition: Derived by counting the number of persons (including drivers) that were occupants of this vehicle. **(* Note: This variable was dropped from the accident file in 1990.)**

1988 - 1989

SAS Name: (OCC_COD)

00-30 = (Actual Value if Total Known)
99 = Unknown

V10B Number of Occupants*

Definition: Indicates the number of persons (including drivers) that were occupants of this vehicle.

2000 - Later

SAS Name: (NUMOCCS)

00-998 = (Actual Value if Total Known)
999 = Unknown

V11 Travel Speed*

Definition: Actual miles per hour. **(* Note: In 2000 the highest travel speed is no longer restricted to 97 MPH, and unknown travel speed is coded as 999.)**

SAS Name: (SPEED) [V11Z. in 2000, 1998, no format in 1999]

1988 - 1999	**2000 - Later**
00 = Stopped Vehicle	00 = Stopped Vehicle
01-96 = (Actual Travel Speed (MPH))	01-998=(Actual Travel Speed (MPH))
97 = Ninety-Seven MPH or Greater	
99 = Unknown	999 = Unknown

V12 Vehicle Contributing Factors *

Definition: Indicates which vehicle factors may have contributed to the cause of the crash. Only one Acontributing factor@ for each vehicle is coded. If a vehicle has multiple Acontributing factors@ (some of which may not be defects), the lowest numerical value is coded. For example, "02" is coded if both brake system and steering system Acontributing factors@ were indicated. **(* Note: In 1995, the name of this variable was changed from *Vehicle Defects* to *Vehicle Contributing Factors* to allow for inclusion of all factors that may have contributed to this vehicle=s involvement in the crash.)**

1988 - 1994

SAS Name: (DEFECT)[V12Z.]

00 = None
01 = Tires
02 = Brake System
03 = Steering System - Tie Rod, Kingpin, Ball Joint, etc.
04 = Suspension - Springs, Shock Absorbers, McPherson Struts, Control Arms, etc.
05 = Power Train - Universal Joint, Drive Shaft, Transmission, etc.
06 = Exhaust System
07 = Headlights
08 = Signal Lights
09 = Other Lights
10 = Wipers
11 = Wheels
12 = Mirrors
13 = Driver Seating and Control
14 = Body, Doors
15 = Trailer Hitch
50 = Hit-and-Run Vehicle
97 = Vehicle Defects - No Details
98 = Other Vehicle Defects
99 = Unknown if Vehicle Has Defects

1995 - Later

SAS Name: (FACTOR) [V12N.]

00 = None
01 = Tires
02 = Brake System
03 = Steering System - Tie Rod, Kingpin, Ball Joint, etc.
04 = Suspension - Springs, Shock Absorbers, McPherson Struts, Control Arms, etc.
05 = Power Train - Universal Joint, Drive Shaft, Transmission, etc.
06 = Exhaust System
07 = Headlights
08 = Signal Lights
09 = Other Lights
10 = Wipers
11 = Wheels
12 = Mirrors
13 = Driver Seating and Control
14 = Body, Doors
15 = Trailer Hitch
50 = Hit-and-Run Vehicle
97 = Vehicle Contributing Factors - No Details*
98 = Other Vehicle Contributing Factors*
99 = Unknown if Vehicle Has Contributing Factors*

V13 Vehicle Trailing

Definition: Indicates if 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. **(*Note: In 1999 the variable was recoded.)**

1988 - 1998

SAS Name: (TRAILER) [V13N. in 2001, 2000, 1999, V13Z. in 1998]

0 = No
1 = Yes, One Trailing Unit
2 = Yes, Two Trailing Units
3 = Yes, Three or More Trailing Units
4 = Yes, Number of Trailing Units Unknown
9 = Unknown

1999 - Later

1 = No*
2 = Yes, One Trailing Unit*
3 = Yes, Two Trailing Units*
4 = Yes, Three or More Trailing Units*
5 = Yes, Number of Trailing Units Unknown*
6 = Unknown*

V14 Jackknife*

Definition: Indicates if a jackknife occurred. Jackknife can occur at any time during the crash sequence. In 1988-1990, jackknife is not restricted to truck-tractor vehicles; it may occur with a passenger car, van, motorcycle, etc. which is pulling a trailing unit. In 1991 - 1998, it is restricted to truck-tractor vehicles. In 1999, jackknife is not restricted to truck-tractor vehicles; it may occur with a passenger car, van, motorcycle, etc. which is pulling a trailing unit

1988 - Later

SAS Name: (JACKNIFE) [V14Z.]

0 = No Jackknife Noted on PAR
1 = Jackknife Occurred

V15 Rollover*

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. Rollover can occur at any time during the crash. **(* Note: The coding of this variable changed after 1991. See *Rollover Type (V30)* for revised coding scheme.)**

1988 - 1991

SAS Name: (ROLLOVER) [V15Z.]

0 = No Rollover Noted on PAR
1 = Rollover Occurred

V16 Fire Occurrence

Definition: Indicates whether or not a vehicle sustained fire damage.

1988 - Later

SAS Name: (FIRE) [V16Z.]

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

V17 Maximum Damage Area*

Definition: This variable reports the most severe area of damage on the vehicle. **(*Note: In 1990, this variable was replaced with *Initial Point of Impact (V24) and Damage Areas (V25).)***

1988 - 1989

SAS Name: (DAM_AREA) [V17Z.]

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

V17H Hot-deck Imputed Damage Area*

Definition: This imputed variable has the same definition and element values as ***Maximum Damage Area,*** excluding value "9" for damage area not determinable or unknown. (See ***Understanding the GES Imputation Process*** section of this manual.) **(*Note: In 1990, this variable was dropped from the Vehicle File. Since the variable was revised, it was unnecessary to imputed unknowns.)**

1988 - 1989

SAS Name: (DAM_AR_H) [V17Z.]

V18 Damage Severity

Definition: Reports the severity of the vehicle damage. In 2001 the towed (due to damage) status of the vehicle became a factor in coding this variable. Starting in 2001, if the PAR indicates that the vehicle was not towed due to damage, or unknown if towed, then Damage Severity must be either None, Minor, Functional, or Unknown. If the PAR indicates that the damage to the vehicle renders it undrivdable then Damage Severity must be coded 3, Disabling. Vehicles that are described on PARs that use a Moderate/Severe scale, rather than Functional/Disabling, are more likely to be affected by this narrowing of definition. Prior to 2001, some vehicles that were towed due to damage may have been coded "2, Functional/Moderate" if the PAR used a Moderate/Severe scale. In 2001 and later any vehicle towed due to damage is coded "3, Disabling."

1988 - Later

SAS Name: (VEH_SEV) [V18Z.]

0 = None
1 = Minor
2 = Functional (Moderate)
3 = Disabling (Severe)
9 = Unknown

V19 Manner of Leaving Scene*

Definition: Measures the disposition of the vehicle, or power unit of an articulated combination, at the crash scene. **(* Note: In 1990, element value "2" was modified into two different values. Therefore, changing the numbering of existing element values.)**

1988 - 1989

SAS Name: (TOWED) [V19Z.]

1990 - Later

SAS Name: (TOWED) [V19N.]

1 = Driven	1 = Driven
2 = Towed Away	2 = Towed Due to Damage*
	3 = Towed Not Due to Damage*
3 = Abandoned	4 = Abandoned
4 = Unknown	9 = Unknown if Towed

V20 Most Harmful Event*

Definition: Indicates the most severe property damage or injury producing event for the vehicle.
(* Note: In 1990, element value A97" *Other - No Details* was deleted. In 1992, element value A50@ *Pavement Surface Irregularity* was added and the numbering of some existing values were modified. Also, element value A4" *Gas Inhalation* was deleted. In 1999, element A4" Gas Inhalation was added and A50" was renumbered to A7")

SAS Name: (V_EVENT)

[V20Z.] 1988 - 1991	[V20N.] 1992 - 1998	[V20NZ.] 1999 - Later	
Noncollision			*Noncollision*
1	1	1	Rollover/Overturn
2	2	2	Fire/Explosion
3	3	3	Immersion
4		4	Gas Inhalation*
5	5	5	Jackknife
6	6	6	Noncollision Injury (Injured in Vehicle, or Fell From Veh.)
	50	7	Pavement Surface Irregularity (Ruts, Potholes, Grates,etc.)*
8	8	8	Other Noncollision
9	9	9	Noncollision - No Details
10	10	10	Thrown or Falling Object
Collision with Object Not Fixed			*Collision with Object Not Fixed*
21	21	21	Pedestrian
22	22	22	Cycle or Cyclist (Pedalcyclist or Pedalcycle)
23	23	23	Railway Train
24	24	24	Animal
25	25	25	Motor Vehicle in Transport
26	26	26	Parked Motor Vehicle (or Other M.V. Not in Transport)
27	27	27	Other Type Non-Motorist
28	28	28	Other Object Not Fixed
29	29	29	Object Not Fixed - No Details
Collision with Fixed Object			*Collision with Fixed Object*
31	31	31	Ground
32	32	32	Building
33	33	33	Impact Attenuator/Crash Cushion
34	34	34	Bridge Structure (Bridge Pier/Abutment/Parapet End/Rail)
35	35	35	Guardrail
36	36	36	Concrete Traffic Barrier or Other Longitudinal Barrier Type
37	37	37	Post, Pole or Support (Sign Post, Utility Post)
38	38	38	Culvert or Ditch
39	39	39	Curb
40	40	40	Embankment
41	41	41	Fence
42	42	42	Wall
43	43	43	Fire Hydrant
44	44	44	Shrubbery or Bush
45	45	45	Tree

46	46	46	Boulder
48	58	58	Other Fixed Object*
49	59	59	Fixed Object - No Details*
Other/Unknown			*Other/Unknown*
97			Other - No Details* (1988-1989 only)
99	99	99	Unknown

V20H Hot-deck Imputed Most Harmful Event

Definition: This imputed variable has the same element values as ***Most Harmful Event***, excluding value "99" for unknown most harmful event . (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - Later

SAS Name: (V_EVNT_H) [V20NZ. in 2001, 2000, 1999, V20N. In 1998]

V20A Most Harmful Event Number

Definition: Indicates the number of the event that caused the most severe property damage or injury for the vehicle. This variable may be used to identify the specific event in the Event File.

2000 - Later

SAS Name: (MHENUM)

1 - xx = (Actual Event Number)

V21 Vehicle Maneuver*

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. (***Note: In 1992, GES began to collect precrash information. The variable, Vehicle Maneuver, was changed to Movement Prior to Critical Event to be part of the precrash variables. The definition of this variable changed slightly. Some element values were added, modified, or deleted. Also, the SAS name changed after 1991.)**

1988-1991

SAS Name: (MANEUVER) [V21Z.]

01 = Going Straight
02 = Slowing or Stopping in Traffic Lane
03 = Starting in Traffic Lane
04 = Stopped in Traffic Lane
05 = Passing or Overtaking Another Vehicle
06 = Leaving a Parked Position
07 = Parked
08 = Entering a Parked Position
09 = 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

V21 Movement Prior to Critical Event*

Definition: Records the attribute which 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 to any evasive maneuvers. **(* Note: In 1992, element values A16", A17", A18" and A94" were added and A09" *Maneuving to Avoid* was deleted. In 1995, element value A00" was added and element value A94" *More than Two Vehicles Involved* was deleted. In 1999 A03" Accelerating in traffic lane was added.)**

SAS Name: (P_CRASH1)* [V21NZ. in 2001, 2000, 1999, V21N. in 1998]

1992 - 1998	1999 - Later	
00	00	No Driver Present*
01	01	Going Straight
02	02	Decelerating in Traffic Lane
	03	Accelerating in traffic lane*
03	04	Starting in Traffic Lane
04	05	Stopped in Traffic Lane
05	06	Passing or Overtaking Another Vehicle
06	07	Disabled or Parked in Travel Lane*
07	08	Leaving a Parked Position*
08	09	Entering a Parked Position
10	10	Turning Right
11	11	Turning Left
12	12	Making U-turn
13	13	Backing Up (other than for parking purposes)
15	14	Negotiating a Curve
16	15	Changing Lanes*
17	16	Merging*
18	17	Successful Corrective Action to a Previous Critical Event*
94		More than Two Vehicles Involved* (Deleted in 1995)
98	97	Other
99	99	Unknown

V21I Univariate Imputed Vehicle Maneuver*

Definition: This imputed variable has the same as definition and element values as ***Vehicle Maneuver***, excluding value "99" for unknown vehicle maneuver. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - 1991

SAS Name: (MANEUV_I) [V21Z.]

V21I Univariate Imputed Movement Prior to Critical Event*

Definition: This imputed variable has the same definition and element values as ***Movement Prior to Critical Event***, excluding value "99" for unknown movement prior to critical event. (See ***Understanding the GES Imputation Process*** section of this manual.)

1992 - Later

SAS Name: (MANEUV_I) [V21NZ.]

V22 Vehicle Role

Definition: Indicates vehicle role in single or multi-vehicle crashes.

1988 - Later

SAS Name: (VEH_ROLE) [V22Z.]

0 = Non-Collision
1 = Striking
2 = Struck
3 = Both
9 = Unknown

V22I Univariate Imputed Vehicle Role

Definition: This imputed variable has the same definition and element values as ***Vehicle Role***, excluding value "9" for unknown vehicle role. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 -Later

SAS Name: (VROLE_I) [V22Z.]

V23 Accident Type*

Definition: Categorizes the precrash situation. For graphic descriptions of possible values see Appendix B. **(*Note: Element value A97, Untripped Rollover" was added in 1992 and removed in 1999.)**

SAS Name: (ACC_TYPE) [V23N.]

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
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 Straigh Ahead on Left.
- 45 Straigh 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

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 Accident Type
99 Unknown Accident Type;

V24 Initial Point of Impact*

Definition: Codes the first impact point that produced property damage or personal injury (regardless of *FIRST or MOST HARMFUL EVENT*). **(* Note: Prior to 1990, this variable did not exist. In 1992, element values A11", A12", A13", and A14" were added to replace element value A7" *Corner*.)**

SAS Name: (IMPACT) [V24NZ.]

1990 - 1991	**1992 - Later**
0 = No Damage/Non-Collision	00 = No Damage/Non-Collision
1 = Front	01 = Front
2 = Right Side	02 = Right Side
3 = Left Side	03 = Left Side

4 = Back	04 = Back
5 = Top	05 = Top
6 = Undercarriage	06 = Undercarriage
7 = Corner	11 = Front Right Corner
	12 = Front Left Corner
	13 = Back Right Corner
	14 = Back Left Corner
9 = Initial Point of Impact Unknown	99 = Initial Point of Impact Unknown

V24H Hot-deck Imputed Initial Point of Impact

Definition: This imputed variable has the same definition and element values as ***Initial Point of Impact***, excluding value "9" for unknown initial point of impact. (See ***Understanding the GES Imputation Process*** section of this manual.)

1990 -Later

SAS Name: (IMPACT_H) [V24NZ.]

V25 Damage Areas*

Definition: This variable reports this vehicle's specific areas damaged due to impact. The totality of the damage is used when determining the specific areas. A five character field is used to indicate up to five specific areas of damage on the vehicle. **(* Note: This variable has replaced *Maximum Damage Area (V17)*. The coding and definition for this variable has been enhanced.)**

1990 - Later

SAS Name: (DAM_AREA) [V25N.] [no format prior to 2000]

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

Examples of complete codes are:

0 = No damage
12000 = Front and right damage
12999 = Front and right damage and unknown if damaged in other areas

In 1992, variables **V21, V26-V29** were added to the vehicle /driver file in the GES. These variables are precrash variables designed to identify: (1) what was this vehicle doing just prior to the critical precrash event, (2) what made this vehicle's situation critical, (3) what was the corrective action, if any, to this critical situation, and (4) what was the location and stability of the vehicle just prior to impact.

V26 Critical Event*

Definition: Identifies the critical event which made the crash imminent (i.e., something occurred which made the collision possible). A critical event is coded for each vehicle and identifies the circumstances leading to this vehicle's first impact in the crash.

1992 - 1993

SAS Name: (P_CRASH2)

00 = 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

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

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 locatio*IV. MISCELLANEOUS*
94 = More than two vehicles involved
98 = Other event
99 = Unknown

V26 Critical Event*

Definition: Identifies the critical event which made the crash imminent (i.e., something occurred which made the collision possible). A critical event is coded for each vehicle and identifies the circumstances leading to this vehicle's first impact in the crash. **(* Note: In 1994, all the 2-digit element values have changed to 3-digit numbers. In 1995, two element values were added: A215" and A515". In 1999 there were extensive additions, deletions and renumbering.)**

SAS Name: (P_CRASH2) [V26Z.] [no format prior to 2000]

1994 - 1998	1999 - Later	
000		Not Applicable/No Collision
This Vehicle Loss of Control Due to:		
010	001	Blow out or flat tire*
020	002	Stalled engine*
030	003	Disabling vehicle failure (e.g., wheel fell off)*
040	004	Minor vehicle failure*
050	005	Poor road conditions (puddle, pothole, ice, etc.)*
060	006	Excessive speed*
099		Other or unknown reason*
	008	Other cause of control loss*
	009	Unknown cause of control loss*
This Vehicle Traveling:		
	010	Over the lane line on left side of travel lane*
	011	Over the lane line on right side of travel lane*
100	012	Over left edge of roadway*
101	013	Over right edge of roadway*
199		Unknown which edge*
102	014	End departure*
	015	Turning Left at intersection*
	016	Turning right at intersection*
	017	Crossing over (passing through) intersection*
	018	This vehicle decelerating*
	019	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 (opposite direction)*
310		From adjacent lane (same direction) - over left lane line*
320		From adjacent lane (same direction) - 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 (ramp/channel)*
497		Encroaching - other*
498		Encroaching - details unknown*
499		This vehicle initiated critical event - details unknown*
Other Motor Vehicle In Lane		

500	050	Other vehicle stopped*
510	051	Traveling in same direction with lower steady speed*
515	052	Traveling in same direction while decelerating* (added in 1995)*
520	053	Traveling in same direction with higher speed*
530	054	Traveling in opposite direction*
	055	In crossover*
	056	Backing*
	059	Unknown travel direction of the other motor vehicle*
Another Vehicle Encroaching Into This Vehicle's Lane		
600		From adjacent lane (opposite direction)*
610	060	From adjacent lane (same direction) - over left lane line*
620	061	From adjacent lane (same direction) - over right lane line*
	062	From opposite direction over left lane line*
	063	From opposite direction over right lane line*
630	064	From parallel/diagonal parking lane*
710	065	Entering intersection - turning into same direction*
711	066	Entering intersection - straight across path*
712		Entering Intersection - turning across path*
713	067	Entering intersection - turning into opposite direction*
729	068	Entering intersection - intended path unknown*
730		Entering driveway, alley access, etc.*
740	070	From driveway, alley access, etc. - turning into same direction*
741	071	From driveway, alley access, etc. - straight across path*
742	072	From driveway, alley access, etc. - turning into opposite direction*
759	073	From driveway, alley access, etc. - intended path unknown*
	074	From entrance to limited access highway*
760		Entering from "Yield" entrance (ramp/channel)*
797		Encroaching -other*
798	078	Encroaching - details unknown*
799		Other vehicle initiated critical event - details unknown*
Pedestrian, Pedacylist Or Other Non-Motorist		
800	080	Pedestrian in roadway*
801	081	Pedestrian approaching roadway*
	082	Pedestrian unknown location
810	083	Pedalcyclist/other non-motorist in roadway*
811	084	Pedalcyclist/other non-motorist approaching roadway*
	085	Pedacyclist or other non-motorist unknown location*
829		Pedestrian/Pedalcyclist/other non-motorist - unknown location*
Object Or Animal		
830	087	Animal in roadway*
831	088	Animal approaching roadway*
	089	Animal unknown location*
840	090	Object in roadway*
841	091	Object approaching roadway*
	092	Object unknown location*
859		Animal or object - unknown location*
Other		
994		More than two vehicles involved*
998	098	Other event / not applicable / no collision*
Unknown		
999	099	Unknown Critical Event*

V27 Corrective Action Attempted*

Definition: Describes the actions taken by the driver of this vehicle in response to the impending danger. Because this variable 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). **(*Note: In 1999 there were extensive additions, deletions and renumbering.)**

SAS Name: (P_CRASH3) [V27NZ. in 2001, 2000, 1999, V27Z. in 1998]

1992 - 1998	1999 - Later	
00		Not Applicable/ No Corrective Action Attempted*
01		Braked/slowed*
05		Backed*
	00	No driver present*
	01	No avoidance maneuver*
	02	Braking (no lockup)*
	03	Braking (lockup)*
	04	Braking (lockup unknown)*
	05	Releasing brakes*
02	06	Steered to left*
03	07	Steered to right*
11	08	Braked and steered to left*
12	09	Braked and steered to right*
04	10	Accelerated*
13	11	Accelerated and steered to left*
14	12	Accelerated and steered to 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 if driver attempted any corrective action

V28 Vehicle Control After Corrective Action*

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 here. **(* Note: In 1995, the name and definition of this variable changed to reflect the control of the vehicle at the time of the critical event and the first harmful event, not as a result of any corrective action.)**

1992 - 1994

SAS Name: (P_CRASH4) [V28NZ.]

00 = No driver present
01 = Vehicle control maintained after corrective action
02 = Vehicle rotated (yawed) clockwise
03 = Vehicle rotated (yawed) counter-clockwise
04 = Vehicle slid/skid longitudinally - no rotation
05 = Vehicle slid/skid laterally - no rotation
09 = 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

V28 Precrash Vehicle Control*

Definition: Assesses the stability of the vehicle during the period immediately prior to this vehicle=s initial involvement in the crash sequence. **(* Note: The name and definition changed in 1995. Also, element A05" *Vehicle slid/skid laterally - No Rotation* was deleted. In 1999 extensive additions and deletions were made)**

SAS Name: (PCRASH4) [V28Z. in 2000, 1999, V28NZ. in 1998]

1995 - 1998	1999 - Later	
00	00	No driver present
01		Vehicle control maintained
02		Vehicle rotated (yawed) clockwise
03		Vehicle rotated (yawed) counter-clockwise
04		Vehicle slid/skid longitudinally - no rotation
09		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
	01	Tracking
	02	Skidding longitudinally - rotation less than 30 degrees
	03	Skidding laterally - clockwise rotation
	04	Skidding laterally - counterclockwise rotation
	07	Other vehicle loss of control (specify)
	09	Precrash stability unknown

V29 Vehicle Path After Corrective Action*

Definition: Identifies the consequences of the corrective action identified in variable *V27* and further reports the results of the vehicle=s precrash stability coded in variable *V28*. The response for this variable must relate directly to the response coded for variable *V27*. **(* Note: In 1995, the name and definition of this variable changed to reflect the control of the vehicle at the time of the critical event and the first harmful event, not as a result of any corrective action.)**

1992 - 1994

SAS Name: (P_CRASH5) [V29Z.]

00 = No corrective action
01 = Vehicle stayed in travel lane where corrective action was initiated
02 = Vehicle stayed on roadway but left travel lane where corrective action was initiated
03 = Vehicle stayed on roadway, not known if left travel lane where corrective action was initiated
04 = Vehicle departed roadway
05 = Corrective action initiated off roadway
94 = More than two vehicles involved
99 = Vehicle path unknown

V29 Precrash 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 variable V28. **(* Note, the name and definition changed in 1995 and some renumbering and the addition of A7" and deletion of A94" occurred in 1999.)**

SAS Name: (PCRASH5) [V29NZ. in 2001, 2000, 1999, V29N. in 1998]

1995 - 1998	1999 - Later	
00	00	No driver present*
01	01	Vehicle stayed in travel lane
02	02	Vehicle stayed on roadway but left travel lane
03	03	Vehicle stayed on roadway, not known if left travel lane
04	04	Vehicle departed roadway
06	05	Vehicle remained off roadway*
07	06	Vehicle returned to roadway*
	07	Entered roadway*
94		More than two vehicles involved
99	99	Vehicle path unknown

V30 Rollover Type*

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. Rollover can occur at any time during the crash. **(* Note: Prior to 1992, information pertaining to rollover was obtained from the variable *Rollover (V15)*. In 1992, this variable was modified to include more specific rollover information.)**

1992 - Later

SAS Name: (ROLLOVER) [V30N.]

00 = No rollover
10 = Untripped rollover
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
99 = Rollover, unknown whether untripped or tripped

In 1992, variables **V31-V36** were added to the vehicle/driver file in the GES. These variables include that portion of the National Governors Association (NGA) data elements which pertain specifically to crashes involving medium/heavy trucks and buses. These elements provide essential information required to analyze motor carrier crashes and are not relevant to other crashes.

V31 Carrier's Identification Number*

Definition: The 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).

1992 - Later

SAS Name: (C_ID_NO) [V31N. in 2001, 2000, 1998, no format in 1999]

0 = Not applicable
1 - 999998 = US DOT or ICC MC number
999999 = Unknown

V32 Number of Axles on Vehicle, Including Trailers*

Definition: Coded for buses and trucks over 4,500 kg GVWR (V5 = 50-64, 66-79)

1992 - Later

SAS Name: (AXLES) [V32N. in 2001, 2000, 1998, no format in 1999]

00 = Not applicable
02 - 20 = (Actual number of axles)
99 = Unknown

V33 Cargo Body Type*

Definition: Coded for buses and trucks over 4,500 kg GVWR (V5 = 50-64, 66-79)

1992 - Later

SAS Name: (CARG_TYP) [V33N.]

00 = Not applicable
01 = Bus
02 = Van/enclosed box
03 = Cargo tank
04 = Flatbed
05 = Dump
06 = Concrete mixer
07 = Auto transporter
08 = Garbage/refuse
98 = Other
99 = Unknown cargo body type

V34 Hazardous Materials Placarded*

Definition: Coded for buses and trucks over 4,500 kg GVWR (V5 = 60, 64, 66-79)

1992 - Later

SAS Name: (HAZ_MAT) [V34N.]

0 = Not applicable
1 = Yes
2 = No
9 = Unknown

V35 Hazardous Materials Placard Number*

Definition: Coded for buses and trucks over 4,500 kg GVWR (V5 = .60, 64, 66-79)

1992 - Later

SAS Name: (HAZM_NO)

0000 = Not applicable
0001 - 9998 = (Actual number)
9999 = Unknown

V36 Hazardous Materials Release*

Definition: Indicates whether or not any hazardous cargo was released from the vehicle cargo tank or compartment. Coded for buses and trucks over 4,500 kg GVWR (V5 = 60, 64, 66-79).

1992 - Later

SAS Name: (HAZ_MA_R) [V36N.]

0 = Not applicable
1 = Yes
2 = No
9 = Unknown

V90 Maximum Injury Severity in Vehicle

Definition: Indicates the single most severe injury level reported for any occupant in this vehicle. This variable is derived by scanning the injury severity for each occupant record in this vehicle. The following order of severity codes was used in 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 Coded in the Crash
From 1999 to 2000 the priority was different: Unknown if Injured had priority over No Injury.

1988 - Later

SAS Name: (MAX_VSEV) [V90Z.]

0 = No Injury
1 = Possible Injury
2 = Non-incapacitating Injury
3 = Incapacitating Injury
4 = Fatal Injury
5 = Injured Severity Unknown
6 = Died Prior
8 = No Person Coded
9 = Unknown

V90I Imputed Maximum Injury Severity in Vehicle

Definition: This imputed variable has the same definition and element values as ***Maximum Injury Severity in Vehicle***, excluding value "9" for unknown maximum injury severity. The variable is derived from the *Hot-deck Imputed Injury Severity (P9)* in the person file.

1988 -Later

SAS Name: (MXVSEV_I) [V90Z.]

V91 Number Injured in Vehicle

Definition: Computed by counting the total number of injured occupants in this vehicle. It is derived by totaling the number of occupant records in which the variable *Injury Severity (P9*) has a value 1 through 5. This count includes fatally injured occupants.

1988 - Later

SAS Name: (NUM_INJV)

1-97 = (Actual Number)
98 = No Person Coded
99 = Unknown if Injured

V91I Imputed Number Injured in Vehicle

Definition: This imputed variable has the same definition and element values as ***Number Injured in Vehicle***, excluding value 98 and 99 for no person coded and unknown injured in vehicle, respectively. This variable is derived from the *Hot-deck Imputed Injury Severity (P9)* variable.

1988 -Later

SAS Name: (NUMINJ_I)

V92 Driver Drinking in Vehicle*

Definition: Reports alcohol use by driver of the vehicle. The variable is derived from the police-reported alcohol involvement variable in the person file. **(* Note: In 1989, this variable was changed from *Alcohol Involved in Vehicle* to *Driver Drinking in Vehicle* to report alcohol use by the driver. In 1988, this variable reported alcohol use by any occupant in the vehicle, including the driver.)**

1988 - Later

SAS Name: (VEH_ALCH) [V92Z.]

1 = Alcohol Involved
2 = No Alcohol
8 = No Person Coded
9 = Unknown

V92I Imputed Driver Drinking in Vehicle

Definition: This imputed variable is derived from the *Hot-deck Imputed Police Reported Alcohol Involvement (P11)* variable in the person file. Element value "9" for unknown driver drinking in vehicle was imputed and element value "8" was added to element value "2".

1988 -Later

SAS Name: (V_ALCH_I) [V92Z.]

D1 Driver Presence

Definition: This variable serves to identify driverless motor vehicles in transport.

1988 - Later

SAS Name: (DR_PRES) [D1N. in 2001, 2000, 1999, D1Z. in 1998]

0 = Unattended Vehicle (Driverless, or No Driver Involved)
1 = Driver Operated Vehicle
2 = Hit and Run
9 = Unknown Driver Presence

D2 Violations Charged*

Definition: Indicates which violations are charged to drivers. Elements "1" or "2", and "4" through "7" are prioritized in decreasing numerical value ("1" or "2" takes precedence over "4", "4" takes precedence over "5", etc.). Element "3" is entered if the driver is cited for alcohol/drugs and speeding. **(*Note: In 1990, element values ›50' and ›97' were added. Also, element value numbering was modified. In 1999 " 01",@ 02" and A03" changed and A96" was added. In 2000, the element A95", No Driver Present, was added.)**

SAS Name: (VIOLATN) [D2NZ. in 2001, 2000, 1999, D2Z. in 1998]

1988 - 1989	1990 - 1998	1999	2000 - Later	
0	00	00	00	None
1	01			Alcohol or Drugs
		01	01	Alcohol*
		02	02	Drugs*
2	02	03	03	Speeding*
3	03			Alcohol or Drugs and Speeding
4	04	04	04	Reckless Driving
5	05	05	05	Driving With a Suspended or Revoked License
6	06	06	06	Failure to Yield Right-of-Way
7	07	07	07	Running a Traffic Signal or Stop Sign
	50	50	50	Hit & Run (and No Information)*
			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

D2I Univariate Imputed Violations Charged

Definition: This imputed variable has the same definition and element values as ***Violations Charged***, excluding value "99" for unknown violations charged. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 -Later

SAS Name: (VLTN_I) [D2NZ. in 2001, 2000, 1999, D2Z. in 1998]

D3 Driver Physical/Mental Impairment*

Definition: Identifies circumstances that may have contributed to the cause of the accident. If two or more circumstances apply, the lowest numerical value is coded. **(* Note: This variable is not available after 1989.)**

1988 - 1989

SAS Name: (DR_IMPMT) [D3Z.]

00 = No Impairments
01 = Drowsy, Sleepy, Asleep, Fatigued
02 = Ill, Blackout
03 = Emotional (e.g., Depression, Angry, Disturbed)
04 = Drugs-Medication
05 = Other Drugs (Marijuana, Cocaine, etc.)
06 = Restricted to Wheelchair
07 = Impaired Due to Previous Injury
08 = Deaf
50 = Hit-and Run Vehicle
97 = Physical/Mental Impairment - No Details
98 = Other Physical/Mental Impairment
99 = Unknown Physical/Mental Condition

D4 Driver's Vision Obscured By*

Definition: Identifies visual circumstances that may have contributed to the cause of the crash. If two or more visual obstructions apply, the lowest numerical value is coded. **(* Note: In 1992, element value A15" *Fog* was added and *Fog* was removed from element value A1". In 1999 A96" Not Reported was added. In 2000, A95" No Driver Present was added.)**

SAS Name: (VIS_OBSC) [D4NZ. in 2001, 2000, 1999, D4N. in 1998]

1988-1991	1992-1999	2000 - Later
00	00	00 = No Obstruction
01		= Rain, Snow, Fog, Smoke, Sand, Dust*
	01	01 = Rain, Snow, Smoke, Sand, Dust*
02	02	02 = Reflected Glare, Bright Sunlight, Headlights
03	03	03 = Curve or Hill
04	04	04 = Building, Billboard, or Other Design Features (Includes Signs, Embankment)
05	05	05 = Trees, Crops, Vegetation
06	06	06 = Moving Vehicle (including load)
07	07	07 = Parked Vehicle
08	08	08 = Splash or Spray of Passing Vehicle
09	09	09 = Inadequate Defrost or Defog System
10	10	10 = Inadequate Lighting System
11	11	11 = Obstruction Interior to Vehicle
12	12	12 = Mirrors
13	13	13 = Head Restraints
14	14	14 = Broken or Improperly Cleaned Windshield
	15	15 = Fog*
50	50	50 = Hit & Run Vehicle (And No Information)
		95 = No Driver Present*
	96	96 = Not Reported* (added in 1999)
97	97	97 = Vision Obscured - No Details
98	98	98 = Other Obstruction
99	99	99 = Unknown Whether Vision was Obstructed

D5 Driver=s Action*

Definition: Indicates if the driver was avoiding, swerving, or sliding due to one of the following. If two or more elements can be describe the driver=s action, the lowest numerical element will be coded. **(*Note: This variable is not available after 1989. It was replaced with *Driver Maneuvered to Avoid (D6)*.)**

1988 - 1989

SAS Name : (DR_ACT) [D5Z.]

0 = Not Avoiding, Swerving, or Sliding
01 = Severe Crosswind
02 = Wind from Passing Truck
03 = slippery or Loose Surface
04 = Tire Blow-out or Flat
05 = Debris or Objects in Road
06 = Ruts, Holes, Bumps in Road
07 = Animals in Road
08 = Vehicle in Road
09 = 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

D6 Driver Maneuvered to Avoid*

Definition: Attempts to identify 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. **(* Note: In 1990, this variable has replaced *Driver=s Action (D5)*. In 1999 A96" Not Reported was added. In 2000 A95" No Driver Present was added.)**

SAS Name: (DRMAN_AV) [D6NZ. in 2001, 2000, 1999, D6N. in 1998]

1990 - 1998	1999	2000 - Later
00	00	00 = Driver Did Not Maneuver To Avoid
01	01	01 = Object In Road
02	02	02 = Poor Road Conditions (Puddle, Ice, Pot Hole, etc.)
03	03	03 = Animal In Road
04	04	04 = Vehicle In Road
05	05	05 = Pedestrian, Pedalcyclist, or Other Non-Motorist In Road
50	50	50 = Hit & Run (And No Information)
		95 = No Driver Present*
	96	96 = Not Reported*
97	97	97 = Avoidance Maneuver - No details
99	99	99 = Unknown If Driver Maneuvered To Avoid

D7 Driver Distracted By*

Definition: Attempts to capture distractions which may have influenced driver performance and contributed to the cause of the crash. The distractions can be both inside the vehicle (internal) and outside the vehicle (external). **(* Note: This variable was added to the vehicle/driver file in 1990. In 1999 extensive modifications were made to the codes including the element A95" No Driver Present.)**

SAS Name: (DR_DSTRD) [D7NZ. in 2001, 2000, 1999, D7N. in 1998]

1990 - 1998		1999 - Later	
00	Not Distracted or N/A	00	Not Distracted*
01	Passengers, Occupants	01	Looked but did not see*
02	Vehicle Instrument Display (Radio, CB, Heating)		
03	Phone	03	By other occupants*
04	Other Internal Distractions	04	By moving object in vehicle*
05	Other Crash ("Rubbernecking")	05	While talking or listening to phone*
06	Other External Distractions	06	While dialing phone*
		07	While adjusting climate control*
		08	While adjusting radio, cassette or CD*
		09	While using other devices integral to vehicle*
		10	While using or reaching for other devices*
		11	Sleepy or fell asleep*
		12	Distracted by outside person or object*
		13	Eating or drinking*
		14	Smoking related*
50	Hit & Run (And No Information)		
		95	No driver present*
		96	Not Reported*
97	Distractions - No Details	97	Inattentive or lost in thought*
		98	Other distraction or inattention*
99	Unknown if Distracted	99	Unknown if Distracted

D8 Driver's Zip Code*

Definition: For the purposes of this variable, a driver is considered to reside at the address listed on the police accident report. **(* Note: This variable was added to the vehicle/driver file in 1992. In 2000 the element 99998 was changed to indicate No Driver Present.)**

SAS Name: (DR_ZIP_C) [D8N. in 2001, 2000, 1998, no format in 1999]

1992-1999	2000 - Later
00000	= Not Resident of U.S. or territories/driver not present 00000 = Not Resident of U.S. or territories*
00001- 99998	00001-99997= (Actual 5-digit zip code)* 99998 = No Driver Present*
99999	99999 = Unknown

D9 Speed Related*

Definition: This variable indicates whether speed is a contributing factor to the cause of the crash. **(*Note: in 2000 "8" No Driver Present was added.)**

SAS Name: (SPEEDREL) [D9N.]

1997 - 1999	**2000 - Later**
0	0 = No
1	1 = Yes
	8 = No Driver Present*
9	9 = Unknown

PERSON FILE

P1 Vehicle Number

Definition: This is the vehicle number for the in-transport vehicle, in or on which, this occupant was riding. All pedestrians and non-motorists have "00" for vehicle number. (This variable is computer assigned.) Possible range "00" through "30". This variable is used to merge the person level data onto the vehicle level records such that people in the crash can be place in a specific vehicle.

1988 - Later

SAS Name: (VEHNO)

P2 Person Number

Definition: Assigned to each occupant, pedestrian, or non-motorists involved in the crash. The assumed driver of a hit-and-run vehicle is coded 01. (This variable is computer assigned.)

1988 - Later

SAS Name: (PERNO)

P3 Person Type

Definition: Indicates the role of the person in the vehicle.

1988 - Later

SAS Name: (PER_TYPE) [P3Z.]

Motorists

1 = Driver of a Motor Vehicle in Transport
2 = Passenger of a Motor Vehicle in Transport
9 = Unknown Occupant Type in a Motor Vehicle in Transport

Non-Motorists - Occupant

3 = Occupant of a Motor Vehicle Not in Transport
4 = Occupant of a Non-Motor Vehicle Transport Device

Non-Motorists - Non-Occupant

5 = Pedestrian
6 = Cyclist (Pedalcyclist)
8 = Other or Unknown Non-Occupant

P4 Seating Position*

Definition: Indicates the location of the occupants in the vehicle. More than one person can be assigned the same seat position, however, this is allowed only when a person is sitting on someone's lap. **(*Note: In 1992, a third seat**

position was added. Element value numbering has been modified.)

SAS Name: (SEAT_POS) [P4N.]

1988 - 1991	**1992 - Later**
00 = Non-motorist	00 = Non-motorist
11 = Front Seat - Left Side (Driver's Side)	11 = Front Seat - Left Side (Driver=s Side)
12 = Front Seat - Middle	12 = Front Seat - Middle
13 = Front Seat - Right Side	13 = Front Seat - Right Side
18 = Front Seat - Other	18 = Front Seat - Other
19 = Front Seat - Unknown	19 = Front Seat - Unknown
21 = Second Seat - Left Side	21 = Second Seat - Left Side
22 = Second Seat - Middle	22 = Second Seat - Middle
23 = Second Seat - Right Side	23 = Second Seat - Right Side
28 = Second Seat - Other	28 = Second Seat - Other
29 = Second Seat - Unknown	29 = Second Seat - Unknown
	31 = Third Seat - Left Side*
	32 = Third Seat - Middle*
	33 = Third Seat - Right Side*
	38 = Third Seat - Other*
	39 = Third Seat - Unknown*
30 = Sleeper Section of Cab (Truck)	50 = Sleeper Section of Cab (Truck)*
40 = Other Passenger in Passenger or Cargo Area	51 = Other Passenger in Passenger or Cargo Area*
50 = Trailing Unit	52 = Trailing Unit *
60 = Riding on Vehicle Exterior	53 = Riding on Vehicle Exterior*
99 = Unknown Seating Position	99 = Unknown Seating Position

P4H Hot-deck Imputed Seating Position

Definition: This imputed variable has the same definition and element values as ***Seating Position,*** excluding 18, 19, 28, 29, 38, 39, and 99 unknown seating position. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 -Later

SAS Name: (SEAT_H) [P4N.]

P5 Safety Equipment Use*

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. **(*Note: This variable was dropped from the Person file in 1990 and was replaced with *Restraint System Use (P15)*.)**

1988 - 1989

SAS Name: (SAF_EQMT) [P5Z.]

00 = Non-motorist
01 = Child Restraint Used
02 = Manual Lap Belt Used
03 = Manual Shoulder Belt Only Used
04 = Manual Shoulder and Lap Belt Used

05 = Automatic Belt Used
06 = Deployed Air Bag
07 = Motorcycle Helmet Used
08 = Other Restraint / Safety Equipment Used
09 = Restraint Used - Type Unknown
10 = None Used
11 = None Available
99 = Unknown Use or Availability

P6 Ejection*

Definition: Refers to occupants being totally or partially thrown from the vehicle as a result of an impact or rollover. **(*Note: In 1990, elements "*Totally Ejected*" and "*Partially Ejected*" were collapsed into one element and element "*Ejected - No Details*" was dropped. In 1995, this variable changed back to the original coding scheme in the 1988 Person File. *"Ejected – Unknown Degree"* was deleted in 1999 but in 2001 it was reinstated. *"Not Applicable"* was added in 2001.)**

SAS Name: (EJECT) [P6N.]

1988-1989	1990-1994	1995-1998	1999-2000	2001-Later	
0	0	0	0	0	Not Ejected
1		1	1	1	Totally Ejected*
	1				Ejected (Partial or total)
2		2	2	2	Partially Ejected*
7		7		7	Ejected – Unknown Degree*
				8	Not Applicable*
9	9	9	9	9	Unknown

P6I Univariate Imputed Ejection

Definition: This imputed variable has the same definition and element values as ***Ejection***, excluding "9" for unknown ejection. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 -Later

SAS Name: (EJECT_I) [P6N.]

P7 Age

Definition: Indicates the person's age at the time of the crash, with respect to the person's last birthday. Prior to 2001 any known age over 97 was coded "97" and Unknown was coded "99." Starting in 2001 all known ages are coded and Unknown is coded "999."

SAS Name: (AGE) [P7Z. in 2001, 2000, 1998, no format in 1999]

1988 – 2000		2001 - Later	
00	= Up to One Year	00	= Up to One Year
01-96	= (Actual Age)	01-998	= (Actual Age)*

97 = 97 Years or Older
99 = Unknown 999 = Unknown*

P7H Hot-deck Imputed Age

Definition: This imputed variable has the same definition and element values as ***Age***, excluding "99" or "999" for unknown age. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 -Later

SAS Name: (AGE_H) [P7Z. in 2001, 2000, 1998, no format in 1999]

P8 Sex

Definition: Indicates the police reported sex for this person

1988 - Later

SAS Name: (SEX) [P8Z.]

1 = Male
2 = Female
9 = Unknown

P8H Hot-deck Imputed Sex

Definition: This imputed variable has the same definition and element values as ***Sex***, excluding "9" for unknown sex. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 -Later

SAS Name: (SEX_H) [P8Z.]

P9 Injury Severity

Definition: Indicates the police reported injury severity for this person.

1988 - Later

SAS Name: (INJ_SEV) [P9Z.]

0 = No Injury (O)
1 = Possible Injury (C)
2 = Non-incapacitating Injury (B)
3 = Incapacitating Injury (A)
4 = Fatal Injury (K)
5 = Injured, Severity Unknown (U)
6 = Died Prior to Crash
9 = Unknown if Injured

P9H Hot-deck Imputed Injury Severity

Definition: This imputed variable has the same definition and element values as ***Injury Severity***, excluding value "9" for unknown if injured. (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 -Later

SAS Name: (INJSEV_H) [P9Z.]

P10 Taken to Hospital or Treatment Facility

Definition: Indicates whether persons involved in the crash were transported to a hospital or treatment facility.

1988 - Later

SAS Name: (HOSPITAL) [P10Z.]

0 = No
1 = Yes
9 = Unknown

P11 Police-Reported Alcohol Involvement*

Definition: Indicates that the person (drivers of in-transport motor vehicles and non-motorists only) had consumed an alcoholic beverage. This variable 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 <u>not</u>** by itself constitute involvement. **(*Note: In 1990, the element A7@ was added and in 1999 some renumbering occurred and A7" was deleted.)**

SAS Name: (PER_ALCH) [P11NZ. in 2001, 2000, 1999, P11N. in 1998]

1988 - 1989	1990 - 1998	1999 - Later	
0		1	No (Alcohol Not Involved)*
	0		Alcohol Not Involved or N/A
		0	Not Applicable*
1			Yes (Alcohol Involved)
	1	2	Alcohol Involved*
	7		Alcohol and/or Drugs Involved*
8	8	8	Not Reported
9	9	9	Unknown (Police-Reported)

P11H Hot-deck Imputed Police-Reported Alcohol Involvement*

Definition: The definition and element values are the same as ***Police-Reported Alcohol Involvement***. From 1988 - 93, the element value "9" for unknown (police-reported) was imputed and element value A8" was added to element value A0". Beginning in 1994, the element values A8" and A9" were imputed. **(*Note: The methodology to create the hot-deck imputed police-reported alcohol involvement variable was modified slightly in 1994. Therefore, the SAS name of the imputed variable has changed.)** (See ***Understanding the GES Imputation Process*** section of this manual.)

1988 - 1993

SAS Name: (ALCH_H) [P11Z.]

1994 -Later

SAS Name: (PERALC_H) [P11NZ.]

P12 Non-motorist=s Physical/Mental Condition*

Definition: Indicates the physical/mental condition for non-motorists. If the person is a driver or occupant of a motor vehicle in transport, they are coded as A00". When two or more circumstances apply, the element of lowest numerical value is coded. **(*Note: In 1989, element value A50" was deleted. In 1990, this variable was dropped and replaced with *Person=s Physical Impairment (P18)*.)**

1988 - 1989

SAS Name: (PHY_COND) [P12Z.]

00 = Not Applicable - Driver or Occupant of Motor Vehicle in Transport
No Physical/Mental Conditions - Non-occupant
01 = Ill, Blackout
02 = Emotional (e.g. Depression, Angry, Disturbed)
03 = Drugs - Medication
04 = Other Drugs (e.g. Cocaine, Marijuana, etc.)
05 = Walking with Cane or Crutches
06 = Paraplegic or Restricted to Wheelchair
07 = Impaired Due to Previous Injury
08 = Deaf
09 = Blind
50 = No Known Physical/Mental Impairment*
97 = Physical/Mental Impairment - No Details
98 = Other Physical/Mental Impairment
99 = Unknown Physical/Mental Condition

P13 Non-motorist Location

Definition: Reports the location of non-motorists at the time of impact. Intersection locations are coded only if non-motorists were struck in the area formed by a junction of two or more trafficways. Non-intersection location may include non-motorists struck in a junction of a driveway/alley access and a named trafficway. Non-motorists who are occupants of motor vehicles not in transport are coded with respect to the location of the vehicle.

1988 - Later

SAS Name: (LOCATN) [P13Z.]

00 = Not Applicable - Driver or Occupant of M.V. in Transport
01 = Intersection - In Crosswalk
02 = Intersection - On Roadway
08 = Intersection - Other
09 = 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
98 = Other Location
99 = Unknown Location

P14 Person=s Action*

Definition: Person=s actions are indicated for everyone involved in the crash except the driver of a motor vehicle in transport. **(*Note: This variable was dropped from the Person file in 1990 and was replaced with the variable *Non-motorist=s Action (P19)*.)**

1988 - 1989

SAS Name: (ACTION) [P14Z.]

00 = Not Applicable - Driver or
No Action - Everyone except a driver

Non-motorist Vehicle Operator:
01 = Failing to have Lights on When Required
02 = Operating without Required Equipment
03 = Improper or Erratic Lane Changing
04 = Failure to Keep in Proper Lane or Running Off Road
05 = Making Improper Entry to or Exit from Trafficway
06 = Operating the Vehicle in Erratic, Reckless, Negligent Manner
07 = Failure of Yield Right of Way
08 = Failure to Obey Traffic Signs/Control Devices/Officers, Failure to Observe Safety Zone
09 = 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

P15 Restraint System Use *

Definition: Encodes what was documented on the PAR regarding occupant use of available vehicle restraints (i.e., belts child safety seat, helmet, or automatic restraints). There is no differentiation here regarding the type of restraint (i.e. manual or automatic). This is accomplished by using variable *Restraint Type (P16)*. **(*Note: This variable replaced *Safety Equipment Use (P5)* in 1990. In 1992, element values A4" and A5" were deleted. In 1995, element values were modified.)**

SAS Name: (REST_SYS) [P15N.]

1990 - 1991

0 = None Used or Not Applicable
1 = Lap/Shoulder Belt
2 = Lap Belt
3 = Shoulder Belt
4 = Air Bag Deployed
5 = Air Bag Deployed and Lap/Shoulder Belt
6 = Child Safety Seat
7 = Motorcycle Helmet
8 = Restraint Used - Specifics Unknown or Other
9 = Unknown if Used

1992 - 1994

0 = None Used or Not Applicable
1 = Lap/Shoulder Belt
2 = Lap Belt
3 = Shoulder Belt

6 = Child Safety Seat
7 = Motorcycle Helmet
8 = Restraint Used - Specifics Unknown or Other
9 = Unknown if Used

1995 - Later

0 = None Used or Not Applicable
1 = Lap/Shoulder Belt
2 = Lap Belt
3 = Shoulder Belt
5 = Motorcycle Helmet*
6 = Child Safety Seat
7 = None Available*
8 = Restraint Used - Specifics Unknown or Other
9 = Unknown if Used

P16 Restraint Type *

Definition: Provides additional information about the restraint system coded in the variable *Restraint System Use (P15*), distinguishing between automatic and manual type devices used. **(*Note: This variable was added to the Person File in 1990 and deleted in 1999.)**

1990 - 1998

SAS Name: (REST_TYP) [P16N.]

0 = None Available or Not Applicable
1 = Automatic (Passive)
2 = Manual (Active)
9 = Unknown Type

P17 Police-Reported Drug Involvement*

Definition: Indicates that the person (drives of in-transport motor vehicles and non-motorists only) had taken drugs. Involvement is not an indication that drugs were in any way cause of the crash, even though it may have been. If PAR indicates that drugs were found in the vehicle, then this information **does not** by itself constitute involvement. **(*Note: This variable was added to the Person File in 1990. In 1999 some renumbering occurred and A7" was deleted. In 2000 the codes for "not applicable" and "drugs not involved" were reversed.)**

SAS Name: (PER_DRUG) [P17NZ. in 2001, 2000, 1999, P17N. in 1998]

1990 – 1998	1999	2000 - Later	
0			Drugs Not Involved or N/A
	1	0	Not Applicable*
1	0	1	Drugs Not Involved*
	2	2	Drugs Involved*
7			Drugs and/or Alcohol Involved
8	8	8	Not Reported
9	9	9	Unknown (Police-Reported)

P18 Person's Physical Impairment*

Definition: Attempts to identify physical impairments for all drivers and non-motorists which may have contributed to the cause of the crash. These impairments can appear anywhere on the PAR-- in the narrative section, in the violations section, in a column entitled "Contributing Factors" or "Driver Action", etc. **(*Note: In 1990, this variable has replaced *Non-Motorist=s Physical/Mental Condition (P12)* in the Person File and *Driver Physical/Mental Impairment (D3)* in the Vehicle File.)**

1990 - Later

SAS Name: (IMPAIRMT) [P18N.]

00 = None
01 = Ill, Blackout
02 = Drowsy, Sleepy, Fell Asleep, Fatigued
03 = Requires Cane or Crutches
04 = Paraplegic or Restricted to Wheelchair
05 = Impaired Due to Previous Injury
06 = Deaf
07 = Blind
97 = Physical Impairment - No Details
98 = Other Physical Impairments
99 = Unknown if Physically Impaired

P19 Non-Motorist Action*

Definition: Attempts to identify circumstances that may have contributed to the cause of the crash. These circumstances ("actions") can appear anywhere on the PAR--in the narrative section, in the violations section, in a column entitled "Contributing Factors" or "Driver Action", etc. **(* Note: In 1990, this variable**

replaced *Person=s Action (P14)*. Element value A20", Interfering with Driver, was deleted. In 1992, element value A23" was deleted and values A27", A28", and A29" were added.)

1990 - 1991

SAS Name: (ACTION) [P19N.]

00 = No Action

Non-Motorist Vehicle Operator:
01 = Failing to Have Lights on When Required
02 = Operating without Required Equipment
03 = Improper or Erratic Lane Changing
04 = Failure to Keep in Proper Lane or Running Off Road
05 = Making Improper Entry to or Exit from Trafficway
06 = Operating the Vehicle in Erratic, Reckless, Negligent Manner
07 = Failure to Yield Right of Way
08 = Failure to Obey Traffic Signs/Control Devices/Officers, Failure to Observe Safety Zone
09 = 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)
23 = Walking/Riding with or Against Traffic, Playing, Working, Sitting, Lying, Standing in Roadway
24 = Inattentive (Talking, Eating, etc.)
25 = Jogging
26 = Non-Motorist Pushing Vehicle
98 = Other Action
99 = Unknown Action

1992 - Later

SAS Name: (ACTION) [P19N.]

00 = No Action
98 = Other Action
99 = Unknown Action

Non-Motorist Vehicle Operator:
01 = Failing to Have Lights on When Required
02 = Operating without Required Equipment
03 = Improper or Erratic Lane Changing
04 = Failure to Keep in Proper Lane or Running Off Road
05 = Making Improper Entry to or Exit from Trafficway
06 = Operating the Vehicle in Erratic, Reckless, Negligent Manner
07 = Failure to Yield Right of Way
08 = Failure to Obey Traffic Signs/Control Devices/Officers, Failure to Observe Safety Zone
09 = 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*

P20 Non-Motorist Safety Equipment Use*

Definition: Attempts to identify safety equipment worn or carried by the non-motorist [Person Type (P3) = "4" (Occupant of a Non-Motor Vehicle Transport Device), "5" (Pedestrian, "6" (Pedalcyclist) or "8" (Other or Unknown)]. **(* Note: This variable was added to the Person File in 1990. In 1999 None Used and N/A were separated and some renumbering occurred.**)

SAS Name: (SAF_EQMT) [P20NZ. in 2001, 2000, 1999, P20N. in 1998]

1990 - 1998	1999 - Later	
0		None Used or N/A
	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

P21 Air Bag Availability/Function*

Definition: Seeks to capture whether the vehicle was equipped with an air bag (in the seat position of this occupant) and, if so; did it deploy. **(*Note: This variable was added to the Person File in 1992. In 2000 the element A8" Not Applicable was added.)**

SAS Name: (AIRBAG) [P21N.]

1992 - 1999	2000 - Later	
0	0	No Air Bag Available
1	1	Deployed
2	2	Non-Deployed
	8	Not Applicable*
9	9	Unknown if Available or Deployed

P22 Non-Motorist Striking Vehicle Number*

Definition: This variable identifies the vehicle which made contact with the non-motorist being coded. The value entered must match the vehicle number of the striking vehicle. (*** Note: This variable was added to the Person File in 1994**.)

1994 - Later

SAS Name: (STR_VEH)

0 = Not Applicable, Occupant of Vehicle

1 – 30 = Assigned Vehicle Number
99 = Unknown

APPENDICES

Appendix A: Make/Model Designations

Appendix B: V23 Accident Type Diagram

Appendix C: Summary Statistics

Appendix D: Generalized Estimated Sampling Errors

Appendix E: Analytical Data Classification of Select GES Variables

APPENDIX A: Make/Model Designations

V3 Vehicle Make (MAKE)

Indicates the make of a vehicle in transport.

Passenger Vehicles (01-69)

01 American Motors
02 Jeep (includes Kaiser-Jeep)
03 AM General
06 Chrysler
07 Dodge
08 Imperial
09 Plymouth
10 Eagle
12 Ford
13 Lincoln
14 Mercury
18 Buick
19 Cadillac
20 Chevrolet
21 Oldsmobile
22 Pontiac
23 GMC
24 Saturn
25 Grumman
29 Other domestic
- 001 Studebaker/Avanti
- 002 Checker
- 398 Other make (i.e., Desoto, Excaliber, Stutz, Hudson, Packard)
- 399 Unknown make

30 Volkswagen
31 Alfa Romeo
32 Audi
33 Austin/Austin Healey
34 BMW
35 Nissan/Datsun
36 Fiat
37 Honda
38 Isuzu
39 Jaguar
40 Lancia
41 Mazda
42 Mercedes Benz
43 MG
44 Peugeot
45 Porsche
46 Renault
47 Saab
48 Subaru
49 Toyota
50 Triumph
51 Volvo
52 Mitsubishi
53 Suzuki
54 Acura
55 Hyundai
56 Merkur
57 Yugo
58 Infiniti
59 Lexus
60 Daihatsu
61 Sterling
62 Land Rover
63 Kia
64 Daewoo
69 Other foreign

Motorcycles (70-79)

70 BSA
71 Ducati
72 Harley-Davidson
73 Kawasaki
74 Moto-Guzzi
75 Norton
76 Yamaha
78 All mopeds other than those above
79 Other motorcycle

Also see:
- 34 BMW
- 37 Honda
- 44 Peugeot
- 50 Triumph
- 53 Suzuki

Trucks and Buses (80-98)

80 Brockway

Also see:
- 03 AM General

81 Diamond Reo/Reo
82 Freightliner/White
83 FWD
84 International Harvester/Navistar
85 Kenworth
86 Mack
87 Peterbilt
88 Iveco/Magirus
98 Other:
- 801 Autocar
- 802 Auto-Union-DKW
- 803 Divco
- 804 Western Star
- 805 Oshkosh
- 806 Hino
- 807 Scania
- 850 Truck based motor-home
- 898 Other truck (e.g., Ward LaFrance, Marmon)
- 902 NeoPlan (bus)
- 950 Bus-based motor-home
- 988 Other bus
- 989 Unknown bus
- 998 Other vehicle (i.e., farm vehicle, go-cart)

99 Unknown

07 Dodge
12 Ford
20 Chevrolet
23 GMC
25 Grumman
35 Nissan/Datsun
36 Fiat
38 Isuzu
42 Mercedes Benz
51 Volvo
52 Mitsubishi

54 ACURA

MODEL	INCLUDES	YEAR	MODEL CODE
INTEGRA	RS, LS, GS	1986-1998	31
LEGEND		1986-1995	32
RL		1996-2000	32
NSX	NTX-T	1991-2000	33
VIGOR		1992-1994	34
CL	Coupe	1996-1998	35
TL		1996-1998	35
RSX			38
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
		1996-1998	401
MDX			421
OTHER LIGHT TRUCK			498
UNKNOWN TYPE LIGHT TRUCK			499
UNKNOWN VEHICLE			999

31 ALFA ROMEO

MODEL	INCLUDES	YEAR	MODEL CODE
SPIDER	All roadsters, Veloce, 1750/2000 roadsters	1933-1994	31
SPORTS SEDAN	All 4 door sedans; Giulia, Super, Berlina, Alfetta, Milano, 1750/2000 sedans	1933-1989	32
SPRINT SPECIAL	All 2-door coupes; Alfetta GT, 1750/2000 sedans	1933-1980	33
GTV-6		1981-1986	34
164		1990-1995	35
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

SLX AM GENERAL

MODEL	INCLUDES	YEAR	MODEL CODE
DISPATCHER	Post Office	1965-1994	401
HUMMER		1993-1998	421
DISPATCHER	DJ series Post Office Van	1965-1991	466
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY TRUCK	Military off-road	1965-1994	884
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
BUS - REAR ENGINE/FLAT FRONT	Transit	1965-1994	983
OTHER BUS			988
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

MODEL	INCLUDES	YEAR	MODEL CODE
RAMBLER/AMERICAN	Rogue, Scambler, 220, 440	1954-1969	1
REBEL/MATADOR	Barcelona, Classic, Brougham, 550, 660, 770, Marlin: WB=114"	1900-1998	2
REBEL/MATADOR	Barcelona, Classic, Brougham, 550, 660, 770, Marlin: WB=115"	1964-1978	2
REBEL/MATADOR	Matador: WB=115"	1900-1978	2
REBEL/MATADOR	Matador: WB=114"	1958-1974	2
AMBASSADOR	Brougham, DPL, SST, DL, Limited, 880. 990	1900-1998	3
PACER	Limited, DL	1975-1980	4
AMX	2-seater only	1968-1970	5
JAVELIN	AMX	1971-1974	6
JAVELIN	SST	1900-1998	6
HORNET/CONCORD	AMX	1975-1978	7
HORNET/CONCORD	Sportabout, limited, DL, SC-360, SST	1900-1998	7
SPIRIT/GREMLIN	Limited, DL. Custom,. X	1900-1998	8
SPIRIT/GREMLIN	AMX	1979-1998	8
SPIRIT/GREMLIN	GT	1983-1998	8
EAGLE	Concord based	1980-1987	9
EAGLE SX-4	Spirit/Gremilin based	1981-1984	10
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

6901 ASTON MARTIN

MODEL	INCLUDES	YEAR	MODEL CODE
LAGONDA		1968-2000	31
OTHER AUTOMOBILE			31
SALOON		1968-2000	31
UNKNOWN AUTOMOBILE			31
VANTAGE		1968-2000	31
VOLANTE		1968-2000	31

32 AUDI

MODEL	INCLUDES	YEAR	MODEL CODE
SUPER 90		1970-1972	31
100/A6	S, LS, GL	1970-1977	32
100/A6	Quattro	1989-1994	32
100/A6	A6	1995-1998	32
FOX		1974-1979	33
4000	Quattro, Coupe GT, CS, S	1980-1988	34
5000	Quattro, CS, S, Turbo	1978-1988	35
80/90	Quattro-90	1988-1995	36
80/90	Quattro-80	1988-1992	36
200	Quattro	1989-1992	37
V8 QUATTRO		1990-1994	38
COUPE QUATTRO		1990-1993	39
S4/S6	S6	1995-1998	40

S4/S6	S4	1993-1994	40
CABRIOLET		1994-1998	41
A4		1996-1998	42
A3		1996-1998	43
A8		1996-1998	44
TT		2000-2000	45
S8			46
ALLROAD			47
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

33 AUSTIN / AUSTIN HEALEY

MODEL	INCLUDES	YEAR	MODEL CODE
MARINA	GT	1900-1998	31
AMERICA		1900-1998	32
HEALEY SPRITE		1900-1998	33
HEALY 3000	Healy 100	1900-1998	34
MINI		1900-1998	35
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

9801 AUTOCAR

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			801
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			801
MEDIUM/HEAVY - COE/HIGH ENTRY			801
MEDIUM/HEAVY - COE/LOW ENTRY			801
MEDIUM/HEAVY - OTHER			801
MEDIUM/HEAVY - UNKOWN ENGINE LOCATION			801
MEDIUM/HEAVY BASED MOTORHOME			801
MEDIUM/HEAVY - COE/LOW ENTRY			802

9802 AUTO-UNION-DKW

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			802
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			802
MEDIUM/HEAVY - COE/HIGH ENTRY			802
MEDIUM/HEAVY - COE/LOW ENTRY			802
MEDIUM/HEAVY - OTHER			802

MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			802
MEDIUM/HEAVY BASED MOTORHOME			802

2902 AVANTI

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			1
UNKNOWN AUTOMOBILE			1

6918 BERTONE

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			52
UNKNOWN AUTOMOBILE			52

34 BMW

MODEL	INCLUDES	YEAR	MODEL CODE
1600, 2002	Tii, 1800i, 200CS	1900-1976	31
COUPE	2800CS, 3.0CS	1969-1976	32
BAVARIA SEDAN	2500, 2800	1969-1974	33
3 SERIES	318i, 318ti, 320i, 325e, 325es, 325i, 328, M3	1977-1998	34
5 SERIES	524i, 258i, 530i, 533i, 535i, TD	1975-1998	35
5 SERIES	525i	1993-1998	35
6 SERIES	630, 633, 635, csi, M6	1977-1998	36
7 SERIES	733i, 435i, L7, 740i, 750iL	1978-1998	37
8 SERIES	850, 840ci	1990-1997	38
Z3	M coupe	1996-1998	39
Z8			40
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
X5	4WD		401
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
UNKNOWN MOTORED CYCLE			799
UNKNOWN VEHICLE			999

6902 BRICKLIN

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			32

UNKNOWN AUTOMOBILE	32

80 BROCKWAY

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY TRUCK BASED MOTORHOME		1900-1998	850
MEDIUM/HEAVY - CBE		1900-1998	881
MEDIUM/HEAVE - COE/LOW ENTRY		1900-1998	882
MEDIUM/HEAVY - COE HIGH ENTRY		1900-1998	883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION		1900-1998	884
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN		1900-1998	890
MEDIUM/HEAVY - OTHER		1900-1998	898
UNKNOWN MEDIUM/HEAVY TRUCK			899

70 BSA

MODEL	INCLUDES	YEAR	MODEL CODE
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

18 BUICK

MODEL	INCLUDES	YEAR	MODEL CODE
SPECIAL/SKYLARK (thru 1972)	GS, GS-350, GS-400, GS-455, GS California, Sport wagon, Custom	1900-1972	1
LESABRE/CENTURION/WILDCAT	Wagon, Luxus, Invicta, Custom, Limited	1977-1985	2
LESABRE/CENTURION/WILDCAT	T-Type	1986-1998	2
LESABRE/CENTURION/WILDCAT	Wagon, Luxus, Invicta, Custom, Limited	1900-1976	2
ELECTRA/ELECTRA 225/PARK AVENUE (91-ON)	Limited, Park Avenue, Ultra	1900-1976	3
ELECTRA/ELECTRA 225/PARK AVENUE (91-ON)	Limited, Park Avenue, Ultra	1977-1984	3
ELECTRA/ELECTRA 225/PARK AVENUE (91-ON)	LImited, Park Avenue, Ultra	1985-1998	3
ROADMASTER	Estate Wagon, Limited	1991-1996	4
RIVIERA	S-Type, T-Type	1994-1998	5
RIVIERA	S-Type, T-Type	1986-1993	5
RIVIERA	S-Type, T-Type	1966-1976	5
RIVIERA	S-Type, T-Type	1977-1985	5
RIVIERA	S-Type, T-Type	1963-1965	5
CENTURY	Luxus, Custom	1900-1977	7

CENTURY	Custom, FWD	1982-1998	7
CENTURY	Custom	1978-1981	7
CENTURY	Luxus, Regal	1972-1977	7
APOLLO/SKYLARK (73-76)	Skylark	1973-1976	8
REGAL	Turbo, Luxux, Gran National, GNX, T-Type	1978-1988	10
SKYHAWK	S-Type, Roadhawk, T-Type, GT	1975-1981	12
SKYHAWK		1982-1998	12
SKYLARK (76-85)	S/R, S, Limited, Sport, T-Type	1980-1985	15
SKYLARK (76-85)	S/R, S, Limited, Sprot, T-Type	1976-1979	15
SOMERSET(85-87)/SKYLARK(86-ON)	Skylark	1986-1999	18
SOMERSET(85-87)/SKYLARK(86-ON)	Somerset, GS Regal, Custom, Limited, T-Type	1985-1987	18
REGAL (FWD)	Limited	1988-1998	20
REATTA		1988-1991	21
OPEL KADETT		1900-1975	31
OPEL MANTA	1900, Luxus, Rallye, Sports Coupe	1900-1975	32
OPEL GT		1900-1975	33
OPEL ISUZU	Deluxe, Sport	1976-1979	34
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
RENDEZVOUS			401
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

19 CADILLAC

MODEL	INCLUDES	YEAR	MODEL CODE
DEVILLE/FLEETWOOD	Coupe de Ville, Sedan de Ville, Fleetwood Brougham, Fleetwood 60 Special, d'Elegance	1900-1976	3
DEVILLE/FLEETWOOD	Concourse	1994-1998	3
DEVILLE/FLEETWOOD	FWD d'Elegance	1985-1998	3
DEVILLE/FLEETWOOD	RWD--Coupe de Ville, Sedan de Ville, Fleetwood Brougham, Fleetwood 60 Special, d'Elegance	1977-1996	3
LIMOUSINE	Fleetwood 75, Formal, DeVille-Based	1900-1998	4
ELDORADO	Biarritz, El-doro, Touring Coupe	1986-1998	5
ELDORADO	Biarritz, El-doro, Touring Coupe	1900-1978	5
ELDORADO	Biarritz, El-doro, Touring Coupe	1979-1985	5
COMMERCIAL SERIES	Ambulance/Hearse	1900-1998	6
ALLANTE		1987-1998	9
SEVILLE	STS	1986-1998	14
SEVILLE	Elegante	1976-1985	14
CIMARRON	D'oro	1982-1988	16
CATERA	RWD	1997-1998	17
CTS			18
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
ESCALADE			421
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			498
UNKNOWN VEHICLE			999

2903 CHECKER

MODEL	INCLUDES	YEAR	MODEL CODE
AEROBUS		1900-1982	2
MARATHON		1900-1982	2
OTHER AUTOMOBILE		1900-1982	2
SUPERBA		1900-1982	2
TAXI		1900-1982	2
UNKNOWN AUTOMOBILE		1900-1982	2

20 CHEVROLET

MODEL	INCLUDES	YEAR	MODEL CODE
CHEVELLE/MALIBU (83-)	Classic, Concours, S-3, Laguna, Nomad, 300, Greenbriar, Estate, Deluxe, SS 396/454	1978-1983	1
CHEVELLE/MALIBU (83-)	Classic, Concours, S-3, Laguna, Nomad, 300, Greenbriar, Estate, Deluxe, SS 396/454	1964-1977	1
IMPALA/CAPRICE	St. Wgn. Biscayne, Belair, Super sport, Classic Classic Brougham, Townsman	1900-1976	2
IMPALA/CAPRICE	Brookwood, Kingswood	1977-1998	2
IMPALA/CAPRICE	Biscayne, Belair, Super sport, Classic Classic Brougham, Townsman	1900-1976	2
CORVETTE	Stingray	1963-1998	4
CORVETTE	Stingray	1953-1962	4
CORVAIR	Monza, Corsa, 500, Yenko	1960-1969	6
EL CAMINO	Royal Knight, SS	1959-1960	7
EL CAMINO	Royal Knight, SS	1964-1977	7
EL CAMINO	Royal Knight, SS	1978-1998	7
NOVA (-79)	Chevy II, LN, LE, Concours SS-350/396, Rally	1962-1979	8
CAMARO	SS, RS, LT, Berlinetta, IROC-Z, Z28	1967-1998	9
MONTE CARLO ('70-'88) (RWD ONLY)	LS, SS, Aerocoupe, Landau	1978-1988	10
MONTE CARLO ('70-'88) (RWD ONLY)	LS, SS, Aerocoupe, Landau	1970-1977	10
VEGA	GT, Cosworth	1971-1977	11
MONZA	Spyder, 2+2, Towne Coupe	1975-1980	12
CHEVETTE	S, Scooter, CS-4 door	1976-1987	13
CHEVETTE	S, Scooter, CS--2 door	1976-1987	13
CITATION	X-11, Citation II	1980-1985	15
CAVALIER	CS, RS, Z24, LS	1982-1998	16
CELEBRITY	CS, Eurosport, VR	1982-1998	17
BERETTA/CORSICA	GT	1988-1998	19
LUMINA	Z-34, Euro	1990-1998	20
SPECTRUM		1985-1998	31
NOVA/GEO PRIZM	CL, NUMMI-built vehicle	1985-1998	32
SPRINT/GEO SPRINT		1985-1998	33
GEO METRO	LSi, Xfi	1989-1998	34
GEO STORM	Gsi	1985-1998	35
MONTE CARLO (1995+) (FWD ONLY)	Z34	1995-1998	36
MALIBU (1997+)		1997-1998	37
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
S-10 BLAZER, BLAZER	S-10 p/u baseed	1983-1994	401
S-10 BLAZER, BLAZER	Blazer	1995-1998	401
GEO TRACKER	Lsi	1989-1998	402

	K-series, fullsized p/u based	1969-1994	421
FULLSIZE BLAZER (K, Tahoe)	Tahoe	1995-1998	421
SUBURBAN	FULLSIZE BLAZER (K, Tahoe)	1900-1998	431
ASTRO VAN	Minivan	1985-1998	441
LUMINA APV/VENTURE	Venture,	1990-1998	442
G-SERIES VAN	Beauville, Chevy Van, Sport Van, G10-G30, Express	1900-1998	461
P-SERIES VAN		1900-1998	466
VAN DERIVATIVE	Hi-cube, Parcel Van	1900-1998	470
S-10/T-10	4 X 4	1982-1998	471
LUV	Imported pickup	1900-1998	472
C, K, R, V-SERIES PICKUP	C10-C30, K10-K30, R10-R30, V10-V30, Silverado, C-K 1500, 2500, 3500	1900-1998	481
AVALANCHE			482
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY CBE	C50/60/65; M60/65; H70/80/90; J70/80/90; Bison 90; all other CBE	1900-1998	881
MEDIUM/HEAVY COE LOW ENTRY	T60/65 - all other COE low entry	1900-1998	882
MEDIUM/HEAVY COE HIGH ENTRY	Titan 90, all other COE hight entry	1900-1998	883
MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY; UNKNOWN ENGINE LOCAITON	MKIII, 1500	1900-1979	890
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
BUS	S-60 series	1900-1998	981
OTHER BUS			988
UNKNOWN BUS TYPE			989
OTHER VEHICLE			998
UNKNOWN VEHICLE			999

6 CHRYSLER

MODEL	INCLUDES	YEAR	MODEL CODE
CORDOBA	Crown, 300, LS	1975-1983	9
NEW YORKER FIFTH AVENUE ('89)			10
NEWPORT			10
RAMPAGE 2.2 (CAR BASED PICKUP)	GT, Sport	1982-1984	13
NEW YORKER ('83-'90)			14
NEW YORKER SALON			14
NEW YORKER/E CLASS/IMPERIAL/5TH AVENUE	Imperial	1990-1993	14
NEW YORKER/E CLASS/IMPERIAL/5TH AVENUE	FWD vehicles, Turbo	1983-1993	14
RWD ONLY-NEW YORKER/NEWPORT/5TH	300	1900-1971	14
RWD ONLY-NEW YORKER/NEWPORT/5TH	Custom, Royal, Brougham, Town and Country	1900-1978	14
RWD ONLY-NEW YORKER/NEWPORT/5TH	Custom, Royal, Brougham, Town and Country	1979-1981	14

	Custom, Royal, Brougham, Town and Country	1982-1989	14
LASER	Turbo, XE, XT	1984-1986	15
LEBARON	FWD except GTS or GTC Sport Coupe	1982-1998	16
LEBARON	Medallion, Salon	1977-1981	16
LEBARON GTS/GTC	GTC-Sport Coupe	1987-1998	17
LEBARON GTS/GTC	GTS-Turbo	1985-1998	17
INTREPID (CANADIAN)	RWD ONLY-NEW		18
TC (MASERATI SPORT)	Turbo Convertible	1988-1991	31
CONQUEST	TSI, Turbo	1987-1989	35
CONCORDE	YORKER/NEWPORT/5TH	1993-1998	41
LHS	New Yorker	1994-1998	42
SEBRING		1995-1998	43
CIRRUS		1995-1998	44
300M		1999-2000	51
PT CRUISER			52
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
TOWN AND COUNTRY	Minivan	1990-1998	441
VOYAGER			442
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

6903 CITROEN

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			33
UNKNOWN AUTOMOBILE			33

2909 CONSULIER

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE		1900-1998	398
UNKNOWN AUTOMOBILE		1900-1998	398

20212 DAEWOO

MODEL	INCLUDES	YEAR	MODEL CODE
LANOS		1999-2000	31
NUBIRA			32
LEGANZA		1999-2000	33
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

60 DAIHATSU

MODEL	INCLUDES	YEAR	MODEL CODE
CHARADE		1990-1992	31
OTHER AUTOMOBILE			398

			399
ROCKY	UNKNOWN AUTOMOBILE	1990-1992	401
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

6904 DELOREAN

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			34
UNKNOWN AUTOMOBILE			34

2904 DESOTO

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE		1900-1998	398
UNKNOWN AUTOMOBILE		1900-1998	398

6916 DESTA

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			48
UNKNOWN AUTOMOBILE			48

81 DIAMOND REO/REO

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY TRUCK BASED MOTORHOME		1900-1998	850
MEDIUM/HEAVY - CBE		1900-1998	881
MEDIUM/HEAVY - COE/LOW ENTRY		1900-1998	882
MEDIUM/HEAVY - COE/HIGH ENTRY		1900-1998	883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION		1900-1998	884
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			890
MEDIUM/HEAVY - OTHER		1900-1998	898
UNKNOWN MEDIUM/HEAVY TRUCK			899

9803 DIVCO

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			803
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			803
MEDIUM/HEAVY - COE/HIGH ENTRY			803
MEDIUM/HEAVY - COE/LOW ENTRY			803

			803
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION	MEDIUM/HEAVY - OTHER		803
MEDIUM/HEAVY BASED MOTORHOME			803

7 DODGE

MODEL	INCLUDES	YEAR	MODEL CODE
DART	Custom, Swinger, Sport, GT, Demon, Special, Special Edition, 170, 270, 340, 360: WB=111"	1962-1976	1
DART	Custom, Swinger, Sport, GT, Demon, Special, Special Edition, 170, 270, 340, 360: WB=108"	1962-1976	1
CORONET/CHARGER/MAGNUM	Brougham, Custom, Superbee, Crestwood, Deluxe, XE, R/t, SE 440, 500, Police	1900-1979	2
CORONET/CHARGER/MAGNUM	Charger	1900-1978	2
POLARA/MONACO/ROYAL MONACO	Custom, Special, Crestwood, Brougham, Police Taxi	1900-1976	3
POLARA/MONACO/ROYAL MONACO	Custom, Special, Crestwood, Brougham, Police Taxi	1977-1978	3
VIPER	RT/10, GTS	1992-1998	4
CHALLENGER	R/T, T/A, Rallye	1970-1974	5
ASPEN	Custom, Special Edition, Police, R/T, Sport: WB=109"	1976-1980	6
ASPEN	Custom, Special Edition, Police, R/T, Sport: WB=113"	1976-1980	6
DIPLOMAT	Medallion, Salon, S	1977-1989	7
OMNI/CHARGER	Charger 2.2	1983-1990	8
OMNI/CHARGER	O24, DeTomaso, Miser, GLH, GLHS, Shelby, America, Expo	1978-1990	8
MIRADA		1980-1983	9
ST REGIS	Police, Taxi	1979-1981	10
ARIES (K)	Custom, SE, LE	1981-1989	11
400	LS	1983-1983	12
RAMPAGE 2.2, GT, SPORT			13
600	ES, Turbo	1983-1988	14
DAYTONA	Turbo Z, Shelby Z, Pacifica, C/S Competition, IROC R/T	1984-1994	15
LANCER	Pacifica, Turbo, ES, Shelby	1985-1989	16
SHADOW	ES, Turbo	1987-1998	17
DYNASTY		1988-1998	18
SPIRIT	ES, Shelby, R/T	1989-1994	19
NEON	Expresso	1994-1998	20
CHALLENGER (ALL IMPORTED)	all imported	1978-1983	33
COLT (EXCLUDES VISTA)	RS, Turbo, Custom, GTS, DL, E, Premier, Deluxe Carousel, GT	1977-1980	34
COLT (EXCLUDES VISTA)	RS, Turbo, Custom, GTS, DL, E, Premier, Deluxe Carousel, GT	1974-1976	34
COLT (EXCLUDES VISTA)	RS, Turbo, Custom, GTS, DL, E, Premier, Deluxe Carousel, GT	1980-1994	34
COLT (EXCLUDES VISTA)	RS, Turbo, Custom, GTS, DL, E, Premier, Deluxe Carousel, GT: WB<93"	1977-1980	34
CONQUEST	Turbo	1984-1986	35
STEALTH		1991-1998	39
MONACO		1990-1992	40
INTREPID		1993-1998	41
AVENGER		1995-1998	42
STRATUS		1995-1998	43
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399

	Sport	1986-1998	401
RAMCHARGER	RAIDER	1900-1998	421
DURANGO	Use 8 stiffness for end impacts, size value for side impacts.	1998-2000	422
VISTA	4 X 4	1984-1991	441
CARAVAN	Mini-Ram, SE, ES: WB=119"	1984-1998	442
CARAVAN	Mini-Ram, SE, ES: WB=112"	1984-1998	442
B-SERIES VANS	Sportsman, Royal, Maxiwagon, Ram, B150-B350, Tradesman	1900-1998	461
VAN DERIVATIVE	Kary Van	1900-1998	470
D50, COLT P/U, RAM 50/RAM 100	Ram 50/Ram 100	1983-1998	471
D50, COLT P/U, RAM 50/RAM 100	D50, Colt P/U	1900-1982	471
DAKOTA	WB=124"	1987-1998	472
DAKOTA	WB=112"	1987-1998	472
D, W-SERIES PICKUP, W100-W350	Ram, Custom, Royal, Miser, D100-D350	1900-1998	481
RAM	1500/2500/3500, P/U	1994-1998	482
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY: CBE			881
MEDIUM/HEAVY: COE LOW ENGRY			882
MEDIUM/HEAVY: COE HIGH ENTRY			883
MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK		18898	
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
MEDIUM BUS	not van based	1900-1998	981
OTHER BUS			988
UNKNOWN BUS TYPE			989
OTHER VEHICLE			998
UNKNOWN VEHICLE			999

71 DUCATI

MODEL	INCLUDES	YEAR	MODEL CODE
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)		321709	
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

10 EAGLE

MODEL	INCLUDES	YEAR	MODEL CODE

SUMMIT	DL, LX, ES	1989-1998	34
TALON	TSI	1990-1998	37
PREMIER	LX, ES	1988-1992	40
VISION	SUMMIT	1993-1998	41
MEDALLION	DL, LX	1988-1990	44
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
SUMMIT WAGON	WB=99.2"	1992-1998	441
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

2905 EXCALIBER

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE		1900-1998	398
UNKNOWN AUTOMOBILE		1900-1998	398

6905 FERRARI

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			35
UNKNOWN AUTOMOBILE			35

36 FIAT

MODEL	INCLUDES	YEAR	MODEL CODE
124 (COUPE/SEDAN)	Sport	1967-1975	31
124 SPIDER/RACER	Spider 2000/1500	1968-1983	32
BRAVA - 131		1975-1982	33
850 (COUPE/SPYDER)		1967-1973	34
128		1972-1979	35
X-1/9		1975-1983	36
STRADA		1979-1983	37
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
MEDIUM/HEAVY COE LOW ENTRY			882
MEDIUM/HEAVY COE HIGH ENTRY			883
MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK			898
UNKNOWN MEDIUM/HEAVY TRUCK			899
UNKNOWN VEHICLE			999

12 FORD

MODEL	INCLUDES	YEAR	MODEL CODE
FALCON	Sprint, GT, Futura	1900-1970	1
FAIRLANE	Torino	1900-1970	2

	Mach, Boss, Granada, Cobra	1965-1973	3
MUSTANG/MUSTANG II	Ghia, SVO, GT, LX, Shelby	1974-1998	3
THUNDERBIRD (ALL SIZES)	Landau, Heritage, Turbo coupe, Elan, Fila	1958-1971	4
THUNDERBIRD (ALL SIZES)	Landau, Heritage, Turbo coupe, Elan, Fila	1977-1979	4
THUNDERBIRD (ALL SIZES)	Landau, Heritage, Turbo coupe, Elan, Fila	1980-1988	4
THUNDERBIRD (ALL SIZES)	Landau, Heritage, Turbo coupe, Elan, Fila	1989-1998	4
THUNDERBIRD (ALL SIZES)	Landau, Heritage, Turbo coupe, Elan, Fila	1972-1976	4
THUNDERBIRD (ALL SIZES)	Landau, Heritage, Turbo coupe, Elan, Fila	1955-1957	4
LTD II	S, Squire, Brougham	1977-1979	5
LTD/CUSTOM/GALAXIE (ALL SIZES)	XL, Landau, Ranch Wagon, Country Squire, S, 500, Brougham, XL, GT	1978-1982	6
LTD/CUSTOM/GALAXIE (ALL SIZES)	XL, Landau, Ranch Wagon, Country Squire, S, 500, Brougham, XL, GT	1983-1986	6
LTD/CUSTOM/GALAXIE (ALL SIZES)	XL, Landau, Ranch Wagon, Country Squire, S, 500, Brougham, XL, GT	1900-1977	6
RANCHERO	Torino/LTD II based	1972-1979	7
RANCHERO	Flacon/Fairlane based	1900-1971	7
MAVERICK	Grabber	1970-1977	8
PINTO	Pony, MPG, ESS	1971-1980	9
TORINO/GRAN TORINO/ELITE	GT, Cobra, Sport, Squire, Brougham	1971-1976	10
GRANADA	ESS, Ghia	1975-1982	11
FAIRMONT	Futura, Sport Coupe	1978-1983	12
ESCORT/EXP	L, GL, GLX, SS, GT, LX, ZX2	1981-1991	13
TEMPO	L, GL, GLX, Sport, 4X4	1992-1999	15
CROWN VICTORIA		1981-1989	16
TAURUS	Mt-5, L, GL, LX, SHO	1986-1989	17
PROBE	GL, LX, GT	1988-1998	18
ENGLISH FORD	Cortina	1900-1998	31
FIESTA	Sport, Ghia	1978-1980	32
FESTIVA		1988-1993	33
LASER		1900-1998	34
CONTOUR		1994-1998	35
ASPIRE		1994-1998	36
FOCUS			37
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
BRONCO ii/BRONCO (-77)/EXPLORER	Explorer	1990-1998	401
BRONCO ii/BRONCO (-77)/EXPLORER	Bronco II--Eddie Bauer, XL, XLT, Limited	1983-1989	401
BRONCO ii/BRONCO (-77)/EXPLORER	Bronco	1900-1977	401
ESCAPE			402
BRONCO-FULLSIZE	Eddie Bauer, Custom, XL, XLT	1978-1998	421
EXPEDITION		1997-1998	422
EXCURSION			431
AEROSTAR	XLT, Cargo Van	1984-1998	441
WINDSTAR		1994-1998	442
E-SERIES VANS	Econoline, Clubwagon, Chateau, E150-E350	1900-1998	461
VAN DERIVATIVE	Parcel van	1900-1998	470
RANGER	Supercab, 4X4, STX, Splash: WB=108"	1982-1998	471
RANGER	Supercab, 4X4, STX, Splash: WB=108"	1982-1998	471
COURIER	Imported pickup	1900-1998	472
SPORT TRAC			473
F-SERIES PICKUP	F100-F350	1900-1998	481
OTHER LIGHT TRUCK			498

			499
F450/550 PICKUP >4536 GVWR			880
MEDIUM/HEAVY CBE	F-5 through F-8, L-series, FT-series	1900-1998	881
MEDIUM/HEAVY COE LOW ENGRY	C/Ct series	1900-1998	882
MEDIUM/HEAVY COE HIGH ENTRY	C/CLT series	1900-1998	883
MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
MEDIUM BUS	B-series	1900-1998	981
OTHER BUS			988
UNKNOWN BUS TYPE			989
OTHER VEHICLE			998
UNKNOWN VEHICLE			999

82 FREIGHTLINER/WHITE

MODEL	INCLUDES	YEAR	MODEL CODE
M-LINE WALK IN VAN			470
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY TRUCK BASED MOTORHOME		1900-1998	850
MEDIUM/HEAVY - CBE		1900-1998	881
MEDIUM/HEAVY - COE/LOW ENTRY		1900-1998	882
MEDIUM/HEAVY - COE/HIGH ENTRY		1900-1998	883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION		1900-1998	884
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN		1900-1998	890
MEDIUM/HEAVY - OTHER		1900-1998	898
UNKNOWN LIGHT/MEDIUM/HEAVY TRUCK			899
BUS CONVENTIONAL ENGINE OUT FRONT			981
BUS FRONT ENGINE/FLAT FRONT			982
BUS REAR ENGINE/FLAT FRONT			983
OTHER BUS			988
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

83 FWD

MODEL	INCLUDES	YEAR	MODEL CODE
MEIDUM/HEAVY TRUCK BASED MOTORHOME			850
MEDIUM/HEAVY - CBE			881

			882
MEDIUM/HEAVY - COE/LOW ENTRY			883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			898
MEDIUM/HEAVY - OTHER			898
UNKNOWN MEDIUM/HEAVY TRUCK			899

23 GMC

MODEL	INCLUDES	YEAR	MODEL CODE
CABALLERO/SPRINT	Sierra Madre del Sur, SP	1900-1977	7
CABALLERO/SPRINT	Sierra Madre del Sur, SP	1978-1998	7
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
JIMMY/TYPHOON/ENVOY	S15 based	1983-1998	401
FULLSIZE JIMMY/YUKON	fullsize pikup based	1900-1998	421
SUBURBAN	all models	1900-1998	431
SAFARI (MINIVAN)		1986-1998	441
G-SERIES VAN	Rally Van, Vandura, G15-G35	1900-1998	461
P-SERIES VAN		1900-1998	466
VAN DERIVATIVE		1987-1987	470
S15/T15/SONOMA	4X4, Cyclone	1982-1998	471
C, K, R, V-SERIES PICKUP	C15-C35, K15-K35, R15-R35, V15-V35, SIERRA	1900-1998	481
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY CBE	W5000/6000/7000 series, Brigadier/General models	1900-1998	881
MEDIUM/HDAVY COE LOW ENTRY	W6000/W7000, all other COE, low entry	1900-1998	882
MEDIUM/HEAVY COE HIGH ENTRY	Astro 95, all other COE, high entry	1900-1998	883
MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION		1900-1998	884
MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
MEDIUM BUS	B6000	1900-1998	981
OTHER BUS			988
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

25 GRUMMAN

MODEL	INCLUDES	YEAR	MODEL CODE
LLV	Postal vehicles	1900-1998	441
STEP-IN VAN	Multi-stop, step van	1900-1998	442
OTHER LIGHT TRUCK			498

			499
MEDIUM/HEAVY TRUCK - CBE			881
MEDIUM/HEAVY TRUCK - COE LOW ENTRY			882
MEDIUM/HEAVY TRUCK - COE HIGH ENTRY			883
MEDIUM/HEAVY TRUCK UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY TRUCK ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
BUS-FLAT FRONT, REAR ENGINE	Transit	1900-1998	983
OTHER BUS			988
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

72 HARLEY-DAVIDSON

MODEL	INCLUDES	YEAR	MODEL CODE
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

6906 HILLMAN

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			36
UNKNOWN AUTOMOBILE			36

9806 HINO

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			806
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			806
MEDIUM/HEAVY - COE/HIGH ENTRY			806
MEDIUM/HEAVY - COE/LOW ENTRY			806
MEDIUM/HEAVY - OTHER			806
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			806
MEDIUM/HEAVY BASED MOTORHOME			806

37 HONDA

MODEL	INCLUDES	YEAR	MODEL CODE
CIVIC/CRX/DEL SOL	1300, 1500, CVCC, DX, EX, VX, CRX, S, Si, HF, 4WD Wagon	1900-1998	31
CIVIC/CRX/DEL SOL	del Sol	1993-1998	31
ACCORD	LX, CVCC, SE-i, LX-i, EX, EX wagon	1900-1981	32
ACCORD	LX, CVCC, SE-i, LX-i, EX, EX wagon, 6 cylinder LX/EX	1987-1998	32
ACCORD	LX, CVCC, SE-i, LX-i, EX, EX wagon	1982-1986	32
PRELUDE	Si	1980-1983	33
PRELUDE	Si	1984-1998	33
600	Coupe, Sedan	1900-1998	34
S2000			35
INSIGHT			37
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
PASSPORT		1994-1998	401
CR-V		1997-2000	402
ODYSSEY		1995-1998	441
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
ATC/ATV (000-050CC)			731
ATC/ATV (051-124CC)			732
ATC/ATV (125-349CC)			733
ATC/ATV (350CC-OVER)			734
ATC/ATV (UNKNOWN CC)			739
UNKNOWN VEHICLE			999

2907 HUDSON

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE		1900-1998	9577 398
UNKNOWN AUTOMOBILE		1900-1998	9587 398

55 HYUNDAI

MODEL	INCLUDES	YEAR	MODEL CODE
PONY		1984-1988	31
EXCEL	GL, GLS	1984-1994	32
SONATA		1989-1998	33
SCOUPE		1991-1995	34
ELANTRA		1992-1998	35
ACCENT		1995-1998	36
TIBURON		1997-1998	37
XG300			38

			398
UNKNOWN AUTOMOBILE	OTHER AUTOMOBILE		399
SANTA FE			401
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

8 IMPERIAL

MODEL	INCLUDES	YEAR	MODEL CODE
IMPERIAL	Lebaron	1900-1976	10
IMPERIAL	Mark Croww, Frank Sinatra editions	1981-1983	10
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

58 INFINITI

MODEL	INCLUDES	YEAR	
M30		1990-1992	31
Q45		1990-1998	32
G20		1999-2000	33
G20		1991-1996	33
J30		1993-1998	34
I30		1996-1998	35
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
QX4		1997-1998	401
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

84 INTERNATIONAL HARVESTER/NAVISTAR

MODEL	INCLUDES	YEAR	MODEL CODE
SCOUT	Scout II, Utility pu, SS-2, Roadstar, 800 series, Traveler, Terra Traveltop	1900-1998	421
TRAVELALL	1010-1210, 100-200	1900-1998	431
MULTISTOP VAN	Metro RM, 120-160, MS 1210, MS 1510	1900-1998	466
PICKUP	R-100-500, 900A-1500C/D, 1010-1510	1900-1998	481
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
TRUCK BASED MOTORHOME			850
MEDIUM HEAVY - CBE	Loadstar/Fleetstar, Paystar, CBE Transtar, 4200, S-series Mixer	1900-1998	881
MEDIUM/HEAVY - COE LOW ENTRY	CO, VCO, DCO, 190-1950, Cargostar, LFM, 5370	1900-1998	882
MEDIUM/HEAVY - COE HIGH ENTRY	DCO, DCOT, UCO, VCOT, 405-series, COE Transtar, Unistar, Conco 707B, 9600	1900-1998	883
MEDIUM/HEAVY: UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN			890

Fire Truck - R140-R306, CO 8190-		1900-1998	898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)	OTHER MEDIUM/HEAVY TRUCK		899
UNKNOWN MEDIUM/HEAVY TRUCK			899
BUS BASED MOTOHOME			950
CONVENTIONAL BUS	R153-1853 - Loadstar, 1603-1853	1900-1998	981
BUS-FLAT FRONT, FRONT ENGINE	173FC, 183FC	1900-1998	982
BUS-FLAT FRONT, REAR ENGINE	183RE, 193RD-transit	1900-1998	983
OTHER BUS			988
UNKNOWN BUS TYPE			989
OTHER VEHICLE			998
UNKNOWN VEHICLE			999

38 ISUZU

MODEL	INCLUDES	YEAR	MODEL CODE
I-MARK	S, RS, Turbo	1985-1989	31
IMPULSE	Turbo, RS	1984-1998	32
STYLUS		1990-1998	33
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
TROOPER/TROOPER II	Deluxe, LS	1984-1998	401
RODEO		1991-1998	402
AMIGO		1989-1994	403
VEHICROSS			404
AXIOM			405
OASIS		1996-1998	441
P'UP (PICKUP) HOMBRE	4x4	1900-1995	471
P'UP (PICKUP) HOMBRE	Hombre	1996-1998	471
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY - CBE			881
MEDIUM/HEAVY COE LOW ENTRY			882
MEDIUM/HEAVY COE HIGH ENTRY			883
MEDIUM/HEAVY COE UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY COE ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
CONVENTIONAL FRONT ENGINE			981
FRONT ENGINE/FLAT FRONT			982
REAR ENGINE/FLAT FRONT			983
OTHER BUS			988
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

88 IVECO/MAGIRUS

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY BASED MOTORHOME			850
MEDIUM/HEAVY - CBE			881
MEDIUM/HEAVY - COE/LOW ENTRY			882
MEDIUM/HEAVY - COE/HIGH ENTRY			883
MEDIUM/HEAVY - UNKOWN ENGINE LOCATION			884
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			890
MEDIUM/HEAVY - OTHER			898
UNKNOWN MEDIUM/HEAVY TRUCK			899

39 JAGUAR

MODEL	INCLUDES	YEAR	MODEL CODE
XJ-S COUPE		1976-1998	31
VANDEN PLAS		1999-2000	32
XJ6/12 SEDAN/COUPE/XJ8/	L, XJ, C, 340/420 Sedan	1900-1998	32
XKE	V12, Roadster, 120	1900-1998	33
XKE	2+2	1900-1998	33
S-TYPE			34
X100		1997-1998	34
X-TYPE			35
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

2 JEEP / KAISER-JEEP

MODEL	INCLUDES	YEAR	MODEL CODE
CJ-2/CJ-3/CJ-4	Military: WB=81"	1900-1966	401
CJ-2/CJ-3/CJ-4	Military: WB=101"	1900-1966	401
CJ-5/CJ-6/CH-7/CH-8	Scrambler, Bolde Eagle, Renegade, Laredo, Wrangler: WB=84"	1967-1998	402
CJ-5/CJ-6/CH-7/CH-8	Scrambler, Bolde Eagle, Renegade, Laredo, Wrangler: WB=104"	1967-1998	402
YJ-SERIES	Wrangler	1986-1998	403
CHEROKEE (1984 ON)	Grand	1992-1998	404
CHEROKEE (1984 ON)	Limited, Loredo, Pioneer, Briarwood	1984-1998	404
LIBERTY			405
CHEROKEE (1963 - 1983)	Wide Track, Chief, Commando, Jeepster	1963-1983	421
GRAND WAGONEER	Wagoneer	1971-1991	431
GRAND WAGONEER	Custom, Bougham Limited	1971-1991	431
PICKUP	J-10, J-20, Honcho	1900-1998	481
COMANCHE	Chief: WB=111"	1986-1992	482
COMANCHE	Chief: WB=119"	1986-1992	482
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

6907 JENSEN

MODEL	INCLUDES	YEAR	MODEL CODE
HEALY		1900-1998	37
OTHER AUTOMOBILE			37
UNKNOWN AUTOMOBILE			37

73 KAWASAKI

MODEL	INCLUDES	YEAR	MODEL CODE
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
ATC/ATV (000-050CC)			731
ATC/ATV (051-124CC)			732
ATC/ATV (125-349CC)			733
ATC/ATV (350CC-OVER)			734
ATC/ATV (UNKNOWN CC)			739
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

85 KENWORTH

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY TRUCK BASED MOTORHOME			850
MEDIUM/HEAVY - CBE			881
MEDIUM/HEAVY - COE/LOW ENTRY			882
MEDIUM/HEAVY - COE/HIGH ENTRY			883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			890
MEDIUM/HEAVY - OTHER			898
UNKNOWN MEDIUM/HEAVY TRUCK			899

63 KIA

MODEL	INCLUDES	YEAR	MODEL CODE
SEPHIA		1900-1998	31
SPECTRA			32
RIO			33
OPTIMA			34
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399

		1996-1998	401
SEDONA			441
OTHER LIGHT TRUCK	SPORTAGE		498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

6919 LADA

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			53
UNKNOWN AUTOMOBILE			53

6908 LAMBORGHINI

MODEL	INCLUDES	YEAR	MODEL CODE
COUNTACH 5000S		1900-1998	38
JALPA		1900-1998	38
OTHER AUTOMOBILE			38
UNKNOWN AUTOMOBILE			38

40 LANCIA

MODEL	INCLUDES	YEAR	MODEL CODE
BETA SEDAN-HPE		1900-1980	31
BETA COUPE - ZAGATO		1900-1982	32
SCORPION		1900-1978	33
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

62 LAND ROVER

MODEL	INCLUDES	YEAR	MODEL CODE
DISCOVERY (LR)		1994-1998	401
COUNTY LWB (RR) / COUNT CLASSIC (RR)	Count Classic	1994-1998	421
COUNTY LWB (RR) / COUNT CLASSIC (RR)	County LWB	1900-1994	421
4.0 SE (RR)		1995-1998	422
DEFENDER 90 (LR)		1994-1998	422
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

59 LEXUS

MODEL	INCLUDES	YEAR	MODEL CODE
ES250/ES-300		1990-1998	31
LS400		1990-1998	32
SC-300/SC-400	2-door Coupe	1992-1998	33

		1994-1998	34
IS-300	GS300/GS400		35
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
RX300		1999-2000	401
LX 450/470			421
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

13 LINCOLN

MODEL	INCLUDES	YEAR	MODEL CODE
CONTINENTAL/TOWN CAR	Continental	1980-1981	1
CONTINENTAL/TOWN CAR	Town Car	1982-1998	1
CONTINENTAL/TOWN CAR	Continental	1900-1979	1
MARK	VI	1980-1983	2
MARK	I, II, III, IV, V	1900-1970	2
MARK	VII	1984-1998	2
MARK	VII	1993-1998	2
MARK	LSC, all Signature/Designer Series	1971-1980	2
CONTINENTAL (82-ON)	All Signature/Designer Series	1982-1987	5
CONTINENTAL (82-ON)	All Signature/Designer Series	1988-1998	5
VERSAILLES		1977-1980	11
LS		2000-2000	12
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
NAVIGATOR		1997-1998	421
BLACKWOOD			481
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

6909 LOTUS

MODEL	INCLUDES	YEAR	MODEL CODE
ESPRIT		1900-1998	39
EUROPE		1900-1998	39
OTHER AUTOMOBILE			39
UNKNOWN AUTOMOBILE			39

86 MACK

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY BASED MOTORHOME			850
MEDIUM/HEAVY - CBE			881
MEDIUM/HEAVY - COE/LOW ENTRY			882
MEDIUM/HEAVY - COE/HIGH ENTRY			883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			884

			890
MEDIUM/HEAVY - OTHER	MEDIUM/HEAVY - COE/ENTRY		898
UNKNOWN MEDIUM/HEAVY TRUCK	POSITION UNKNOWN		899

9808 MARMON

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			898
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			898
MEDIUM/HEAVY - COE/HIGH ENTRY			898
MEDIUM/HEAVY - COE/LOW ENTRY			898
MEDIUM/HEAVY - OTHER			898
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			898
MEDIUM/HEAVY BASED MOTORHOME			898

6910 MASERATI

MODEL	INCLUDES	YEAR	MODEL CODE
BITURBO		1900-1998	40
OTHER AUTOMOBILE			40
UNKNOWN AUTOMOBILE			40

41 MAZDA

MODEL	INCLUDES	YEAR	MODEL CODE
RX2		1972-1974	31
RX3		1972-1978	32
RX4		1974-1978	33
RX7	S, GS, GSL, SE	1979-1998	34
GLC/PROTEGE/323	DX	1977-1998	35
GLC/PROTEGE/323	Protege	1990-1998	35
GLC/PROTEGE/323	323	1977-1994	35
COSMO		1976-1978	36
626	GT, GS, GSL, SE	1979-1998	37
808		1972-1977	38
MIZER		1976-1976	39
R-100		1900-1972	40
616/618		1900-1972	41
1800		1900-1972	42
929		1988-1996	43
MX-6	Turbo	1988-1998	44
MIATA		1990-1998	45
MX-3	GS	1992-1998	46
MILLENIA		1995-1998	47
MP3			48
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399

NAVAJO		1991-1998	401
TRIBUTE			402
MPV		1989-1998	441
MAZDA PICKUP	Cab Plus, B-4000	1994-1998	471
MAZDA PICKUP	B-2000, B-2200, B-2600, SE-5, LX	1900-1998	471
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

42 MERCEDES BENZ

MODEL	INCLUDES	YEAR	MODEL CODE
200/220/230/240/250/260/280/300/ 320 SE,CD,D,SD,E	Sedan and 5 passenger "C" only, SE, CD, D, SD, TD, TE, CE, E,	1900-1998	31
230/280 SL	2 seater only	1900-1998	32
300/350/380/450/500SL/560SL	300/500 SL	1990-1994	33
300/350/380/450/500SL/560SL	2 seater only	1900-1994	33
350/380/420/450/560/ SLC		1900-1998	34
280/300SEL		1900-1998	35
380/420/450/500/560SEL/500SEC/ 560SEC/350SDL/300S		1900-1998	36
300 SE/380/450 SE	280 S, 300 SD Sedan/350 SD	1900-1998	37
300 SE/380/450 SE	280 SE	1975-1998	37
600, 6.9 SEDAB	Pullman	1900-1998	38
190	D, E, 2.3, 2,5	1900-1998	39
300	CE Cabriolet	1993-1998	40
400/500 E	SE	1992-1998	41
220/280 C		1994-1900	42
S CLASS			43
SL CLASS			44
SLK			45
CL			46
CLK			47
E			48
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
M		1997-2000	401
G CLASS			402
VAN DERIVATIVE	Kurbstar	1982-1998	470
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVE - CBE			881
MEDIUM/HEAVY - COE LOW ENTRY			882
MEDIUM/HEAVY - COE HIGH ENTRY			883
MEDIUM/HEAVY; UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
MEDIUM BUS			981

			988
UNKNOWN BUS TYPE	OTHER BUS		989
UNKNOWN VEHICLE			999

14 MERCURY

MODEL	INCLUDES	YEAR	MODEL CODE
CYCLONE	GT, CJ, Spoiler	1900-1971	2
CAPRI-DOMESTIC	RS, Turbo, GS, Black Magic	1979-1986	3
COUGAR/XR7	XR-7, RS, LS, GS, Eliminator, Brougham, Villager,	1989-1998	4
COUGAR/XR7	XR-7, RS, LS, GS, Eliminator, Brougham, Villager,	1967-1976	4
COUGAR/XR7	XR-7, RS, LS, GS, Eliminator, Brougham, Villager,	1980-1988	4
COUGAR/XR7	XR-7, RS, LS, GS, Eliminator, Brougham, Villager,	1977-1979	4
COUGAR/XR7	XR-7, RS, LS, GS, Eliminator, Brougham, Villager,	1977-1979	4
MARQUIS/MONTEREY	Marauder, X-100, Parklane, S-55, Custom, Brougham, Montclair, Grand Marquis	1979-1982	6
MARQUIS/MONTEREY	Marauder, X-100, Parklane, S-55, Custom, Brougham, Montclair, Grand Marquis: WB=106"	1982-1998	6
MARQUIS/MONTEREY	Marauder, X-100, Parklane, S-55, Custom, Brougham, Montclair, Grand Marquis: WB=114"	1982-1998	6
MARQUIS/MONTEREY	Marauder, X-100, Parklane, S-55, Custom, Brougham, Montclair, Grand Marquis: WB=124"	1900-1978	6
MARQUIS/MONTEREY	Marauder, X-100, Parklane, S-55, Custom, Brougham, Montclair, Grand Marquis: WB=121"	1900-1978	6
COMET	Capri	1966-1967	8
COMET	Caliente, GT, Voyager, 202	1971-1977	8
COMET	Caliente, GT, Voyager, 202	1962-1967	8
BOBCAT	Runabout, Villager	1975-1980	9
MONTEGO	GT, MX, Villager, Brougham: WB=114"	1972-1976	10
MONTEGO	GT, MX, Villager, Brougham: WB=114"	1972-1976	10
MONTEGO	GT, MX, Villager, Brougham	1968-1973	10
MONTEGO	Comet	1968-1970	10
MONARCH	Ghia	1975-1980	11
ZEPHYR	GS, Z-7	1978-1983	12
LYNX/LN-7 (82-83)	L, LS, GS, RS, XR-3	1981-1987	13
TOPAZ	L, LS, GS, 4 X 4	1984-1998	15
SABLE	LS, GS	1986-1998	17
CAPRI-FOREIGN	Capri II	1970-1977	31
CAPRI-FOREIGN	2 + 2	1989-1994	31
PANTERA	deTomaso	1972-1974	33
TRACER	L, GL	1994-1998	36
MYSTIQUE		1994-1998	37
COUGAR			38
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
MOUNTAINEER		1996-1998	401
VILLAGER	LS, GS	1993-1998	443
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

56 MERKUR

MODEL	INCLUDES	YEAR	MODEL CODE

XR4Ti	Turbo	1985-1989	31
SCORPIO	Turbo	1987-1990	32
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

43 MG

MODEL	INCLUDES	YEAR	MODEL CODE
MIDGET			31
MGB ('76-'79)		1976-1979	32
MGB ('67-'75)	GT	1967-1975	33
MGA		1900-1998	34
TA/TC/TD/TF		1900-1998	35
MGC	GT	1900-1969	36
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

52 MITSUBISHI

MODEL	INCLUDES	YEAR	MODEL CODE
STARION	2+2, LE, Turbo	1983-1990	31
TREDIA	L, LS, Turbo	1983-1988	32
CORDIA	L, Turbo	1983-1988	33
GALANT	Sigma	1985-1988	34
GALANT	ECS	1985-1998	34
MIRAGE	L, Turbo	1985-1998	35
PRECIS			36
ECLIPSE		1990-1998	37
SIGMA		1989-1990	38
3000GT	Spyder, VR-4	1991-1998	39
DIAMANTE		1992-1998	40
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
MONTERO	Sport	1985-1998	401
MINIVAN	LS	1987-1998	441
EXPO WAGON	LRV, Sport WB=107.1"	1992-1995	442
EXPO WAGON	LRV, Sport WB=99.2"	1992-1995	442
PICKUP	Mighty Max, SPX, 4 X 4	1900-1998	471
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY - COE LOW ENTRY	FUSO FE	1900-1998	882
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
CONVENTIONAL FRONT ENGINE			981
FRONT ENGINE/FLAT FRONT			982
REAR ENGINE/FLAT FRONT			983
OTHER BUS			988

UNKNOWN VEHICLE	UNKNOWN TYPE BUS		999

6911 MORRIS

MODEL	INCLUDES	YEAR	MODEL CODE
MINOR		1900-1998	41
OTHER AUTOMOBILE			41
UNKNOWN AUTOMOBILE			41

74 MOTO-GUZZI

MODEL	INCLUDES	YEAR	MODEL CODE
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
ATC/ATV (000-050CC)			731
ATC/ATV (051-124CC)			732
ATC/ATV (125-349CC)			733
ATC/ATV (350CC-OVER)			734
ATC/ATV (UNKNOWN CC)			739
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

9810 NEOPLAN

MODEL	INCLUDES	YEAR	MODEL CODE
BUS - CONVENTIONAL FRONT ENGINE			902
BUS - FRONT ENGINE/FLAT FRONT			902
BUS - REAR ENGINE/FLAT FRONT			902
BUS BASED MOTORHOME			902
OTHER BUS			902

35 NISSAN / DATSUN

MODEL	INCLUDES	YEAR	MODEL CODE
F10		1977-1978	31
200/240 SX		1984-1998	32
200/240 SX		1974-1983	32
1200/210/B210	Honeybee	1971-1982	33
Z-CAR, ZX	2+2	1979-1998	34
Z-CAR, ZX	2+2	1975-1978	34
Z-CAR, ZX	240/260/280Z, 300 ZX, Turbo	1970-1998	34
310		1979-1982	35
510	PL	1978-1981	36

	PL	1968-1973	36
610	PL	1973-1976	37
710	PL	1974-1977	38
810/MAXIMA		1977-1998	39
ROADSTER	SPL 311, SRL 311, 1600, 2000, convertible	1900-1970	40
PL411, RL411		1900-1967	41
STANZA	XE	1982-1992	42
SENTRA		1983-1998	43
PULSAR	EXA	1986-1990	44
PULSAR	NX	1983-1990	44
MICRA		1987-1998	45
NX 1600/2000		1992-1998	46
ALTIMA		1993-1999	47
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
PATHFINDER		1986-1998	401
XTERRA			402
VAN	XE, GXE	1988-1998	441
AXXESS		1989-1990	442
QUEST		1993-1998	443
DATSUN/NISSAN PU/FRONTIER	PL620, King Cab, Hardbody	1973-1998	471
OTHER LIGHT TRUCK	Patrol	1900-1998	498
UNKNOWN LIGHT TRUCK			499
MEDIUM/HEAVY COE HIGH ENTRY			883
OTHER MEDIUM/HEAVY TRUCK			898
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
UNKNOWN VEHICLE			999

75 NORTON

MODEL	INCLUDES	YEAR	MODEL CODE
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

21 OLDSMOBILE

MODEL	INCLUDES	YEAR	MODEL CODE
CUTLASS (RWD-ONLY)	Supreme, S, LS, Salon, Brougham, Vista Cruiser, Rallye 350, Hurst Olds, 442, Calais	1978-1988	1
CUTLASS (RWD-ONLY)	Supreme, S, LS, Salon, Brougham, Vista Cruiser, Rallye 350, Hurst Olds, 442, Calais	1900-1977	1
CUTLASS (RWD-ONLY)	Classic	1988-1988	1
CUTLASS (RWD-ONLY)	F85	1900-1972	1

	Royale, Custom, Delta, Jetstar 88, Delmont 88, Custom Cruiser	1985-1998	2
DELTA 88	Royale, Custom, Delta, Jetstar 88, Delmont 88, Custom Cruiser	1977-1985	2
DELTA 88	Royale, Custom, Delta, Jetstar 88, Delmont 88, Custom Cruiser	1900-1976	2
DELTA 88	Starfire	1900-1966	2
NINETY-EIGHT	Regency, Luxury	1986-1998	3
NINETY-EIGHT	Regency, Luxury	1977-1984	3
NINETY-EIGHT	Regency, Luxury	1900-1976	3
TORONADO	XSR, Trofeo, Brougham, Custom	1986-1992	5
TORONADO	XSR, Trofeo, Brougham, Custom	1979-1985	5
TORONADO	XSR, Trofeo, Brougham, Custom	1966-1978	5
COMMERCIAL SERIES	Ambulance/Hearse	1900-1998	6
STARFIRE	SX, GT	1975-1980	12
OMEGA	RWD	1975-1979	15
OMEGA	X-body type FWD	1980-1985	15
FIRENZA	S, LS, SX, Cruiser, GT	1982-1988	16
CIERA	Cutlass Ciera, Brougham, ES	1982-1998	17
CALAIS	GT, ES, 500	1985-1991	18
CUTLASS (FWD)	Supreme	1988-1998	20
ACHIEVA	SC	1992-1998	21
AURORA	DELTA 88	1994-1998	22
INTRIGUE			23
ALERO			24
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
BRAVADA		1991-1994	401
SILHOUETTE		1990-1998	441
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
OTHER VEHICLE			998
UNKNOWN VEHICLE			999

9805 OSHKOSH

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			805
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			805
MEDIUM/HEAVY - COE/HIGH ENTRY			805
MEDIUM/HEAVY - COE/LOW ENTRY			805
MEDIUM/HEAVY - OTHER			805
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			805
MEDIUM/HEAVY BASED MOTORHOME			805

29 OTHER DOMESTIC MANUFACTURER (light vehicles)

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER MAKE			398
UNKNOWN MAKE			399

			498
OTHER MEDIUM/HEAVY TRUCK	OTHER LIGHT TRUCK		898
OTHER BUS			988
OTHER VEHICLE			998

69 OTHER FOREIGN MANUFACTURER (light vehicles)

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER MAKE			398
UNKOWN MAKE			399
OTHER LIGHT TRUCK			498
OTHER MEDIUM/HEAVY TRUCK			898
OTHER BUS			988
OTHER VEHICLE			998

15691 OTHER MAKE (med/heavy truck/bus or "other")

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			398
OTHER LIGHT TRUCK			498
TRUCK BASED MOTORHOME			850
OTHER MEDIUM/HEAVY TRUCK			898
BUS BASED MOTORHOME			950
OTHER BUS			988
OTHER VEHICLE			998

78 OTHER MAKE MOPED

MODEL	INCLUDES	YEAR	MODEL CODE
0-50cc			701
51-124cc			702
UNKNOWN cc			709
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

79 OTHER MAKE MOTORED CYCLE

MODEL	INCLUDES	YEAR	MODEL CODE
0-50cc		1900-1998	701
51-124cc		1900-1998	702
125-349cc		1900-1998	703
350-449cc		1900-1998	704
450-749cc		1900-1998	705
750c or greater		1900-1998	706
Unknown cc		1900-1998	709
ATC/ATV 0-50cc			731
ATC/ATV 51-124cc			732
ATC/ATV 125-349cc			733
ATC/ATV 350cc OR GREATER			734
ATV/ATC UNKNOWN cc			739
OTHER MOTORED CYCLE			798

			799
	UNKNOWN MOTORED CYCLE		

87 PETERBILT

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY BASED MOTORHOME			850
MEDIUM/HEAVY - CBE			881
MEDIUM/HEAVY - COE/LOW ENTRY			882
MEDIUM/HEAVY - COE/HIGH ENTRY			883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			890
MEDIUM/HEAVY - OTHER			898
UNKNOWN MEDIUM/HEAVY TRUCK			899

44 PEUGEOT

MODEL	INCLUDES	YEAR	MODEL CODE
304		1971-1973	31
403		1900-1967	32
404		1900-1970	33
404	Station Wagon	1900-1970	33
504/505	Station Wagon	1970-1991	34
504/505	STI, STX, Turbo, S, GL GLS, Liberte	1970-1991	34
604	SL, D	1977-1984	35
405		1989-1991	36
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (UNKNOWN CC)			709
UNKNOWN MOTORED CYCLE			799
UNKNOWN VEHICLE			999

9 PLYMOUTH

MODEL	INCLUDES	YEAR	MODEL CODE
VALIANT/DUSTER/SCAMP	100, 200, Brougham, Signet, Custom, Special, 340/360, Twister: WB=108"	1900-1976	1
VALIANT/DUSTER/SCAMP	100, 200, Brougham, Signet, Custom, Special, 340/360, Twister: WB=111"	1900-1976	1
SATELLITE/BELVEDERE	Belveder I/II, GTX, Roadrunner, Sebring, Sebring Plus, Superbird, Brougham	1900-1974	2
FURY	Roadrunner	1975-1975	3
FURY	Salon, VIP, Sport, Suburban	1975-1978	3
FURY	I, II, III	1900-1974	3
GRAN FURY	Sedan, Brougham, Custom Sport, Suburban	1975-1981	4
GRAN FURY	Sedan, Brougham, Custom Sport, Suburban	1982-1989	4
BARRACUDA	Formula, S, 340, AAR, 'Cuda, Gran Coupe	1965-1973	5

VOLARE	Custom, Premier, Roadrunner, Police: WB=109"	1976-1980	6
VOLARE	Custom, Premier, Roadrunner, Police: WB=113"	1976-1980	6
CARAVELLE	Turbo, SE	1985-1989	7
HORIZON	TC-3, Miser, Turismo 2.2, Custom, SE, America Expo	1978-1990	8
HORIZON	Duster	1985-1990	8
RELIANT (K)	SE, LE	1981-1989	11
SCAMP (CAR BASED PICKUP)	GT, 2.2	1982-1984	13
SUNDANCE	Turbo	1987-1998	17
ACCLAIM	LX, LE	1989-1998	19
NEON	Expresso	1994-1998	20
CRICKET		1971-1972	31
ARROW	Fire Arrow, GS, GT	1976-1980	
SAPPORO	all imported	1978-1983	33
CHAMP/COLT (EXCLUDES VISTA)	Turbo, Custom	1979-1994	34
CHAMP/COLT (EXCLUDES VISTA)	Station Wagon	1984-1994	34
CONQUEST	TSI	1984-1989	35
LASER	RS, Turbo	1989-1998	37
BREEZE		1996-1998	38
PROWLER			39
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
TRAILDUSTER		1900-1998	421
COLT VISTA	4 X 4	1987-1998	441
VOYAGER (MINIVAN)	SE, LX: WB=112"	1984-1998	442
VOYAGER (MINIVAN)	SE, LX: WB=119"	1984-1998	442
VAN-FULLSIZE (B-SERIES)	Includes Voyager, Sport, Premier	1965-1995	461
ARROW PICKUP (FOREIGN)		1900-1998	471
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

22 PONTIAC

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER LIGHT			
LEMANS/TEMPEST (THRU 79)	Safari, T-37, Luxury, Grand Sport, GT-37, Sprint, Judge Grand AM, Grand Lemans	1973-1975	1
LEMANS/TEMPEST (THRU 79)	Safari, T-37, Luxury, Grand Sport, GT-37, Sprint, Grand Lemans	1976-1977	1
LEMANS/TEMPEST (THRU 79)	Safari, T-37, Luxury, Grand Sport, GT-37, Sprint, Grand Lemans	1978-1979	1
LEMANS/TEMPEST (THRU 79)	Safari, T-37, Luxury, Grad Sport, GTO, GT-37, Sprint, Grand Lemans	1900-1973	1
BONNEVILLE/CATALINA/PARISIENNE	Brougham, Gand Safari, Safari, Granville, 2+2 Executive, Starchief	1977-1981	2
BONNEVILLE/CATALINA/PARISIENNE	Brougham, Gand Safari, Safari, Granville, 2+2 Executive, Starchief	1969-1976	2
BONNEVILLE/CATALINA/PARISIENNE	Brougham, Gand Safari, Safari, Granville, 2+2 Executive, Starchief	1982-1984	2
BONNEVILLE/CATALINA/PARISIENNE	Parisienne	1983-1984	2
BONNEVILLE/CATALINA/PARISIENNE	SE, SSE, SSEi	1987-1998	2
BONNEVILLE/CATALINA/PARISIENNE	Brougham, Gand Safari, Safari, Granville, 2+2 Executive, Starchief	1900-1968	2

	2M4, 2M6, GT, SE	1984-1988	5
VENTURA	II, SJ, Sprint, Custom	1971-1977	8
VENTURA	GTO	1974-1977	8
FIREBIRD/TRANS AM	Esprit, Formula, GTA, Redbird, Yellowbird, Skybird, SE	1982-1998	9
FIREBIRD/TRANS AM	Esprit, Formula, GTA, Redbird, Yellowbird, Skybird, SE	1967-1981	9
GRAND PRIX (RWD)	J, LJ, SJ, Brougham, 2+2	1973-1977	10
GRAND PRIX (RWD)	J, LJ, SJ, Brougham, 2+2	1978-1987	10
GRAND PRIX (RWD)	J, LJ, SJ, Brougham, 2+2	1963-1972	10
ASTRE	Safari, SJ, Custom	1975-1977	11
SUNBIRD (THRU 80)	Safari, Sport, Formula	1976-1980	12
T1000/1000	4 door	1981-1987	13
T1000/1000	2 door	1981-1987	13
PHOENIX	LJ, SJ	1980-1984	15
PHOENIX	LJ, SJ	1977-1979	15
J2000/SUNBIRD/SUNFIRE	Sunfire-GT/SE	1995-1998	16
J2000/SUNBIRD/SUNFIRE	Sunbird	1984-1994	16
J2000/SUNBIRD/SUNFIRE	Le, Se, GT, Convertible	1982-1994	16
6000	STE, SE, LE	1982-1998	17
GRAND AM	SE, LE	1985-1998	18
GRAND AM	SE, LE	1980-1980	18
GRAND PRIX (FWD)	SE, McLaren Turbo, GTP	1988-1998	20
LEMANS (88-on)	SE, Tempest	1988-1998	31
OTHER AUTOMOBILE	FIERO		398
UNKNOWN AUTOMOBILE			399
AZTEK			401
VIBE			402
TRANS SPORT/MONTANA		1990-1998	441
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

45 PORSCHE

MODEL	INCLUDES	YEAR	MODEL CODE
911	Panorama	1996-1998	31
911	L, S, E, T, SC, Carrera, Slopenose, Speedstar	1900-1998	31
912	E, T	1900-1969	32
914	S, 1.8, 2.0, 914/6	1970-1976	33
924	Turbo, S	1977-1988	34
928	S	1978-1998	35
930	Turbo	1989-1994	36
944	Turbo, S	1983-1992	37
959		1989-1994	38
968		1992-1995	39
986 BOXSTER			40
OTHER AUTOMOBILE	Spyder, Speedster, 356	1900-1998	398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

6917 RELIANT

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			49

46 RENAULT/AMC UNKNOWN AUTOMOBILE

MODEL	INCLUDES	YEAR	MODEL CODE
LECAR	5	1976-1983	31
DAUPHINE/10/R-8/CARAVELLE		1900-1971	32
12	R12L, R12TL	1972-1977	33
15	R14TL	1973-1976	34
16	R16	1969-1972	35
17	R17, Gordini Coupe, R17TL	1973-1980	36
R18I	Sportwagon	1981-1998	37
FUEGO	TL, TS, GTL, GTS, Turbo	1982-1985	38
ALLIANCE/ENCORE/GTA, CONVERTIBLE	L, DL, Limited, X-37	1983-1998	39
ALPINE	GT	1987-1998	41
MEDALLION	DL, LX	1987-1987	44
PREMIER		1987-1987	45
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

6912 ROLLS ROYCE/BENTLEY

MODEL	INCLUDES	YEAR	MODEL CODE
CLOUD/SHADOW SERIES		1900-1998	42
OTHER AUTOMOBILE			42
UNKNOWN AUTOMOBILE			42

47 SAAB

MODEL	INCLUDES	YEAR	MODEL CODE
99/99E/900	S, Turbo, Cabriolet	1900-1998	31
SONNETT	II, III, V-4	1968-1974	32
95/96/97		1900-1973	33
9000, CS	CS	1993-1998	34
9000, CS	S, Trubo	1985-1998	34
9 - 3			35
9 - 5			36
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

24 SATURN

MODEL	INCLUDES	YEAR	MODEL CODE
SL	SL1, SL2, SL3	1991-1998	1
SC	SC1, SC2	1991-1996	2
SC	includes 3 door coupe	1997-2000	2
SW	SW1, SW2	1993-1998	3
EV	EV1	1997-1998	4

			5
LW			6
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE	LS		399
VUE			401
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

9807 SCANIA

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			807
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			807
MEDIUM/HEAVY - COE/HIGH ENTRY			807
MEDIUM/HEAVY - COE/LOW ENTRY			807
MEDIUM/HEAVY - OTHER			807
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			807
MEDIUM/HEAVY BASED MOTORHOME			807

6913 SIMCA

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			44
UNKNOWN AUTOMOBILE			44

61 STERLING

MODEL	INCLUDES	YEAR	MODEL CODE
827S	Li	1986-1991	31
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

24428 STERLING TRUCKS

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			808
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			808
MEDIUM/HEAVY - COE/HIGH ENTRY			808
MEDIUM/HEAVY - COE/LOW ENTRY			808
MEDIUM/HEAVY - OTHER			808
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			808

2901
STUDEBAKER

	INCLUDES	YEAR	MODEL CODE
CRUISER		1900-1966	1
GRAN TURISMO		1900-1966	1
HAWK		1900-1966	1
LARK		1900-1966	1
OTHER AUTOMOBILE			1
UNKNOWN AUTOMOBILE			1

2906 STUTZ

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE		1900-1998	398
UNKNOWN AUTOMOBILE		1900-1998	398

48 SUBARU

MODEL	INCLUDES	YEAR	MODEL CODE
DL/FE/G/GF/GL/GLF/STD/LOYALE	4 wheel drive, Turbo	1972-1989	31
DL/FE/G/GF/GL/GLF/STD/LOYALE	Loyale	1990-1994	31
STAR		1970-1971	32
360		1969-1970	33
LEGACY	Brighton, Outback, Outback II	1989-1998	34
XT/XT6	4WD Turbo, convertible, DL	1986-1998	35
JUSTY	DL, GL	1987-1994	36
SVX		1992-1998	37
IMPREZA	Outback, Outback II	1993-1998	38
BRAT DL, GL		1978-1998	43
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
FORESTER			401
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

6914 SUNBEAM

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			45
UNKNOWN AUTOMOBILE			45

53 SUZUKI

MODEL	INCLUDES	YEAR	MODEL CODE
SA310	GLX	1986-1998	31
SWIFT	GTi, GTX	1989-1998	34
ESTEEM		1995-1998	35
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399

SAMURAI	Standard, Deluxe	1985-1995	401
SIDEKICK/GRAND VITARA			402
X-90/VITARA			403
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			499
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
ATC/ATV (000-050CC)			731
ATC/ATV (051-124CC)			732
ATC/ATV (125-349CC)			733
ATC/ATV (350CC-OVER)			734
ATC/ATV (UNKNOWN CC)			739
UNKNOWN MOTORED CYCLE			799
UNKNOWN VEHICLE			999

49 TOYOTA

MODEL	INCLUDES	YEAR	MODEL CODE
CORONA	Mark II, Custom, 1900, 2000, Deluxe	1900-1982	31
COROLLA	FX-16	1986-1998	32
COROLLA	1100, 1200, 1600, SR-5, LE, Deluxe, Custom	1969-1985	32
CELICA	1900, 2000, GT, ST	1972-1998	33
CELICA	GTS	1972-1993	33
SUPRA	Celica Supra, Soarer	1979-1998	34
CRESSIDA		1978-1992	35
CROWN	2300, 2600	1900-1971	36
CARINA	2000	1972-1973	37
TERCEL	Corolla Tercel, 4WD Wagon	1980-1998	38
STARLET		1981-1984	39
CAMRY	LE, Deluxe, XLE, Coupe	1983-1998	40
MR-2		1985-1995	41
PASEO		1992-1998	42
AVALON		1995-1998	43
SOLARA			44
ECHO			45
PRIUS			46
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
4-RUNNER		1985-1998	401
RAV-4		1996-1998	402
HIGHLANDER			403
HIGHLANDER			403
MATRIX			404
LANDCRUISER		1976-1998	421
SEQUOIA			422
MINVAN/PREVIA	Previea	1991-1998	441
MINVAN/PREVIA	LE, Cargo	1984-1990	441
SIENNA			442
PICKUP	SR-5, Extra Cab, Sport, LN44, Chinook, Wonder Wagon	1974-1998	471

TACOMA			472
T-100		1993-1998	481
TUNDRA			482
OTHER LIGHT TRUCK			610498
UNKNOWN LIGHT TRUCK			499
UNKNOWN VEHICLE			999

50 TRIUMPH

MODEL	INCLUDES	YEAR	MODEL CODE
SPITFIRE	I, II, III, IV, 1500	1900-1981	31
GT-6	MK3	1967-1973	32
TR4	TR2, TR3, TR4A	1900-1968	33
TR6		1969-1976	34
TR7/8		1975-1981	35
HERALD	Vitesse	1900-1998	36
STAG		1971-1973	37
OTHER AUTOMOBILE	2000, 1200 series	1900-1998	398
UNKNOWN AUTOMOBILE			399
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
UNKNOWN MOTORED CYCLE			799
UNKNOWN VEHICLE			999

6915 TVR

MODEL	INCLUDES	YEAR	MODEL CODE
OTHER AUTOMOBILE			46
UNKNOWN AUTOMOBILE			46

2999 UNKNOWN DOMESTIC MANUFACTURER

MODEL	INCLUDES	YEAR	MODEL CODE
UNKNOWN AUTOMOBILE			399
UNKNOWN LIGHT TRUCK			499
UNKNOWN MOTORED CYCLE			799
UNKNOWN MEDIUM/HEAVY TRUCK			899
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

6999 UNKNOWN FOREIGN MANUFACTURER

MODEL	INCLUDES	YEAR	MODEL CODE
UNKNOWN AUTOMOBILE			399
UNKNOWN LIGHT TRUCK			499

			799
UNKNOWN MEDIUM/HEAVY TRUCK	UNKNOWN MOTORED CYCLE	1993-1998	899
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

99 UNKNOWN MANUFACTURER

MODEL	INCLUDES	YEAR	MODEL CODE
UNKNOWN AUTOMOBILE			399
UNKNOWN LIGHT TRUCK			499
UNKNOWN MOTORED CYCLE			799
UNK TYPE TRUCK (LIGHT/MED/HEAVY)			899
UNKNOWN MEDIUM/HEAVY TRUCK			899
UNKNOWN BUS TYPE			989
UNKNOWN VEHICLE			999

9899 UNKNOWN MEDIUM/HEAVY TRUCKS AND BUSES MAN

MODEL	INCLUDES	YEAR	MODEL CODE
Unknown medium/heavy truck		1900-1999	899
Unknown bus type		1900-1999	988

30 VOLKSWAGEN

MODEL	INCLUDES	YEAR	MODEL
KARMANN GHIA		1900-1974	31
BEETLE 1300/1500	flat windshield, 94.5" WB	1900-1977	32
SUPER BEETLE	Distinguished by curved windshield, 95.3" WB	1971-1980	33
411/412	Squareback/Fastback	1971-1974	34
SQUAREBACK/FASTBACK	Type 3, 1600	1900-1974	35
RABBIT	L, GTI, Sport, LS, Custom, DL, Deluxe	1975-1984	36
DASHER		1974-1981	37
SCIROCCO	16V	1975-1988	38
JETTA	GL, GLI	1981-1992	40
QUANTUM	Synco	1982-1988	41
GOLF/CABRIOLET	Synco, GTI, Cabriolet, GT, GL	1985-1992	42
RABBIT PICKUP	car/based pickup	1980-1983	43
FOX	GL	1987-1998	44
CORRADO		1989-1998	45
PASSAT		1990-1998	46
JETTA III		1993-1998	47
GOLF III		1993-1998	48
NEW BEETLE			49
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
THE THING (181)		1973-1975	401
VANAGON/CAMPER	Bus, Kombi, Van	1900-1998	441
EUROVAN		1992-1998	442
OTHER LIGHT TRUCK			498
UNKNOWN LIGHT TRUCK			782499

			998
UNKNOWN VEHICLE	OTHER VEHICLE		999

51 VOLVO

MODEL	INCLUDES	YEAR	MODEL
122	S	1900-1968	31
142/144/145	S, E, GL, GLS, Deluxe	1900-1974	32
164	S, E	1969-1975	33
240/242/244/245	DL. GL, GLE, GLT, Deluxe	1975-1998	34
262/264/265	GL	1976-1982	35
1800	E, S, ES	1900-1973	36
760/780	GLE, Turbo	1983-1990	38
760/780	GLE, Turbo	1987-1992	38
740	GLE, GT, Turbo, GL	1986-1992	39
940	GLE, Turbo, SE	1991-1998	40
960		1992-1998	41
850	GLT, Wagon	1993-1998	42
70 SERIES			43
90 SERIES			44
80 SERIES	S80		45
4O SERIES	Includes S40, V40		46
60 SERIES			47
OTHER AUTOMOBILE			398
UNKNOWN AUTOMOBILE			399
MEDIUM/HEAVY CBE			881
MEDIUM/HEAVY COE LOW ENTRY			882
MEDIUM/HEAVY COE HIGH ENTRY			883
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			884
MEDIUM/HEAVY: COE ENTRY POSITION UNKNOWN			890
OTHER MEDIUM/HEAVY TRUCK			898
UNKNOWN MEDIUM/HEAVY TRUCK			899
MEDIUM BUS			981
OTHER BUS			988
UNKNOWN TYPE BUS			989
UNKNOWN VEHICLE			999

9809 WARD LAFRANCE

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			898
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			898
MEDIUM/HEAVY - COE/HIGH ENTRY			898
MEDIUM/HEAVY - COE/LOW ENTRY			898
MEDIUM/HEAVY - OTHER			898
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			898

			898
MEDIUM/HEAVY BASED MOTORHOME			

9804 WESTERN STAR

MODEL	INCLUDES	YEAR	MODEL CODE
MEDIUM/HEAVY - CBE			804
MEDIUM/HEAVY - COE/ENTRY POSITION UNKNOWN			804
MEDIUM/HEAVY - COE/HIGH ENTRY			804
MEDIUM/HEAVY - COE/LOW ENTRY			804
MEDIUM/HEAVY - OTHER			804
MEDIUM/HEAVY - UNKNOWN ENGINE LOCATION			804
MEDIUM/HEAVY BASED MOTORHOME			804

30189 WINNEBAGO

MODEL	INCLUDES	YEAR	MODEL CODE
VAN BASED MOTORHOME			470
LIGHT TRUCK BASED MOTORHOME			498
UNKNOWN TYPE LIGHT MOTORHOME			499
MOTOR HOME			850
MEDIUM / HEAVY OTHER			898
MEDIUM / HEAVY UNKNOWN			899
UNKNOWN VEHICLE			999

76 YAMAHA

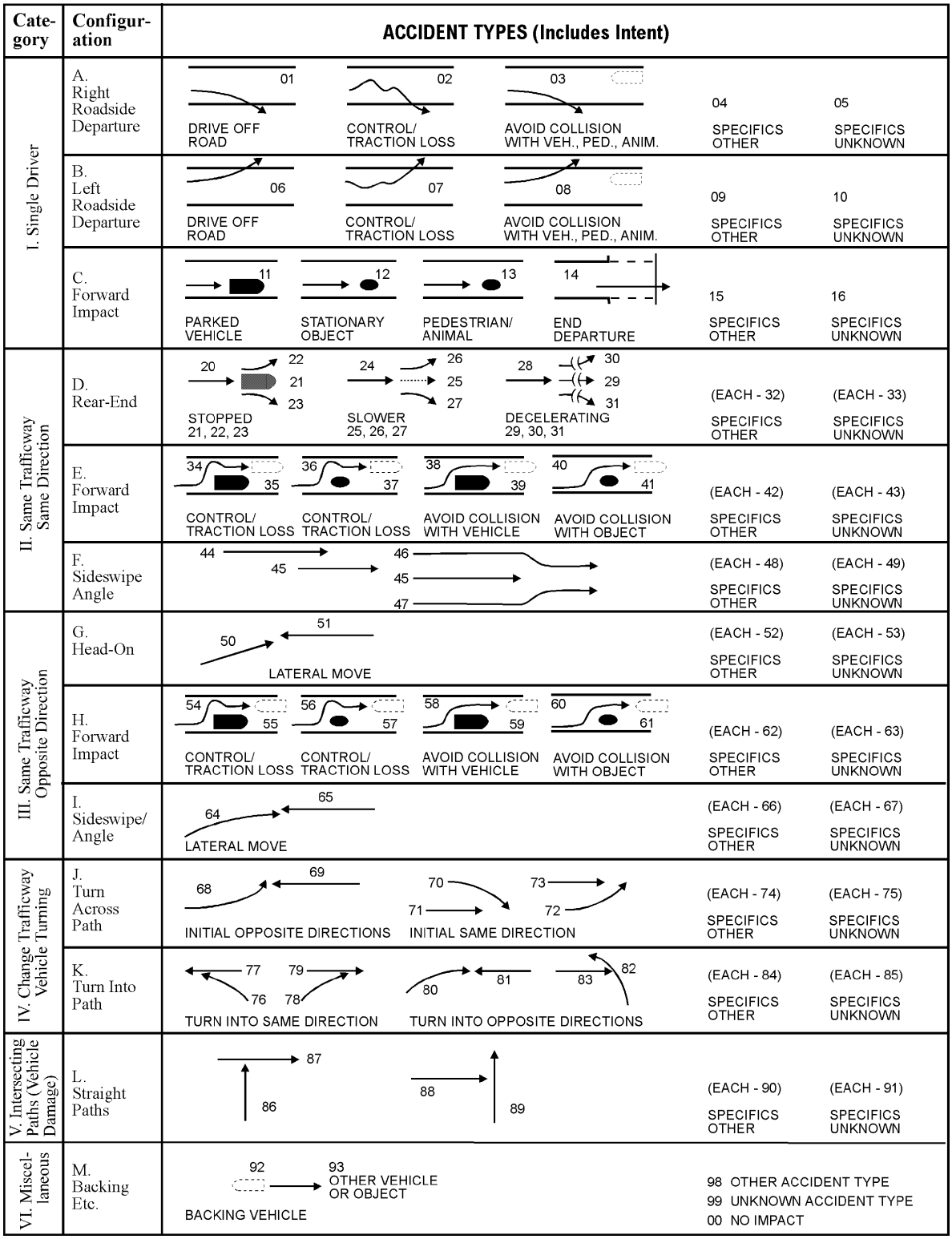
MODEL	INCLUDES	YEAR	MODEL CODE
MOTORCYCLE (000-050CC)			701
MOTORCYCLE (051-124CC)			702
MOTORCYCLE (125-349CC)			703
MOTORCYCLE (350-449CC)			704
MOTORCYCLE (450-749CC)			705
MOTORCYCLE (750CC-OVER)			706
MOTORCYCLE (UNKNOWN CC)			709
ATC/ATV (000-050CC)			731
ATC/ATV (051-124CC)			732
ATC/ATV (125-349CC)			733
ATC/ATV (350CC-OVER)			734
ATC/ATV (UNKNOWN CC)			739
OTHER MOTORED CYCLE			798
UNKNOWN MOTORED CYCLE			799

57 YUGO

MODEL	INCLUDES	YEAR	MODEL CODE

GVX, Cabriolet		1986-1992	31
OTHER AUTOMOBILE	GV		398
UNKNOWN AUTOMOBILE			399
UNKNOWN VEHICLE			999

APPENDIX B: V23 Accident Type Diagram



APPENDIX C: Summary Statistics

The following two tables provides a summary of descriptive statistics from the GES data files. Table 1 represents the actual number of records or Aunweighted sample@ and Table 2 represents the national estimates or Aweighted sample@ for the given descriptive from 1988 - 2001. These statistics will provide the user with a benchmark to compare against numbers obtained from the analytical files. The user can confirm that their program is running properly and/or the file is complete.

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	57,392	102,566	146,612	102,283	143,546	1,703	1,128
2001	55,964	100,161	143,281	99,893	140,147	1,732	1,005

Drivers: PER_TYPE = 1
Occupants: PER_TYPE IN (1,2,9)
Pedestrians: PER_TYPE = 5
Pedalcyclists: PER_TYPE = 6

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

Drivers: PER_TYPE = 1
Occupants: PER_TYPE IN (1,2,9)
Pedestrians: PER_TYPE = 5
Pedalcyclists: PER_TYPE = 6

APPENDIX D: Generalized Estimated Sampling Errors

Generalized standard errors were calculated separately for the crash, vehicle, and person characteristics. The values for the 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 125. 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 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*	$**SE = e^{a/2+b/2(\ln X)**2}$, *where*	$***\ SE = e^{a/2+b/2(\ln X)**2}$, *where*
a = 9.63	*a = 9.16*	*a = 9.04*
b = .067	*b = .069*	*b = .070*

1989 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*	$**SE = e^{a/2+b/2(\ln X)**2}$, *where*	$***\ SE = e^{a/2+b/2(\ln X)**2}$, *where*
$a = 9.63$	$a = 9.16$	$a = 9.04$
$b = .067$	$b = .069$	$b = .070$

1990 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
2,000,000	116,200	2,000,000	128,300	2,000,000	108,800
3,000,000	169,800	3,000,000	194,500	3,000,000	163,200
4,000,000	223,700	4,000,000	263,100	4,000,000	219,100
5,000,000	278,000	5,000,000	334,000	5,000,000	276,400
6,000,000	332,800	6,000,000	406,900	6,000,000	335,200
7,000,000	388,100	7,000,000	481,600	7,000,000	394,900
8,000,000	444,000	8,000,000	558,200	8,000,000	455,900
9,000,000	500,400	9,000,000	636,400	9,000,000	518,100
10,000,000	557,300	10,000,000	716,100	10,000,000	581,300
11,000,000	614,700	11,000,000	797,400	11,000,000	645,500
12,000,000	672,500	12,000,000	808,100	12,000,000	710,600

$*\ SE = e^{(a/2)+(b/2)(\ln(x))^2}$, *where*	$**SE = e^{(a/2)+(b/2)(\ln(x))^2}$, *where*	$***\ SE = e^{(a/2)+(b/2)(\ln(x))^2}$, *where*
$a = 9.93401$	$a = 8.83524$	$a = 8.88000$
$b = 0.06362$	$b = 0.06977$	$b = 0.06800$

1991 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*	$**SE = e^{a+b(\ln X)^2}$, *where*	$***\ SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.900441$	$a = 4.460186$	$a = 4.291460$
$b = 0.032292$	$b = 0.034701$	$b = 0.035576$

1992 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*	$** SE = e^{a+b(\ln X)^2}$, *where*	$*** SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.413218$	$a = 4.294210$	$a = 4.132995$
$b = 0.035447$	$b = 0.035807$	$b = 0.036452$

1993 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*	$**SE = e^{a+b(\ln X)^2}$, *where*	$***\ SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.388598$	$a = 4.285811$	$a = 4.222608$
$b = 0.035368$	$b = 0.035587$	$b = 0.035587$

1994 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*	$**SE = e^{a+b(\ln X)^2}$, *where*	$***\ SE = e^{a+b(\ln X)^2}$, *where*
a = 4.347699	*a = 4.283883*	*a = 4.206542*
b = 0.035898	*b = 0.036063*	*b = 0.035915*

1995 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*	$**SE = e^{a+b(\ln X)^2}$, *where*	$***\ SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.362086$	$a = 4.329914$	$a = 4.289002$
$b = 0.035627$	$b = 0.035631$	$b = 0.035157$

1996 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*	$**SE = e^{a+b(\ln X)^2}$, *where*	$*** SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.521508$	$a = 4.374631$	$a = 4.417590$
$b = 0.034180$	$b = 0.035149$	$b = 0.034001$

1997 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*	$** SE = e^{a+b(\ln X)^2}$, *where*	$*** SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.424135$	$a = 4.331394$	$a = 4.390740$
$b = 0.035154$	$b = 0.035572$	$b = 0.034978$

1998 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*	* $SE = e^{a+b(\ln X)^2}$, *where*	* $SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.415376$	$a = 4.371851$	$a = 4.551937$
$b = 0.034778$	$b = 0.035013$	$b = 0.033125$

1999 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*	* $SE = e^{a+b(\ln X)^2}$, *where*	* $SE = e^{a+b(\ln X)^2}$, *where*
$a = 4.414534$	$a = 4.348017$	$a = 4.452860$
$b = 0.034746$	$b = 0.034987$	$b = 0.033682$

2000 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*	* $SE = e^{a+b(\ln X)^2}$, *where*	* $SE = e^{a+b(\ln X)^2}$, *where*
a = 4.336620	a = 4.335260	a = 4.481530
b = 0.035240	b = 0.034980	b = 0.033490

APPENDIX E: Analytical Data Classification of Select GES Variables

Several variables in the GES are classified or collapsed according to analytical needs. In various NCSA=s published reports and analysis, select GES variables have been given a standard classification. This section will attempt to show how GES variables are classified, assisting users in understanding and duplicating statistics presented in NCSA=s published reports.

Earlier publications using only GES data included the fatal crash data from the 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 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 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 GES variables that are used in NCSA=s publications and analysis:

Univariate Maximum Injury Severity in Crash

GES DESCRIPTION	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

GES DESCRIPTION	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.

Body Type

BODY TYPE CLASS	GES CODES	
	1988 - 1991	**1992-1997**
Passenger Cars	1-11	
Passenger Vehicles	1-11, 14-22, 24-41, 43-48 (for 1993 & later add new body type codes **24 & 25**)	
Light Trucks/ Vans/Utility Vehicles	14, 20-41, 47, 48	14-22, 28-41, 45, 48 (for 1993 & later add new body type codes **24 & 25**)
Medium Trucks	(60,68) and (***Vehicle Trailing*** = 0 or 9)	(60,64,78) and (***Vehicle Trailing*** = 0 or 9)
Heavy/Combination Trucks	((60,68) and (***Vehicle Trailing***=1-4)) or 65	((60,64,78) and ***(Vehicle Trailing***=1-4)) or 66
Large Trucks	60, 65, 68	60, 64,66,78
Buses	50-59	
Motored Cycles	70-79	80-89
Other Vehicles	12, 42, 63, 80-89 (for 1990 and 1991 add new body type code **13**)	12, 13, 23, 42, 65, 90-97

L Note: In 1993 & later, when defining **School Buses** be sure to include body type code **24** (van-based school bus) and when defining **Transit Buses**, be sure to include body type code **25** (van-based transit bus).

Person Type

GES DESCRIPTION	CODE	PERSON TYPE CLASS
	1988 - Later	
Driver of a Motor Vehicle in Transport	1	Driver
Passenger of a Motor Vehicle in Transport	2	Passenger
Occupant of a Motor Vehicle Not in Transport	3	Other Nonmotorist
Occupant of a Non-Motor Vehicle in Transport	4	Other Nonmotorist
Pedestrian	5	Pedestrian
Cyclist (Pedalcyclist)	6	Pedalcyclist
Other or Unknown Non-Occupant	8	Other Nonmotorist
Driver, Passenger, or Unknown Occupant Type in a Motor Vehicle in Transport	1,2,9	Occupant

Restraint System Use

GES DESCRIPTION	CODE			RESTRAINT CLASS
	1988-1991	1992-1994	1995-later	
None Used or Not Applicable	0			Restraint Not Used
Lap/Shoulder Belt	1			Restraint Used
Lap Belt	2			Restraint Used
Shoulder Belt	3			Restraint Used
Air Bag Deployed	4	-	-	Restraint Used
Air Bag Deployed & Lap/Shoulder Belt	5	-	-	Restraint Used
Child Safety Seat	6			Restraint Used
Motorcycle Helmet	7		5	Restraint Used
None Available	-	-	7	Restraint Not Used
Restraint Used - Specifics Unknown or Other	8			Restraint Used
Unknown if Used	9			Restraint Use Unknown

Univariate Traffic Control Device

CONTROL DEVICE CLASS	GES CODES	
	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