NATIONAL AUTOMOTIVE SAMPLING SYSTEM (NASS)

CRASHWORTHINESS DATA SYSTEM

Analytical User's Manual

2000 File



U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis

Washington, D.C. 20590

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SECTION 1

INTRODUCTION

The National Automotive Sampling System (NASS) Crashworthiness Data System (CDS) is a nationwide crash data collection program sponsored by the U.S. Department of Transportation. It is operated by the National Center for Statistics and Analysis (NCSA) of the National Highway Traffic Safety Administration (NHTSA).

The NASS CDS provides an automated, comprehensive national traffic crash data base. Data collection began in 1979 in 10 geographic sites, called Primary Sampling Units (PSU's). The 2000 NASS CDS file contains data from 24 PSU's. These data are weighted to represent all police reported motor vehicle crashes occurring in the USA during the year involving passenger cars, light trucks and vans that were towed due to damage.

The NASS program was re-evaluated in the mid-1980's. This re-evaluation resulted in changes which were implemented by NHTSA in January 1988. NASS now has two major operating components: (1) the General Estimates System (GES) which collects data on a sample of police traffic crash reports; and (2) the Crashworthiness Data System (CDS) which collects additional detailed information on a sample of police reported traffic crashes.

Comparing the 1988-2000 files with files from years prior to 1988 is not recommended. The principal attributes of the NASS CDS 1988-2000 files include: focusing on crashes involving automobiles and automobile derivatives, light trucks and vans with gross vehicle weight less than 10,000 pounds (4,537 kg); giving special consideration to late model year vehicles (the five most recent model years [four, beginning in 1996]); emphasizing the more serious injury crashes; eliminating the pedestrian and non-motorist record, the driver record and vehicle registration information. A revised set of data collection forms was designed in 1988 for the crashworthiness data system. Some features are: the introduction of an Accident Event Record to capture all events in the crash; the creation of three new vehicle records (General Vehicle, Exterior Vehicle, Interior Vehicle); and the separation of occupant records into an Occupant Assessment Record and an Occupant Injury Record, wherein all injuries are coded.

The NASS CDS file is available in two automated formats: a sequential data set or a Statistical Analysis System (SAS) data set in a formatted or unformatted version. Hard copy data collection records, sanitized to protect privacy, are available for review through data collection year 1996. An electronic version of these records is available beginning with data collection year 1997. These records contain photographic images, scene diagrams, and vehicle damage diagrams.

This manual and the NASS 2000 Crashworthiness Data System's Data Collection, Coding and Editing Manual are the primary documentation supporting the automated file. When using this file one should be

careful to understand the coding conventions of all variables used thoroughly. In addition, the user may find the following documents helpful:

CRASH3 Technical Manual, July 1986

Collision Deformation Classification (SAE J224 MAR 80)

Injury Coding Manual 1993

NASS Design for Crashworthiness Research, April 1986 (Internal Working Paper)

General Description of the NASS Crashworthiness Data System Sample Design, April 1987 (Internal Working Paper)

1988-1996 NASS CDS Variable-Attribute Structure Manual

The first document is available from the DOT/Volpe National Transportation Systems Center (VNTSC), DTS-44, Kendall Square, Cambridge, Massachusetts 02142. The second document is available from the Society of Automotive Engineers (SAE), Warrendale, Pennsylvania 15096. The last four documents are available from the National Highway Traffic Safety Administration at the address below.

Comments on the content and utility of the files and primary documentation are appreciated. Please address them to the National Center for Statistics and Analysis - NRD-30, National Highway Traffic Safety Administration, U.S. Department of Transportation, 400 Seventh St., S.W., Washington, D.C. 20590.

SECTION 2

CHANGES IN 2000

Formatted SAS data sets were made available for the years 1988-2000.

**ACCIDENT RECORD**

One data element has been deleted.

Deleted:
Pedestrian Study (AC07) - This Special Study was a separate system.

**UNWEIGHTED CASES**

Eight Impact Fires Special Study cases, which were over sampled, have been retained on the file with zero weight.  Cases qualify for this special study if a vehicle fire occurs from an impact with another vehicle or object and the case is not selected as part of the CDS case sample.  These over sampled crashes are limited to fires originating in late model year vehicles (1997-2001).  All case numbers are in the 500 series e.g., 04-501G.

SECTION 3

THE SAMPLING SYSTEM AND SAMPLE DESIGN

The crashes investigated in NASS CDS are a probability sample of all police reported crashes in the U.S. A NASS CDS crash must fulfill the following requirements: must be police reported, must involve a harmful event (property damage and/or personal injury) resulting from a crash and must involve at least one towed passenger car or light truck or van in transport on a trafficway. Every crash which meets these conditions has a chance of being selected. This type of sample design makes it possible to compute estimates which are representative of the entire country.

The selection of sample crashes in NASS is accomplished in three stages: (1) selection of PSU's, (2) selection of police jurisdictions and (3) selection of crashes.


Stage 1 - Select PSU's

For the first stage of selection, the country was divided into 1195 geographic areas called Primary Sampling Units (PSU's). Each PSU consisted of either a central city, a county surrounding a central city, an entire county or a group of contiguous counties. The PSU's were defined so that their minimum population was approximately 50,000.

The 1195 PSU's were grouped into 12 strata based on geographic region and type, e.g., central cities, suburban counties, and other PSU's. The 24 PSU's to be sampled were allocated to each stratum roughly proportional to the number of crashes in each stratum. Two PSU's were selected from each stratum.


Stage 2 - Select Police Jurisdictions

If every crash in each PSU were investigated, a national estimate could be obtained by weighting each crash by the inverse of the probability of selecting the PSU. Because it is uneconomical and impractical to investigate every crash in each sample PSU, a second and third stage of sampling are performed. Each PSU contains a number of police jurisdictions which process reports of crashes that occur within the PSU's boundaries. These police jurisdictions form the frame of the second stage of sampling. Each jurisdiction is assigned a measure of size based on the number, severity and type of its crashes. A sample of jurisdictions is selected which over-samples those having a larger measure of size.

Stage 3 - Select Crashes

The final stage of sampling is the selection of crashes within the sampled jurisdictions. Each week, the police jurisdictions are contacted and all crashes that qualify for the NASS CDS for which a police crash report has been filed since the last date that jurisdiction was contacted are listed. While being listed, each crash is classified into a stratum based on type of vehicle, most severe police reported injury, disposition of the injured, tow status of the vehicles and model year of the vehicles. All qualifying crashes are listed, except in a few of the largest police jurisdictions. In these jurisdictions only crashes with either an even or an odd police crash report number are listed.

To select crashes, each team is assigned a fixed number of crashes to investigate each week. The number of crashes a team selects for investigation is governed by the number of researchers on a team. Sampling weights for the strata are assigned so that a larger percentage of the higher severity crashes are selected than of the lower severity crashes. Also, crashes in the same stratum have the same probability of being selected, regardless of the PSU.

To select the sample, each crash is assigned a weight equal to the inverse of the probability of selecting the police jurisdiction in which it was listed.

SAMPLING VARIABLES

The stratification category (1) by type of vehicle is "CDS applicable"---passenger cars, light trucks and vans and "other vehicles"---all other vehicle types; (2) by injury is "fatal injury"---K, "serious injury"---A or "minor injury, not injured or unknown"---B,C,O,U; (3) by disposition of the injured is "transported to a medical facility" or "not transported"; (4) by hospitalization is "occupant admitted at least overnight"; (5) by tow status is "towed due to damage" or "not towed"; (6) by model year of the vehicle is "late model year"---1997 through 2001 or "non-late model year"---1996 or before.

SAMPLING STRATA

The ten PAR sampling Strata used by the CDS are listed below and shown in Table 3-1:

Stratum A-NASS crashes in which at least one occupant of a towed CDS applicable late model year vehicle had a police reported injury of "K" (fatal injury).

Stratum B-NASS crashes not qualifying for Stratum A in which at least one occupant of a towed CDS applicable non-late model year vehicle had a police reported injury of "K" (fatal injury).

Stratum J-NASS crashes not qualifying for Strata A or B in which at least one occupant of a towed CDS applicable late model year vehicle had a police reported injury of "A" (incapacitating injury) AND was

transported to a treatment facility for treatment AND was admitted overnight to the hospital. If the crash involved more than one CDS applicable vehicle, at least two CDS applicable vehicles must be towed.

Stratum K-NASS crashes not qualifying for Strata A, B or J in which at least one occupant of a towed CDS applicable nonlate model year vehicle had a police reported injury of "A" (incapacitating injury) AND was transported to a treatment facility for treatment AND was admitted overnight to the hospital. If the crash involved more than one CDS applicable vehicle, at least two CDS applicable vehicles must be towed.

Stratum C-NASS crashes not qualifying for Strata A, B, J or K in which at least one occupant of a towed CDS applicable late model year vehicle had a police reported injury of "A" (incapacitating injury) AND was transported to a treatment facility for treatment. If the crash involved more than one CDS applicable vehicle, then at least two CDS applicable vehicles must be towed.

Stratum D-NASS crashes not qualifying for Strata A, B, J, K or C in which at least one occupant of a towed CDS applicable non-late model year vehicle had a police reported injury of "A" (incapacitating injury) AND was transported to a treatment facility for treatment. If the crash involved more than one CDS applicable vehicle, then at least two CDS applicable vehicles must be towed.

Stratum E-NASS crashes not qualifying for Strata A, B, J, K, C or D in which at least one occupant of a towed CDS applicable late model vehicle was transported from the scene to a treatment facility for treatment.

Stratum F-NASS crashes not qualifying for Strata A, B, J, K, C, D or E in which at least one occupant of a towed CDS applicable non-late model vehicle was transported from the scene to a treatment facility for treatment.

Stratum G-NASS crashes not qualifying for Strata A, B, J, K, C, D, E or F which involve at least one CDS applicable late model vehicle that was towed, according to the police report, from the scene due to damage.

Stratum H-NASS crashes not qualifying for Strata A, B, J, K, C, D, E, F or G which involve at least one CDS applicable non-late model vehicle that was towed, according to the police report, from the scene due to damage.

Example of Crash Stratification: A CDS applicable non-late model year vehicle and a bicycle crash. The CDS applicable vehicle is towed with minor injuries to the occupants, who are not transported. The bicyclist receives a serious injury---"A". The crash is classified as Stratum H because of the minor injuries to the occupants of the towed CDS applicable non-late model year vehicle.

Table 3-1
2000 NASS CDS Strata

| Late Model Year (LMY) Vehicle Involvement | Most Severe Police Reported Injury | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Fatal Injury AK@ | Transported | | | | | Non-transported | |
| | | Serious Injury AA@ | | | | Minor Injury or Unk. AB@, AC@, or AU@ | Minor Injury, Not injured or Unknown | |
| | | Single CDS Veh. | | Multiple CDS Applicable Vehicles | | | At Least one Towed CDS Veh. | No Towed CDS Appli. Veh. |
| | | Towed | | Two or More Towed | Only One Towed | | | |
| | | Hosp-ital-ized | Not Hosp-ital-ized | Hosp-ital-ized | Not Hosp-ital-ized | | | |
| Injury in Towed LMY CDS Veh. | A | J | C | J | C | E | G | Not |
| Injury not in Towed LMY CDS Veh. | B | K | D | K | D | F | H | in Scope |

Note: Late Model Year refers to 1997 through 2001 model years.

Sampling

Because the crashes selected in NASS CDS are a probability sample of all crashes occurring in the survey year, the data from these crashes are "weighted" to produce National Estimates. The weights result from the stages of selection, reflecting that crash's probability of selection. The analysis file contains only one weight.

PSU Inflation Factor

The PSU Inflation Factor is the within PSU sampling weight for each crash in that PSU's sample and is equal to the inverse of that crash's probability of selection within the PSU. It is equal to the product of the inverse of the probability of selecting that crash from the other crashes and the inverse of the probability of selecting the police jurisdiction in which the crash occurred from among all police jurisdictions listed in the PSU (Stage 2).

The sum of the PSU Inflation Factors for all crashes sampled within a PSU is an unbiased estimate of the number of crashes which occurred during the year in that PSU. Unbiased estimates of crash characteristics

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for a PSU can be obtained by multiplying the value of the characteristic for each crash sampled in the PSU by that crash's PSU Inflation Factor and summing.

National Inflation Factor

The National Inflation Factor is the overall sampling weight for each crash selected in the NASS sample and the inverse of the probability of selection of that crash. It is equal to product of the PSU Inflation Factor and the inverse of the probability of selection of the PSU (Stage 1).

The sum of the National Inflation Factors for all sampled NASS crashes in a year is an unbiased estimate of the total number of crashes which occurred during the year in the U.S. If restricted to a crash stratum, the sum is an estimate of the total number of that type of crash, which occurred in that year. Unbiased estimates of National totals of crash characteristics can be obtained by multiplying the value of the characteristic for each crash in the NASS sample by the National Inflation Factor for that crash.

Ratio Inflation Factor

The Ratio Inflation Factor is the product of the National Inflation Factor and a rate, which adjusts for differences between actual and estimated totals. This ratio is calculated using crash totals from both the sampled and non-sampled police jurisdictions. The totals for the sampled jurisdictions come from the Stage 3 frame. The totals for the non-sampled jurisdictions are collected annually. The PSU's are grouped into predetermined sets. Ratios are formed by dividing the total crashes in each stratum and in each set of PSU's by the estimated total. Those estimated totals are sums of the National Inflation Factors for each crash in the crash strata and set of PSU's.

Estimates of National totals for crash characteristics can be obtained using the Ratio Inflation Factor (RIF). However, because the RIFs have been adjusted to actual crash counts, some of the sampling variation has been removed. Therefore they will produce more precise estimates than the National Inflation Factor. It is for this reason that the RIF or Ratio Weight is the only weight on the analysis file. Less than one percent of the cases have RIFs greater than 5000. This is the result of listing at least twice the number of expected serious injury crashes on a given sampling day.

# SECTION 4

## DERIVED VARIABLES

Most of the data presented in the NASS record layout can be identified easily as coming from crash investigation and other activities of NASS field teams.  The following data elements, however, are by-products of sampling procedures used by NASS or are derived from data processing applications, such as totaling the number of injured persons in a given crash.  The following list identifies the specific data elements, gives their location in the Sequential File Record Layout, lists  their SAS name (Label) and explains their derivation:

SPECIFICATION FOR DERIVED VARIABLES
VARIABLE NAME - LOCATION - DESCRIPTION

MAXIMUM TREATMENT IN THIS ACCIDENT (AC33) (SAS Label: ATREAT)

This single place numeric value indicates the most intensive treatment given to any occupant of a towed CDS applicable vehicle or a non-towed with air bag deployment in the crash, using the following order of codes:

| | |
|---|---|
| 1 | FATAL |
| 3 | HOSPITALIZED |
| 4 | TRANSPORTED AND RELEASED |
| 5 | TREATMENT AT SCENE |
| 6 | TREATMENT LATER |
| 7 | TREATMENT - OTHER |
| 8 | TRANSPORTED TO A MEDICAL FACILITY - UNKNOWN IF TREATED |
| 2 | FATAL - RULED DISEASE |
| 9 | UNKNOWN |
| 0 | NO TREATMENT |
| . | NOT COLLECTED |

This variable is derived by scanning the TREATMENT-MORTALITY (OA62) variable in each occupant assessment record in the crash.

**Source:** TREATMENT-MORTALITY (OA62).
**Missing Values:** Occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49 and POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. If there are no occupants in any towed CDS applicable vehicle in the crash, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.
**SAS Codes**: .N for Blank (Not Collected) and .U for 9 (Unknown).

MAXIMUM KNOWN A.I.S. IN THIS ACCIDENT (AC34) (SAS Label: AAIS)

This single place numeric value indicates the single most severe injury level reported for any occupant of a towed CDS applicable vehicle or a non-towed with air bag deployment in the crash, using the following order of codes:

| | |
|---|---|
| 6 | MAXIMUM (UNTREATABLE) INJURY |
| 5 | CRITICAL INJURY |
| 4 | SEVERE INJURY |
| 3 | SERIOUS INJURY |
| 2 | MODERATE INJURY |
| 1 | MINOR INJURY |
| 7 | INJURY, UNKNOWN SEVERITY |
| 9 | UNKNOWN IF INJURED |
| 0 | NOT INJURED |
| . | NOT COLLECTED |

This variable is derived by scanning the A.I.S. SEVERITY (OI010...OI100) variable on each occupant injury record in the crash. If none of the occupants in the crash has an occupant injury record, then scan the NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70) variable on the occupant assessment record. Use the following order of codes: if "97", then code "7"; if "99", then code "9"; if "00", then code "0".

**Source:** A.I.S. SEVERITY (OI010...OI100) and NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70).

**Missing Values:** Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Occupant injury records will be missing for: (1) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2) Non-towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00. If there are no occupants in any towed CDS applicable vehicle in the crash, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.

**SAS Codes:** .N for Blank (Not Collected) and .U for 9 (Unknown).

NUMBER OF SERIOUSLY INJURED OCCUPANTS IN THIS ACCIDENT (AC35-36) (SAS Label: AINJSER)

This two place numeric value indicates the total number of fatally and other seriously injured occupants of towed CDS applicable vehicles or non-towed with air bag deployment involved in the crash. It is derived by totaling for the crash either the number of occupant assessment records

in which the TREATMENT-MORTALITY (OA62) value is coded "1" (Fatal) or the number of occupant injury records in which the A.I.S. SEVERITY (OI010...OI100) value is coded "3-6". (Add together "1"s in OA62 and if the code in OA62 is not equal to "1", add one injury per occupant where OI010...OI100 is "3-6").

**Source:** TREATMENT-MORTALITY (OA62) and A.I.S. SEVERITY (OI010...OI100).
**Missing Values:** Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Occupant injury records will be missing for: (1) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2) Non-towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00. If none of the occupants in the crash has an occupant injury record or if, on all the occupant assessment records the only codes in OA70 are equal to "97, 99 or 00", then use code "00" (None) for this derived variable. If there are no occupants in any towed CDS applicable vehicle in the crash, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.
**SAS Codes:** .N for Blank (Not Collected). Unknown is not a valid code.

## NUMBER OF INJURED OCCUPANTS IN THIS ACCIDENT (AC37-38) (SAS Label: AINJURED)

This two place numeric value indicates the total number of injured occupants of towed CDS applicable vehicles or non-towed with air bag deployment involved in the crash. It is derived by totaling the number of occupant assessment records in which the variable NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70) has a value of 01-97.

**Source:** NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70).
**Missing Values:** Occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00. Non-

towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00. If, on all the occupant assessment records in the crash, the only codes in OA70 are equal to "99 or 00", then use code "00" (None) for this derived variable. If there are no occupants in any towed CDS applicable vehicle in the crash, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.
**SAS Codes:** .N for Blank (Not Collected). Unknown is not a valid code.

ALCOHOL INVOLVEMENT IN THIS ACCIDENT (AC39) (SAS Label: ALCINV)

This single place numeric value indicates if any involved driver were reported to have had some alcohol involvement at the time of the crash, using the following order of codes:
    1       YES
    2       NO
    9       UNKNOWN
This variable is derived by scanning the POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER (GV13) and ALCOHOL TEST RESULT FOR DRIVER (GV14) variables on each general vehicle record in the crash. The ALCOHOL INVOLVEMENT codes are derived as follows:

(YES) 1 - If POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER equals 1 (YES-ALCOHOL PRESENT) or ALCOHOL TEST RESULT FOR DRIVER equals 01-49 (positive result).

(NO) 2 - If POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER equals 0 (NO ALCOHOL PRESENT) and ALCOHOL TEST RESULT FOR DRIVER equals 00 (NONE) or 96 (NONE GIVEN).

(UNKNOWN) 9 - If the variables shown above have any other combination of values.

**Source:** POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER (GV13) and ALCOHOL TEST RESULT FOR DRIVER (GV14).
**Missing Values:** None (must have at least one general vehicle record coded through the variable ACCIDENT TYPE (GV36) in the crash).
**SAS Codes:** .U for 9 (Unknown).

DAY OF WEEK (AC40-41) (SAS Label:  DAYWEEK)

This two place numeric value indicates on which day of the week the crash occurred.  To protect the confidentiality of records concerning specific crashes used by NASS, the crash date is not provided.   Instead, the crash record indicates year, month and DAY OF WEEK of crash occurrence. DAY OF WEEK values are coded as follows:

| | | | |
|---|---|---|---|
| 01 | Sunday | 05 | Thursday |
| 02 | Monday | 06 | Friday |
| 03 | Tuesday | 07 | Saturday |
| 04 | Wednesday | | |

**Source:**  DATE OF ACCIDENT (AC04).
**Missing Values:**  None.
**SAS codes:**  None.  Unknown is not a valid code.


PSU INFLATION FACTOR (SAS Label: PSUWGT)

This eight place numeric value has three implied decimal places.  It indicates the within PSU sampling weight for each crash in that PSU's sample.
**This weight is not on the current year file.**

**Source:**  Computed by NHTSA Headquarters.
**Missing Values:**  None.
**SAS Codes:**  None.

NATIONAL INFLATION FACTOR (SAS Label: NATWGT)

This eight place numeric value has three implied decimal places.  It indicates the overall sampling weight for each crash selected in the NASS sample.
**This weight is not on the current year file.**

**Source:**  Computed by NHTSA Headquarters.
**Missing Values:**  None.
**SAS Codes:**  None.

RATIO INFLATION FACTOR (AC58-65) (SAS Label: RATWGT)

This eight place numeric value has three implied decimal places.  It is the product of the National Inflation Factor and a ratio which adjusts for differences between actual and estimated totals.

**Source:**  Computed by NHTSA Headquarters.
**Missing Values:**  None.
**SAS Codes:**  None.

DRUG INVOLVEMENT IN THIS ACCIDENT (AC66) (SAS Label: DRGINV)

This single place numeric value indicates if any involved driver were reported to have had some drug involvement at the time of the crash, using the following order of codes:

    1       YES
    2       NO
    3       UNKNOWN

This variable is derived by scanning the POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER (GV15) and OTHER DRUG SPECIMEN TEST RESULT (GV16) variables on each general vehicle record in the crash. The DRUG INVOLVEMENT codes are derived as follows:

(YES) 1 - If POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER equals 1 (YES - OTHER DRUG PRESENT) or OTHER DRUG SPECIMEN TEST RESULT equals 2 (DRUG FOUND IN SPECIMEN).

(NO) 2 - If POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER equals 0 (NO OTHER DRUGS PRESENT) and OTHER DRUG SPECIMEN TEST RESULT equals 0 (NO SPECIMEN TEST GIVEN) or 1 (DRUG NOT FOUND IN SPECIMEN).

(UNKNOWN) 9 - If the variables shown above have any other combination of values.

**Source:** POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER (GV15) and OTHER DRUG SPECIMEN TEST RESULT (GV16).
**Missing Values:** None (must have at least one general vehicle record coded through the variable ACCIDENT TYPE (GV36) in the crash).
**SAS Codes:** .U for 9 (Unknown).

MANNER OF COLLISION (AC67) (SAS Label: MANCOLL)

This single place numeric value indicates the configuration of the crash based on the first harmful event, using the following codes:

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

This variable is derived by scanning the OBJECT CONTACTED (AC16) variable on the crash event record and the ACCIDENT TYPE (GV36) variable on the general vehicle record, where VEHICLE NUMBER (AC13) equals VEHICLE NUMBER (GV03). The MANNER OF COLLISION codes are derived as follows:

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

**Source:** OBJECT CONTACTED (AC16) and ACCIDENT TYPE (GV36).
**Missing Values:** None (must have at least one general vehicle record coded through the variable ACCIDENT TYPE (GV36) in the crash.
**SAS Codes:** .U for 9 (Unknown).

PSU STRATA (AC68-69) (SAS Label:  PSUSTRAT)

This two place numeric variable indicates the stratum into which each PSU is grouped in the first stage of selection of sample crashes.  It is used for calculating variance by analysts using the SUDAAN statistical system.  Values are coded as follows:

01 - 12

This variable is derived by scanning a coded table consisting of PSU number and stratum number.

**Source:** PSU NUMBER (AC01) and coded table.
**Missing Values:** None.
**SAS Codes:** None.

MAXIMUM TREATMENT IN THIS VEHICLE (GV75-REC22) (SAS Label:  VTREAT)

This single place numeric value indicates the most intensive treatment given to any occupant of this towed CDS applicable vehicle or non-towed with air bag deployment using the following order of codes:

| 1 | FATAL |
|---|---|
| 3 | HOSPITALIZED |
| 4 | TRANSPORTED AND RELEASED |
| 5 | TREATMENT AT SCENE |
| 6 | TREATMENT LATER |
| 7 | TREATMENT - OTHER |

| 8 | TRANSPORTED TO A MEDICAL FACILITY - UNKNOWN IF TREATED |
|---|---|
| 2 | FATAL - RULED DISEASE |
| 9 | UNKNOWN |
| 0 | NO TREATMENT |
| . | NOT COLLECTED |

This variable is derived by scanning the TREATMENT-MORTALITY (OA62) variable in each occupant assessment record in this vehicle.

**Source:** TREATMENT-MORTALITY (OA62).
**Missing Values:** Occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. If none of the occupants in the vehicle has an occupant assessment record, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.
**SAS Codes:** .N for Blank (Not Collected) and .U for 9 (Unknown).

MAXIMUM KNOWN A.I.S. IN THIS VEHICLE (GV76-REC22) (SAS Label: VAIS)

This single place numeric value indicates the single most severe injury level reported for any occupant in this towed CDS applicable vehicle or non-towed with air bag deployment using the following order of codes:

| 6 | MAXIMUM (UNTREATABLE) INJURY |
|---|---|
| 5 | CRITICAL INJURY |
| 4 | SEVERE INJURY |
| 3 | SERIOUS INJURY |
| 2 | MODERATE INJURY |
| 1 | MINOR INJURY |
| 7 | INJURY, UNKNOWN SEVERITY |
| 9 | UNKNOWN IF INJURED |
| 0 | NOT INJURED |
| . | NOT COLLECTED |

This variable is derived by scanning the A.I.S. SEVERITY (OI010...OI100) variable on each occupant injury record in this towed CDS applicable vehicle or non-towed with air bag deployment. If none of the occupants in this vehicle has an occupant injury record, then scan the NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70) variable on the

occupant assessment record. Use the following order of codes: if "97", then code "7"; if "99", then code "9"; if "00", then code "0".

**Source:** A.I.S. SEVERITY (OI010...OI100) and NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70).

**Missing Values:** Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Occupant injury records will be missing for: (1) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2) Non-towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00. If none of the occupants in the vehicle has an occupant assessment record, then use code "BLANK" (Not Collected) on the Flat file and use ".N" (Not Collected) on the SAS file.

**SAS Codes:** .N for Blank (Not Collected) and .U for 9 (Unknown).

NUMBER SERIOUSLY INJURED IN THIS VEHICLE (GV77&78-REC22) (SAS Label: VINJSER)

This two place numeric value indicates the total number of fatally and other seriously injured occupants of this towed CDS applicable vehicle or non-towed with air bag deployment. It is derived by totaling for the vehicle either the number of occupant assessment records in which the TREATMENT-MORTALITY (OA62) value is coded "1" (Fatal) or the number of occupant injury records in which the A.I.S. SEVERITY (OI010...OI100) value is coded "3-6". (Add together "1"s in OA62 and if the code in OA62 is not equal to "1", add one injury per occupant where OI010...OI100 is "3-6").

**Source:** TREATMENT-MORTALITY (OA62) and A.I.S. SEVERITY (OI010...OI100).

**Missing Values:** Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Occupant injury records will be missing for: (1)Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2) Non towed CDS applicable vehicles with no

known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00.

If none of the occupants in the vehicle has an occupant assessment record, then use code "BLANK" (Not Collected) on the Flat file and use ".N" (Not Collected) on the SAS file. If, on all the occupant assessment records in the vehicle, the only codes in OA70 are equal to "97, 99 or 00", then use code "00" (None) for this derived variable.
**SAS Codes:** .N for Blank (Not Collected). Unknown is not a valid code.

NUMBER INJURED IN THIS VEHICLE (GV79&80-REC22) (SAS Label: VINJURED)

This two place numeric value indicates the total number of injured occupants of this towed CDS applicable vehicle or non-towed with air bag deployment. It is derived by totaling the number of occupant assessment records in which the variable NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70) has a value of 01-97.

**Source:** NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70).
**Missing Values:** Occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00. Non-towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00. If none of the occupants in the vehicle has an occupant assessment record, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file. If, on all the occupant assessment records in the vehicle, the only codes in OA70 are equal to "99 or 00", then use code "00" (None) for this derived variable.
**SAS Codes:** .N for Blank (Not Collected). Unknown is not a valid code.

FRONT/REAR WHEEL DRIVE (GV81-REC22) (SAS Label: DRIVE)

This single place numeric value indicates which wheels of a passenger car are powered. Values are coded as follows:

| | |
|---|---|
| 1 | REAR WHEEL DRIVE |
| 2 | FRONT WHEEL DRIVE |
| 8 | NOT APPLICABLE, NOT A PASSENGER CAR |

9        UNKNOWN (FOUR WHEEL DRIVE POTENTIAL)

This variable is derived by scanning a coded table consisting of vehicle make, vehicle model and vehicle model year, to which a "drive" code has been appended.

**Source:** VEHICLE MODEL YEAR (GV04), VEHICLE MAKE (GV05), VEHICLE  MODEL (GV06), BODY TYPE (GV07) and coded table.
**Missing Values:** None.
**SAS Codes:** .U for 9 (Unknown).


VIN LENGTH (GV82&83-REC22) (SAS Label:  VINLNGTH)

This two place numeric value indicates the number of characters in the Vehicle Identification Number (VIN) as originally recorded.  99 denotes unknown (on the FLAT file).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Values:** None.
**SAS Codes:** .U for 99 (Unknown).


WEIGHT OF THE OTHER VEHICLE (GV84-86;REC22) (SAS Label:  OTVEHWGT)

This three place numeric value indicates the weight (in kilograms) of the other vehicle, if the most severe impact is with another CDS applicable vehicle. (This vehicle must be an inspected CDS applicable vehicle, the other vehicle need only be a CDS applicable vehicle). Values are coded as follows:

| | |
|---|---|
| 045 | LESS THAN 450 KILOGRAMS |
| 046 - 609 | 460-6,090 KILOGRAMS |
| 610 | 6,100 KILOGRAMS OR MORE |
| 998 | NOT APPLICABLE (MOST SEVERE IMPACT NOT WITH ANOTHER VEHICLE OR WITH VEHICLE HITTING ITSELF) |
| 999 | UNKNOWN |
| . | NOT COLLECTED |

This variable is derived by scanning the OBJECT CONTACTED (EV05) variable from the HIGHEST DELTA "V" as coded on the exterior vehicle record.  If the object contacted is another CDS applicable vehicle, then the weight is derived by scanning the VEHICLE CURB WEIGHT (GV43) variable as coded on the general vehicle record for the other CDS applicable vehicle.
**Source:** OBJECT CONTACTED (EV05), BODY TYPE (GV07) & VEHICLE CURB WEIGHT (GV43).
**Missing Values:** Exterior vehicle records will be missing and variables GV37-67 on general vehicle records will not be coded for Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99. If the most severe impact is between an inspected CDS applicable vehicle and a non CDS applicable vehicle, then use code "BLANK" (Not Collected) on the Flat file and use ".N" (Not Collected) on the SAS file.  Exterior vehicle records will be missing for CDS applicable vehicles which are not inspected-   BODY TYPE (GV07) equals 01-49 and TYPE OF VEHICLE INSPECTION  (GV67) equals 0.  Use code "BLANK" (Not Collected) on the Flat file and use

".N" (Not Collected) on the SAS file.  If the OBJECT CONTACTED (EV05) variable is blank (non collision event) for an inspected CDS applicable vehicle, then use code 998 (Not Applicable).
**SAS Codes:** .N for Blank (Not Collected) and .U for 999 (Unknown)

BODY TYPE OF THE OTHER VEHICLE (GV87&88-REC22) (SAS Label:  OTBDYTYP)

This two place numeric value indicates the body type of the other vehicle if the most severe impact is with another vehicle. (This vehicle must be an inspected CDS applicable vehicle, the other vehicle may be any vehicle type).  If the impact is not with another vehicle, the value is coded as follows:

> 98      NOT APPLICABLE (MOST SEVERE IMPACT NOT WITH ANOTHER VEHICLE OR WITH VEHICLE HITTING ITSELF)
> .       NOT COLLECTED

This variable is derived by scanning the OBJECT CONTACTED (EV05) variable from the HIGHEST DELTA "V" as coded on the exterior vehicle record.  If the object contacted is another vehicle, then the body type is derived by scanning the BODY TYPE (GV07) variable as coded on the general vehicle record for the other vehicle.

**Source:**  OBJECT CONTACTED (EV05) and BODY TYPE (GV07).
**Missing Values:**  Exterior vehicle records will be missing for:
(1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99;
(2) Not Inspected CDS applicable vehicles-BODY TYPE (GV07) equals 01-49 and TYPE OF VEHICLE INSPECTION (GV67) equals 0.  For these vehicle types, use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.  If the OBJECT CONTACTED (EV05) variable is blank (non collision event) for an inspected CDS applicable vehicle, then use code 98 (Not Applicable).
**SAS Codes:** .N for Blank (Not Collected) and .U for 99 (Unknown).

VINA MAKE (GV13-17;REC23) (SAS Label: VINMAKE)

This five place alphanumeric value indicates the National Crime Information Center (NCIC) code for vehicle make.  99999 denotes unknown.

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Values:** If VINA VEHICLE TYPE is unknown (U), then VIN MAKE will be blank.
**SAS Codes:** A .@ for Blank.

VINA MODEL (PASS. VEH.) (GV18-20;REC23) (SAS Label: VINAMOD)

This three place alphanumeric value contains a Polk series code for the model of passenger vehicles.  For a listing of these codes please refer to the Polk PC VINA manual.

This variable is derived by the VINA analysis scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).

**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA MODEL (PASS. VEH.) will be blank.

**SAS Codes:** A.@ for Blank.

VINA SERIES (TRUCKS) (GV21-23;REC23) (SAS Label: SERTR)

This three place alphanumeric value contains a Polk series code.    For a listing of these codes please refer to the Polk PC VINA manual.

This variable is derived by the VINA analysis scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).

**Missing Value:** If VINA VEHICLE TYPE is equal to Passenger Vehicle (P), Motorcycle (M) or Unknown (U), then VINA SERIES (TRUCKS) will be blank.

**SAS Codes:** A.@ for Blank.

VINA BODY TYPE (GV24&25;REC23) (SAS Label: VINBT)

This two place alphanumeric value indicates the vehicle=s body type.  The applicable codes and their descriptors are listed in the following table:

Body Type Codes

| Passenger Vehicles | | | |
|---|---|---|---|
| AM | Ambulance | UT | Utility ** |
| CB | Cab & Chassis (Luv) | WW | Wide Wheel Wagon |
| CP | Coupe | 2D | Sedan 2 Dr. |
| CV | Convertible | 2F | Formal Hardtop 2 Dr. |
| HP | Hatchback* | 2H (81-03) | Hatchback 2 Dr. |
| HR | Hearse | 2L | Liftback 3 Dr. |
| HT | Hardtop * | 2P | Pillard Hardtop 2 Dr. |
| LB | Liftback | 2T | Hardtop 2 Dr. |
| LM | Limousine | 2W | Wagon 2 Dr. |

| | | | | |
|---|---|---|---|---|
| NB | Notchback | 3D | Runabout 3 Dr. |
| PK | Pickup ** | 4D | Sedan 4 Dr. |
| PN | Panel ** | 4H (81-03) | Hatchback 4 Dr. |
| RD | Roadster | 4L | Liftback 5 Dr. |
| SB | Sport Hatchback | 4P | Pillard Hardtop 4 Dr. |
| SC | Sport Coupe | 4T | Hardtop 4 Dr. |
| SD | Sedan * | 4W | Wagon 4 Dr. |
| SV | Sport Van | 5D | Sedan 5 Dr. |
| SW | Station Wagon | | |

\*      Used only when number of doors is unknown

\*\*     To code trucks commonly registered as passenger vehicles

| Trucks | | | |
|---|---|---|---|
| AC | Auto Carrier | MV | Maxi Van |
| AR | Armored Truck | MY | Motorized Cutaway |
| BU | Bus | PC | Club Cab Pickup |
| CB | Chassis and Cab | PD | Parcel Delivery |
| CC | Conventional Cab | PK | Pickup |
| CG | Cargo Van | PM | Pickup with Camper mounted on bed |
| CH | Crew Chassis | PN | Panel |
| CL | Club Chassis | PS | Super Cab Pickup |
| CM | Concrete or Transit Mixer | RD | Roadster (Jeep, Jeep Commando) |
| CR | Crane | SN | Step Van |
| CS | Super Cab/Chassis Pickup | SP | Sport Pickup |
| CU | Custom Pickup | ST | Stake or Rack |
| CV | Convertible (Jeep Commando, Suzuki Samarai, Dodge Dakota) | SV | Sports Van |
| | | | |

| | | | | |
|---|---|---|---|---|
| CW | Crew Pickup | SW | Station Wagon (Jeep Wagonneer, Dodge Sportsman A100, Toyota Landcruiser) |
| CY | Cargo Cutaway | S1 | One Seat |
| DP | Dump | S2 | Two Seat |
| DS | Tractor Truck (diesel) | TB | Tilt Cab |
| EC | Extended Cargo Van | TL | Tilt Tandem |
| ES | Extended Sport Van | TM | Tandem |
| EV | Ext Van | TN | Tank |
| EW | Extended Window Van | TR | Tractor Truck (Gasoline) |
| FB | Flat-bed or Platform | UT | Utility (Blazer, Jimmy, Scout, etc.) |
| FC | Forward Control | VC | Van Camper |
| FT | Fire Truck | VD | Display Van |
| GG | Garbage or Refuse | VN | Van |
| GL | Gliders | VT | Vanette (including Metro and Handy Van) |
| GN | Grain | VW | Window Van |
| HO | Hopper | WK | Tow Truck Wrecker |
| IC | Incomplete Chassis | WW | Wide Wheel Wagon |
| IE | Incomplete Ext Van | XT | Travelall |
| LG | Logger | YY | Cutaway |
| LL | Suburban & Carry All | 2W | 2 Dr. Wagon |
| MH | Motorized Home | 4W | 4 Dr. Wagon |
| MP | Multi-purpose | 8V | 8 Passenger Sport Van |

| Motorcycles | | | |
|---|---|---|---|
| AT | All terrain | MY | Mini Cycle |
| EN | Enduro | RC | Racer |
| MK | Mini Bike | RS | Road/Street |

| MM | Mini Moto Cross | RT | Road/Trail |
|----|----------------|----|------------|
| MP | Moped | T | Dirt |
| MR | Mini Road/Trail | TL | Trail/Dirt |
| MS | Motor Scooter | TR | Trails |
| MX | Moto Cross | | |

This variable is derived by the VINA analysis scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA BODY TYPE will be blank.
**SAS Codes:** A.@ for Blank.

VINA ROOF TYPE (GV26;REC23) (SAS Label: ROOF1)

This single place numeric value indicates the type of roof on the vehicle (model years 1985 and later) using the following codes:

       1      None/not available
       2      Manual sun/moon roof
       3      Power sun/moon roof
       4      Removable panels
       5      Removable roof
       6      retractable roof panel
       7      Other/unknown

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA ROOF TYPE will be blank.
**SAS Codes:** A.@ for Blank.

VINA ROOF TYPE (OPTIONAL 1) (GV27;REC23) (SAS Label: ROOF2)

This single place numeric value indicates the optional type of roof for the vehicle (model year 1985 and later) using the following codes:

       1      None/not available

| | |
|---|---|
| 2 | Manual sun/moon roof |
| 3 | Power sun/moon roof |
| 4 | Removable panels |
| 5 | Removable roof |
| 6 | retractable roof panel |
| 7 | Other/unknown |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA ROOF TYPE (OPTIONAL 1) will be blank.
**SAS Codes:** A.@ for Blank.

VINA ROOF TYPE (OPTIONAL 2) (GV28;REC23) (SAS Label: ROOF3)

This single place numeric value indicates the an optional type of roof for the vehicle (model year 1985 and later) using the following codes:

| | |
|---|---|
| 1 | None/not available |
| 2 | Manual sun/moon roof |
| 3 | Power sun/moon roof |
| 4 | Removable panels |
| 5 | Removable roof |
| 6 | retractable roof panel |
| 7 | Other/unknown |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA ROOF TYPE (OPTIONAL 2) will be blank.
**SAS Codes:** A.@ for Blank.

VINA ANTI-LOCK BRAKES (GV29;REC23) (SAS Label: ANTILOCK)

This single place numeric value indicates if anti-lock brakes are available in the vehicle (model year 1985 and later) and if so, which axles have the system (if known). The following codes are used:

| | |
|---|---|
| 1 | Not Available |
| 2 | 4 wheel standard |
| 3 | Rear only standard |
| 4 | ABS standard, wheels unknown |

| 5 | 4 wheel optional |
| 6 | Rear only optional |
| 7 | ABS optional, wheels unknown |
| 9 | Unknown |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA ANTI-LOCK BRAKES will be blank.
**SAS Codes:** A.@ for Blank.

### VINA FRONT WHEEL DRIVE (GV30;REC23) (SAS Label: FRTWHLDR)

This single place alphanumeric value indicates if the vehicle (model year 1985 and later) is front wheel drive using the following codes.

| N | No |
| Y | Yes |
| * | Some vehicles of this series |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA FRONT WHEEL DRIVE will be blank.
**SAS Codes:** A.@ for Blank.

### VINA FOUR WHEEL DRIVE (GV31;REC 23) (SAS Label: FOURWHDR)

This single place alphnumeric value indicates if the vehicle (model year 1985 and later) is four wheel drive using the following codes.

| N | No |
| Y | Yes |
| * | Some vehicles of this series |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA FOUR WHEEL DRIVE will be blank.
**SAS Codes:** A.@ for Blank.

VINA RESTRAINT TYPE (GV32;REC23) (SAS Label: RESTYPE)

This single place alphanumeric value indicates the actual presence of the restraint type in the vehicle. The code cannot be used to determine whether the restraint is an optional or a standard feature of the vehicle. The codes are valid for model years 1985 to the current model year. The following codes are used:

A        Active (manual) belts
B        Driver front air bag/passenger side belt unknown
C        Dual front air bags/belt system unknown
D        Dual front air bag/passenger side passive belts
E        Dual front air bags/active belts
F        Dual front air bags/passive belts
G        Dual air bags front and side/belts unknown
H        Dual air bags front, head and sides/belts unknown
I        Dual air bags front, head and sides/passive belts
J        Dual air bags front and sides/passive belts
K        Dual air bags front and sides/active belts
L        Dual air bags front, head and sides/active belt
M        Driver front air bag/passenger side active belt
P        Passive (automatic) belts

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA RESTRAINT TYPE will be blank.
**SAS Codes:** A.@ for Blank.

VINA CARBURETION (PASS VEH) (GV 33;REC23) (SAS Label: CARBUR)

This single place alphanumeric value contains the number of barrels for the engine or a descriptive code indicating that the engine is high performance, fuel-injected, turbo, or electronically controlled. The codes are for passenger vehicles only. The codes and their meanings are listed in the following table:

| Carburetion Codes and Meanings | | |
| --- | --- | --- |
| Code | Number of BBL | Description of Engine |
| (a number) | Number specified by the code | Number of barrels for the engine (e.g. 4) |
| | | |

| | | | |
|---|---|---|
| A* | 1 | Lower HP |
| B* | 1 | Higher HP |
| C | 1 | Turbo |
| D* | 1 | Turbo Low HP |
| E* | 1 | Turbo High HP |
| F | Unknown | A fuel injection rating code used when the manufacturer=s specifications do not show the number of barrels. |
| G | 1 | Electronically controlled |
| H | Unknown | A high performance rating code used when the manufacturer=s specifications do not show the number of barrels. |
| J* | 2 | Lower HP |
| K* | 2 | Higher HP |
| L | 2 | Turbo |
| M* | 2 | Turbo Low HP |
| N* | 2 | Turbo High HP |
| P | 2 | Electronically controlled |
| Q | Unknown | Electronically controlled |
| R | 4 | Electronically controlled |
| S* | 4 | Lower HP |
| T | 1,2 or 4 | Turbo Fuel Injected |
| U* | 4 | Higher HP |
| V | 4 | Turbo |
| W* | 4 | Turbo Low HP |
| X* | 4 | Turbo High HP |
| Y | Unknown | Turbo |
| Z | Unknown | Super Charged |

*NOTE: These values are coded only when necessary to apply correct insurance symbol.

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is equal to Trucks (T), Motorcycle (M) or unknown (U), then VINA CARBURETION (PASS VEH) will be blank.
**SAS Codes:** A.@ for Blank.

VINA FUEL CODE (GV34;REC23) (SAS Label: FUELCODE)

This single place alphanumeric value indicates the type of fuel suggested by the manufacturer for the engine. The descriptive codes and their meanings are as follows:

| | |
|---|---|
| D | Diesel |
| E | Electric |
| F | Flexible Fuel |
| G | Gas |
| N | Compressed Natural Gas |
| P | Propane |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:** VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA FUEL CODE will be blank.
**SAS Codes:** A.@ for Blank.

VINA WEIGHT CODE (TRUCKS) (GV35;REC23) (SAS Label: WGTCDTR)

This single place numeric value indicates the manufacturer=s Gross Vehicle Weight (GVW) rating. The descriptive codes and their meanings are as follows:

| | |
|---|---|
| 1 | 6,000 and less |
| 2 | 6,001 - 10,000 |
| 3 | 10,001 - 14,000 |
| 4 | 14,001 - 16,000 |
| 5 | 16,001 - 19,500 |
| 6 | 19,501 - 26,000 |
| 7 | 26,001 - 33,000 |
| 8 | 33,001 - and more |
| 9 | weight unknown |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:**   VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is equal to Passenger Vehicle (P), Motorcycle (M) or unknown (U), then VINA WEIGHT CODE (TRUCKS) will be blank.
**SAS Codes:** A.@ for Blank.

VINA VEHICLE TYPE (GV36;REC23) (SAS Label: VEHTYPE)

This single place alphanumeric value indicates the type of vehicle using the following values:

| | |
|---|---|
| P | Passenger Vehicle |
| T | Truck |
| M | Motorcycle |
| U | Unknown |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:**   VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** None.
**SAS Codes:** A.@ for Blank.

VINA WHEELS/DRIVING WHEELS (TRUCKS) (GV37&38;REC23) (SAS Label: WHLDRWHEL)

This two place numeric value contains information about truck wheels.  The first position contains the total number of wheels.  The second position contains the number of driving wheels.

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:**   VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is equal to Passenger Vehicle (P), Motorcycle (M) or unknown (U), then VINA WHEELS/DRIVING WHEELS (TRUCKS) will be blank.
**SAS Codes:** A.@ for Blank.

VINA DAYLIGHT RUN LIGHTS (GV39;REC23) (SAS Label: DAYRUNLT)

This single place alphanumeric value indicates the availability of Daytime Running Lights.  Values are coded as follows:

| | |
|---|---|
| S | Standard |
| O | Optional |
| N | Not Available |
| U | Unknown |

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:**   VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA DAYLIGHT RUN LIGHTS will be blank.
**SAS Codes:** A.@ for Blank.

VINA BASE SHIPPING WEIGHT (PASS VEH & M/C) (GV40-43;REC23) (SAS Label: VEHWGT)

This four place numeric value indicates the base shipping weight (dry weight) of passenger vehicles and motorcycles.

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:**   VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA BASE SHIPPING WEIGHT (PASS VEH & M/C) will be blank.
**SAS Codes:** A.@ for Blank.

VINA MOTORCYCLE CC=s ENGINE DISPLACEMENT (GV44-47;REC23) (SAS Label: MCYCLDS)

This four place numeric value indicates the manufacturer=s cubic centimeter (CC) displacement of the model.

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:**   VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is equal to Passenger Vehicle (P), Truck (T) or unknown (U), then VINA MOTORCYCLE CC=s ENGINE DISPLACEMENT will be blank.
**SAS Codes:** A.@ for Blank.

VINA MODEL YEAR (GV48-51;REC23) (SAS Label: VINMODYR)

This four place numeric value indicates the vehicle=s model year.

This variable is derived by the VINA analysis system scanning the VEHICLE IDENTIFICATION NUMBER (GV08).

**Source:**   VEHICLE IDENTIFICATION NUMBER (GV08).
**Missing Value:** If VINA VEHICLE TYPE is unknown (U), then VINA MODEL YEAR will be blank.

**SAS Codes:** A .@ for Blank.

MAXIMUM KNOWN OCCUPANT A.I.S. (OA115) (SAS Label: MAIS)

This single place numeric value indicates the single most severe injury level reported for this occupant of a towed CDS applicable vehicle or a non-towed with air bag deployment using the following order of codes:

| | |
|---|---|
| 6 | MAXIMUM (UNTREATABLE) INJURY |
| 5 | CRITICAL INJURY |
| 4 | SEVERE INJURY |
| 3 | SERIOUS INJURY |
| 2 | MODERATE INJURY |
| 1 | MINOR INJURY |
| 7 | INJURY, UNKNOWN SEVERITY |
| 9 | UNKNOWN IF INJURED |
| 0 | NOT INJURED |

This variable is derived by scanning the A.I.S. SEVERITY (OI010...OI100) variable on the occupant injury record. If this occupant does not have an occupant injury record, then scan the NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70) variable on the occupant assessment record. Use the following order of codes: if "97", then code "7"; if "99", then code "9"; if "00", then code "0".

**Source:** A.I.S. SEVERITY (OI010...OI100) and NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70).

**Missing Values:** None (if you do not have an occupant injury record, you will have an occupant assessment record for each occupant of a towed CDS applicable vehicle). Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9. Occupant injury records will be missing for: (1)Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2)Non-towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF REPORTED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00.

**SAS Codes:** .U for 9 (Unknown).

OCCUPANT I.S.S. (OA116-117) (SAS Label: ISS)

This two place numeric value provides an index score indicating the relative severity of overall injury to the individual vehicle occupant of a towed CDS applicable vehicle or a non-towed with air bag deployment using the following order of codes:

| | |
|---|---|
| 6 | MAXIMUM (UNTREATABLE) INJURY |
| 5 | CRITICAL INJURY |
| 4 | SEVERE INJURY |
| 3 | SERIOUS INJURY |
| 2 | MODERATE INJURY |
| 1 | MINOR INJURY |
| 0 | NOT INJURED |

It is derived by scanning the BODY REGION (OI006...OI096) and the A.I.S. SEVERITY (OI010...OI100) variables on the occupant injury record. The I.S.S. score is calculated by adding the squares of the highest A.I.S. SEVERITY entries for each of the three most severely injured body regions. For A.I.S. Code "7" (Injury, Unknown Severity), use code "0". If the occupant injury record is missing, scan the NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70) variable on the occupant assessment record. If the codes in OA70 are "97, 99 or 00", then use code "0". An example of calculating an I.S.S. score is the following:

An Occupant suffered serious injury (A.I.S.=3) to the legs (Body Region 5), moderate injury (A.I.S.=2) to the pelvic area (Body Region 4) and moderate to minor injuries elsewhere (A.I.S.=2). The resulting I.S.S. is the sum of the squares of these three A.I.S. Severity scores: $(3**2) + (2**2) + (2**2)$ or 17.

**Source:** BODY REGION (OI006...OI096) and A.I.S. SEVERITY OI010...OI100).
**Missing Values:** None (if you do not have an occupant injury record, you will have an occupant assessment record for each occupant of a towed CDS applicable vehicle). Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9. Occupant injury records will be missing for: (1)Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2)Non-towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00.
**SAS Codes:** None.

BODY REGION - AIS-85 (OI33) (SAS Label: BODYREG)

This single place alphanumeric value captures the body regions as defined in the 1988    Injury Coding Manual in accordance with the coding conventions of AIS-85.

Values are coded as follows:

| | |
|---|---|
| M  Abdomen | K  Knee |
| Q  Ankle - foot | L  Leg (lower) |
| A  Arm (upper) | Y  Lower limb (s) (whole or unknown part) |
| B  Back - thoracolumbar spine | N  Neck - cervical spine |
| C  Chest | P  Pelvic - hip |
| E  Elbow | S  Shoulder |
| F  Face | T  Thigh |
| R  Forearm | X  Upper limb (s) (whole or unknown part |
| H  Head - skull | |
| U  Injured, unknown region | O  Whole body |
| | W  Wrist - hand |

This variable is derived by scanning a coded table which converts AIS-90 injury codes to OIC (AIS-85) codes.

**Source:**  BODY REGION (AIS-90) (OI006...OI096), TYPE OF ANATOMIC STRUCTURE (OI007...OI097), SPECIFIC ANATOMIC STRUCTURE (OI008...OI098), LEVEL OF INJURY (OOI009..OI099) and coded table.

**Missing Values:** Occupant injury records will be missing for:  (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00.

**SAS Codes:**  None

LESION - AIS-85 (OI34) (SAS Label: LESION)

This single place alphanumeric value captures the lesions as defined in the 1988 Injury    Coding Manual in accordance with the coding conventions of AIS-85.

Values are coded as follows:

| | |
|---|---|
| A  Abrasion | Z  Fracture and dislocation |
| M  Amputation | U  Injured, unknown lesion |
| V  Avulsion | L  Laceration |
| B  Burn | O  Other |
| K  Concussion | P  Perforation, puncture |

| | |
|---|---|
| C Contusion | R Rupture |
| N Crush | S Sprain |
| G Detachment, separation | T Strain |
| D Dislocation | E Total severence, transection |
| F Fracture | |

This variable is derived by scanning a coded table which converts AIS-90 injury codes to OIC (AIS-85) codes.

**Source:** BODY REGION (AIS-90) (OI006...OI096), TYPE OF ANATOMIC STRUCTURE (OI007...OI097), SPECIFIC ANATOMIC STRUCTURE (OI008...OI098), LEVEL OF INJURY (OOI009..OI099) and coded table.

**Missing Values:** Occupant injury records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00.

**SAS Codes:** None

SYSTEM ORGAN - AIS-85 (OI35) (SAS Label: SYSORG)

This single place alphanumeric value captures the system organs as defined in the 1988 Injury Coding Manual in accordance with the coding conventions of AIS-85.

Values are as follows:

| | |
|---|---|
| W All systems in region | L Liver |
| A Arteries - veins | M Muscles |
| B Brain | N Nervous system |
| D Digestive | P Pulmonary - lungs |
| E Ears | R Respiratory |
| O Eye | S Skeletal |
| H Heart | C Spinal Cord |
| U Injured, unknown system | Q Spleen |
| I Integumentary | T Thyroid, other endocrine gland |
| J Joints | G Urogenital |
| K Kidneys | V Vertebrae |

This variable is derived by scanning a coded table which converts AIS-90 injury codes to OIC (AIS-85) codes.

**Source:** BODY REGION (AIS-90) (OI006...OI096), TYPE OF ANATOMIC
STRUCTURE (OI007...OI097), SPECIFIC ANATOMIC STRUCTURE
(OI008...OI098), LEVEL OF INJURY (OOI009..OI099) and coded table.

**Missing Values:** Occupant injury records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with no air bag deployment-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9, AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL (GV41) equals 0, 1, 3, 7 or 9 and AIR BAG DEPLOYMENT, OTHER THAN FIRST SEAT FRONTAL (GV42) equals 0, 5, 7 or 9; (3) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00.

**SAS Codes:** None

# SECTION 5
## SEQUENTIAL ANALYTICAL FILE RECORD LAYOUTS

### ACCIDENT RECORD

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (11) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Number of General Vehicle Forms Submitted | 11 | 12 | 2 |
| Month of Accident | 13 | 14 | 2 |
| FILLER | 15 | 16 | 2 |
| Year of Accident | 17 | 20 | 4 |
| Time of Accident | 21 | 24 | 4 |
| Administrative Use | 25 | 25 | 1 |
| Pedestrian Study | 26 | 26 | 1 |
| Impact Fire | 27 | 27 | 1 |
| Truck Underride | 28 | 28 | 1 |
| RABSS | 29 | 29 | 1 |
| FILLER | 30 | 30 | 1 |
| No. of Recorded Events in this Accident | 31 | 32 | 2 |
| Maximum Treatment | 33 | 33 | 1 |
| Maximum Known AIS | 34 | 34 | 1 |
| No. of Seriously Injured Occupants | 35 | 36 | 2 |
| No. of Injured Occupants | 37 | 38 | 2 |
| Alcohol Involved | 39 | 39 | 1 |
| Day of Week of Accident | 40 | 41 | 2 |
| FILLER | 42 | 49 | 8 |
| FILLER | 50 | 57 | 8 |
| Ratio Inflation Factor | 58 | 65 | 8 |
| Drug Involved | 66 | 66 | 1 |
| Manner of Collision | 67 | 67 | 1 |
| PSU Strata | 68 | 69 | 2 |

### ACCIDENT EVENT RECORD

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (12) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Accident Event Sequence Number | 11 | 12 | 2 |
| Vehicle Number (1) | 13 | 14 | 2 |
| Class Of Vehicle (1) | 15 | 16 | 2 |
| General Area Of Damage (1) | 17 | 17 | 1 |
| Vehicle Number (2) OR Object Contacted | 18 | 19 | 2 |
| Class Of Vehicle (2) | 20 | 21 | 2 |
| General Area Of Damage (2) | 22 | 22 | 1 |

## GENERAL VEHICLE RECORD - (21)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (21) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| Vehicle Model Year | 13 | 16 | 4 |
| Vehicle Make | 17 | 18 | 2 |
| Vehicle Model | 19 | 21 | 3 |
| Body Type | 22 | 23 | 2 |
| Vehicle Identification Number | 24 | 33 | 10 |
| FILLER | 34 | 40 | 7 |
| Vehicle Special Use | 41 | 41 | 1 |
| Vehicle Disposition | 42 | 42 | 1 |
| Travel Speed | 43 | 45 | 3 |
| Speed Limit | 46 | 48 | 3 |
| Alcohol Presence | 49 | 49 | 1 |
| Alcohol Test Result | 50 | 51 | 2 |
| Drug Presence | 52 | 52 | 1 |
| Other Drug Specimen Test | 53 | 53 | 1 |
| Drivers Zip Code | 54 | 58 | 5 |
| Drivers Race | 59 | 59 | 1 |
| Relation to Interchange | 60 | 60 | 1 |
| Trafficway Flow | 61 | 61 | 1 |
| Number of Travel Lanes | 62 | 62 | 1 |
| Roadway Alignment | 63 | 63 | 1 |
| Roadway Profile | 64 | 64 | 1 |
| Roadway Surface Type | 65 | 65 | 1 |
| Roadway Surface Condition | 66 | 66 | 1 |
| Light Conditions | 67 | 67 | 1 |
| Atmospheric Conditions | 68 | 68 | 1 |
| Traffic Control Device | 69 | 69 | 1 |
| Traffic Control Functioning | 70 | 70 | 1 |
| Drivers Distraction/Inattention to Driving | 71 | 72 | 2 |
| Pre-Event Movement | 73 | 74 | 2 |
| Critical PreCrash Event | 75 | 76 | 2 |
| Attempted Avoidance Manuever | 77 | 78 | 2 |
| Pre-Impact Stability | 79 | 79 | 1 |
| Pre-Impact Location | 80 | 80 | 1 |
| Accident Type | 81 | 82 | 2 |
| VIN Check | 83 | 83 | 1 |

## GENERAL VEHICLE RECORD - (22)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (22) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| Driver Presence | 13 | 13 | 1 |
| Number of Occupants This Vehicle | 14 | 15 | 2 |
| Number of Occupant Forms submitted | 16 | 17 | 2 |
| AOPS Vehicle | 18 | 18 | 1 |
| Bag Deployment - 1st Seat FRONTAL | 19 | 19 | 1 |
| Bag Deployment - Other | 20 | 20 | 1 |
| Vehicle Curb Weight | 21 | 23 | 3 |
| Vehicle Cargo Weight | 24 | 26 | 3 |
| Rollover | 27 | 28 | 2 |
| Rollover Initiation Type | 29 | 30 | 2 |
| Location of Rollover Initiation | 31 | 31 | 1 |
| Rollover Object Contacted | 32 | 33 | 2 |
| Location of Tripping Force | 34 | 34 | 1 |
| Direction of Initial Roll | 35 | 35 | 1 |
| Front Override/Underride | 36 | 36 | 1 |
| Rear Override/Underride | 37 | 37 | 1 |
| Heading Angle for This Vehicle | 38 | 40 | 3 |
| Heading Angle for Other Vehicle | 41 | 43 | 3 |
| Towed Trailing Unit | 44 | 44 | 1 |
| Doc. Of Trajectory Data | 45 | 45 | 1 |
| Condition of Tree or Pole | 46 | 46 | 1 |
| Basis for Total Delta V | 47 | 48 | 2 |
| Total Delta V | 49 | 51 | 3 |
| Longitudinal Component of Delta V | 52 | 55 | 4 |
| Lateral Component of Delta V | 56 | 59 | 4 |
| Energy Absorption | 60 | 63 | 4 |
| Impact Speed | 64 | 66 | 3 |
| Confidence in Reconstruction Program | 67 | 67 | 1 |
| Barrier Equivalent Speed | 68 | 70 | 3 |
| Estimated Highest Delta V | 71 | 71 | 1 |
| Type of Vehicle Inspection | 72 | 72 | 1 |
| Delta V Event Number | 73 | 74 | 2 |
| Maximum Treatment | 75 | 75 | 1 |
| Maximum Known AIS | 76 | 76 | 1 |
| Number of Seriously Injured in This Vehicle | 77 | 78 | 2 |
| Number of Injured in This Vehicle | 79 | 80 | 2 |
| Front/Rear Wheel Drive | 81 | 81 | 1 |
| VIN Length | 82 | 83 | 2 |
| Weight of the Other Vehicle | 84 | 86 | 3 |
| Body Type of the Other Vehicle | 87 | 88 | 2 |

## GENERAL VEHICLE RECORD - (23)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (23) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| VINA Make | 13 | 17 | 5 |
| VINA Model (Pass. Veh.) | 18 | 20 | 3 |
| VINA Series (Trucks) | 21 | 23 | 3 |
| VINA Body Type | 24 | 25 | 2 |
| VINA Roof Type | 26 | 26 | 1 |
| VINA Roof Type (Option 1) | 27 | 27 | 1 |
| VINA Roof Type (Option 2) | 28 | 28 | 1 |
| VINA Anti-Lock Brakes | 29 | 29 | 1 |
| VINA Front Wheel Drive | 30 | 30 | 1 |
| VINA Four Wheel Drive | 31 | 31 | 1 |
| VINA Restraint Type | 32 | 32 | 1 |
| VINA Carburetion (Pass. Veh.) | 33 | 33 | 1 |
| VINA Fuel Code | 34 | 34 | 1 |
| VINA Weight Code (Trucks) | 35 | 35 | 1 |
| VINA Vehicle Type | 36 | 36 | 1 |
| VINA Wheels/Driving Wheels (Trucks) | 37 | 38 | 2 |
| VINA Daylight Running Lights | 39 | 39 | 1 |
| VINA Base Shipping Weight (Pass. Veh. & M/C) | 40 | 43 | 4 |
| VINA Motorcycle CC's (Engine Displ) | 44 | 47 | 4 |
| VINA Model Year | 48 | 51 | 4 |

| EXTERIOR VEHICLE RECORD - (31) | | | |
|---|---|---|---|
| FIELD NAME | START | END | LENGTH |
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (31) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| Accident Sequence - 1 | 13 | 14 | 2 |
| Object Contacted - 1 | 15 | 16 | 2 |
| Direction of Force - 1 | 17 | 18 | 2 |
| Deformation Location - 1 | 19 | 19 | 1 |
| Longitude/Lateral Location - 1 | 20 | 20 | 1 |
| Vertical/Lateral Location - 1 | 21 | 21 | 1 |
| Type of Damage Distribution - 1 | 22 | 22 | 1 |
| Deformation Extent - 1 | 23 | 24 | 2 |
| Accident Sequence - 2 | 25 | 26 | 2 |
| Object Contacted - 2 | 27 | 28 | 2 |
| Direction of Force - 2 | 29 | 30 | 2 |
| Deformation Location - 2 | 31 | 31 | 1 |
| Longitude/Lateral Location - 2 | 32 | 32 | 1 |
| Vertical/Lateral Location - 2 | 33 | 33 | 1 |
| Type of Damage Distribution - 2 | 34 | 34 | 1 |
| Deformation Extent - 2 | 35 | 36 | 2 |
| Crash Damage Data for Highest Delta V - L | 37 | 39 | 3 |
| Crash Damage Data for Highest Delta V - C1 | 40 | 42 | 3 |
| Crash Damage Data for Highest Delta V - C2 | 43 | 45 | 3 |
| Crash Damage Data for Highest Delta V - C3 | 46 | 48 | 3 |
| Crash Damage Data for Highest Delta V - C4 | 49 | 51 | 3 |
| Crash Damage Data for Highest Delta V - C5 | 52 | 54 | 3 |
| Crash Damage Data for Highest Delta V - C6 | 55 | 57 | 3 |
| Crash Damage Data for Highest Delta V - D | 58 | 61 | 4 |
| Crash Damage Data/ 2nd Highest DeltaV -L | 62 | 64 | 3 |
| Crash Damage Data/ 2nd Highest DeltaV -C1 | 65 | 67 | 3 |
| Crash Damage Data/ 2nd Highest DeltaV -C2 | 68 | 70 | 3 |
| Crash Damage Data/ 2nd Highest DeltaV -C3 | 71 | 73 | 3 |
| Crash Damage Data/ 2nd Highest DeltaV -C4 | 74 | 76 | 3 |
| Crash Damage Data/ 2nd Highest DeltaV -C5 | 77 | 79 | 3 |
| Crash Damage Data/ 2nd Highest DeltaV -C6 | 80 | 82 | 3 |
| Crash Damage Data/ 2nd Highest DeltaV -D | 83 | 86 | 4 |
| Undeformed End Width | 87 | 89 | 3 |
| Direct Damage Width | 90 | 92 | 3 |
| Original Wheelbase | 93 | 95 | 3 |
| Original Average Track Width | 96 | 98 | 3 |
| CDCS Documented - Not Coded | 99 | 99 | 1 |
| Vehicle Disposition (RES.) | 100 | 100 | 1 |

| | START | END | LENGTH |
|---|---|---|---|
| Altered Vehicle | 101 | 101 | 1 |

## EXTERIOR VEHICLE RECORD - (31)

| FIELD NAME - (CONTINUED) | START | END | LENGTH |
|---|---|---|---|
| Fire Occurrence | 102 | 102 | 1 |
| Origin of Fire | 103 | 103 | 1 |
| Filler Cap Tank - 1 | 104 | 104 | 1 |
| Filler Cap Tank - 2 | 105 | 105 | 1 |
| Type of Tank - 1 | 106 | 106 | 1 |
| Type of Tank - 2 | 107 | 107 | 1 |
| Location Tank - 1 | 108 | 108 | 1 |
| Location Tank - 2 | 109 | 109 | 1 |
| Damage Tank - 1 | 110 | 110 | 1 |
| Damage Tank - 2 | 111 | 111 | 1 |
| Leakage Tank - 1 | 112 | 112 | 1 |
| Leakage Tank -2 | 113 | 113 | 1 |
| Fuel Type Tank - 1 | 114 | 115 | 2 |
| Fuel Type Tank - 2 | 116 | 117 | 2 |
| More Than 2 Tanks | 118 | 118 | 1 |

## INTERIOR VEHICLE RECORD - (41)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (41) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| Passenger Compartment Integrity | 13 | 14 | 2 |
| Door/Gate/Hatch Opening-LF | 15 | 15 | 1 |
| Door/Gate/Hatch Opening-RF | 16 | 16 | 1 |
| Door/Gate/Hatch Opening-LR | 17 | 17 | 1 |
| Door/Gate/Hatch Opening-RR | 18 | 18 | 1 |
| Door/Gate/Hatch Opening-TG | 19 | 19 | 1 |
| Door/Gate/Hatch Damage - LF | 20 | 20 | 1 |
| Door/Gate/Hatch Damage - RF | 21 | 21 | 1 |
| Door/Gate/Hatch Damage - LR | 22 | 22 | 1 |
| Door/Gate/Hatch Damage - RR | 23 | 23 | 1 |
| Door/Gate/Hatch Damage - TG | 24 | 24 | 1 |
| Type of Glazing - WS | 25 | 25 | 1 |
| Type of Glazing - LF | 26 | 26 | 1 |
| Type of Glazing - RF | 27 | 27 | 1 |
| Type of Glazing - LR | 28 | 28 | 1 |
| Type of Glazing - RR | 29 | 29 | 1 |
| Type of Glazing - BL | 30 | 30 | 1 |
| Type of Glazing - RO | 31 | 31 | 1 |
| Type of Glazing - OT | 32 | 32 | 1 |
| PreCrash Glazing Status - WS | 33 | 33 | 1 |
| PreCrash Glazing Status - LF | 34 | 34 | 1 |
| PreCrash Glazing Status - RF | 35 | 35 | 1 |
| PreCrash Glazing Status - LR | 36 | 36 | 1 |
| PreCrash Glazing Status - RR | 37 | 37 | 1 |
| PreCrash Glazing Status - BL | 38 | 38 | 1 |
| PreCrash Glazing Status - RO | 39 | 39 | 1 |
| PreCrash Glazing Status - OT | 40 | 40 | 1 |
| Glazing Damage - Impact - WS | 41 | 41 | 1 |
| Glazing Damage - Impact - LF | 42 | 42 | 1 |
| Glazing Damage - Impact - RF | 43 | 43 | 1 |
| Glazing Damage - Impact - LR | 44 | 44 | 1 |
| Glazing Damage - Impact - RR | 45 | 45 | 1 |
| Glazing Damage - Impact - BL | 46 | 46 | 1 |
| Glazing Damage - Impact - RO | 47 | 47 | 1 |
| Glazing Damage - Impact - OT | 48 | 48 | 1 |
| Glazing Damage - Contact - WS | 49 | 49 | 1 |
| Glazing Damage - Contact - LF | 50 | 50 | 1 |
| Glazing Damage - Contact - RF | 51 | 51 | 1 |
| Glazing Damage - Contact - LR | 52 | 52 | 1 |
| Glazing Damage - Contact - RR | 53 | 53 | 1 |
| Glazing Damage - Contact - BL | 54 | 54 | 1 |
| Glazing Damage - Contact - RO | 55 | 55 | 1 |
| Glazing Damage - Contact - OT | 56 | 56 | 1 |

## INTERIOR VEHICLE RECORD - (42)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (42) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| Location of Intrusion - 1st | 13 | 14 | 2 |
| Intruding Component - 1st | 15 | 16 | 2 |
| Magnitude of Intrusion - 1st | 17 | 17 | 1 |
| Crush Direction - 1st | 18 | 18 | 1 |
| Location of Intrusion - 2nd | 19 | 20 | 2 |
| Intruding Component - 2nd | 21 | 22 | 2 |
| Magnitude of Intrusion - 2nd | 23 | 23 | 1 |
| Crush Direction - 2nd | 24 | 24 | 1 |
| Location of Intrusion - 3rd | 25 | 26 | 2 |
| Intruding Component - 3rd | 27 | 28 | 2 |
| Magnitude of Intrusion - 3rd | 29 | 29 | 1 |
| Crush Direction - 3rd | 30 | 30 | 1 |
| Location of Intrusion - 4th | 31 | 32 | 2 |
| Intruding Component - 4th | 33 | 34 | 2 |
| Magnitude of Intrusion - 4th | 35 | 35 | 1 |
| Crush Direction - 4th | 36 | 36 | 1 |
| Location of Intrusion - 5th | 37 | 38 | 2 |
| Intruding Component - 5th | 39 | 40 | 2 |
| Magnitude of Intrusion - 5th | 41 | 41 | 1 |
| Crush Direction - 5th | 42 | 42 | 1 |
| Location of Intrusion - 6th | 43 | 44 | 2 |
| Intruding Component - 6th | 45 | 46 | 2 |
| Magnitude of Intrusion - 6th | 47 | 47 | 1 |
| Crush Direction - 6th | 48 | 48 | 1 |
| Location of Intrusion - 7th | 49 | 50 | 2 |
| Intruding Component - 7th | 51 | 52 | 2 |
| Magnitude of Intrusion - 7th | 53 | 53 | 1 |
| Crush Direction - 7th | 54 | 54 | 1 |
| Location of Intrusion - 8th | 55 | 56 | 2 |
| Intruding Component - 8th | 57 | 58 | 2 |
| Magnitude of Intrusion - 8th | 59 | 59 | 1 |
| Crush Direction - 8th | 60 | 60 | 1 |
| Location of Intrusion - 9th | 61 | 62 | 2 |
| Intruding Component - 9th | 63 | 64 | 2 |
| Magnitude of Intrusion - 9th | 65 | 65 | 1 |
| Crush Direction - 9th | 66 | 66 | 1 |
| Location of Intrusion - 10th | 67 | 68 | 2 |
| Intruding Component - 10th | 69 | 70 | 2 |
| Magnitude of Intrusion - 10th | 71 | 71 | 1 |
| Crush Direction - 10th | 72 | 72 | 1 |
| Steering Column Type | 73 | 73 | 1 |
| FILLER | 74 | 75 | 2 |
| FILLER | 76 | 78 | 3 |
| FILLER | 79 | 81 | 3 |
| FILLER | 82 | 84 | 3 |
| Tilt Steering Column Adj. | 85 | 85 | 1 |
| Telescoping Steering Column Adj. | 86 | 86 | 1 |
| Steering Rim/Spoke Deformation | 87 | 88 | 2 |
| Location of Steering Rim/Spoke Deformation | 89 | 90 | 2 |

| Odometer Reading | 91 | 93 | 3 |

## INTERIOR VEHICLE RECORD - (42)

| FIELD NAME - (CONTINUED) | START | END | LENGTH |
|---|---|---|---|
| Instrument Panel Damage | 94 | 94 | 1 |
| Type Knee Bolster Covering | 95 | 95 | 1 |
| Knee Bolsters Deformed | 96 | 96 | 1 |
| Glove Compartment Door Open | 97 | 97 | 1 |
| Adaptive Driving Equipment | 98 | 98 | 1 |

## OCCUPANT ASSESSMENT RECORD - (51)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (51) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| Occupant Number | 13 | 14 | 2 |
| Occupants Age | 15 | 16 | 2 |
| Occupants Sex | 17 | 17 | 1 |
| Occupants Height | 18 | 20 | 3 |
| Occupants Weight | 21 | 23 | 3 |
| Occupants Role | 24 | 24 | 1 |
| Occupants Seat Position | 25 | 26 | 2 |
| Occupants Posture | 27 | 27 | 1 |
| Ejection | 28 | 28 | 1 |
| Ejection Area | 29 | 29 | 1 |
| Ejection Medium | 30 | 30 | 1 |
| Medium Status | 31 | 31 | 1 |
| Entrapment | 32 | 32 | 1 |
| Occupant Mobility | 33 | 33 | 1 |
| Manual Belt Availability | 34 | 34 | 1 |
| Manual Belt Use | 35 | 36 | 2 |
| Proper Use of Manual Belt | 37 | 37 | 1 |
| Manual Belt Failure | 38 | 38 | 1 |
| Shoulder Belt Anchorage Adj | 39 | 39 | 1 |
| Automatic Belt Availability | 40 | 40 | 1 |
| Automatic Belt Use | 41 | 41 | 1 |
| Automatic Belt Type | 42 | 42 | 1 |
| Proper Use - Automatic Belt | 43 | 43 | 1 |
| Automatic Belt Failure Mode | 44 | 44 | 1 |
| Police Reported Belt Use | 45 | 45 | 1 |
| Police Reported Air Bag Availability | 46 | 46 | 1 |
| Air Bag Availability - Frontal | 47 | 47 | 1 |
| Air Bag Deployment - Frontal | 48 | 48 | 1 |
| Air Bag Availability - Other | 49 | 49 | 1 |
| Air Bag Deployment - Other | 50 | 50 | 1 |

| Did Air Bag Fail? | 51 | 51 | 1 |
|---|---|---|---|
| Vehicle in Previous Accident? | 52 | 52 | 1 |
| | | | |

## OCCUPANT ASSESSMENT RECORD - (51)

| FIELD NAME - (CONTINUED) | START | END | LENGTH |
|---|---|---|---|
| Type of Air Bag | 53 | 53 | 1 |
| Prior Maintenance on Bag? | 54 | 54 | 1 |
| Air Bag Deployment Accident Event Sequence Number | 55 | 56 | 2 |
| CDC for Air Bag Deployment | 57 | 57 | 1 |
| Longitudinal Component of Delta V for Air Bag Deployment Impact | 58 | 61 | 4 |
| Did Air Bag Flaps Open? | 62 | 62 | 1 |
| Were Air Bag Flaps Damaged? | 63 | 63 | 1 |
| Was There Damage to the Air Bag | 64 | 65 | 2 |
| Source of Air Bag Damage | 66 | 67 | 2 |
| Was the Air Bag Tethered? | 68 | 68 | 1 |
| Did Air Bag have Vent Ports? | 69 | 69 | 1 |
| Air Bag Contact by other Occupant? | 70 | 70 | 1 |
| Was Occupant wearing Eye wear? | 71 | 71 | 1 |
| Head Restraint Type/Damage | 72 | 72 | 1 |
| Seat Type | 73 | 74 | 2 |
| Seat Orientation | 75 | 75 | 1 |
| Seat Track Position Prior To Impact | 76 | 76 | 1 |
| Seat Back Incline Prior and Post Impact | 77 | 78 | 2 |
| Seat Performance | 79 | 79 | 1 |
| Child Safety Seat Make /Model | 80 | 82 | 3 |
| Type of Child Seat | 83 | 83 | 1 |
| Child Safety Seat Orientation | 84 | 85 | 2 |
| Child Safety Seat Harness Usage | 86 | 87 | 2 |
| Child Safety Seat Shield Usage | 88 | 89 | 2 |
| Child Safety Seat Tether Usage | 90 | 91 | 2 |
| Injury Severity | 92 | 92 | 1 |
| Treatment - Mortality | 93 | 93 | 1 |
| Type of Medical Facility | 94 | 94 | 1 |
| Hospital Stay | 95 | 96 | 2 |
| Working Days Lost | 97 | 98 | 2 |
| Time To Death | 99 | 100 | 2 |
| 1st Medically Reported Cause of Death | 101 | 102 | 2 |
| 2nd Medically Reported Cause of Death | 103 | 104 | 2 |
| 3rd Medically Reported Cause of Death | 105 | 106 | 2 |
| Number of Recorded Injuries for this Occupant | 107 | 108 | 2 |
| Glasgow Score | 109 | 110 | 2 |
| Blood Given | 111 | 111 | 1 |
| ABG Bicarbonate | 112 | 113 | 2 |
| Belt Use Determination | 114 | 114 | 1 |
| Maximum Known AIS | 115 | 115 | 1 |
| Injury Severity Score | 116 | 117 | 2 |

## OCCUPANT INJURY RECORD - (61)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (61) | 7 | 8 | 2 |
| Version Number | 9 | 10 | 2 |
| Vehicle Number | 11 | 12 | 2 |
| Occupant Number | 13 | 14 | 2 |
| Injury Number | 15 | 16 | 2 |
| Source of Injury Data | 17 | 17 | 1 |
| Body Region - AIS90 | 18 | 18 | 1 |
| Type of Anatomic Structure | 19 | 19 | 1 |
| Specific Anatomic Structure | 20 | 21 | 2 |
| Level of Injury | 22 | 23 | 2 |
| AIS Severity | 24 | 24 | 1 |
| Aspect - AIS90 | 25 | 25 | 1 |
| Injury Source | 26 | 28 | 3 |
| Confidence Level | 29 | 29 | 1 |
| Direct/Indirect Injury | 30 | 30 | 1 |
| Occupant Area Intrusion Number | 31 | 32 | 2 |
| Body Region - AIS85 | 33 | 33 | 1 |
| Lesion - AIS85 | 34 | 34 | 1 |
| System Organ - AIS85 | 35 | 35 | 1 |

## TYPE ACCIDENT RECORD - (66)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (66) | 7 | 8 | 2 |
| Version | 9 | 10 | 2 |
| Line Number | 11 | 12 | 2 |
| Text66 | 13 | 92 | 80 |

## ACCIDENT DESCRIPTION RECORD - (71)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (71) | 7 | 8 | 2 |
| Version | 9 | 10 | 2 |
| Line Number | 11 | 12 | 2 |
| Text71 | 13 | 92 | 80 |
| | | | |

## VEHICLE PROFILE RECORD - (81)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (81) | 7 | 8 | 2 |
| Version | 9 | 10 | 2 |
| Line Number | 11 | 12 | 2 |
| Text81 | 13 | 92 | 80 |

## PERSON PROFILE RECORD - (91)

| FIELD NAME | START | END | LENGTH |
|---|---|---|---|
| PSU Number | 1 | 2 | 2 |
| Case Number | 3 | 6 | 4 |
| Record Number (91) | 7 | 8 | 2 |
| Version | 9 | 10 | 2 |
| Line Number | 11 | 12 | 2 |
| Text91 | 13 | 92 | 80 |

NASS data are available in the form of a Statistical Analysis System (SAS) file. SAS is a highly flexible statistical package that provides a high level programming language for effective matrix manipulation and data management facilities.

SAS is a non-hierarchical database. The SAS database for NASS consists of eleven individual data sets, corresponding to the six NASS CDS data collection records in either formatted or unformatted versions. The exceptions are (1) the Case Summary record which is broken into four data sets, the Type Accident, the Accident Description, the Vehicle Profile and the Person Profile data sets and (2) the Accident record which is broken into Accident and Accident Event data sets. The other data sets are General Vehicle, Exterior Vehicle, Interior Vehicle, Occupant Assessment and Occupant Injury. Using modified relational database concepts, SAS allows the natural hierarchical structure of NASS data to be fully explored by the analyst. An analyst can create a new SAS data set by merging data from several levels of the NASS hierarchy--e. g., vehicle and occupant levels--through use of an appropriate set of SAS commands within the DATA step.

SAS Data Base Contents

The variable names in the NASS/SAS data base are from the data collection forms or derived variables and are limited to eight characters. The SAS data base is generally an exact representation of the data contained on the NASS master file. The only exceptions are the following:

- Numeric variables for which 9, 99, etc. represent "unknown" are recoded to the SAS special missing value .U ("dot-u") and are not included in percentage tabulations;

- The value of 95 ("test refused") for Alcohol Test Result For Driver (ALCTEST) has been recoded to .B; the value of 96 ("none given") has been recoded to .C; the value of 97 ("performed, results unknown") has been recoded to .D; the value of 98 ("no driver present") has been recoded to .E; and the value of 99 ("unknown") has been recoded to .U; these values are not included in percentage tabulations;

- Missing data for numeric values are recoded as "." in SAS and are not included in percentage tabulations;

- Values for derived variables which cannot be computed due to conditions where a form is not completed e.g., non CDS applicable vehicle have been recoded to .N ("not coded");

- Hour of Day (Time) is stored as a SAS time value and has an output format of HHMM5.

PSU NUMBER (PSU), CASE NUMBER-STRATUM (CASEID) and CASE SEQUENCE NUMBER (CASENO) are identical variables across all NASS records. CASENO is the first three digits of CASEID. Therefore, PSU and either CASENO or CASEID can be used to merge NASS record levels. Similarly, VEHICLE NUMBER (VEHNO) is identical in the General Vehicle, Exterior Vehicle, Interior Vehicle, Occupant Assessment and Occupant Injury record levels and can be used to merge these records in the DATA step.

The remainder of this Section presents the SAS layout for the current year NASS Analysis file. In general, the order of variables in the SAS data sets follows the order of data fields on the master file (and thus the order of items on the data collection forms used by NASS investigation teams). The user can invoke PROC CONTENTS to produce the following list of SAS variables:

```
                      The SAS System
                                 13:25 Thursday, August 2, 2001


                  CONTENTS PROCEDURE

              -----Directory-----

           Libref:        NASS2000
           Engine:        V612
           Physical Name: e:\anal2000

           #   Name      Memtype  Indexes

           1   ACCIDENT  DATA
           2   ACC_DESC  DATA
           3   EVENT     DATA
           4   GV        DATA
           5   OA        DATA
           6   OI        DATA
           7   PERS_PRO  DATA
           8   TYP_ACC   DATA
           9   VE        DATA
          10   VEH_PRO   DATA
          11   VI        DATA
```

CONTENTS PROCEDURE

Data Set Name: NASS2000.ACCIDENT          Observations:          4307
Member Type:   DATA                       Variables:             24
Engine:        V612                       Indexes:               0
Created:       13:51 Thursday, August 2, 2001   Observation Length:  76
Last Modified: 13:51 Thursday, August 2, 2001   Deleted Observations: 0
Protection:                               Compressed:            NO
Data Set Type:                            Sorted:                YES
Label:

-----Engine/Host Dependent Information-----

Data Set Page Size:          8192
Number of Data Set Pages:    41
File Format:                 607
First Data Page:             1
Max Obs per Page:            107
Obs in First Data Page:      64

-----Alphabetic List of Variables and Attributes-----

| #  | Variable | Type | Len | Pos | Label |
|----|----------|------|-----|-----|-------|
| 1  | AAIS     | Num  | 3   | 0   | MAXIMUM KNOWN AIS IN ACCIDENT |
| 21 | ADMINSS  | Num  | 3   | 64  | ADMINISTRATIVE USE |
| 2  | AINJSER  | Num  | 3   | 3   | NUMBER OF SERIOUSLY INJURED OCCUPANTS |
| 3  | AINJURED | Num  | 3   | 6   | TOTAL NUMBER OF INJURED OCCUPANTS |
| 4  | ALCINV   | Num  | 3   | 9   | ALCOHOL INVOLVED IN ACCIDENT |
| 5  | ATREAT   | Num  | 3   | 12  | MAXIMUM TREATMENT IN ACCIDENT |
| 6  | CASEID   | Char | 4   | 15  | CASE NUMBER - STRATUM |
| 7  | CASENO   | Num  | 3   | 19  | CASE SEQUENCE NUMBER |
| 8  | DAYWEEK  | Num  | 3   | 22  | DAY OF WEEK OF ACCIDENT |
| 9  | DRGINV   | Num  | 3   | 25  | DRUG INVOLVED |
| 10 | EVENTS   | Num  | 3   | 28  | NUMBER OF RECORDED EVENTS IN ACCIDENT |
| 11 | FIRESTDY | Num  | 3   | 31  | IMPACT FIRES |
| 12 | MANCOLL  | Num  | 3   | 34  | MANNER OF COLLISION |
| 13 | MONTH    | Num  | 3   | 37  | MONTH OF ACCIDENT |
| 14 | PSU      | Num  | 3   | 40  | PRIMARY SAMPLING UNIT NUMBER |
| 15 | PSUSTRAT | Num  | 3   | 43  | PRIMARY SAMPLING UNIT STRATIFICATION |
| 22 | RABSS    | Num  | 3   | 67  | REDESIGNED AIR BAG SPECIAL STUDY |
| 16 | RATWGT   | Num  | 6   | 46  | RATIO INFLATION FACTOR |
| 17 | STRATIF  | Char | 1   | 52  | CASE STRATUM |
| 18 | TIME     | Num  | 4   | 53  | TIME OF ACCIDENT |
| 23 | TRKURIDE | Num  | 3   | 70  | TRUCK UNDERRIDE STUDY |
| 19 | VEHFORMS | Num  | 3   | 57  | NUMBER GENERAL VEHICLE FORMS SUBMITTED |
| 24 | VERSION  | Num  | 3   | 73  | VERSION NUMBER |
| 20 | YEAR     | Num  | 4   | 60  | YEAR OF ACCIDENT |

-----Sort Information-----

Sortedby:      PSU CASENO
Validated:     YES
Character Set: ANSI

CONTENTS PROCEDURE

Data Set Name: NASS2000.ACC_DESC          Observations:           35392
Member Type:   DATA                       Variables:              7
Engine:        V612                       Indexes:                0
Created:       13:51 Thursday, August 2, 2001   Observation Length:     97
Last Modified: 13:51 Thursday, August 2, 2001   Deleted Observations:   0
Protection:                               Compressed:             NO
Data Set Type:                            Sorted:                 YES
Label:

-----Engine/Host Dependent Information-----

Data Set Page Size:        8192
Number of Data Set Pages: 422
File Format:               607
First Data Page:           1
Max Obs per Page:          84
Obs in First Data Page:    71

-----Alphabetic List of Variables and Attributes-----

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 6 | CASEID  | Char | 4  | 90 | CASE NUMBER - STRATUM |
| 3 | CASENO  | Num  | 3  | 83 | CASE SEQUENCE NUMBER |
| 5 | LINENO  | Num  | 3  | 87 | LINE NUMBER |
| 2 | PSU     | Num  | 3  | 80 | PRIMARY SAMPLING UNIT NUMBER |
| 4 | STRATIF | Char | 1  | 86 | CASE STRATUM |
| 1 | TEXT71  | Char | 80 | 0  | SUMMARY TEXT |
| 7 | VERSION | Num  | 3  | 94 | VERSION NUMBER |

-----Sort Information-----

Sortedby:      PSU CASENO LINENO
Validated:     YES
Character Set: ANSI

CONTENTS PROCEDURE

| Data Set Name: NASS2000.EVENT | Observations: | 7844 |
|---|---|---|
| Member Type:   DATA | Variables: | 13 |
| Engine:        V612 | Indexes: | 0 |
| Created:       13:51 Thursday, August 2, 2001 | Observation Length: | 37 |
| Last Modified: 13:51 Thursday, August 2, 2001 | Deleted Observations: | 0 |
| Protection: | Compressed: | NO |
| Data Set Type: | Sorted: | YES |
| Label: | | |

-----Engine/Host Dependent Information-----

```
Data Set Page Size:        8192
Number of Data Set Pages: 36
File Format:               607
First Data Page:           1
Max Obs per Page:          220
Obs in First Data Page:    168
```

-----Alphabetic List of Variables and Attributes-----

| # | Variable | Type | Len | Pos | Label |
|---|---|---|---|---|---|
| 1 | ACCSEQ | Num | 3 | 0 | ACCIDENT EVENT SEQUENCE NUMBER |
| 2 | CASEID | Char | 4 | 3 | CASE NUMBER – STRATUM |
| 3 | CASENO | Num | 3 | 7 | CASE SEQUENCE NUMBER |
| 5 | CLASS1 | Num | 3 | 13 | CLASS OF FIRST VEHICLE |
| 4 | CLASS2 | Num | 3 | 10 | CLASS OF OTHER VEHICLE |
| 6 | GADEV1 | Char | 1 | 16 | GENERAL AREA OF DAMAGE FIRST VEHICLE |
| 7 | GADEV2 | Char | 1 | 17 | GENERAL AREA OF DAMAGE OTHER VEHICLE |
| 8 | OBJCONT | Num | 3 | 18 | OTHER VEHICLE NUMBER OR OBJECT CONTACTED |
| 10 | PSU | Num | 3 | 27 | PRIMARY SAMPLING UNIT NUMBER |
| 9 | RATWGT | Num | 6 | 21 | RATIO INFLATION FACTOR |
| 11 | STRATIF | Char | 1 | 30 | CASE STRATUM |
| 12 | VEHNUM | Num | 3 | 31 | VEHICLE NUMBER |
| 13 | VERSION | Num | 3 | 34 | VERSION NUMBER |

-----Sort Information-----

```
Sortedby:      PSU CASENO ACCSEQ
Validated:     YES
Character Set: ANSI
```

CONTENTS PROCEDURE

```
Data Set Name: NASS2000.GV                    Observations:          7579
Member Type:   DATA                           Variables:             101
Engine:        V612                           Indexes:               0
Created:       13:51 Thursday, August 2, 2001 Observation Length:    326
Last Modified: 13:51 Thursday, August 2, 2001 Deleted Observations:  0
Protection:                                   Compressed:            NO
Data Set Type:                                Sorted:                YES
Label:
```

-----Engine/Host Dependent Information-----

```
              Data Set Page Size:        10240
              Number of Data Set Pages: 246
              File Format:               607
              First Data Page:           2
              Max Obs per Page:          31
              Obs in First Data Page:    22
```

-----Alphabetic List of Variables and Attributes-----

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 1 | ACCSEQDV | Num | 3 | 0 | ACCIDENT SEQUENCE NO FOR HIGHEST DELTA V |
| 2 | ACCTYPE | Num | 3 | 3 | ACCIDENT TYPE |
| 3 | ALCTEST | Num | 3 | 6 | ALCOHOL TEST RESULT FOR DRIVER |
| 48 | ALIGNMNT | Num | 3 | 149 | ROADWAY ALIGNMENT |
| 5 | ANGOTHER | Num | 3 | 12 | HEADING ANGLE FOR OTHER VEHICLE |
| 4 | ANGTHIS | Num | 3 | 9 | HEADING ANGLE FOR THIS VEHICLE |
| 86 | ANTILOCK | Num | 3 | 271 | ANTILOCK BRAKES |
| 6 | AOPSVEH | Num | 3 | 15 | AOPS VEHICLE |
| 8 | BAGDEPFV | Num | 3 | 21 | AIR BAG DEPLOYMENT, FIRST SEAT FRONTAL |
| 9 | BAGDEPOV | Num | 3 | 24 | AIR BAG DEPLOYMENT, OTHER |
| 10 | BAREQSP | Num | 3 | 27 | BARRIER EQUIVALENT SPEED |
| 11 | BODYTYPE | Num | 3 | 30 | VEHICLE BODY TYPE |
| 90 | CARBUR | Char | 1 | 277 | CARBURETION |
| 12 | CARGOWGT | Num | 3 | 33 | VEHICLE CARGO WEIGHT |
| 13 | CASEID | Char | 4 | 36 | CASE NUMBER - STRATUM |
| 14 | CASENO | Num | 3 | 40 | CASE SEQUENCE NUMBER |
| 15 | CONDTREE | Num | 3 | 43 | POST COLLISION CONDITION OF TREE OR POLE |
| 16 | CURBWGT | Num | 4 | 46 | VEHICLE CURB WEIGHT |
| 95 | DAYRUNLT | Char | 1 | 286 | DAYLIGHT RUNNING LIGHTS |
| 18 | DOCTRAJ | Num | 3 | 53 | DOCUMENTATION OF TRAJECTORY DATA |
| 20 | DRINKING | Num | 3 | 59 | POLICE REPORTED ALCOHOL PRESENCE |
| 19 | DRIVDIST | Num | 3 | 56 | DRIVER'S DISTRACTION/INATTENTION TO DRIV |
| 21 | DRIVE | Num | 3 | 62 | FRONT/REAR WHEEL DRIVE |
| 22 | DRPRES | Num | 3 | 65 | DRIVER PRESENCE IN VEHICLE |
| 23 | DRRACE | Num | 3 | 68 | DRIVER'S RACE/ETHNIC ORIGIN |
| 74 | DRUGS | Num | 3 | 233 | REPORTED OTHER DRUG |
| 24 | DRZIP | Num | 4 | 71 | DRIVER'S ZIP CODE |
| 25 | DVBASIS | Num | 3 | 75 | BASIS FOR TOTAL DELTA V (HIGHEST) |
| 26 | DVCONFID | Num | 3 | 78 | CONFIDENCE IN RECONSTRUCTION |
| 17 | DVEST | Num | 3 | 50 | ESTIMATED HIGHEST DELTA V |
| 27 | DVLAT | Num | 3 | 81 | LATERAL COMPONENT OF DELTA V |
| 28 | DVLONG | Num | 3 | 84 | LONGITUDINAL COMPONENT OF DELTA V |
| 29 | DVTOTAL | Num | 3 | 87 | TOTAL DELTA V |

CONTENTS PROCEDURE

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 30 | ENERGY | Num | 4 | 90 | ENERGY ABSORPTION |
| 88 | FOURWHDR | Char | 1 | 275 | FOUR WHEEL DRIVE |
| 31 | FOVERIDE | Num | 3 | 94 | FRONT OVERRIDE/UNDERRIDE THIS VEHICLE |
| 87 | FRTWHLDR | Char | 1 | 274 | FRONT WHEEL DRIVE |
| 91 | FUELCODE | Char | 1 | 278 | FUEL CODE |
| 32 | IMPACTSP | Num | 3 | 97 | IMPACT SPEED |
| 33 | INSPTYPE | Num | 3 | 100 | TYPE OF VEHICLE INSPECTION |
| 34 | LANES | Num | 3 | 103 | NUMBER OF LANES |
| 35 | LGTCOND | Num | 3 | 106 | LIGHT CONDITIONS |
| 36 | MAKE | Num | 3 | 109 | VEHICLE MAKE |
| 37 | MANEUVER | Num | 3 | 112 | ATTEMPTED AVOIDANCE MANEUVER |
| 77 | MCYCLDS | Num | 4 | 242 | MOTORCYCLE ENGINE DISPLACEMENT |
| 38 | MODEL | Num | 3 | 115 | VEHICLE MODEL |
| 39 | MODELYR | Num | 4 | 118 | VEHICLE MODEL YEAR |
| 41 | OCCFORMS | Num | 3 | 128 | NUMBER OF OCCUPANT FORMS SUBMITTED |
| 42 | OCUPANTS | Num | 3 | 131 | NUMBER OF OCCUPANTS THIS VEHICLE |
| 97 | OTBDYTYP | Num | 3 | 291 | BODY TYPE OF THE OTHER VEHICLE |
| 96 | OTVEHWGT | Num | 4 | 287 | WEIGHT OF THE OTHER VEHICLE |
| 43 | PREEVENT | Num | 3 | 134 | INITIAL CRITICAL (PRECRASH) EVENT |
| 45 | PREILOC | Num | 3 | 140 | PRE-IMPACT LOCATION |
| 46 | PREISTAB | Num | 3 | 143 | PRE-IMPACT STABILITY |
| 44 | PREMOVE | Num | 3 | 137 | PRE-EVENT MOVEMENT PRIOR REC CRIT EVENT |
| 50 | PROFILE | Num | 3 | 155 | ROADWAY PROFILE |
| 47 | PSU | Num | 3 | 146 | PRIMARY SAMPLING UNIT NUMBER |
| 40 | RATWGT | Num | 6 | 122 | RATIO INFLATION FACTOR |
| 52 | RELINTER | Num | 3 | 161 | RELATION TO JUNCTION |
| 89 | RESTYPE | Char | 1 | 276 | RESTRAINT TYPE |
| 53 | ROLINDIR | Num | 3 | 164 | DIRECTION OF INITIAL ROLL |
| 54 | ROLINLOC | Num | 3 | 167 | LOCATION OF ROLLOVER |
| 55 | ROLINTYP | Num | 3 | 170 | ROLLOVER INITIATION TYPE |
| 56 | ROLLOBJ | Num | 3 | 173 | ROLLOVER INITIATION OBJECT CONTACTED |
| 57 | ROLLOVER | Num | 3 | 176 | ROLLOVER |
| 83 | ROOF1 | Num | 3 | 262 | ROOF |
| 84 | ROOF2 | Num | 3 | 265 | OPTIONAL ROOF 1 |
| 85 | ROOF3 | Num | 3 | 268 | OPTIONAL ROOF 2 |
| 58 | ROVERIDE | Num | 3 | 179 | REAR OVERRIDE/UNDERRIDE THIS VEHICLE |
| 81 | SERTR | Char | 3 | 257 | VIN SERIES TRUCK |
| 59 | SPECOTH | Num | 3 | 182 | OTHER DRUG: SPECIMEN TEST RESULTS |
| 60 | SPLIMIT | Num | 3 | 185 | SPEED LIMIT |
| 61 | STRATIF | Char | 1 | 188 | CASE STRATUM |
| 49 | SURCOND | Num | 3 | 152 | ROADWAY SURFACE CONDITION |
| 51 | SURTYPE | Num | 3 | 158 | ROADWAY SURFACE TYPE |
| 62 | TOWHITCH | Num | 3 | 189 | TOWED TRAILING UNIT |
| 63 | TOWPAR | Num | 3 | 192 | POLICE REPORTED VEHICLE DISPOSITION |
| 64 | TRAFCONT | Num | 3 | 195 | TRAFFIC CONTROL DEVICE |
| 67 | TRAFFLOW | Num | 3 | 204 | TRAFFICWAY FLOW |
| 66 | TRAVELSP | Num | 3 | 201 | POLICE REPORTED TRAVEL SPEED |
| 65 | TRCTLFCT | Num | 3 | 198 | TRAFFIC CONTROL DEVICE FUNCTIONING |
| 68 | TRIPLOC | Num | 3 | 207 | LOC. ON VEH. WHERE INIT TRIP FORCE APPL |
| 101 | VAIS | Num | 8 | 318 | MAXIMUM KNOWN AIS IN THIS VEHICLE |
| 69 | VEHNO | Num | 3 | 210 | VEHICLE NUMBER |
| 93 | VEHTYPE | Char | 1 | 282 | TYPE OF VEHICLE |
| 70 | VEHUSE | Num | 3 | 213 | VEHICLE SPECIAL USE |

CONTENTS PROCEDURE

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 78 | VEHWGT | Num | 4 | 246 | VIN VEHICLE WEIGHT |
| 76 | VERSION | Num | 3 | 239 | VERSION NUMBER |
| 71 | VIN | Char | 10 | 216 | VEHICLE IDENTIFICATION NUMBER |
| 80 | VINAMOD | Char | 3 | 254 | VIN MODEL CARS & TRUCKS |
| 82 | VINBT | Char | 2 | 260 | VIN BODY TYPE |
| 98 | VINJSER | Num | 8 | 294 | NUMBER SERIOUSLY INJURED IN THIS VEHICLE |
| 99 | VINJURED | Num | 8 | 302 | NUMBER INJURED IN THIS VEHICLE |
| 72 | VINLNGTH | Num | 3 | 226 | VIN LENGTH |
| 79 | VINMAKE | Char | 4 | 250 | VIN MAKE |
| 73 | VINMODYR | Num | 4 | 229 | VIN MODEL YEAR |
| 75 | VINO | Num | 3 | 236 | VINO |
| 100 | VTREAT | Num | 8 | 310 | MAXIMUM TREATMENT IN THIS VEHICLE |
| 7 | WEATHER | Num | 3 | 18 | ATMOSPHERIC CONDITIONS |
| 92 | WGTCDTR | Num | 3 | 279 | TRUCK WEIGHT CODE |
| 94 | WHLDRWHL | Num | 3 | 283 | NUMBER WHEELS/NUMBER OF DRIVE WHEELS |

-----Sort Information-----

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

                              CONTENTS PROCEDURE

Data Set Name: NASS2000.OA                      Observations:          9840
Member Type:   DATA                             Variables:             80
Engine:        V612                             Indexes:               0
Created:       13:51 Thursday, August 2, 2001   Observation Length:    242
Last Modified: 13:51 Thursday, August 2, 2001   Deleted Observations:  0
Protection:                                     Compressed:            NO
Data Set Type:                                  Sorted:                YES
Label:

                    -----Engine/Host Dependent Information-----

                    Data Set Page Size:        8192
                    Number of Data Set Pages: 300
                    File Format:               607
                    First Data Page:           2
                    Max Obs per Page:          33
                    Obs in First Data Page:    25

               -----Alphabetic List of Variables and Attributes-----

   #    Variable   Type   Len    Pos    Label
   ────────────────────────────────────────────────────────────────────────

   1    ABELTAVL   Num     3      0     AUTOMATIC BELT SYSTEM AVAILABILITY/FUNC
   2    ABELTUSE   Num     3      3     AUTOMATIC BELT (PASSIVE) SYSTEM USE
   3    ABELTYPE   Num     3      6     AUTOMATIC (PASSIVE) BELT SYSTEM TYPE
   4    ABLTFAIL   Num     3      9     AUTOMATIC (PASSIVE) BELT SYSTEM FAILURE
   5    ABLTPROP   Num     3     12     PROPER USE OF AUTO (PASSIVE) BELT SYSTEM
   6    AGE        Num     3     15     AGE OF OCCUPANT
   7    BAGAVAIL   Num     3     18     AIR BAG SYSTEM AVAILABILITY
  54    BAGAVOTH   Num     3    160     OTHER FRONTAL AIR BAG AVAILABILITY/FUNCT
   8    BAGAVRPT   Num     3     21     POLICE REPORTED AIRBAG AVAILABILITY/FUNC
  21    BAGCDC     Num     3     61     CDC FOR AIR BAG DEPLOYMENT IMPACT
  28    BAGCONOT   Num     3     82     AIR BAG CONTACTED BY ANOTHER OCCUPANT
  11    BAGDAMAG   Num     3     30     WAS THERE DAMAGE TO THE AIR BAG
  67    BAGDAMSO   Num     3    202     SOURCE OF AIR BAG DAMAGE
   9    BAGDEPLY   Num     3     24     AIR BAG SYSTEM DEPLOYED
  55    BAGDEPOT   Num     3    163     OTHER AIR BAG SYSTEM DEPLOYMENT
  10    BAGEVENT   Num     3     27     AIR BAG DEPLOYMENT ACCIDENT EVENT SEQUEN
  12    BAGFAIL    Num     3     33     AIR BAG SYSTEM FAILURE
  35    BAGFLDAM   Num     3    103     WERE AIR BAG MODULE COVER FLAPS DAMAGED
  36    BAGFLOPN   Num     3    106     DID AIR BAG MODULE COVER FLAPS OPEN AT D
  43    BAGMAINT   Num     3    127     PRIOR MAINTENANCE/SERVICE ON AIR BAG
  13    BAGTETHR   Num     3     36     WAS THE AIR BAG TETHERED
  14    BAGTYPE    Num     3     39     TYPE OF AIR BAG
  72    BAGVENTS   Num     3    215     DID THE AIR BAG HAVE VENT PORTS
  15    BELTANCH   Num     3     42     SHOULDER BELT UPPER ANCHORAGE ADJUSTMENT
  57    BELTSOU    Num     3    169     PRIMARY SOURCE OF BELT USE DETERMINATION
  79    BICARB     Num     3    236     ARTERIAL BLOOD GASES (ABG) HC03
  78    BLOOD      Num     3    233     WAS THE OCCUPANT GIVEN BLOOD?
  16    CASEID     Char    4     45     CASE NUMBER - STRATUM
  17    CASENO     Num     3     49     CASE SEQUENCE NUMBER
  18    CAUSE1     Num     3     52     1ST MEDICALLY REPORTED CAUSE OF DEATH
  19    CAUSE2     Num     3     55     2ND MEDICALLY REPORTED CAUSE OF DEATH
  20    CAUSE3     Num     3     58     3RD MEDICALLY REPORTED CAUSE OF DEATH
  22    CHHARNES   Num     3     64     CHILD SAFETY SEAT HARNESS USAGE

CONTENTS PROCEDURE

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 23 | CHMAKE | Num | 3 | 67 | CHILD SAFETY SEAT MAKE/MODEL |
| 24 | CHORIENT | Num | 3 | 70 | CHILD SAFETY SEAT ORIENTATION |
| 25 | CHSHIELD | Num | 3 | 73 | CHILD SAFETY SEAT SHIELD USAGE |
| 26 | CHTETHER | Num | 3 | 76 | CHILD SAFETY SEAT TETHER USAGE |
| 27 | CHTYPE | Num | 3 | 79 | TYPE OF CHILD SAFETY SEAT |
| 29 | DEATH | Num | 3 | 85 | TIME TO DEATH |
| 30 | DVBAG | Num | 3 | 88 | LONGITUDINAL COMPONENT OF DELTA V FOR AI |
| 31 | EJCTAREA | Num | 3 | 91 | EJECTION AREA |
| 32 | EJCTMED | Num | 3 | 94 | EJECTION MEDIUM |
| 33 | EJECTION | Num | 3 | 97 | EJECTION |
| 34 | ENTRAP | Num | 3 | 100 | ENTRAPMENT |
| 51 | EYEWEAR | Num | 3 | 151 | WAS THE OCCUPANT WEARING EYE-WEAR |
| 77 | GLASGOW | Num | 3 | 230 | GLASGOW COMA SCALE (GCS) SCORE |
| 37 | HEADREST | Num | 3 | 109 | HEAD RESTRAINT TYPE/DAMAGE BY OCCUPANT |
| 38 | HEIGHT | Num | 3 | 112 | HEIGHT OF OCCUPANT |
| 39 | HOSPSTAY | Num | 3 | 115 | HOSPITAL STAY |
| 40 | INJNUM | Num | 3 | 118 | NUMBER RECORDED INJURIES THIS OCCUPANT |
| 41 | INJSEV | Num | 3 | 121 | INJURY SEVERITY (POLICE RATING) |
| 42 | ISS | Num | 3 | 124 | INJURY SEVERITY SCORE |
| 44 | MAIS | Num | 3 | 130 | MAXIMUM KNOWN OCCUPANT AIS |
| 45 | MANAVAIL | Num | 3 | 133 | MANUAL BELT SYSTEM AVAILABILITY |
| 46 | MANFAIL | Num | 3 | 136 | MANUAL BELT FAILURE MODE DURING ACCIDENT |
| 47 | MANPROPR | Num | 3 | 139 | PROPER USE OF MANUAL BELTS |
| 48 | MANUSE | Num | 3 | 142 | MANUAL BELT SYSTEM USE |
| 50 | MEDFACIL | Num | 3 | 148 | TYPE MEDICAL FACILITY INITIAL TREATMENT |
| 49 | MEDSTA | Num | 3 | 145 | MEDIUM STATUS (PRIOR TO IMPACT) |
| 52 | OCCMOBIL | Num | 3 | 154 | OCCUPANT MOBILITY |
| 53 | OCCNO | Num | 3 | 157 | OCCUPANT NUMBER |
| 56 | PARUSE | Num | 3 | 166 | POLICE REPORTED RESTRAINT USE |
| 58 | POSTURE | Num | 3 | 172 | OCCUPANT'S POSTURE |
| 59 | PREVACC | Num | 3 | 175 | HAD VEHICLE BEEN IN PREVIOUS ACCIDENTS |
| 60 | PSU | Num | 3 | 178 | PRIMARY SAMPLING UNIT NUMBER |
| 61 | RATWGT | Num | 6 | 181 | RATIO INFLATION FACTOR |
| 62 | ROLE | Num | 3 | 187 | OCCUPANT'S ROLE |
| 63 | SEATPERF | Num | 3 | 190 | SEAT PERFORMANCE (THIS POSITION) |
| 64 | SEATPOS | Num | 3 | 193 | OCCUPANT'S SEAT POSITION |
| 70 | SEATRACK | Num | 3 | 209 | SEAT TRACK ADJUSTED POSITION PRIOR TO IM |
| 65 | SEATTYPE | Num | 3 | 196 | SEAT TYPE (THIS OCCUPANT POSITION) |
| 66 | SEX | Num | 3 | 199 | OCCUPANT'S SEX |
| 68 | STBACINC | Num | 3 | 205 | SEAT BACK INCLINE PRIOR AND POST IMPACT |
| 76 | STORIENT | Num | 3 | 227 | SEAT ORIENTATION (THIS OCCUPANT POS.) |
| 69 | STRATIF | Char | 1 | 208 | CASE STRATUM |
| 71 | TREATMNT | Num | 3 | 212 | TREATMENT - MORTALITY |
| 73 | VEHNO | Num | 3 | 218 | VEHICLE NUMBER |
| 80 | VERSION | Num | 3 | 239 | VERSION NUMBER |
| 74 | WEIGHT | Num | 3 | 221 | OCCUPANT'S WEIGHT |
| 75 | WORKDAYS | Num | 3 | 224 | WORKING DAYS LOST |

-----Sort Information-----

Sortedby:      PSU CASENO VEHNO OCCNO
Validated:     YES
Character Set: ANSI

CONTENTS PROCEDURE

Data Set Name: NASS2000.OI                          Observations:           27726
Member Type:   DATA                                 Variables:              23
Engine:        V612                                 Indexes:                0
Created:       13:51 Thursday, August 2, 2001       Observation Length:     65
Last Modified: 13:51 Thursday, August 2, 2001       Deleted Observations:   0
Protection:                                         Compressed:             NO
Data Set Type:                                      Sorted:                 YES
Label:

                    -----Engine/Host Dependent Information-----

                    Data Set Page Size:        8192
                    Number of Data Set Pages:  223
                    File Format:               607
                    First Data Page:           1
                    Max Obs per Page:          125
                    Obs in First Data Page:    76

                -----Alphabetic List of Variables and Attributes-----

     #    Variable    Type    Len    Pos    Label
    ─────────────────────────────────────────────────────────────────────────

     1    AIS         Num      3      0     A.I.S. SEVERITY
     2    ASPECT90    Num      3      3     ASPECT90
    22    BODYREG     Char     1     63     BODY REGION
     3    CASEID      Char     4      6     CASE NUMBER - STRATUM
     4    CASENO      Num      3     10     CASE SEQUENCE NUMBER
     5    DIRINJ      Num      3     13     DIRECT/INDIRECT INJURY
     6    INJLEVEL    Num      3     16     INJURY LEVEL
     7    INJNO       Num      3     19     INJURY NUMBER
     8    INJSOU      Num      3     22     INJURY SOURCE
     9    INTRUNO     Num      3     25     OCCUPANT AREA INTRUSION NO.
    23    LESION      Char     1     64     LESION (A.I.S. - O.I.C.)
    10    OCCNO       Num      3     28     OCCUPANT NUMBER
    11    PSU         Num      3     31     PRIMARY SAMPLING UNIT NUMBER
    12    RATWGT      Num      6     34     RATIO INFLATION FACTOR
    13    REGION90    Num      3     40     BODY REGION (O.I.C. - A.I.S.)
    14    SOUCON      Num      3     43     INJURY SOURCE CONFIDENCE LEVEL
    15    SOUDAT      Num      3     46     SOURCE OF INJURY DATA
    16    STRATIF     Char     1     49     CASE STRATUM
    17    STRUSPEC    Num      3     50     SPECIFIC ANATOMIC STRUCTURE
    18    STRUTYPE    Num      3     53     TYPE OF ANATOMIC STRUCTURE
    21    SYSORG      Char     1     62     SYSTEM/ORGAN (O.I.C. - A.I.S.)
    19    VEHNO       Num      3     56     VEHICLE NUMBER
    20    VERSION     Num      3     59     VERSION NUMBER

                        -----Sort Information-----

              Sortedby:      PSU CASENO VEHNO OCCNO INJNO
              Validated:     YES
              Character Set: ANSI

                          CONTENTS PROCEDURE

Data Set Name: NASS2000.PERS_PRO          Observations:           19429
Member Type:   DATA                       Variables:              7
Engine:        V612                        Indexes:                0
Created:       13:51 Thursday, August 2, 2001   Observation Length:     97
Last Modified: 13:51 Thursday, August 2, 2001   Deleted Observations:   0
Protection:                               Compressed:             NO
Data Set Type:                            Sorted:                 YES
Label:

                -----Engine/Host Dependent Information-----

                Data Set Page Size:       8192
                Number of Data Set Pages: 232
                File Format:              607
                First Data Page:          1
                Max Obs per Page:         84
                Obs in First Data Page:   71

           -----Alphabetic List of Variables and Attributes-----

        #     Variable     Type     Len     Pos     Label
        _____

        6     CASEID       Char      4       90     CASE NUMBER - STRATUM
        3     CASENO       Num       3       83     CASE SEQUENCE NUMBER
        5     LINENO       Num       3       87     LINE NUMBER
        2     PSU          Num       3       80     PRIMARY SAMPLING UNIT NUMBER
        4     STRATIF      Char      1       86     CASE STRATUM
        1     TEXT91       Char     80        0     SUMMARY TEXT
        7     VERSION      Num       3       94     VERSION NUMBER

                      -----Sort Information-----

                 Sortedby:      PSU CASENO LINENO
                 Validated:     YES
                 Character Set: ANSI

CONTENTS PROCEDURE

Data Set Name: NASS2000.TYP_ACC          Observations:         4307
Member Type:   DATA                      Variables:            7
Engine:        V612                      Indexes:              0
Created:       13:51 Thursday, August 2, 2001   Observation Length:   97
Last Modified: 13:51 Thursday, August 2, 2001   Deleted Observations: 0
Protection:                              Compressed:           NO
Data Set Type:                           Sorted:               YES
Label:

-----Engine/Host Dependent Information-----

Data Set Page Size:        8192
Number of Data Set Pages: 52
File Format:               607
First Data Page:           1
Max Obs per Page:          84
Obs in First Data Page:    71

-----Alphabetic List of Variables and Attributes-----

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 6 | CASEID   | Char | 4   | 90  | CASE NUMBER - STRATUM |
| 3 | CASENO   | Num  | 3   | 83  | CASE SEQUENCE NUMBER |
| 5 | LINENO   | Num  | 3   | 87  | LINE NUMBER |
| 2 | PSU      | Num  | 3   | 80  | PRIMARY SAMPLING UNIT NUMBER |
| 4 | STRATIF  | Char | 1   | 86  | CASE STRATUM |
| 1 | TEXT66   | Char | 80  | 0   | SUMMARY TEXT |
| 7 | VERSION  | Num  | 3   | 94  | VERSION NUMBER |

-----Sort Information-----

Sortedby:       PSU CASENO LINENO
Validated:      YES
Character Set: ANSI

                          CONTENTS PROCEDURE

Data Set Name: NASS2000.VE              Observations:          5483
Member Type:   DATA                     Variables:             63
Engine:        V612                     Indexes:               0
Created:       13:51 Thursday, August 2, 2001   Observation Length:    180
Last Modified: 13:51 Thursday, August 2, 2001   Deleted Observations:  0
Protection:                             Compressed:            NO
Data Set Type:                          Sorted:                YES
Label:


                -----Engine/Host Dependent Information-----

                    Data Set Page Size:        8192
                    Number of Data Set Pages: 123
                    File Format:               607
                    First Data Page:           2
                    Max Obs per Page:          45
                    Obs in First Data Page:    45


            -----Alphabetic List of Variables and Attributes-----


     #     Variable   Type    Len    Pos    Label
    ─────────────────────────────────────────────────────────────────────────

     1     ACCSEQ1    Num      3      0     ACCIDENT EVENT SEQUENCE (HIGHEST)
     2     ACCSEQ2    Num      3      3     ACCIDENT EVENT SEQUENCE (2ND HIGHEST)
     3     ALTVEH     Num      3      6     MULTI-STAGE MANUFACTURED/CERT. ALT. VEH.
     5     CASEID     Char     4     12     CASE NUMBER - STRATUM
     6     CASENO     Num      3     16     CASE SEQUENCE NUMBER
     7     DIRDAMW    Num      3     19     DIRECT DAMAGE WIDTH
     8     DOCCDC     Num      3     22     CDCs DOCUMENTED BUT NOT CODED ON FILE?
    17     DOF1       Num      3     49     DIRECTION OF FORCE (HIGHEST)
    18     DOF2       Num      3     52     DIRECTION OF FORCE (2ND HIGHEST)
     9     DVC1       Num      3     25     CRUSH PROFILE C1 (HIGHEST)
    10     DVC2       Num      3     28     CRUSH PROFILE C2 (HIGHEST)
    11     DVC3       Num      3     31     CRUSH PROFILE C3 (HIGHEST)
    12     DVC4       Num      3     34     CRUSH PROFILE C4 (HIGHEST)
    13     DVC5       Num      3     37     CRUSH PROFILE C5 (HIGHEST)
    14     DVC6       Num      3     40     CRUSH PROFILE C6 (HIGHEST)
    15     DVD        Num      3     43     CRUSH PROFILE D (HIGHEST)
    16     DVL        Num      3     46     CRUSH PROFILE L (HIGHEST)
    20     EXTENT1    Num      3     58     DEFORMATION EXTENT (HIGHEST)
    21     EXTENT2    Num      3     61     DEFORMATION EXTENT (2ND HIGHEST)
    24     FIRE       Num      3     70     FIRE OCCURRENCE
    25     FIREORIG   Num      3     73     ORIGIN OF FIRE
    22     FUELCAP1   Num      3     64     LOCATION OF FUEL TANK-1 FILLER CAP
    23     FUELCAP2   Num      3     67     LOCATION OF FUEL TANK-2 FILLER CAP
    26     FUELDAM1   Num      3     76     DAMAGE TO FUEL TANK-1
    27     FUELDAM2   Num      3     79     DAMAGE TO FUEL TANK-2
    36     FUELEAK1   Num      3    102     LEAKAGE LOCATION OF FUEL SYSTEM-1
    37     FUELEAK2   Num      3    105     LEAKAGE LOCATION OF FUEL SYSTEM-2
    38     FUELGT2    Num      3    108     EQUIPPED WITH MORE THAN TWO FUEL TANKS
    30     FUELLOC1   Num      3     84     LOCATION OF FUEL TANK-1
    31     FUELLOC2   Num      3     87     LOCATION OF FUEL TANK-2
    32     FUELTNK1   Num      3     90     TYPE OF FUEL TANK-1
    33     FUELTNK2   Num      3     93     TYPE OF FUEL TANK-2
    34     FUELTYP1   Num      3     96     FUEL TYPE-1

CONTENTS PROCEDURE

| #  | Variable | Type | Len | Pos | Label |
|----|----------|------|-----|-----|-------|
| 35 | FUELTYP2 | Num  | 3   | 99  | FUEL TYPE-2 |
| 28 | GAD1     | Char | 1   | 82  | DEFORMATION LOCATION (HIGHEST) |
| 29 | GAD2     | Char | 1   | 83  | DEFORMATION LOCATION (2ND HIGHEST) |
| 39 | OBJCONT1 | Num  | 3   | 111 | OBJECT CONTACTED (HIGHEST) |
| 40 | OBJCONT2 | Num  | 3   | 114 | OBJECT CONTACTED (2ND HIGHEST) |
| 4  | ORIGAVTW | Num  | 3   | 9   | ORIGINAL AVERAGE TRACK WIDTH |
| 41 | PDOF1    | Num  | 3   | 117 | CLOCK DIRECTION FOR PDOF IN DEGREES (HIG |
| 42 | PDOF2    | Num  | 3   | 120 | CLOCK DIRECTION FOR PDOF IN DEGREES (2ND |
| 43 | PSU      | Num  | 3   | 123 | PRIMARY SAMPLING UNIT NUMBER |
| 44 | RATWGT   | Num  | 6   | 126 | RATIO INFLATION FACTOR |
| 45 | SDVC1    | Num  | 3   | 132 | CRUSH PROFILE C1 (2ND HIGHEST) |
| 46 | SDVC2    | Num  | 3   | 135 | CRUSH PROFILE C2 (2ND HIGHEST) |
| 47 | SDVC3    | Num  | 3   | 138 | CRUSH PROFILE C3 (2ND HIGHEST) |
| 48 | SDVC4    | Num  | 3   | 141 | CRUSH PROFILE C4 (2ND HIGHEST) |
| 49 | SDVC5    | Num  | 3   | 144 | CRUSH PROFILE C5 (2ND HIGHEST) |
| 50 | SDVC6    | Num  | 3   | 147 | CRUSH PROFILE C6 (2ND HIGHEST) |
| 51 | SDVD     | Num  | 3   | 150 | CRUSH PROFILE D (2ND HIGHEST) |
| 52 | SDVL     | Num  | 3   | 153 | CRUSH PROFILE L (2ND HIGHEST) |
| 53 | SHL1     | Char | 1   | 156 | SPECIFIC LONGITUDINAL LOCATION (HIGHEST) |
| 54 | SHL2     | Char | 1   | 157 | SPECIFIC LONGITUDINAL LOC. (2ND HIGHEST) |
| 55 | STRATIF  | Char | 1   | 158 | CASE STRATUM |
| 56 | SVL1     | Char | 1   | 159 | SPECIFIC VERTICAL LOCATION (HIGHEST) |
| 57 | SVL2     | Char | 1   | 160 | SPECIFIC VERTICAL LOCATION (2ND HIGHEST) |
| 58 | TDD1     | Char | 1   | 161 | TYPE OF DAMAGE DISTRIBUTION (HIGHEST) |
| 59 | TDD2     | Char | 1   | 162 | TYPE OF DAMAGE DISTRIBUTION(2ND HIGHEST) |
| 60 | TOWRES   | Num  | 3   | 163 | RESEARCHER ASSESSMNT VEHICLE DISPOSITION |
| 19 | UNDENDW  | Num  | 3   | 55  | UNDEFORMED END WIDTH |
| 61 | VEHNO    | Num  | 3   | 166 | VEHICLE NUMBER |
| 63 | VERSION  | Num  | 3   | 177 | VERSION NUMBER |
| 62 | WHEELBAS | Num  | 8   | 169 | ORIGINAL WHEELBASE |

-----Sort Information-----

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

CONTENTS PROCEDURE

Data Set Name: NASS2000.VEH_PRO          Observations:          7736
Member Type:   DATA                      Variables:             7
Engine:        V612                      Indexes:               0
Created:       13:51 Thursday, August 2, 2001   Observation Length:  97
Last Modified: 13:51 Thursday, August 2, 2001   Deleted Observations: 0
Protection:                              Compressed:            NO
Data Set Type:                           Sorted:                YES
Label:

-----Engine/Host Dependent Information-----

Data Set Page Size:       8192
Number of Data Set Pages: 93
File Format:              607
First Data Page:         1
Max Obs per Page:        84
Obs in First Data Page:  71

-----Alphabetic List of Variables and Attributes-----

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 6 | CASEID   | Char | 4   | 90  | CASE NUMBER - STRATUM |
| 3 | CASENO   | Num  | 3   | 83  | CASE SEQUENCE NUMBER |
| 5 | LINENO   | Num  | 3   | 87  | LINE NUMBER |
| 2 | PSU      | Num  | 3   | 80  | PRIMARY SAMPLING UNIT NUMBER |
| 4 | STRATIF  | Char | 1   | 86  | CASE STRATUM |
| 1 | TEXT81   | Char | 80  | 0   | SUMMARY TEXT |
| 7 | VERSION  | Num  | 3   | 94  | VERSION NUMBER |

-----Sort Information-----

Sortedby:       PSU CASENO LINENO
Validated:      YES
Character Set: ANSI

CONTENTS PROCEDURE

| | | | | |
|---|---|---|---|---|
| Data Set Name: NASS2000.VI | | | Observations: | 4981 |
| Member Type: DATA | | | Variables: | 101 |
| Engine: V612 | | | Indexes: | 0 |
| Created: 13:51 Thursday, August 2, 2001 | | | Observation Length: | 305 |
| Last Modified: 13:51 Thursday, August 2, 2001 | | | Deleted Observations: | 0 |
| Protection: | | | Compressed: | NO |
| Data Set Type: | | | Sorted: | YES |
| Label: | | | | |

-----Engine/Host Dependent Information-----

```
Data Set Page Size:        9216
Number of Data Set Pages: 168
File Format:               607
First Data Page:           2
Max Obs per Page:          30
Obs in First Data Page:    17
```

-----Alphabetic List of Variables and Attributes-----

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 49 | ADAPTEQ | Num | 3 | 143 | ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT |
| 50 | BOLSTDEF | Num | 3 | 146 | KNEE BOLSTER DEFORMED - OCCUPANT CONTACT |
| 100 | BOLSTYPE | Num | 3 | 299 | TYPE OF KNEE BOLSTER COVERING |
| 1 | CASEID | Char | 4 | 0 | CASE NUMBER - STRATUM |
| 2 | CASENO | Num | 3 | 4 | CASE SEQUENCE NUMBER |
| 53 | CDRIR1 | Num | 3 | 155 | 1ST DOMINANT CRUSH DIRECTION |
| 57 | CDRIR2 | Num | 3 | 167 | 2ND DOMINANT CRUSH DIRECTION |
| 61 | CDRIR3 | Num | 3 | 179 | 3RD DOMINANT CRUSH DIRECTION |
| 65 | CDRIR4 | Num | 3 | 191 | 4TH DOMINANT CRUSH DIRECTION |
| 69 | CDRIR5 | Num | 3 | 203 | 5TH DOMINANT CRUSH DIRECTION |
| 73 | CDRIR6 | Num | 3 | 215 | 6TH DOMINANT CRUSH DIRECTION |
| 77 | CDRIR7 | Num | 3 | 227 | 7TH DOMINANT CRUSH DIRECTION |
| 81 | CDRIR8 | Num | 3 | 239 | 8TH DOMINANT CRUSH DIRECTION |
| 85 | CDRIR9 | Num | 3 | 251 | 9TH DOMINANT CRUSH DIRECTION |
| 89 | CDRIR10 | Num | 3 | 263 | 10TH DOMINANT CRUSH DIRECTION |
| 98 | COLMTELE | Num | 3 | 293 | TELESCOPING STEERING COLUMN ADJUSTMENT |
| 99 | COLMTILT | Num | 3 | 296 | TILT STEERING COLUMN ADJUSTMENT |
| 51 | COLUMTYP | Num | 3 | 149 | STEERING COLUMN TYPE |
| 3 | FAILLF | Num | 3 | 7 | LF DAMAGE/FAILURE ASSOCIATED W |
| 4 | FAILLR | Num | 3 | 10 | LR DAMAGE/FAILURE - OPENING IN COLLISION |
| 5 | FAILRF | Num | 3 | 13 | RF DAMAGE/FAILURE - OPENING IN COLLISION |
| 6 | FAILRR | Num | 3 | 16 | RR DAMAGE/FAILURE - OPENING IN COLLISION |
| 7 | FAILTG | Num | 3 | 19 | TG DAMAGE/FAILURE - OPENING IN COLLISION |
| 8 | GLIMPBL | Num | 3 | 22 | BL GLAZING DAMAGE FROM IMPACT FORCES |
| 9 | GLIMPLF | Num | 3 | 25 | LF GLAZING DAMAGE FROM IMPACT FORCES |
| 10 | GLIMPLR | Num | 3 | 28 | LR GLAZING DAMAGE FROM IMPACT FORCES |
| 11 | GLIMPOTH | Num | 3 | 31 | OTHER GLAZING DAMAGE FROM IMPACT FORCES |
| 12 | GLIMPRF | Num | 3 | 34 | RF GLAZING DAMAGE FROM IMPACT FORCES |
| 13 | GLIMPRR | Num | 3 | 37 | RR GLAZING DAMAGE FROM IMPACT FORCES |
| 14 | GLIMPRUF | Num | 3 | 40 | ROOF GLAZING DAMAGE FROM IMPACT FORCES |
| 15 | GLIMPWS | Num | 3 | 43 | WS GLAZING DAMAGE FROM IMPACT FORCES |
| 16 | GLOCCBL | Num | 3 | 46 | BL GLAZING DAMAGE FROM OCCUPANT CONTACT |
| 17 | GLOCCLF | Num | 3 | 49 | LF GLAZING DAMAGE FROM OCCUPANT CONTACT |

CONTENTS PROCEDURE

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 18 | GLOCCLR | Num | 3 | 52 | LR GLAZING DAMAGE FROM OCCUPANT CONTACT |
| 19 | GLOCCOTH | Num | 3 | 55 | OTHER GLAZING DAMAGE FROM OCC. CONTACT |
| 20 | GLOCCRF | Num | 3 | 58 | RF GLAZING DAMAGE FROM OCCUPANT CONTACT |
| 21 | GLOCCRR | Num | 3 | 61 | RR GLAZING DAMAGE FROM OCCUPANT CONTACT |
| 22 | GLOCCRUF | Num | 3 | 64 | ROOF GLAZING DAMAGE FROM OCC. CONTACT |
| 23 | GLOCCWS | Num | 3 | 67 | WS GLAZING DAMAGE FROM OCCUPANT CONTACT |
| 52 | GLOVOPEN | Num | 3 | 152 | DID GLOVE COMPARTMENT DOOR OPEN |
| 24 | GLPREBL | Num | 3 | 70 | BL WINDOW PRECRASH GLAZING STATUS |
| 25 | GLPRELF | Num | 3 | 73 | LF WINDOW PRECRASH GLAZING STATUS |
| 26 | GLPRELR | Num | 3 | 76 | LR WINDOW PRECRASH GLAZING STATUS |
| 27 | GLPREOTH | Num | 3 | 79 | OTHER WINDOW PRECRASH GLAZING STATUS |
| 28 | GLPRERF | Num | 3 | 82 | RF WINDOW PRECRASH GLAZING STATUS |
| 29 | GLPRERR | Num | 3 | 85 | RR WINDOW PRECRASH GLAZING STATUS |
| 30 | GLPRERUF | Num | 3 | 88 | ROOF WINDOW PRECRASH GLAZING STATUS |
| 31 | GLPREWS | Num | 3 | 91 | WS WINDOW PRECRASH GLAZING STATUS |
| 32 | GLTYPBL | Num | 3 | 94 | BL TYPE OF WINDOW/WINDSHIELD GLAZING |
| 33 | GLTYPLF | Num | 3 | 97 | LF TYPE OF WINDOW/WINDSHIELD GLAZING |
| 34 | GLTYPLR | Num | 3 | 100 | LR TYPE OF WINDOW/WINDSHIELD GLAZING |
| 35 | GLTYPOTH | Num | 3 | 103 | OTHER TYPE OF WINDOW/WINDSHIELD GLAZING |
| 36 | GLTYPRF | Num | 3 | 106 | RF TYPE OF WINDOW/WINDSHIELD GLAZING |
| 37 | GLTYPRR | Num | 3 | 109 | RR TYPE OF WINDOW/WINDSHIELD GLAZING |
| 38 | GLTYPRUF | Num | 3 | 112 | ROOF TYPE OF WINDOW/WINDSHIELD GLAZING |
| 39 | GLTYPWS | Num | 3 | 115 | WS TYPE OF WINDOW/WINDSHIELD GLAZING |
| 55 | INCOMP1 | Num | 3 | 161 | 1ST INTRUDING COMPONENT |
| 59 | INCOMP2 | Num | 3 | 173 | 2ND INTRUDING COMPONENT |
| 63 | INCOMP3 | Num | 3 | 185 | 3RD INTRUDING COMPONENT |
| 67 | INCOMP4 | Num | 3 | 197 | 4TH INTRUDING COMPONENT |
| 71 | INCOMP5 | Num | 3 | 209 | 5TH INTRUDING COMPONENT |
| 75 | INCOMP6 | Num | 3 | 221 | 6TH INTRUDING COMPONENT |
| 79 | INCOMP7 | Num | 3 | 233 | 7TH INTRUDING COMPONENT |
| 83 | INCOMP8 | Num | 3 | 245 | 8TH INTRUDING COMPONENT |
| 87 | INCOMP9 | Num | 3 | 257 | 9TH INTRUDING COMPONENT |
| 91 | INCOMP10 | Num | 3 | 269 | 10TH INTRUDING COMPONENT |
| 54 | INLOC1 | Num | 3 | 158 | 1ST LOCATION OF INTRUSION |
| 58 | INLOC2 | Num | 3 | 170 | 2ND LOCATION OF INTRUSION |
| 62 | INLOC3 | Num | 3 | 182 | 3RD LOCATION OF INTRUSION |
| 66 | INLOC4 | Num | 3 | 194 | 4TH LOCATION OF INTRUSION |
| 70 | INLOC5 | Num | 3 | 206 | 5TH LOCATION OF INTRUSION |
| 74 | INLOC6 | Num | 3 | 218 | 6TH LOCATION OF INTRUSION |
| 78 | INLOC7 | Num | 3 | 230 | 7TH LOCATION OF INTRUSION |
| 82 | INLOC8 | Num | 3 | 242 | 8TH LOCATION OF INTRUSION |
| 86 | INLOC9 | Num | 3 | 254 | 9TH LOCATION OF INTRUSION |
| 90 | INLOC10 | Num | 3 | 266 | 10TH LOCATION OF INTRUSION |
| 56 | INMAG1 | Num | 3 | 164 | 1ST MAGNITUDE OF INTRUSION |
| 60 | INMAG2 | Num | 3 | 176 | 2ND MAGNITUDE OF INTRUSION |
| 64 | INMAG3 | Num | 3 | 188 | 3RD MAGNITUDE OF INTRUSION |
| 68 | INMAG4 | Num | 3 | 200 | 4TH MAGNITUDE OF INTRUSION |
| 72 | INMAG5 | Num | 3 | 212 | 5TH MAGNITUDE OF INTRUSION |
| 76 | INMAG6 | Num | 3 | 224 | 6TH MAGNITUDE OF INTRUSION |
| 80 | INMAG7 | Num | 3 | 236 | 7TH MAGNITUDE OF INTRUSION |
| 84 | INMAG8 | Num | 3 | 248 | 8TH MAGNITUDE OF INTRUSION |
| 88 | INMAG9 | Num | 3 | 260 | 9TH MAGNITUDE OF INTRUSION |
| 92 | INMAG10 | Num | 3 | 272 | 10TH MAGNITUDE OF INTRUSION |

CONTENTS PROCEDURE

| # | Variable | Type | Len | Pos | Label |
|---|----------|------|-----|-----|-------|
| 93 | ODOMETER | Num | 3 | 275 | ODOMETER READING |
| 40 | OPENLF | Num | 3 | 118 | LF DOOR, TAILGATE OR HATCH OPENING |
| 41 | OPENLR | Num | 3 | 121 | LR DOOR, TAILGATE OR HATCH OPENING |
| 42 | OPENRF | Num | 3 | 124 | RF DOOR, TAILGATE OR HATCH OPENING |
| 43 | OPENRR | Num | 3 | 127 | RR DOOR, TAILGATE OR HATCH OPENING |
| 44 | OPENTG | Num | 3 | 130 | TG DOOR, TAILGATE OR HATCH OPENING |
| 94 | PANELDAM | Num | 3 | 278 | INSTRUMENT PANEL DAMAGE - OCC. CONTACT |
| 45 | PASINTEG | Num | 3 | 133 | PASSENGER COMPARTMENT INTEGRITY |
| 46 | PSU | Num | 3 | 136 | PRIMARY SAMPLING UNIT NUMBER |
| 95 | RATWGT | Num | 6 | 281 | RATIO INFLATION FACTOR |
| 96 | RDEFLOC | Num | 3 | 287 | LOCATION STEERING RIM/SPOKE DEFORMATION |
| 97 | RIMDEF | Num | 3 | 290 | STEERING RIM/SPOKE DEFORMATION |
| 47 | STRATIF | Char | 1 | 139 | CASE STRATUM |
| 48 | VEHNO | Num | 3 | 140 | VEHICLE NUMBER |
| 101 | VERSION | Num | 3 | 302 | VERSION NUMBER |

-----Sort Information-----

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

# APPENDIX A


## DATA COLLECTION FORMS
(These forms can be found in the NASS Data Collection, Coding and Editing Manual)

CODING INFORMATION FOR VEHICLE MAKE/MODEL
(The complete codes can be found in the NASS Data Collection, Coding and Editing Manual)

The primary source of information on vehicle make and model is vehicle inspection; the VIN provides vehicle make data. Secondary sources include the police report and interviews. If the make of the vehicle is known and the model is not known, but the vehicle type (e. g., passenger car) is known, then Vehicle Model is coded as "399" (Unknown automobile). If the make of the vehicle is not known but the body type is known (e.g., a hit-and-run 2-door sedan), then Vehicle Make is coded "99" (Unknown) and Vehicle Model is coded "399" (Unknown automobile). If no information is available for a vehicle, then Vehicle Make and Body Type are coded "99" (Unknown) and Vehicle Model is coded "999" (Unknown).

Vehicle models are organized into general groups. These groups are:

| | |
|---|---|
| 001-397 - | Passenger vehicle (automobile) |
| 398 - | Other automobile |
| 399 - | Unknown automobile |
| 401-490 - | Light trucks (including compact and large utility vehicles, utility station wagons, minivans, large vans [includes step vans and van derivatives], compact pickup trucks, and large pickup trucks) |
| 498 - | Other light truck |
| 499 - | Unknown light truck |
| 701-739 - | Motored Cycles/ATCs/ATVs (including motorcycles, mopeds, minibikes, motorscooters and dirt bikes) (701 - 709 Motorcycles/Mopeds) (731 - 739 ATCs/ATVs) |
| 798 - | Other motored cycle |
| 799 - | Unknown motored cycle |
| 801-890 - | Medium/heavy trucks (includes all trucks over 10,000 lbs. GVWR except some pickup type trucks under Body Type code "31" -Large pickup) |
| 898 - | Other medium/heavy truck |
| 899 - | Unknown medium/heavy truck |
| 901-983 - | Buses |
| 988 - | Other bus |
| 989 - | Unknown bus |
| 998 - | Other vehicle (includes construction equipment, farm vehicles and go-karts) |

999 -        Unknown vehicle

Within these groups, the model codes for automobiles and light trucks generally are not ordered to give any indication of vehicle size or type.  However, the model codes for motored cycles, medium/heavy trucks, buses and other vehicles have specific definition.  These definitions are:

Motored Cycles
701     0-50cc
702     51-124cc
703     125-349cc
704     350-449cc
705     450-749cc
706     750cc or greater
709     Unknown cc

All Terrain Cycles/Vehicles
731     0-50cc
732     51-124cc
733     125-349cc
734     350cc or greater
739     Unknown cc

Trucks and Buses
850     M/H truck based motor home
881     Medium/Heavy - CBE
882     Medium/Heavy - COE/low entry
883     Medium/Heavy - COE/high entry
884     Medium/Heavy - Unknown engine location
890     Medium/Heavy - COE entry position unknown
950     Truck based motor home
981     Bus - conventional front engine
982     Bus - front engine/flat front
983     Bus - rear engine/flat front

Other
398     Other automobile
498     Other light truck
798     Other motored cycle
898     Other medium/heavy truck
988     Other bus
998     Other vehicle (farm vehicle, go-kart)

Unknown
399     Unknown automobile
499     Unknown light truck
799     Unknown motored cycle
899     Unknown medium/heavy truck
989     Unknown bus

999     Unknown vehicle

# MISSING RECORD RULES

Under the NASS Crashworthiness Data System (CDS) the rules for the presence or absence of forms (records) in a crash will depend on whether data exists or has been collected. For example, if a vehicle is not inspected there will not be an Exterior Vehicle record; if an occupant does not have a recorded injury there will not be an Occupant Injury record. In the current year NASS CDS, at least one of each record type will be required for a crash which includes a towed, inspected, CDS applicable vehicle involved in a CDC applicable event (or CDC is blank) with an occupant having a recorded injury. The rules for the presence and absence of each record type and whether partial or complete are as follows:

Accident Record                    One required for every crash.

Accident Event RecordAt least one required for every crash.

General Vehicle Record
      Complete Record:      One required for every CDS applicable vehicle (GV07=01-49).
      Partial Record:One required (completed through variable GV36) for every non CDS applicable vehicle (GV07=50-99).

Exterior Vehicle Record
      Complete Record:      One required for every inspected (GV67=1-3) CDS applicable vehicle
                        (GV07=01-49) involved in a CDC applicable event.
      Partial Record:One required for every inspected CDS applicable vehicle not involved in a CDC
                        applicable event (variables EV04-19 will be blank).
      Missing Record:      (1) Not inspected (GV67=0) CDS applicable vehicle.
                        (2) Non CDS applicable vehicle (GV07=50-99).

Interior Vehicle Record
      Complete Record:      Towed (GV10=1), inspected (GV67=1-3), CDS applicable vehicle (GV07=01-49).
      Missing Record:      (1) Towed, not inspected (GV67=0) CDS applicable vehicle.
                        (2) Not towed (GV10=0 or 9) CDS applicable vehicle and no air bag deployment (GV41 = 0, 1, 3, 7, 9) and (GV42 = 0, 5, 7, 9).
                        (3) Non CDS applicable vehicle (GV07=50-99).

Occupant Assessment
      Complete Record:      Towed (GV10=1), CDS applicable vehicle (GV07=01-49).
      Missing Record:      (1) Not towed (GV10=0 or 9), CDS applicable vehicle and no air bag deployment (GV41 = 0, 1, 3, 7, 9) and (GV42 = 0, 5, 7, 9).
                        (2) Non CDS applicable vehicle (GV07=50-99).

Occupant Injury Record

    Complete Record:    Towed (GV10=1), CDS applicable vehicle (GV07=01-49) with an occupant having a recorded injury (OA70=01-96).

    Missing Record:    (1) Towed, CDS applicable vehicle with occupant not having a recorded injury (OA70=00,97,99).
(2) Not towed (GV10=0 or 9), CDS applicable vehicle and no air bag deployment (GV41 = 0, 1, 3, 7, 9) and (GV42 = 0, 5, 7, 9).
(3) Non CDS applicable vehicle (GV07=50-99).

# APPENDIX D

## CDC AND DELTA-V

This section gives an overview of the Collision Deformation Classification (CDC) for cars, vans, and light trucks, per SAE J224 MAR 84 in the current year NASS. The CDC codes contain eight characters. If there is no CDC, these codes are left blank. If there is a CDC, these codes are as follows:

Direction of Force (2-character numeric). Sum of Clock Direction and Incremental Value of Shift if both are known. If either is unknown, direction of force is coded "99".

Clock Direction is coded as follows:

| | | | |
|---|---|---|---|
| 00 | Non-horizontal force | 07 | 7 o'clock |
| 01 | 1 o'clock | 08 | 8 o'clock |
| 02 | 2 o'clock | 09 | 9 o'clock |
| 03 | 3 o'clock | 10 | 10 o'clock |
| 04 | 4 o'clock | 11 | 11 o'clock |
| 05 | 5 o'clock | 12 | 12 o'clock |
| 06 | 6 o'clock | 99 | Unknown |

Incremental Value of Shift i.e., change in direction of the structure as opposed to crushing of the structure. It is coded as follows:

| | |
|---|---|
| 00 | No shift |
| 20 | End shift vertical--up; top shift--forward |
| 40 | End shift vertical--down; top shift--rearward |
| 60 | End or top shift lateral--right |
| 80 | End or top shift lateral--left |
| 99 | Unknown |

Deformation Location (1 character alphanumeric) is coded as follows:

| | |
|---|---|
| F | Front |
| R | Right side |
| L | Left side |
| B | Back (rear) |
| T | Top |
| U | Undercarriage |
| 9 | Unknown |

Specific Longitudinal or Lateral Location (1 character alphanumeric) is coded as follows:

| Horizontal Impacts | | | Top or Undercarriage | |
|---|---|---|---|---|
| D | Distributed--side or end | | D | Distributed (F+P+B) |
| L | Left--front or rear | | F | Front Section |
| C | Center--front or rear | | P | Center Section |
| R | Right--front or rear | | B | Rear Section |
| F | Side front--left or right | Y | F+P | |
| P | Side center section--L or R | Z | P+B | |
| B | Side rear--left or right | 9 | Unknown | |
| Y | Side (F + P) or end (L + C) | | | |
| Z | Side (P + B) or end (C + R) | | | |
| 9 | Unknown | | | |

Specific Vertical or Lateral Location (1 character alphanumeric) is coded as follows:

Vertical - Front, Rear, or Side Impacts

| | |
|---|---|
| A | All |
| H | Top of frame to top |
| E | Everything below belt line |
| G | Belt line and above |
| M | Middle--top of frame to belt line or hood |
| L | Frame--top of frame, frame, bottom of frame (including undercarriage) |
| W | Below undercarriage level (wheel and tires only) |
| 9 | Unknown |

Lateral - Top and Undercarriage Impacts

| | |
|---|---|
| D | Distributed |
| L | Left |
| C | Center |
| R | Right |
| Y | Left and Center (L + C) |
| Z | Right and Center (R + C) |
| 9 | Unknown |

Type of Damage Distribution (1 character alphanumeric) is coded as follows:

| | | | |
|---|---|---|---|
| W | Wide impact area | E | Corner |
| N | Narrow impact area | K | Conversion in impact type |
| S | Sideswipe | U | No residual deformation |
| O | Rollover (including side) | 9 | Unknown |
| A | Overhanging structure | | |

Deformation Extent Guide (2 character alphanumeric) is coded as follows:

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

Delta-V.

Delta-V is defined as the vector velocity change during the collision phase of a crash or as common velocity minus approach velocity, where common velocity is the velocity of both vehicles at the instant of maximum crush:

$$\ddot{A}V = V \text{ common} - V \text{ approach}$$

The direction of the vector is determined by the investigator as the direction of principal force. For each vehicle, the components of its Delta-V are obtained by projecting on the longitudinal and lateral axes of that vehicle.
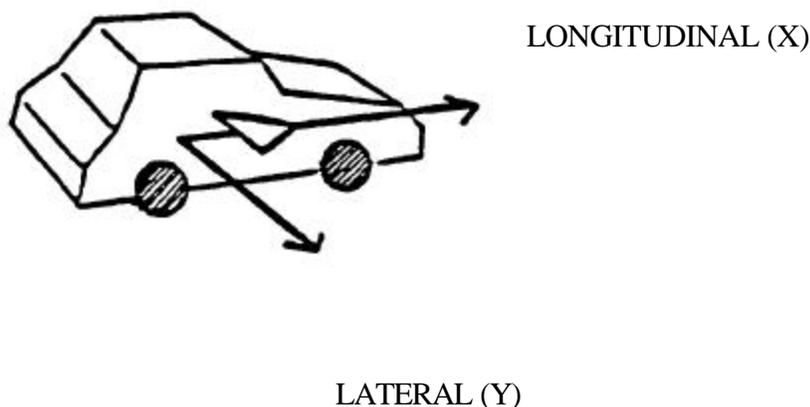


LONGITUDINAL (X)

LATERAL (Y)

Figure D-1

Figure D-1 shows the positive direction of the longitudinal and lateral components of Delta-V. For example, in a head-on collision, a vehicle is decelerated and the initial high positive longitudinal velocity is reduced; thus it will have a negative longitudinal Delta-V.

# APPENDIX E

## SELECTED COUNTS

Users of the NASS Analysis file occasionally have requested that the manual include total counts for certain NASS statistics. These counts may help assure that the users are accessing the desired NASS tape.  Further, such counts help to identify the source of apparent anomalies.

For this edition of the User's Manual, the following counts have been identified as potentially the most useful:

| | | |
|---|---|---|
| **!** | Total Number of Type Accident Records............................ | 4,307 |
| **!** | Total Number of Accident Description Records.................... | 35,392 |
| **!** | Total Number of Vehicle Profile Records.......................... | 7,736 |
| **!** | Total Number of Person Profile Records............................ | 19,429 |
| ! | Total Number of Accident Records.................................. | 4,307 |
| ! | Total Number of Accident Event Records.......................... | 7,844 |
| ! | Total Number of General Vehicle Records......................... | 7,579 |
| ! | Total Number of Exterior Vehicle Records........................ | 5,483 |
| ! | Total Number of Interior Vehicle Records......................... | 4,981 |
| ! | Total Number of Occupant Assessment Records................... | 9,840 |
| ! | Total Number of Occupant Injury Records......................... | 27,726 |

(1)     PSU Codes
(2)     PSU Description
(3)     Population (1990 & 1980)
(4)     Land Area (Square Miles)
(5)     Population (by Age Group)
(6)     Number of Workers and Means of Transportation to Work
(7)     Number of Housing Units and Vehicles Available

Demographics data on the 24 PSU's are included to give researchers supplementary information on the nature of the PSU's when analyzing NASS data.  The land area figures are from the County and City Data Book, 1988. The 1990 population figures and the figures on age distribution of the population in 1990 are from Tables 54 and 61 of "1990 Census of Population, General Population Characteristics, Age and Sex by Race and Hispanic Origin:  1990 - County, Place and County Subdivision".  The 1980 population figures and the figures on age distribution of the population in 1980 are from Tables 26 and 46 of "1980 Census of Population, Chapter B, General Population Characteristics, Persons by Age for Countries, Areas and Places:  1980".  The figures pertaining to number of workers, means of transportation to work, number of housing units and vehicles available are from Table 6 "Employment Status and Journey to Work Characteristics:  1990" and Table 14 "Fuels and Equipment Characteristics:  1990" of "1990 Census of Population and Housing, Summary Social, Economic and Housing Characteristics".

# PRIMARY SAMPLING UNIT (PSU) CODES AND DESCRIPTION

| VALUES | STRATA | DESCRIPTION |
|---|---|---|
| 03, 06, 41, 49, | 1 | Central City, one of the 60 largest |
| 72, 74, 79, 82 | | SMSAs |
| 05, 08, 09, 12, | 2 | Suburban, one of the 17 - 60th |
| 45, 73, 75, 81 | | largest SMSAs or PSU within 61st - 119th largest SMSAs either containing or not containing a central city. |
| 02, 04, 11, 13, | 3 | Other PSU |
| 43, 48, 76, 78 | | |

# POPULATION

| PSU | 1990 | 1980 | % CHANGE | LAND AREA |
|-----|------|------|----------|-----------|
| P02 | 165,304 | 158,158 | 4.5 | 1,131 |
| P03 | 2,300,664 | 2,230,936 | 3.1 | 70 |
| P04 | 433,203 | 346,038 | 25.2 | 641 |
| P05 | 678,111 | 643,621 | 5.4 | 486 |
| P06 | 1,585,577 | 1,688,210 | -6.1 | 136 |
| P08 | 966,570 | 1,026,147 | -5.8 | 672 |
| P09 | 830,422 | 737,822 | 12.6 | 939 |
| P11 | 282,937 | 264,748 | 6.9 | 710 |
| P12 | 430,459 | 450,449 | -4.4 | 642 |
| P13 | 158,983 | 157,589 | 0.9 | 507 |
| P41 | 271,074 | 274,602 | -1.3 | 55 |
| P43 | 423,380 | 301,327 | 40.5 | 854 |
| P45 | 335,749 | 319,694 | 5 | 506 |
| P48 | 167,098 | 153,264 | 9 | 1,961 |
| P49 | 1,006,877 | 904,078 | 11.4 | 331 |
| P72 | 2,783,726 | 3,005,072 | -7.4 | 228 |
| P73 | 475,594 | 522,965 | -9.1 | 501 |
| P74 | 416,444 | 397,038 | 4.9 | 333 |
| P75 | 441,500 | 374,194 | 18 | 917 |
| P76 | 74,778 | 71,348 | 4.8 | 11,219 |
| P78 | 120,739 | 90,554 | 33.3 | 9,994 |
| P79 | 4,948,333 | 4,149,319 | 19.3 | 3,554 |
| P81 | 991,060 | 775,903 | 27.7 | 2,044 |
| P82 | 516,259 | 493,846 | 4.5 | 84 |
| | | | | |
| All PSUs | 20,804,841 | 19,536,922 | 6.5 | 38,515 |
| Total U.S. | 248,709,873 | 226,542,203 | 9.8 | 3,618,770 |

## POPULATION BY AGE GROUP (1990)

| PSU | UNDER 5 | 5 TO 9 | 10 TO 14 | 15 TO 19 | 20 TO 24 | 25 TO 29 | 30 TO 44 | 45 TO 64 | 65+ |
|---|---|---|---|---|---|---|---|---|---|
| P02 | 11,396 | 11,045 | 10,150 | 11,765 | 12,206 | 14,201 | 41,415 | 32,628 | 21,498 |
| P03 | 178,420 | 165,956 | 164,476 | 164,977 | 179,622 | 204,387 | 538,749 | 419,020 | 285,057 |
| P04 | 28,816 | 27,497 | 26,434 | 25,568 | 24,228 | 30,151 | 91,778 | 78,323 | 100,408 |
| P05 | 45,837 | 43,619 | 39,570 | 39,910 | 44,516 | 56,186 | 165,576 | 140,904 | 101,993 |
| P06 | 115,871 | 104,113 | 100,472 | 107,408 | 135,952 | 142,337 | 347,907 | 290,803 | 240,714 |
| P08 | 61,325 | 59,345 | 54,992 | 54,766 | 56,554 | 72,966 | 232,418 | 208,629 | 165,575 |
| P09 | 64,026 | 58,331 | 53,667 | 59,426 | 77,972 | 88,137 | 220,574 | 151,373 | 56,916 |
| P11 | 19,160 | 17,431 | 15,395 | 24,922 | 39,623 | 29,635 | 71,793 | 43,592 | 21,226 |
| P12 | 33,436 | 33,652 | 33,493 | 33,647 | 30,825 | 34,807 | 102,684 | 84,086 | 43,829 |
| P13 | 12,854 | 12,930 | 12,082 | 11,336 | 10,353 | 12,576 | 36,925 | 29,149 | 20,798 |
| P41 | 16,068 | 14,648 | 12,681 | 13,713 | 16,586 | 22,707 | 64,861 | 55,147 | 54,663 |
| P43 | 30,174 | 27,295 | 25,468 | 29,177 | 40,887 | 46,171 | 118,537 | 72,478 | 33,193 |
| P45 | 21,426 | 21,148 | 20,155 | 24,918 | 30,077 | 28,850 | 81,291 | 65,194 | 42,690 |
| P48 | 10,818 | 11,073 | 11,539 | 15,863 | 19,330 | 13,062 | 36,760 | 29,473 | 19,180 |
| P49 | 81,138 | 70,967 | 61,951 | 65,369 | 91,074 | 120,170 | 254,770 | 163,547 | 97,891 |
| P72 | 216,468 | 201,140 | 190,488 | 200,988 | 235,616 | 278,694 | 645,300 | 484,450 | 330,182 |
| P73 | 34,039 | 37,502 | 38,942 | 36,770 | 30,902 | 35,923 | 109,188 | 93,649 | 58,679 |
| P74 | 33,314 | 32,489 | 29,325 | 28,498 | 31,740 | 39,112 | 101,480 | 73,153 | 47,333 |
| P75 | 33,469 | 34,032 | 31,125 | 29,471 | 25,841 | 37,177 | 128,350 | 86,421 | 35,614 |
| P76 | 5,771 | 6,388 | 6,418 | 5,781 | 3,973 | 4,502 | 14,717 | 15,167 | 12,061 |
| P78 | 10,160 | 10,104 | 9,608 | 9,091 | 9,573 | 9,670 | 24,212 | 20,826 | 17,495 |
| P79 | 416,258 | 377,775 | 348,590 | 364,937 | 419,299 | 478,019 | 1,217,438 | 859,606 | 466,411 |
| P81 | 75,665 | 74,986 | 67,462 | 62,023 | 65,249 | 89,923 | 275,550 | 191,520 | 88,692 |
| P82 | 29,269 | 23,842 | 20,057 | 25,641 | 48,364 | 55,845 | 149,538 | 85,303 | 78,400 |

# WORKERS AND MEANS OF TRANSPORTATION TO WORK

| PSU | WORKERS | % USING CAR, TRUCK, OR VAN | % IN CAR POOLS | % USING PUBLIC TRANSIT |
|-----|---------|----------------------------|----------------|------------------------|
| P02 | 78,739 | 88.6 | 12.3 | 1.7 |
| P03 | 907,010 | 31.3 | 8.8 | 58 |
| P04 | 178,966 | 92.7 | 13.3 | 2 |
| P05 | 352,960 | 88.8 | 10 | 4.2 |
| P06 | 640,577 | 57.8 | 13.2 | 28.7 |
| P08 | 444,449 | 85.6 | 12.8 | 8.7 |
| P09 | 468,944 | 83.7 | 19 | 11.2 |
| P11 | 148,727 | 83.1 | 9.6 | 3 |
| P12 | 174,589 | 95.2 | 10.1 | 0.8 |
| P13 | 63,855 | 93.7 | 11.3 | 0.7 |
| P41 | 126,578 | 88.7 | 13.3 | 3.6 |
| P43 | 237,181 | 93 | 12.1 | 1.6 |
| P45 | 160,829 | 91.1 | 12.4 | 1.1 |
| P48 | 71,893 | 93.6 | 13.5 | 0.7 |
| P49 | 500,566 | 87.6 | 15.2 | 6.7 |
| P72 | 1,181,677 | 61.1 | 14.8 | 29.7 |
| P73 | 199,700 | 91.5 | 12.4 | 3.6 |
| P74 | 210,358 | 91.1 | 11.4 | 2.7 |
| P75 | 238,304 | 90.8 | 12.2 | 3 |
| P76 | 23,706 | 88.3 | 14.3 | 0.2 |
| P78 | 45,834 | 86.4 | 18.2 | 1.3 |
| P79 | 2,283,850 | 89.5 | 15.8 | 4.2 |
| P81 | 525,998 | 89.2 | 11 | 4.9 |
| P82 | 279,748 | 70.5 | 11.8 | 15.9 |

# HOUSING UNITS AND VEHICLE AVAILABILITY

| PSU | ALL OCCUPIED HOUSING UNITS | % WITH VEHICLES AVAILABLE | | |
|---|---|---|---|---|
| | | NONE | 1 | MORE |
| P02 | 60,807 | 9 | 33.2 | 57.8 |
| P03 | 828,199 | 56.7 | 33.2 | 10.1 |
| P04 | 168,147 | 8.9 | 42 | 49.1 |
| P05 | 254,995 | 7 | 32.6 | 60.4 |
| P06 | 603,075 | 38.1 | 40.5 | 21.4 |
| P08 | 387,778 | 13.3 | 38 | 48.8 |
| P09 | 290,961 | 8.9 | 33.7 | 57.4 |
| P11 | 104,528 | 7.2 | 35.2 | 57.6 |
| P12 | 161,296 | 11.3 | 34.7 | 54 |
| P13 | 57,798 | 9.7 | 33.5 | 56.8 |
| P41 | 119,344 | 13.6 | 46.1 | 40.3 |
| P43 | 165,743 | 6.3 | 31.7 | 62 |
| P45 | 133,639 | 9.4 | 33.8 | 56.8 |
| P48 | 61,099 | 10.2 | 32 | 57.8 |
| P49 | 402,042 | 11.2 | 44.2 | 44.6 |
| P72 | 1,025,174 | 34.3 | 41.1 | 24.6 |
| P73 | 170,748 | 12.5 | 35.2 | 52.3 |
| P74 | 161,113 | 10.5 | 34.6 | 54.9 |
| P75 | 167,853 | 3.3 | 26.8 | 69.9 |
| P76 | 26,177 | 8.8 | 33.9 | 57.4 |
| P78 | 41,139 | 6.4 | 39.3 | 54.3 |
| P79 | 1,613,172 | 7.8 | 32.5 | 59.6 |
| P81 | 379,090 | 4.2 | 27.7 | 68.1 |
| P82 | 236,702 | 16.7 | 40.9 | 42.3 |