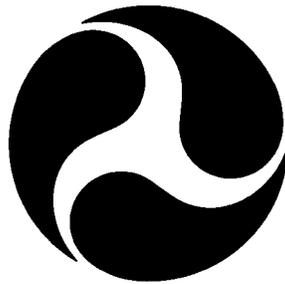NATIONAL ACCIDENT SAMPLING SYSTEM (NASS)

CRASHWORTHINESS DATA SYSTEM

Analytical User's Manual

1992 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 Accident Sampling System (NASS) Crashworthiness Data System (CDS) is a nationwide accident 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 accident data base. Data collection began in 1979 in 10 geographic sites, called Primary Sampling Units (PSU's). The 1992 NASS CDS file contains data from 24 PSU's. These data are weighted to represent all police reported motor vehicle accidents 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 1988-1992 files with files from years prior to 1988 is not recommended. The principal attributes of the NASS CDS 1988-1992 files include: focusing on accidents involving automobiles and automobile derivatives, light trucks and vans with gross vehicle weight less than 10,000 pounds; giving special consideration to late model year vehicles (the five most recent model years); emphasizing the more serious injury accidents; 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 accident; 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. Hard copy data collection records, sanitized to protect privacy, are available for review. These records contain photographic slides, scene diagrams, and vehicle damage diagrams.

This manual and the NASS 1992 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 1988

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)

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 three 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.

CHANGES IN 1992

New data elements were added to the NASS CDS covering driver zip code and race, vehicle special use, rollover characteristics, precrash events, seat orientation, Glasgow Coma Scale Score, if occupant was given blood and arterial blood gases found. One new derived data element, psu strata, was added. Eight unweighted Fatal AOPS Special Study cases were included on the file. A detailed list of changes by record type and data element follows.

ACCIDENT RECORD

One data element has been renamed
FATAL AOPS SPECIAL STUDY INDICATOR (AC08)

Two attributes have been restructured in the data element
CLASS OF VEHICLE (AC14...AC42):

(1991)	(1992)
SHORT UTILITY VEHICLE (11)	COMPACT UTILITY VEHICLE (11)
TRUCK BASED UTILITY (12)	LARGE UTILITY VEHICLE (12)

One attribute has been modified in the data element
VEHICLE NUMBER OR OBJECT CONTACTED (AC16...AC44):
     OTHER TRAFFIC BARRIER (INCLUDES GUARDRAIL) (56)

GENERAL VEHICLE RECORD

Attributes have been revised in the data element
BODY TYPE (GV07):

Deleted	Renumbered, Renamed or Restructured
(1991)	(1992)
SHORT UTILITY-NOT TRUCK BASED (13)	COMPACT UTILITY (14)
TRUCK BASED UTILITY (14)	LARGE UTILITY (15)
TRUCK BASED STATION WAGON (33)	UTILITY STATION WAGON (16)
STANDARD VAN (21)	LARGE VAN (21)
STANDARD PICKUP (31)	LARGE PICKUP (31)
LIGHT TRUCK BASED SUBURBAN LIMOUSINE (34)	

CONVERTIBLE PICKUP (35)   CONVERTIBLE PICKUP (33)
OTHER LIGHT CONVENTIONAL   OTHER LIGHT CONVENTIONAL
      TRUCK TYPE (47)   TRUCK TYPE (45)

Added (1992)

THREE-WHEEL AUTOMOBILE OR AUTOMOBILE DERIVATIVE (13)
UTILITY, UNKNOWN BODY TYPE (19)
STEP VAN OR WALK-IN VAN (<= 10K LBS GVWR) (22)
VAN BASED MOTORHOME (<= 10K LBS GVWR) (23)

New General Vehicle data elements:
DRIVER'S ZIP CODE (GV56)
DRIVER'S RACE/ETHNIC ORIGIN (GV57)
VEHICLE SPECIAL USE (THIS TRIP) (GV58)

Five new data elements were added involving rollover characteristics:
ROLLOVER INITIATION TYPE (GV59)
LOCATION OF ROLLOVER INITIATION (GV60)
ROLLOVER INITIATION OBJECT CONTACTED(GV61)
LOCATION ON VEHICLE WHERE INITIAL PRINCIPAL TRIPPING FORCE IS
      APPLIED (GV62)
DIRECTION OF INITIAL ROLL (GV63)

Four precrash event data elements were added:
PRE-EVENT MOVEMENT (PRIOR TO RECOGNITION OF CRITICAL EVENT)
      (GV64)
CRITICAL PRECRASH EVENT (GV65)
PRECRASH STABILITY AFTER AVOIDANCE MANEUVER (GV66)
PRECRASH DIRECTIONAL CONSEQUENCES OF AVOIDANCE MANEUVER
      (CORRECTIVE ACTION) (GV67)

OCCUPANT ASSESSMENT RECORD

Two new attributes were added to the data element
MANUAL (ACTIVE) BELT SYSTEM AVAILABILITY (OA17):
      SHOULDER BELT (LAP BELT DESTROYED/REMOVED) (6)
      LAP BELT (SHOULDER BELT DESTROYED/REMOVED) (7)

One attribute "air bag deployed" was split into two attributes in the data element
AIR BAG SYSTEM DEPLOYMENT (OA22):
AIR BAG DEPLOYED DURING ACCIDENT (AS A RESULT OF IMPACT)
      (1)

AIR BAG DEPLOYED AS A RESULT OF A NONCOLLISION EVENT
DURING ACCIDENT SEQUENCE (E.G., FIRE, EXPLOSION, ELECTRICAL)
(6)

One attribute was added to the data element
SEAT TYPE (THIS OCCUPANT POSITION) (OA26):
 BOX MOUNTED SEAT (I.E., VAN TYPE) (10)

One attribute was modified in the data element
SEAT PERFORMANCE (THIS OCCUPANT POSITION) (OA27):
 SEAT BACK FOLDING LOCKS OR "SEAT BACK" FAILED (3)

One attribute was added to the data element
CHILD SAFETY SEAT MAKE/MODEL (OA28):
 BUILT-IN CHILD SAFETY SEAT (950)

Four new data elements were added
SEAT ORIENTATION (THIS OCCUPANT POSITION) (OA49)
GLASGOW COMA SCALE (GCS) SCORE (AT MEDICAL FACILITY) (OA50)
WAS THE OCCUPANT GIVEN BLOOD? (OA51)
ARTERIAL BLOOD GASES (ABG) - HCO_3 (OA52)

OCCUPANT INJURY RECORD

Three attributes were added to the data element
INJURY SOURCE (OI011...OI101):
 LEFT SIDE WINDOW SILL (28)
 RIGHT SIDE WINDOW SILL (38)
 AIR BAG EXHAUST GASES (93)

ALL RECORD TYPES

A new derived data element was added
PSU STRATA

UNWEIGHTED CASES

Eight Fatal AOPS Special Study cases, which were oversampled, have been retained on the file
with zero weight. Cases qualify for this special study if a fatality occurs to an occupant of a late
model (1988-1993) CDS applicable vehicle equipped with an automatic occupant protection
system. All case numbers are in the 500 series and are stratum "A" e.g., 06-501A.

SECTION 3

THE SAMPLING SYSTEM AND SAMPLE DESIGN

The accidents investigated in NASS CDS are a probability sample of all police reported accidents in the U.S. A NASS CDS accident must fulfill the following requirements: must be police reported, must involve a harmful event (property damage and/or personal injury) resulting from an accident and must involve at least one towed passenger car or light truck or van in transport on a trafficway. Every accident 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 accidents in NASS is accomplished in three stages: (1) selection of PSU's, (2) selection of police jurisdictions and (3) selection of accidents.

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 accidents in each stratum. Two PSU's were selected from each stratum.

Stage 2 - Select Police Jurisdictions

If every accident in each PSU were investigated, a national estimate could be obtained by weighting each accident by the inverse of the probability of selecting the PSU. Because it is uneconomical and impractical to investigate every accident 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 accidents 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 accidents. A sample of jurisdictions is selected which over-samples those having a larger measure of size.

Stage 3 - Select Accidents

The final stage of sampling is the selection of accidents within the sampled jurisdictions. Each week, the police jurisdictions are contacted and all accidents that qualify for the NASS CDS for which a police accident report has been filed since the last date that jurisdiction was contacted are listed. While being listed, each accident 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 accidents are listed, except in a few of the largest police jurisdictions. In these jurisdictions only accidents with either an even or an odd police accident report number are listed.

To select accidents, each team is assigned a fixed number of accidents to investigate each week. The number of accidents 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 accidents is selected than of the lower severity accidents. Also, accidents in the same stratum have the same probability of being selected, regardless of the PSU.

To select the sample, each accident 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"---1988 through 1993 or "non-late model year"---1987 or before.

SAMPLING STRATA

The ten PAR sampling Strata used by the CDS are listed below and shown in Table 2-1:

Stratum A-NASS accidents 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 accidents 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 accidents 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 accident involved more than one CDS applicable vehicle, at least two CDS applicable vehicles must be towed.

Stratum K-NASS accidents 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 accident involved more than one CDS applicable vehicle, at least two CDS applicable vehicles must be towed.

Stratum C-NASS accidents 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 accident involved more than one CDS applicable vehicle, then at least two CDS applicable vehicles must be towed.

Stratum D-NASS accidents 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 accident involved more than one CDS applicable vehicle, then at least two CDS applicable vehicles must be towed.

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

Stratum F-NASS accidents 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 accidents 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 accidents 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 Accident 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 accident 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
1992 NASS CDS Strata

Late Model Year (LMV) Vehicle Involvement	Most Severe Police Reported Injury								
	Fatal Injury "K"	Transported						Nontransported	
		Serious Injury "A"					Minor Injury or Unk. "B", "C", or "U"	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			
		Hospitalized	Not Hospitalized	Hospitalized	Not Hospitalized				
Injury in Towed, LMY, CDS Veh.	A	J	C	J	C	E		G	Not In Scope
Injury not in Towed, LMY, CDS Vehicle	B	K	D	K	D	F		H	Not In Scope

Note: Late Model Year refers to 1988 through 1993 model years.

Sampling

Because the accidents selected in NASS CDS are a probability sample of all accidents occurring in the survey year, the data from these accidents are "weighted" to produce National Estimates. The weights result from the stages of selection, reflecting that accident'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 accident in that PSU's sample and is equal to the inverse of that accident's probability of selection within the PSU. It is equal to the product of the inverse of the probability of selecting that accident from the other accidents and the inverse of the probability of selecting the police jurisdiction in which the accident occurred from among all police jurisdictions listed in the PSU (Stage 2).

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

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

National Inflation Factor

The National Inflation Factor is the overall sampling weight for each accident selected in the NASS sample and the inverse of the probability of selection of that accident. 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 accidents in a year is an unbiased estimate of the total number of accidents which occurred during the year in the U.S. If restricted to an accident stratum, the sum is an estimate of the total number of that type of accident which occurred in that year. Unbiased estimates of National totals of accident characteristics can be obtained by multiplying the value of the characteristic for each accident in the NASS sample by the National Inflation Factor for that accident.

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 accident 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 accidents 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 accident in the accident strata and set of PSU's.

Estimates of National totals for accident characteristics can be obtained using the Ratio Inflation Factor (RIF). However, because the RIFs have been adjusted to actual accident 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 accident 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 accident. The following list identifies the specific data elements, gives their location in the Sequential File Record Layout and explains their derivation:

SPECIFICATION FOR DERIVED VARIABLES
VARIABLE NAME - LOCATION - DESCRIPTION

MAXIMUM TREATMENT IN THIS ACCIDENT (AC29) (SAS Label: ATREAT)

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

1	FATAL
3	HOSPITALIZED
4	TRANSPORTED AND RELEASED
5	TREATMENT AT SCENE
6	TREATMENT LATER
8	TREATMENT - OTHER
2	FATAL - RULED DISEASE
9	UNKNOWN
0	NO TREATMENT
.	NOT COLLECTED

This variable is derived by scanning the TREATMENT-MORTALITY (OA35) variable in each occupant assessment record in the accident.

Source: TREATMENT-MORTALITY (OA35).
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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV18) equals 0. If there are no occupants in any towed CDS applicable vehicle in the accident, 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 (AC30) (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 non-towed CDS applicable AOPS vehicle in the accident, 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 accident. If none of the occupants in the accident has an occupant injury record, then scan the NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA43) 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 (OA43).

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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV18) 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 (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00; (2) Non-towed CDS applicable AOPS vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE? (GV36) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00. If there are no occupants in any towed CDS applicable vehicle in the accident, 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 (AC31-32) (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 CDS applicable AOPS vehicles involved in the accident. It is derived by totaling for the accident either the number of occupant assessment records in which the TREATMENT-MORTALITY (OA35) 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 OA35 and if the code in OA35 is not equal to "1", add one injury per occupant where OI010...OI100 is "3-6").

Source: TREATMENT-MORTALITY (OA35) 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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV18) 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 (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00; (2) Non-towed CDS applicable AOPS vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE? (GV36) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00. If none of the occupants in the accident has an occupant injury record or if, on all the occupant assessment records the only codes in OA43 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 accident, 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 (AC33-34) (SAS Label: AINJURED)

This two place numeric value indicates the total number of injured occupants of towed CDS applicable vehicles or non-towed CDS applicable AOPS vehicles involved in the accident. It is derived by totaling the number of occupant assessment records in which the variable NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA43) has a value of 01-97.

Source: NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA43).
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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV18) equals 0. Towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 99 or 00. Non-towed CDS applicable AOPS vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE (GV36) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 99 or 00. If, on all the occupant assessment records in the accident, the only codes in

OA43 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 accident, 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 (AC35) (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 accident, using the following order of codes:

1   YES
2   NO
9   UNKNOWN

This variable is derived by scanning the POLICE REPORTED ALCOHOL PRESENCE (GV11) and ALCOHOL TEST RESULT FOR DRIVER (GV12) variables on each general vehicle record in the accident. The ALCOHOL INVOLVEMENT codes are derived as follows:

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

(NO) 2 - If POLICE REPORTED ALCOHOL PRESENCE 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 (GV11) and ALCOHOL TEST RESULT FOR DRIVER (GV12).
Missing Values: None (must have at least one general vehicle record coded through the variable ACCIDENT TYPE (GV15) in the accident).
SAS Codes: .U for 9 (Unknown).

DAY OF WEEK (AC36-37) (SAS Label: DAYWEEK)

This two place numeric value indicates on which day of the week the accident occurred. To protect the confidentiality of records concerning specific accidents used by NASS, the accident date is not provided. Instead, the accident record indicates year, month and DAY OF WEEK of accident 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 (AC38-45) (SAS Label: PSUWGT)

This eight place numeric value has three implied decimal places. It indicates the within PSU sampling weight for each accident 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 (AC46-53) (SAS Label: NATWGT)

This eight place numeric value has three implied decimal places. It indicates the overall sampling weight for each accident 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 (AC54-61) (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 (AC62) (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 accident, using the following order of codes:

1	YES
2	NO
9	UNKNOWN

This variable is derived by scanning the POLICE REPORTED OTHER DRUG PRESENCE (GV37) and the variables reporting SPECIMEN TEST RESULTS for NARCOTIC, DEPRESSANT, STIMULANT, HALLUCINOGEN, CANNABINOID, PHENCYCLIDINE, INHALANT and OTHER DRUGS (GV41, GV43, GV45, GV47, GV49, GV51, GV53 and

GV55) on each general vehicle record in the accident. The DRUG INVOLVEMENT codes are derived as follows:

(YES) 1 - If POLICE REPORTED OTHER DRUG PRESENCE equals 1 (YES - OTHER DRUG PRESENT) or NARCOTIC DRUG - SPECIMEN TEST RESULTS equals 2 (DRUG FOUND IN SPECIMEN) or DEPRESSANT DRUG equals 2 or STIMULANT DRUG equals 2 or HALLUCINOGEN DRUG equals 2 or CANNABINOID DRUG equals 2 or PHENCYCLIDINE DRUG equals 2 or INHALANT DRUG equals 2 or OTHER DRUG equals 2.

(NO) 2 -If POLICE REPORTED OTHER DRUG PRESENCE equals 0 (NO OTHER DRUGS PRESENT) and [NARCOTIC DRUG - SPECIMEN TEST RESULTS equals 0 (NO SPECIMEN TEST GIVEN) or 1 (DRUG NOT FOUND IN SPECIMEN)] and [DEPRESSANT DRUG equals 0 or 1] and [STIMULANT DRUG equals 0 or 1] and [HALLUCINOGEN DRUG equals 0 or 1] and [CANNABINOID DRUG equals 0 or 1] and [PHENCYCLIDINE DRUG equals 0 or 1] and [INHALANT DRUG equals 0 or 1] and [OTHER DRUG equals 0 or 1].

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

Source: POLICE REPORTED OTHER DRUG PRESENCE (GV37) and NARCOTIC DRUG - SPECIMEN TEST RESULTS (GV41) and DEPRESSANT DRUG (GV43) and STIMULANT DRUG (GV45) and HALLUCINOGEN DRUG (GV47) and CANNABINOID DRUG (GV49) and PHENCYCLIDINE DRUG (GV51) and INHALANT DRUG (GV53) and OTHER DRUG (GV55).
Missing Values: None (must have at least one general vehicle record coded from variable GV37 through GV55 in the accident).
SAS Codes: .U for 9 (Unknown).

MANNER OF COLLISION (AC63) (SAS Label: MANCOLL)

This single place numeric value indicates the configuration of the accident 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 the accident event record and the ACCIDENT TYPE (GV15) 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 (GV15).
Missing Values: None (must have at least one general vehicle record coded through the variable ACCIDENT TYPE [GV15] in the accident.
SAS Codes: .U for 9 (Unknown).

PSU STRATA (AC64-65) (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 accidents. 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 (GV107) (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 CDS applicable AOPS vehicle using the following order of codes:

     1   FATAL
     3   HOSPITALIZED
     4   TRANSPORTED AND RELEASED
     5   TREATMENT AT SCENE
     6   TREATMENT LATER
     8   TREATMENT - OTHER
     2   FATAL - RULED DISEASE
     9   UNKNOWN
     0   NO TREATMENT
     .   NOT COLLECTED

This variable is derived by scanning the TREATMENT-MORTALITY (OA35) variable in each occupant assessment record in this vehicle.

Source: TREATMENT-MORTALITY (OA35).
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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF VEHICLE FORMS SUBMITTED (GV18) 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 (GV108) (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 CDS applicable AOPS vehicle 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 CDS applicable AOPS vehicle. If none of the occupants in this vehicle has an occupant injury record, then scan the NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA43) 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 (OA43).
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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF VEHICLE FORMS SUBMITTED (GV18) 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 (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00; (2) Non-towed CDS applicable AOPS vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE? (GV36) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) 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 (GV109-110) (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 CDS applicable AOPS vehicle. It is derived by totaling for the vehicle either the number of occupant assessment records in which the TREATMENT-MORTALITY (OA35) 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 OA35 and if the code in OA35 is not equal to "1", add one injury per occupant where OI010...OI100 is "3-6").

Source: TREATMENT-MORTALITY (OA35) 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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF VEHICLE FORMS SUBMITTED (GV18) 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 (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00; (2) Non towed CDS applicable AOPS vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE? (GV36) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) 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 OA43 are equal to "97, 99 or 00", then use code "00" (None) for this derived variable.

NUMBER INJURED IN THIS VEHICLE (GV111-112) (SAS Label: VINJURED)

This two place numeric value indicates the total number of injured occupants of this towed CDS applicable vehicle or non-towed CDS applicable AOPS vehicle. It is derived by totaling the number of occupant assessment records in which the variable NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA43) has a value of 01-97.

Source: NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA43).
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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) equals 0; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF VEHICLE FORMS SUBMITTED (GV18) equals 0. Towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 99 or 00. Non-towed CDS applicable AOPS vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE? (GV36) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) 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 OA43 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 (GV113) (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 (GV114-115) (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 (GV116-118) (SAS Label: OTVEHWGT)

This three place numeric value indicates the weight (in pounds) 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:

010	LESS THAN 1,050 POUNDS
011 - 134	1,050-13,449 POUNDS
135	13,450 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 (GV19) variable as coded on the general vehicle record for the other CDS applicable vehicle.
Source: OBJECT CONTACTED (EV05), BODY TYPE (GV07) & VEHICLE CURB WEIGHT (GV19).
Missing Values: Exterior vehicle records will be missing and variables GV16-36 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 (GV35) 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 (GV119-120) (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 (GV35) 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).

MAXIMUM KNOWN OCCUPANT A.I.S. (OA78) (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 non-towed CDS applicable AOPS vehicle 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 (OA43) 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 (OA43).
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 or a non-towed CDS applicable AOPS 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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) 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 (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00; (2)Non-towed CDS applicable AOPS vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE? (GV36) equals 1 and NUMBER OF REPORTED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00.
SAS Codes: .U for 9 (Unknown).

OCCUPANT I.S.S. (OA79-80) (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 CDS applicable AOPS vehicle 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 (OA43) variable on the occupant assessment record. If the codes in OA43 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 or a non-towed CDS applicable AOPS 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 Non AOPS vehicles-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9 and IS THIS AN AOPS VEHICLE? (GV36) 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 (GV09) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00; (2)Non-towed CDS applicable AOPS vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV09) equals 0 or 9, IS THIS AN AOPS VEHICLE? (GV36) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA43) equals 97, 99 or 00.

SAS Codes: None.

ACCIDENT RECORD

```
------------------------------        ------------------------------
 1  PSU NUMBER                         38
 2                                     39
------------------------------        40
 3                                     41
 4  CASE NUMBER                        42
 5                                     43
 6                                     44
------------------------------        45
 7  RECORD NUMBER (11)                ------------------------------
 8                                     46
------------------------------        47
 9  VERSION NUMBER                     48
------------------------------        49
10  NUMBER OF GENERAL                  50
11  VEHICLE FORMS SUBMITTED            51
------------------------------        52
12  MONTH OF ACCIDENT                  53
13                                    ------------------------------
------------------------------        54
14                                     55
15                                     56
------------------------------        57  RATIO INFLATION FACTOR
16  YEAR OF ACCIDENT                   58
17                                     59
------------------------------        60
18                                     61
19  TIME OF ACCIDENT                  ------------------------------
20                                     62  DRUG INVOLVED
21                                    ------------------------------
------------------------------        63  MANNER OF COLLISION
22  NOT ACTIVE                        ------------------------------
------------------------------        64  PSU STRATA
23  NOT ACTIVE                         65
------------------------------        ------------------------------
24  FATAL AOPS
------------------------------
25
26
------------------------------
27  NUMBER OF RECORDED
28  EVENTS IN THIS ACCIDENT
------------------------------
29  MAXIMUM TREATMENT
------------------------------
30  MAXIMUM KNOWN AIS
------------------------------
31  NUMBER OF SERIOUSLY
32  INJURED OCCUPANTS
------------------------------
33  NUMBER OF INJURED OCCUPANTS
34
------------------------------
35  ALCOHOL INVOLVED
------------------------------
36  DAY OF WEEK OF ACCIDENT
37
------------------------------
```

ACCIDENT EVENT RECORD

```
   ------------------------------
    1  PSU NUMBER
    2
   ------------------------------
    3
    4  CASE NUMBER
    5
    6
   ------------------------------
    7  RECORD NUMBER (12)
    8
   ------------------------------
    9  VERSION NUMBER
   ------------------------------
   10  ACCIDENT EVENT
   11  SEQUENCE NUMBER
   ------------------------------
   12  VEHICLE NUMBER (1)
   13
   ------------------------------
   14  CLASS OF VEHICLE (1)
   15
   ------------------------------
   16  GENERAL AREA OF DAMAGE (1)
   ------------------------------
   17  VEHICLE NUMBER (2) OR
   18  OBJECT CONTACTED
   ------------------------------
   19  CLASS OF VEHICLE (2)
   20
   ------------------------------
   21  GENERAL AREA OF DAMAGE (2)
   ------------------------------
```

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--------------------------------        --------------------------------
 1  PSU NUMBER                           53  NUMBER OF OCCUPANT FORMS
 2                                       54  SUBMITTED
--------------------------------        --------------------------------
 3                                       55  VEHICLE CURB WEIGHT
 4  CASE NUMBER                          56
 5                                       57
 6                                       --------------------------------
--------------------------------        58  VEHICLE CARGO WEIGHT
 7  RECORD NUMBER (21)                   59
 8                                       --------------------------------
--------------------------------        60  TOWED TRAILING UNIT
 9  VERSION NUMBER                       --------------------------------
--------------------------------        61  DOC. OF TRAJECTORY DATA
10  VEHICLE NUMBER                       --------------------------------
11                                       62  CONDITION OF TREE OR POLE
--------------------------------        --------------------------------
12  VEHICLE MODEL YEAR                   63  ROLLOVER
13                                       --------------------------------
--------------------------------        64  FRONT OVERRIDE/UNDERRIDE
14  VEHICLE MAKE                         --------------------------------
15                                       65  REAR OVERRIDE/UNDERRIDE
--------------------------------        --------------------------------
16                                       66  HEADING ANGLE FOR
17  VEHICLE MODEL                        67  THIS VEHICLE
18                                       68
--------------------------------        --------------------------------
19  BODY TYPE                            69  HEADING ANGLE FOR
20                                       70  OTHER VEHICLE
--------------------------------        71
21                                       --------------------------------
22                                       72  BASIS FOR TOTAL DELTA V
23                                       --------------------------------
24                                       73  TOTAL DELTA V
25  VEHICLE IDENTIFICATION               74
26         NUMBER                        --------------------------------
27                                       75  LONGITUDINAL COMPONENT OF
28                                       76  DELTA V
29                                       77
30                                       --------------------------------
--------------------------------        78  LATERAL COMPONENT OF
31                                       79  DELTA V
32                                       80
33                                       --------------------------------
34                                       81  ENERGY ABSORPTION
35                                       82
36                                       83
37                                       84
--------------------------------        --------------------------------
38  VEHICLE DISPOSITION                  85  CONFIDENCE IN RECONS. PGM.
--------------------------------        --------------------------------
39  TRAVEL SPEED                         86  TYPE OF VEHICLE INSPECTION
40                                       --------------------------------
--------------------------------        87  AOPS VEHICLE
41  ALCOHOL PRESENCE                     --------------------------------
--------------------------------
42  ALCOHOL TEST RESULT
43
--------------------------------
44  SPEED LIMIT
45
--------------------------------
46  ATTEMPTED
47  AVOIDANCE MANEUVER
--------------------------------
48  ACCIDENT TYPE
49
--------------------------------
50  DRIVER PRESENCE
--------------------------------
51  NUMBER OF OCCUPANTS
52  THIS VEHICLE
--------------------------------
```

```
------------------------------
 1  PSU NUMBER
 2
------------------------------
 3
 4  CASE NUMBER
 5
 6
------------------------------
 7  RECORD NUMBER (22)
 8
------------------------------
 9  VERSION NUMBER
------------------------------
10  VEHICLE NUMBER
11
------------------------------
12  DRUG PRESENCE
------------------------------
13  OBSERVATION TEST TYPE
------------------------------
14  SPECIMEN TEST TYPE
------------------------------
15  OBSERVED NARCOTIC DRUG
------------------------------
16  SPECIMEN NARCOTIC DRUG
------------------------------
17  OBSERVED DEPRESSANT DRUG
------------------------------
18  SPECIMEN DEPRESSANT DRUG
------------------------------
19  OBSERVED STIMULANT DRUG
------------------------------
20  SPECIMEN STIMULANT DRUG
------------------------------
21  OBSERVED HALLUCINOGEN DRUG
------------------------------
22  SPECIMEN HALLUCINOGEN DRUG
------------------------------
23  OBSERVED CANNABINOID DRUG
------------------------------
24  SPECIMEN CANNABINOID DRUG
------------------------------
25  OBSERVED PHENCYCLIDINE DRUG
------------------------------
26  SPECIMEN PHENCYCLIDINE DRUG
------------------------------
27  OBSERVED INHALANT DRUG
------------------------------
28  SPECIMEN INHALANT DRUG
------------------------------
29  OBSERVED OTHER DRUG
------------------------------
30  SPECIMEN OTHER DRUG
------------------------------
31
32
33  DRIVER'S ZIP CODE
34
35
------------------------------
36  DRIVER'S RACE
------------------------------
37  VEHICLE SPECIAL USE
------------------------------
38  ROLLOVER INITIATION TYPE
------------------------------
39  LOCATION OF ROLLOVER INIT.
------------------------------
40  ROLLOVER
41  OBJECT CONTACTED
------------------------------
```

```
------------------------------
42  LOCATION OF TRIPPING FORCE
------------------------------
43  DIRECTION OF INITIAL ROLL
------------------------------
44  PRE-EVENT MOVEMENT
45
------------------------------
46  CRITICAL PRECRASH EVENT
47
------------------------------
48  PRECRASH STABILITY
------------------------------
49  CONSEQ OF CORRECTIVE ACTION
------------------------------
50  MAXIMUM TREATMENT
------------------------------
51  MAXIMUM KNOWN AIS
------------------------------
52  NUMBER OF SERIOUSLY INJURED
53  IN THIS VEHICLE
------------------------------
54  NUMBER OF INJURED
55  IN THIS VEHICLE
------------------------------
56  FRONT/REAR WHEEL DRIVE
------------------------------
57  VIN LENGTH
58
------------------------------
59  WEIGHT OF THE
60  OTHER VEHICLE
61
------------------------------
62  BODY TYPE OF
63  THE OTHER VEHICLE
------------------------------
```

EXTERIOR VEHICLE FORM

```
--------------------------------        --------------------------------
 1   PSU NUMBER                          47  CRASH DAMAGE DATA
 2                                       48  FOR HIGHEST DELTA "V" - C5
--------------------------------        --------------------------------
 3                                       49  CRASH DAMAGE DATA
 4   CASE NUMBER                         50  FOR HIGHEST DELTA "V" - C6
 5                                       --------------------------------
 6                                       51  CRASH DAMAGE DATA
--------------------------------        52  FOR HIGHEST DELTA "V" - D
 7   RECORD NUMBER (31)                  53
 8                                       54
--------------------------------        --------------------------------
 9   VERSION NUMBER                      55  CRASH DAMAGE DATA
--------------------------------        56  FOR 2ND HIGHEST
10   VEHICLE NUMBER                      57  DELTA "V" - L
11                                       --------------------------------
--------------------------------        58  CRASH DAMAGE DATA FOR
12   ACCIDENT SEQUENCE - 1               59  2ND HIGHEST DELTA "V" - C1
13                                       --------------------------------
--------------------------------        60  CRASH DAMAGE DATA FOR
14   OBJECT                              61  2ND HIGHEST DELTA "V" - C2
15   CONTACTED - 1                       --------------------------------
--------------------------------        62  CRASH DAMAGE DATA FOR
16   DIRECTION                           63  2ND HIGHEST DELTA "V" - C3
17   OF FORCE - 1                        --------------------------------
--------------------------------        64  CRASH DAMAGE DATA FOR
18   DEFORMATION LOCATION - 1            65  2ND HIGHEST DELTA "V" - C4
--------------------------------        --------------------------------
19   LONG./LATERAL LOCATION - 1          66  CRASH DAMAGE DATA FOR
--------------------------------        67  2ND HIGHEST DELTA "V" - C5
20   VERT./LATERAL LOCATION - 1          --------------------------------
--------------------------------        68  CRASH DAMAGE DATA FOR
21   TYPE OF DAMAGE DIST. - 1            69  2ND HIGHEST DELTA "V" - C6
--------------------------------        --------------------------------
22   DEFORMATION                         70  CRASH DAMAGE DATA
23   EXTENT - 1                          71  FOR 2ND HIGHEST
--------------------------------        72  DELTA "V" - D
24   ACCIDENT SEQUENCE - 2               73
25                                       --------------------------------
--------------------------------        74  CDCS DOCUMENTED-NOT CODED
26   OBJECT                              --------------------------------
27   CONTACTED - 2                       75  VEHICLE DISPOSITION (RES.)
--------------------------------        --------------------------------
28   DIRECTION                           76  ORIGINAL WHEELBASE
29   OF FORCE - 2                        77
--------------------------------        78
30   DEFORMATION LOCATION - 2            79
--------------------------------        --------------------------------
31   LONG./LATERAL LOCATION - 2          80  ALTERED VEHICLE
--------------------------------        --------------------------------
32   VERT./LATERAL LOCATION - 2          81  FIRE OCCURRENCE
--------------------------------        --------------------------------
33   TYPE OF DAMAGE DIST. - 2            82  ORIGIN OF FIRE
--------------------------------        --------------------------------
34   DEFORMATION                         83  TYPE OF TANK
35   EXTENT - 2                          --------------------------------
--------------------------------
36   CRASH DAMAGE DATA FOR
37   HIGHEST DELTA "V" - L
38
--------------------------------
39   CRASH DAMAGE DATA FOR
40   HIGHEST DELTA "V" - C1
--------------------------------
41   CRASH DAMAGE DATA FOR
42   HIGHEST DELTA "V" - C2
--------------------------------
43   CRASH DAMAGE DATA FOR
44   HIGHEST DELTA "V" - C3
--------------------------------
45   CRASH DAMAGE DATA FOR
46   HIGHEST DELTA "V' - C4
--------------------------------
```

```
--------------------------------          --------------------------------
 1  PSU NUMBER                              40  TYPE OF GLAZING-WS
 2                                          --------------------------------
--------------------------------          41  TYPE OF GLAZING-LF
 3                                          --------------------------------
 4  CASE NUMBER                             42  TYPE OF GLAZING-RF
 5                                          --------------------------------
 6                                          43  TYPE OF GLAZING-LR
--------------------------------          --------------------------------
 7  RECORD NUMBER (41)                      44  TYPE OF GLAZING-RR
 8                                          --------------------------------
--------------------------------          45  TYPE OF GLAZING-BL
 9  VERSION NUMBER                          --------------------------------
--------------------------------          46  TYPE OF GLAZING-RO
10  VEHICLE NUMBER                          --------------------------------
11                                          47  TYPE OF GLAZING-OT
--------------------------------          --------------------------------
12  PASSENGER COMPARTMENT                   48  PRECRASH GLAZING STATUS-WS
13  INTEGRITY                               --------------------------------
--------------------------------          49  PRECRASH GLAZING STATUS-LF
14  DOOR/GATE/HATCH OPENING-LF              --------------------------------
--------------------------------          50  PRECRASH GLAZING STATUS-RF
15  DOOR/GATE/HATCH OPENING-RF              --------------------------------
--------------------------------          51  PRECRASH GLAZING STATUS-LR
16  DOOR/GATE/HATCH OPENING-LR              --------------------------------
--------------------------------          52  PRECRASH GLAZING STATUS-RR
17  DOOR/GATE/HATCH OPENING-RR              --------------------------------
--------------------------------          53  PRECRASH GLAZING STATUS-BL
18  DOOR/GATE/HATCH OPENING-TG              --------------------------------
--------------------------------          54  PRECRASH GLAZING STATUS-RO
19  DOOR/GATE/HATCH DAMAGE-LF               --------------------------------
--------------------------------          55  PRECRASH GLAZING STATUS-OT
20  DOOR/GATE/HATCH DAMAGE-RF               --------------------------------
--------------------------------
21  DOOR/GATE/HATCH DAMAGE-LR
--------------------------------
22  DOOR/GATE/HATCH DAMAGE-RR
--------------------------------
23  DOOR/GATE/HATCH DAMAGE-TG
--------------------------------
24  GLAZING DAMAGE-IMPACT-WS
--------------------------------
25  GLAZING DAMAGE-IMPACT-LF
--------------------------------
26  GLAZING DAMAGE-IMPACT-RF
--------------------------------
27  GLAZING DAMAGE-IMPACT-LR
--------------------------------
28  GLAZING DAMAGE-IMPACT-RR
--------------------------------
29  GLAZING DAMAGE-IMPACT-BL
--------------------------------
30  GLAZING DAMAGE-IMPACT-RO
--------------------------------
31  GLAZING DAMAGE-IMPACT-OT
--------------------------------
32  GLAZING DAMAGE-CONTACT-WS
--------------------------------
33  GLAZING DAMAGE-CONTACT-LF
--------------------------------
34  GLAZING DAMAGE-CONTACT-RF
--------------------------------
35  GLAZING DAMAGE-CONTACT-LR
--------------------------------
36  GLAZING DAMAGE-CONTACT-RR
--------------------------------
37  GLAZING DAMAGE-CONTACT-BL
--------------------------------
38  GLAZING DAMAGE-CONTACT-RO
--------------------------------
39  GLAZING DAMAGE-CONTACT-OT
--------------------------------
```

```
-------------------------------
 1  PSU NUMBER
 2
-------------------------------
 3
 4  CASE NUMBER
 5
 6
-------------------------------
 7  RECORD NUMBER (42)
 8
-------------------------------
 9  VERSION NUMBER
-------------------------------
10  VEHICLE NUMBER
11
-------------------------------
12  LOCATION OF INTRUSION-1ST
13
-------------------------------
14  INTRUDING COMPONENT-1ST
15
-------------------------------
16  MAGNITUDE OF INTRUSION-1ST
-------------------------------
17  CRUSH DIRECTION-1ST
-------------------------------
18  LOCATION OF INTRUSION-2ND
19
-------------------------------
20  INTRUDING COMPONENT-2ND
21
-------------------------------
22  MAGNITUDE OF INTRUSION-2ND
-------------------------------
23  CRUSH DIRECTION-2ND
-------------------------------
24  LOCATION OF INTRUSION-3RD
25
-------------------------------
26  INTRUDING COMPONENT-3RD
27
-------------------------------
28  MAGNITUDE OF INTRUSION-3RD
-------------------------------
29  CRUSH DIRECTION-3RD
-------------------------------
30  LOCATION OF INTRUSION-4TH
31
-------------------------------
32  INTRUDING COMPONENT-4TH
33
-------------------------------
34  MAGNITUDE OF INTRUSION-4TH
-------------------------------
35  CRUSH DIRECTION-4TH
-------------------------------
36  LOCATION OF INTRUSION-5TH
37
-------------------------------
38  INTRUDING COMPONENT-5TH
39
-------------------------------
40  MAGNITUDE OF INTRUSION-5TH
-------------------------------
41  CRUSH DIRECTION-5TH
-------------------------------
42  LOCATION OF INTRUSION-6TH
43
-------------------------------
44  INTRUDING COMPONENT-6TH
45
-------------------------------
```

```
-------------------------------
46  MAGNITUDE OF INTRUSION-6TH
-------------------------------
47  CRUSH DIRECTION-6TH
-------------------------------
48  LOCATION OF INTRUSION-7TH
49
-------------------------------
50  INTRUDING COMPONENT-7TH
51
-------------------------------
52  MAGNITUDE OF INTRUSION-7TH
-------------------------------
53  CRUSH DIRECTION-7TH
-------------------------------
54  LOCATION OF INTRUSION-8TH
55
-------------------------------
56  INTRUDING COMPONENT-8TH
57
-------------------------------
58  MAGNITUDE OF INTRUSION-8TH
-------------------------------
59  CRUSH DIRECTION-8TH
-------------------------------
60  LOCATION OF INTRUSION-9TH
61
-------------------------------
62  INTRUDING COMPONENT-9TH
63
-------------------------------
64  MAGNITUDE OF INTRUSION-9TH
-------------------------------
65  CRUSH DIRECTION-9TH
-------------------------------
66  LOCATION OF INTRUSION-10TH
67
-------------------------------
68  INTRUDING COMPONENT-10TH
69
-------------------------------
70  MAGNITUDE OF INTRUSION-10TH
-------------------------------
71  CRUSH DIRECTION-10TH
-------------------------------
72  STEERING COLUMN TYPE
-------------------------------
73  STEERING COLUMN COLLAPSE
74
-------------------------------
75  DIRECTION AND MAGNITUDE
76  OF STEERING COLUMN
77  MOVEMENT-VERTICAL
-------------------------------
78  DIRECTION AND MAGNITUDE
79  OF STEERING COLUMN
80  MOVEMENT-LATERAL
-------------------------------
81  DIRECTION AND MAGNITUDE
82  OF STEERING COLUMN
83  MOVEMENT-LONGITUDINAL
-------------------------------
84  RIM/SPOKE DEFORMATION
-------------------------------
85  LOCATION OF STEERING
86  RIM/SPOKE DEFORMATION
-------------------------------
87  ODOMETER READING
88
89
-------------------------------
90  INSTRUMENT PANEL DAMAGE
-------------------------------
91  KNEE BOLSTERS DEFORMED
-------------------------------
92  GLOVE COMPARTMENT DOOR OPEN
-------------------------------
```

```
------------------------------
 1  PSU NUMBER
 2
------------------------------

 3
 4  CASE NUMBER
 5
 6
------------------------------
 7  RECORD NUMBER (51)
 8
------------------------------
 9  VERSION NUMBER
------------------------------
10  VEHICLE NUMBER
11
------------------------------
12  OCCUPANT NUMBER
13
------------------------------
14  OCCUPANT'S AGE
15
------------------------------
16  OCCUPANT'S SEX
------------------------------
17  OCCUPANT'S HEIGHT
18
------------------------------
19
20  OCCUPANT'S WEIGHT
21
------------------------------
22  OCCUPANT'S ROLE
------------------------------
23  OCCUPANT'S SEAT POSITION
24
------------------------------
25  OCCUPANT'S POSTURE
------------------------------
26  EJECTION
------------------------------
27  EJECTION AREA
------------------------------
28  EJECTION MEDIUM
------------------------------
29  MEDIUM STATUS
------------------------------
30  ENTRAPMENT
------------------------------
31  MANUAL BELT AVAILABILITY
------------------------------
32  MANUAL BELT USE
33
------------------------------
34  PROPER USE OF MANUAL BELT
------------------------------
35  MANUAL BELT FAILURE
------------------------------
36  AIR BAG AVAILABILITY
------------------------------
37  AIR BAG DEPLOYMENT
------------------------------
38  DID AIR BAG FAIL?
------------------------------
39  POLICE REP. RESTRAINT USE
------------------------------
40  HEAD REST. TYPE/DAMAGE
------------------------------
41  SEAT TYPE
42
------------------------------
43  SEAT PERFORMANCE
------------------------------
44  CHILD SAFETY SEAT
45  MAKE/MODEL
46
------------------------------
```

```
------------------------------
47  TYPE OF CHILD SAFETY SEAT
------------------------------
48  CHILD SAFETY SEAT
49  ORIENTATION
------------------------------
50  CHILD SAFETY SEAT
51  HARNESS USAGE
------------------------------
52  CHILD SAFETY SEAT
53  SHIELD USAGE
------------------------------
54  CHILD SAFETY SEAT
55  TETHER USAGE
------------------------------
56  INJURY SEVERITY
------------------------------
57  TREATMENT-MORTALITY
------------------------------
58  TYPE OF MEDICAL FACILITY
------------------------------
59  HOSPITAL STAY
60
------------------------------
61  WORKING DAYS LOST
62
------------------------------
63  TIME TO DEATH
64
------------------------------
65  1ST MEDICALLY REPORTED
66  CAUSE OF DEATH
------------------------------
67  2ND MEDICALLY REPORTED
68  CAUSE OF DEATH
------------------------------
69  3RD MEDICALLY REPORTED
70  CAUSE OF DEATH
------------------------------
71  NUMBER OF RECORDED INJURIES
72  FOR THIS OCCUPANT
------------------------------
73  AUTOMATIC BELT AVAILABILITY
------------------------------
74  AUTOMATIC BELT USE
------------------------------
75  AUTOMATIC BELT TYPE
------------------------------
76  PROPER USE - AUTOMATIC BELT
------------------------------
77  AUTOMATIC BELT FAILURE MODE
------------------------------
78  SEAT ORIENTATION
------------------------------
79  GLASGOW SCORE
80
------------------------------
81  BLOOD GIVEN
------------------------------
82  ABG BICARBONATE
83
------------------------------
84  MAXIMUM KNOWN AIS
------------------------------
85  INJURY SEVERITY SCORE
86
------------------------------
```

```
------------------------------
 1 PSU NUMBER
 2
------------------------------
 3
 4  CASE NUMBER
 5
 6
------------------------------
 7 RECORD NUMBER (61)
 8
------------------------------
 9  VERSION NUMBER
------------------------------
10  VEHICLE NUMBER
11
------------------------------
12  OCCUPANT NUMBER
13
------------------------------
14  INJURY NUMBER
15
------------------------------
16  SOURCE OF INJURY DATA
------------------------------
17  BODY REGION
------------------------------
18  ASPECT
------------------------------
19  LESION
------------------------------
20  SYSTEM ORGAN
------------------------------
21  AIS SEVERITY
------------------------------
22  INJURY SOURCE
23
------------------------------
24  CONFIDENCE LEVEL
------------------------------
25  DIRECT/INDIRECT INJURY
------------------------------
26  OCCUPANT AREA
27  INTRUSION NUMBER
------------------------------
```

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-hierarchial data base. The SAS data base for NASS consists of seven individual data sets, corresponding to the six NASS CDS data collection records. The exception is 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 hierarchial 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 Date 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, non towed CDS applicable non AOPS 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:

```
                              SAS

                     CONTENTS PROCEDURE

              -----Directory for Library NASS92------

                      #   Name      Memtype
                      1   ACCIDENT  DATA
                      2   EVENT     DATA
                      3   GV        DATA
                      4   OA        DATA
                      5   OI        DATA
                      6   VE        DATA
                      7   VI        DATA


                              SAS
                     CONTENTS PROCEDURE

   Data Set Name:  NASS92.ACCIDENT          Type:
   Observations:   4956                     Record Len: 90
   Variables:      21
   Label:


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

   #   Variable  Type  Len  Pos  Label
   13  AAIS      Num    4    51  MAXIMUM KNOWN AIS IN ACCIDENT
   14  AINJSER   Num    4    55  NUMBER OF SERIOUSLY INJURED OCCUPANTS
   15  AINJURED  Num    4    59  TOTAL NUMBER OF INJURED OCCUPANTS
   16  ALCINV    Num    4    63  ALCOHOL INVOLVED IN ACCIDENT
    6  AOPSFAT   Num    4    22  SS14 - SPECIAL STUDIES CASE (AOPSFAT)
   12  ATREAT    Num    4    47  MAXIMUM TREATMENT IN ACCIDENT
    2  CASEID    Char   4     8  CASE NUMBER - STRATUM
    3  CASENO    Num    4    12  CASE SEQUENCE NUMBER
   17  DAYWEEK   Num    4    67  DAY OF WEEK OF ACCIDENT
   19  DRGINV    Num    4    78  DRUG INVOLVED
   11  EVENTS    Num    4    43  NUMBER OF RECORDED EVENTS IN ACCIDENT
   20  MANCOLL   Num    4    82  MANNER OF COLLISION
    8  MONTH     Num    4    30  MONTH OF ACCIDENT
    1  PSU       Num    4     4  PRIMARY SAMPLING UNIT NUMBER
   21  PSUSTRAT  Num    4    86  PSU STRATUM
   18  RATWGT    Num    7    71  RATIO INFLATION FACTOR
    4  STRATIF   Char   1    16  CASE STRATUM
   10  TIME      Num    5    38  TIME OF ACCIDENT
    7  VEHFORMS  Num    4    26  NUMBER GENERAL VEHICLE FORMS SUBMITTED
    5  VERSION   Num    5    17  VERSION NUMBER
    9  YEAR      Num    4    34  YEAR OF ACCIDENT


                                                         SAS
                                                CONTENTS PROCEDURE
                                       ----Variables Ordered by Position----

   #   Variable  Type  Len  Pos  Label
    1  PSU       Num    4     4  PRIMARY SAMPLING UNIT NUMBER
    2  CASEID    Char   4     8  CASE NUMBER - STRATUM
    3  CASENO    Num    4    12  CASE SEQUENCE NUMBER
    4  STRATIF   Char   1    16  CASE STRATUM
    5  VERSION   Num    5    17  VERSION NUMBER
    6  AOPSFAT   Num    4    22  SS14 - SPECIAL STUDIES CASE (AOPSFAT)
    7  VEHFORMS  Num    4    26  NUMBER GENERAL VEHICLE FORMS SUBMITTED
    8  MONTH     Num    4    30  MONTH OF ACCIDENT
    9  YEAR      Num    4    34  YEAR OF ACCIDENT
   10  TIME      Num    5    38  TIME OF ACCIDENT
   11  EVENTS    Num    4    43  NUMBER OF RECORDED EVENTS IN ACCIDENT
   12  ATREAT    Num    4    47  MAXIMUM TREATMENT IN ACCIDENT
   13  AAIS      Num    4    51  MAXIMUM KNOWN AIS IN ACCIDENT
   14  AINJSER   Num    4    55  NUMBER OF SERIOUSLY INJURED OCCUPANTS
   15  AINJURED  Num    4    59  TOTAL NUMBER OF INJURED OCCUPANTS
   16  ALCINV    Num    4    63  ALCOHOL INVOLVED IN ACCIDENT
   17  DAYWEEK   Num    4    67  DAY OF WEEK OF ACCIDENT
   18  RATWGT    Num    7    71  RATIO INFLATION FACTOR
   19  DRGINV    Num    4    78  DRUG INVOLVED
   20  MANCOLL   Num    4    82  MANNER OF COLLISION
   21  PSUSTRAT  Num    4    86  PSU STRATUM
```

CONTENTS PROCEDURE

```
Data Set Name:  NASS92.EVENT          Type:
Observations:   9357                  Record Len: 55
Variables:      14
Label:
```

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

```
 #  Variable  Type  Len  Pos  Label
 6  ACCSEQ    Num    4    22  ACCIDENT EVENT SEQUENCE NUMBER
 2  CASEID    Char   4     8  CASE NUMBER - STRATUM
 3  CASENO    Num    4    12  CASE SEQUENCE NUMBER
 8  CLASS1    Num    4    30  CLASS OF FIRST VEHICLE
11  CLASS2    Num    4    39  CLASS OF OTHER VEHICLE
 9  GADEV1    Char   1    34  GENERAL AREA OF DAMAGE FIRST VEHICLE
12  GADEV2    Char   1    43  GENERAL AREA OF DAMAGE OTHER VEHICLE
10  OBJCONT   Num    4    35  OTHER VEHICLE NUMBER OR OBJECT CONTACTED
 1  PSU       Num    4     4  PRIMARY SAMPLING UNIT NUMBER
14  PSUSTRAT  Num    4    51  PSU STRATUM
13  RATWGT    Num    7    44  RATIO INFLATION FACTOR
 4  STRATIF   Char   1    16  CASE STRATUM
 7  VEHNUM    Num    4    26  VEHICLE NUMBER
 5  VERSION   Num    5    17  VERSION NUMBER
```

----Variables Ordered by Position----

```
 #  Variable  Type  Len  Pos  Label
 1  PSU       Num    4     4  PRIMARY SAMPLING UNIT NUMBER
 2  CASEID    Char   4     8  CASE NUMBER - STRATUM
 3  CASENO    Num    4    12  CASE SEQUENCE NUMBER
 4  STRATIF   Char   1    16  CASE STRATUM
 5  VERSION   Num    5    17  VERSION NUMBER
 6  ACCSEQ    Num    4    22  ACCIDENT EVENT SEQUENCE NUMBER
 7  VEHNUM    Num    4    26  VEHICLE NUMBER
 8  CLASS1    Num    4    30  CLASS OF FIRST VEHICLE
 9  GADEV1    Char   1    34  GENERAL AREA OF DAMAGE FIRST VEHICLE
10  OBJCONT   Num    4    35  OTHER VEHICLE NUMBER OR OBJECT CONTACTED
11  CLASS2    Num    4    39  CLASS OF OTHER VEHICLE
12  GADEV2    Char   1    43  GENERAL AREA OF DAMAGE OTHER VEHICLE
13  RATWGT    Num    7    44  RATIO INFLATION FACTOR
14  PSUSTRAT  Num    4    51  PSU STRATUM
```

CONTENTS PROCEDURE

```
Data Set Name: NASS92.GV              Type:
Observations:   8504                  Record Len: 333
Variables:      80
Label:
```

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

#	Variable	Type	Len	Pos	Label
20	ACCTYPE	Num	4	87	ACCIDENT TYPE
17	ALCTEST	Num	4	75	ALCOHOL TEST RESULT FOR DRIVER
33	ANGOTHER	Num	4	140	HEADING ANGLE FOR OTHER VEHICLE
32	ANGTHIS	Num	4	136	HEADING ANGLE FOR THIS VEHICLE
3	AOPSVEH	Num	4	15	AOPS VEHICLE
12	BODYTYPE	Num	4	49	VEHICLE BODY TYPE
25	CARGOWGT	Num	4	108	VEHICLE CARGO WEIGHT
4	CASEID	Char	4	19	CASE NUMBER - STRATUM
5	CASENO	Num	4	23	CASE SEQUENCE NUMBER
28	CONDTREE	Num	4	120	POST COLLISION CONDITION OF TREE OR POLE
79	CONSEQ	Num	4	325	PRECRASH DIRECT. CONSEQ. OF CORR. ACTION
24	CURBWGT	Num	5	103	VEHICLE CURB WEIGHT
27	DOCTRAJ	Num	4	116	DOCUMENTATION OF TRAJECTORY DATA
16	DRINKING	Num	4	71	POLICE REPORTED ALCOHOL PRESENCE
44	DRIVE	Num	4	185	FRONT/REAR WHEEL DRIVE
21	DRPRES	Num	4	91	DRIVER PRESENCE IN VEHICLE
69	DRRACE	Num	4	285	DRIVER'S RACE/ETHNIC ORIGIN
49	DRUGS	Num	4	205	POLICE REPORTD OTHER DRUG PRESENCE
68	DRZIP	Num	4	281	DRIVER'S ZIP CODE
34	DVBASIS	Num	4	144	BASIS FOR TOTAL DELTA V (HIGHEST)
39	DVCONFID	Num	4	165	CONFIDENCE IN RECONSTRUCTION
37	DVLAT	Num	4	156	LATERAL COMPONENT OF DELTA V
36	DVLONG	Num	4	152	LONGITUDINAL COMPONENT OF DELTA V
35	DVTOTAL	Num	4	148	TOTAL DELTA V
38	ENERGY	Num	5	160	ENERGY ABSORPTION
30	FOVERIDE	Num	4	128	FRONT OVERRIDE/UNDERRIDE THIS VEHICLE
40	INSPTYPE	Num	4	169	TYPE OF VEHICLE INSPECTION
10	MAKE	Num	4	41	VEHICLE MAKE
19	MANEUVER	Num	4	83	ATTEMPTED AVOIDANCE MANEUVER
11	MODEL	Num	4	45	VEHICLE MODEL
9	MODELYR	Num	4	37	VEHICLE MODEL YEAR
60	OBSCNAB	Num	4	249	CANNABINOID DRUG: OBS/PERC TEST RES
54	OBSDEPR	Num	4	225	DEPRESSANT DRUG: OBS/PERC TEST RES
58	OBSHLUC	Num	4	241	HALLUCINOGEN DRUG: OBS/PERC TEST RES
64	OBSINHL	Num	4	265	INHALANT DRUG: OBS/PERC TEST RES
52	OBSNARC	Num	4	217	NARCOTIC DRUG: OBS/PERC TEST RES
66	OBSOTH	Num	4	273	OTHER DRUG: OVS/PERC TEST RES
62	OBSPCP	Num	4	257	PHENCYCLIDINE DRUG: OBS/PERC TEST RES
56	OBSSTIM	Num	4	233	STIMULANT DRUG: OBS/PERC TEST RES
50	OBSTEST	Num	4	209	OBS/PERC TEST TYPE FOR DRIVER
23	OCCFORMS	Num	4	99	NUMBER OF OCCUPANT FORMS SUBMITTED
22	OCUPANTS	Num	4	95	NUMBER OF OCCUPANTS THIS VEHICLE
47	OTBDYTYP	Num	4	197	BODY TYPE OF THE OTHER VEHICLE
46	OTVEHWGT	Num	4	193	WEIGHT OF THE OTHER VEHICLE
77	PREEVENT	Num	4	317	INITIAL CRITICAL (PRECRASH) EVENT
76	PREMOVE	Num	4	313	PRE-EVENT MOVEMENT PRIOR REC CRIT EVENT
78	PRESTAB	Num	4	321	PRECRASH STABLITY AFTER AVOID. MANEUVER

#	Variable	Type	Len	Pos	Label
2	PSU	Num	4	11	PRIMARY SAMPLING UNIT NUMBER
80	PSUSTRAT	Num	4	329	PSU STRATUM
1	RATWGT	Num	7	4	RATIO INFLATION FACTOR
75	ROLINDIR	Num	4	309	DIRECTION OF INITIAL ROLL
72	ROLINLOC	Num	4	297	LOCATION OF ROLLOVER
71	ROLINTYP	Num	4	293	ROLLOVER INITIATION TYPE
73	ROLLOBJ	Num	4	301	ROLLOVER INIATION OBJECT CONTACTED
29	ROLLOVER	Num	4	124	ROLLOVER
31	ROVERIDE	Num	4	132	REAR OVERRIDE/UNDERRIDE THIS VEHICLE
61	SPECCNAB	Num	4	253	CANNABINOID DRUG: SPECIMEN TEST RESULTS
55	SPECDEPR	Num	4	229	DEPRESSANT DRUG: SPECIMEN TEST RESULTS
59	SPECHLUC	Num	4	245	HALLUCINOGEN DRUG: SPECIMEN TEST RESULTS
65	SPECINHL	Num	4	269	INHALANT DRUG: SPECIMEN TEST RESULTS
53	SPECNARC	Num	4	221	NARCOTIC DRUG: SPECIMEN TEST RESULTS
67	SPECOTH	Num	4	277	OTHER DRUG: SPECIMEN TEST RESULTS
63	SPECPCP	Num	4	261	PHENCYCLIDINE DRUG: SPECIMEN TEST RESULT
57	SPECSTIM	Num	4	237	STIMULANT DRUG: SPECIMEN TEST RESULTS
51	SPECTEST	Num	4	213	OTHER DRUG SPECIMEN TEST TYPE FOR DRIVER
18	SPLIMIT	Num	4	79	SPEED LIMIT
6	STRATIF	Char	1	27	CASE STRATUM
26	TOWHITCH	Num	4	112	TOWED TRAILING UNIT
14	TOWPAR	Num	4	63	POLICE REPORTED VEHICLE DISPOSITION
15	TRAVELSP	Num	4	67	POLICE REPORTED TRAVEL SPEED
74	TRIPLOC	Num	4	305	LOC. ON VEH. WHERE INIT TRIP FORCE APPL
48	VAIS	Num	4	201	MAXIMUM KNOWN AIS IN THIS VEHICLE
8	VEHNO	Num	4	33	VEHICLE NUMBER
70	VEHUSE	Num	4	289	VEHICLE SPECIAL USE
7	VERSION	Num	5	28	VERSION NUMBER
13	VIN	Char	10	53	VEHICLE IDENTIFICATION NUMBER
42	VINJSER	Num	4	177	NUMBER SERIOUSLY INJURED IN THIS VEHICLE
43	VINJURED	Num	4	181	NUMBER INJURED IN THIS VEHICLE
41	VINLNGTH	Num	4	173	VIN LENGTH
45	VTREAT	Num	4	189	MAXIMUM TREATMENT IN THIS VEHICLE

CONTENTS PROCEDURE
----Variables Ordered by Position----

#	Variable	Type	Len	Pos	Label
1	RATWGT	Num	7	4	RATIO INFLATION FACTOR
2	PSU	Num	4	11	PRIMARY SAMPLING UNIT NUMBER
3	AOPSVEH	Num	4	15	AOPS VEHICLE
4	CASEID	Char	4	19	CASE NUMBER - STRATUM
5	CASENO	Num	4	23	CASE SEQUENCE NUMBER
6	STRATIF	Char	1	27	CASE STRATUM
7	VERSION	Num	5	28	VERSION NUMBER
8	VEHNO	Num	4	33	VEHICLE NUMBER
9	MODELYR	Num	4	37	VEHICLE MODEL YEAR
10	MAKE	Num	4	41	VEHICLE MAKE
11	MODEL	Num	4	45	VEHICLE MODEL
12	BODYTYPE	Num	4	49	VEHICLE BODY TYPE
13	VIN	Char	10	53	VEHICLE IDENTIFICATION NUMBER
14	TOWPAR	Num	4	63	POLICE REPORTED VEHICLE DISPOSITION
15	TRAVELSP	Num	4	67	POLICE REPORTED TRAVEL SPEED
16	DRINKING	Num	4	71	POLICE REPORTED ALCOHOL PRESENCE
17	ALCTEST	Num	4	75	ALCOHOL TEST RESULT FOR DRIVER
18	SPLIMIT	Num	4	79	SPEED LIMIT
19	MANEUVER	Num	4	83	ATTEMPTED AVOIDANCE MANEUVER
20	ACCTYPE	Num	4	87	ACCIDENT TYPE
21	DRPRES	Num	4	91	DRIVER PRESENCE IN VEHICLE
22	OCUPANTS	Num	4	95	NUMBER OF OCCUPANTS THIS VEHICLE
23	OCCFORMS	Num	4	99	NUMBER OF OCCUPANT FORMS SUBMITTED
24	CURBWGT	Num	5	103	VEHICLE CURB WEIGHT
25	CARGOWGT	Num	4	108	VEHICLE CARGO WEIGHT
26	TOWHITCH	Num	4	112	TOWED TRAILING UNIT
27	DOCTRAJ	Num	4	116	DOCUMENTATION OF TRAJECTORY DATA
28	CONDTREE	Num	4	120	POST COLLISION CONDITION OF TREE OR POLE
29	ROLLOVER	Num	4	124	ROLLOVER
30	FOVERIDE	Num	4	128	FRONT OVERRIDE/UNDERRIDE THIS VEHICLE
31	ROVERIDE	Num	4	132	REAR OVERRIDE/UNDERRIDE THIS VEHICLE
32	ANGTHIS	Num	4	136	HEADING ANGLE FOR THIS VEHICLE
33	ANGOTHER	Num	4	140	HEADING ANGLE FOR OTHER VEHICLE
34	DVBASIS	Num	4	144	BASIS FOR TOTAL DELTA V (HIGHEST)
35	DVTOTAL	Num	4	148	TOTAL DELTA V
36	DVLONG	Num	4	152	LONGITUDINAL COMPONENT OF DELTA V
37	DVLAT	Num	4	156	LATERAL COMPONENT OF DELTA V
38	ENERGY	Num	5	160	ENERGY ABSORPTION
39	DVCONFID	Num	4	165	CONFIDENCE IN RECONSTRUCTION
40	INSPTYPE	Num	4	169	TYPE OF VEHICLE INSPECTION
41	VINLNGTH	Num	4	173	VIN LENGTH
42	VINJSER	Num	4	177	NUMBER SERIOUSLY INJURED IN THIS VEHICLE
43	VINJURED	Num	4	181	NUMBER INJURED IN THIS VEHICLE
44	DRIVE	Num	4	185	FRONT/REAR WHEEL DRIVE
45	VTREAT	Num	4	189	MAXIMUM TREATMENT IN THIS VEHICLE
46	OTVEHWGT	Num	4	193	WEIGHT OF THE OTHER VEHICLE
47	OTBDYTYP	Num	4	197	BODY TYPE OF THE OTHER VEHICLE
48	VAIS	Num	4	201	MAXIMUM KNOWN AIS IN THIS VEHICLE
49	DRUGS	Num	4	205	POLICE REPORTD OTHER DRUG PRESENCE
50	OBSTEST	Num	4	209	OBS/PERC TEST TYPE FOR DRIVER
51	SPECTEST	Num	4	213	OTHER DRUG SPECIMEN TEST TYPE FOR DRIVER
52	OBSNARC	Num	4	217	NARCOTIC DRUG: OBS/PERC TEST RES
53	SPECNARC	Num	4	221	NARCOTIC DRUG: SPECIMEN TEST RESULTS

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 #   Variable  Type  Len  Pos  Label
54   OBSDEPR   Num    4   225  DEPRESSANT DRUG: OBS/PERC TEST RES
55   SPECDEPR  Num    4   229  DEPRESSANT DRUG: SPECIMEN TEST RESULTS
56   OBSSTIM   Num    4   233  STIMULANT DRUG: OBS/PERC TEST RES
57   SPECSTIM  Num    4   237  STIMULANT DRUG: SPECIMEN TEST RESULTS
58   OBSHLUC   Num    4   241  HALLUCINOGEN DRUG: OBS/PERC TEST RES
59   SPECHLUC  Num    4   245  HALLUCINOGEN DRUG: SPECIMEN TEST RESULTS
60   OBSCNAB   Num    4   249  CANNABINOID DRUG: OBS/PERC TEST RES
61   SPECCNAB  Num    4   253  CANNABINOID DRUG: SPECIMEN TEST RESULTS
62   OBSPCP    Num    4   257  PHENCYCLIDINE DRUG: OBS/PERC TEST RES
63   SPECPCP   Num    4   261  PHENCYCLIDINE DRUG: SPECIMEN TEST RESULT
64   OBSINHL   Num    4   265  INHALANT DRUG: OBS/PERC TEST RES
65   SPECINHL  Num    4   269  INHALANT DRUG: SPECIMEN TEST RESULTS
66   OBSOTH    Num    4   273  OTHER DRUG: OVS/PERC TEST RES
67   SPECOTH   Num    4   277  OTHER DRUG: SPECIMEN TEST RESULTS
68   DRZIP     Num    4   281  DRIVER'S ZIP CODE
69   DRRACE    Num    4   285  DRIVER'S RACE/ETHNIC ORIGIN
70   VEHUSE    Num    4   289  VEHICLE SPECIAL USE
71   ROLINTYP  Num    4   293  ROLLOVER INITIATION TYPE
72   ROLINLOC  Num    4   297  LOCATION OF ROLLOVER
73   ROLLOBJ   Num    4   301  ROLLOVER INIATION OBJECT CONTACTED
74   TRIPLOC   Num    4   305  LOC. ON VEH. WHERE INIT TRIP FORCE APPL
75   ROLINDIR  Num    4   309  DIRECTION OF INITIAL ROLL
76   PREMOVE   Num    4   313  PRE-EVENT MOVEMENT PRIOR REC CRIT EVENT
77   PREEVENT  Num    4   317  INITIAL CRITICAL (PRECRASH) EVENT
78   PRESTAB   Num    4   321  PRECRASH STABLITY AFTER AVOID. MANEUVER
79   CONSEQ    Num    4   325  PRECRASH DIRECT. CONSEQ. OF CORR. ACTION
80   PSUSTRAT  Num    4   329  PSU STRATUM
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CONTENTS PROCEDURE

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Data Set Name:  NASS92.VE              Type:
Observations:   6326                   Record Len: 173
Variables:      47
Label:
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-----Alphabetic List of Variables and Attributes-----

```
 #   Variable   Type   Len   Pos   Label
 7   ACCSEQ1    Num     4     26   ACCIDENT EVENT SEQUENCE (HIGHEST)
15   ACCSEQ2    Num     4     46   ACCIDENT EVENT SEQUENCE (2ND HIGHEST)
43   ALTVEH     Num     4    153   MULTI-STAGE MANUFACTURED/CERT. ALT. VEH.
 2   CASEID     Char    4      8   CASE NUMBER - STRATUM
 3   CASENO     Num     4     12   CASE SEQUENCE NUMBER
39   DOCCDC     Num     4    130   CDCs DOCUMENTED BUT NOT CODED ON FILE?
 9   DOF1       Num     4     34   DIRECTION OF FORCE (HIGHEST)
17   DOF2       Num     4     54   DIRECTION OF FORCE (2ND HIGHEST)
24   DVC1       Num     4     70   CRUSH PROFILE C1 (HIGHEST)
25   DVC2       Num     4     74   CRUSH PROFILE C2 (HIGHEST)
26   DVC3       Num     4     78   CRUSH PROFILE C3 (HIGHEST)
27   DVC4       Num     4     82   CRUSH PROFILE C4 (HIGHEST)
28   DVC5       Num     4     86   CRUSH PROFILE C5 (HIGHEST)
29   DVC6       Num     4     90   CRUSH PROFILE C6 (HIGHEST)
30   DVD        Num     4     94   CRUSH PROFILE D (HIGHEST)
23   DVL        Num     4     66   CRUSH PROFILE L (HIGHEST)
14   EXTENT1    Num     4     42   DEFORMATION EXTENT (HIGHEST)
22   EXTENT2    Num     4     62   DEFORMATION EXTENT (2ND HIGHEST)
44   FIRE       Num     4    157   FIRE OCCURRENCE
45   FIREORIG   Num     4    161   ORIGIN OF FIRE
46   FUELTANK   Num     4    165   TYPE OF FUEL TANK
10   GAD1       Char    1     38   DEFORMATION LOCATION (HIGHEST)
18   GAD2       Char    1     58   DEFORMATION LOCATION (2ND HIGHEST)
 8   OBJCONT1   Num     4     30   OBJECT CONTACTED (HIGHEST)
16   OBJCONT2   Num     4     50   OBJECT CONTACTED (2ND HIGHEST)
 1   PSU        Num     4      4   PRIMARY SAMPLING UNIT NUMBER
47   PSUSTRAT   Num     4    169   PSU STRATUM
42   RATWGT     Num     7    146   RATIO INFLATION FACTOR
32   SDVC1      Num     4    102   CRUSH PROFILE C1 (2ND HIGHEST)
33   SDVC2      Num     4    106   CRUSH PROFILE C2 (2ND HIGHEST)
34   SDVC3      Num     4    110   CRUSH PROFILE C3 (2ND HIGHEST)
35   SDVC4      Num     4    114   CRUSH PROFILE C4 (2ND HIGHEST)
36   SDVC5      Num     4    118   CRUSH PROFILE C5 (2ND HIGHEST)
37   SDVC6      Num     4    122   CRUSH PROFILE C6 (2ND HIGHEST)
38   SDVD       Num     4    126   CRUSH PROFILE D (2ND HIGHEST)
31   SDVL       Num     4     98   CRUSH PROFILE L (2ND HIGHEST)
11   SHL1       Char    1     39   SPECIFIC LONGITUDINAL LOCATION (HIGHEST)
19   SHL2       Char    1     59   SPECIFIC LONGITUDINAL LOC. (2ND HIGHEST)
 4   STRATIF    Char    1     16   CASE STRATUM
12   SVL1       Char    1     40   SPECIFIC VERTICAL LOCATION (HIGHEST)
20   SVL2       Char    1     60   SPECIFIC VERTICAL LOCATION (2ND HIGHEST)
13   TDD1       Char    1     41   TYPE OF DAMAGE DISTRIBUTION (HIGHEST)
21   TDD2       Char    1     61   TYPE OF DAMAGE DISTRIBUTION(2ND HIGHEST)
40   TOWRES     Num     4    134   RESEARCHER ASSESSMNT VEHICLE DISPOSITION
 6   VEHNO      Num     4     22   VEHICLE NUMBER
 5   VERSION    Num     5     17   VERSION NUMBER
41   WHEELBAS   Num     8    138   ORIGINAL WHEELBASE
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CONTENTS PROCEDURE
----Variables Ordered by Position----

#	Variable	Type	Len	Pos	Label
1	PSU	Num	4	4	PRIMARY SAMPLING UNIT NUMBER
2	CASEID	Char	4	8	CASE NUMBER - STRATUM
3	CASENO	Num	4	12	CASE SEQUENCE NUMBER
4	STRATIF	Char	1	16	CASE STRATUM
5	VERSION	Num	5	17	VERSION NUMBER
6	VEHNO	Num	4	22	VEHICLE NUMBER
7	ACCSEQ1	Num	4	26	ACCIDENT EVENT SEQUENCE (HIGHEST)
8	OBJCONT1	Num	4	30	OBJECT CONTACTED (HIGHEST)
9	DOF1	Num	4	34	DIRECTION OF FORCE (HIGHEST)
10	GAD1	Char	1	38	DEFORMATION LOCATION (HIGHEST)
11	SHL1	Char	1	39	SPECIFIC LONGITUDINAL LOCATION (HIGHEST)
12	SVL1	Char	1	40	SPECIFIC VERTICAL LOCATION (HIGHEST)
13	TDD1	Char	1	41	TYPE OF DAMAGE DISTRIBUTION (HIGHEST)
14	EXTENT1	Num	4	42	DEFORMATION EXTENT (HIGHEST)
15	ACCSEQ2	Num	4	46	ACCIDENT EVENT SEQUENCE (2ND HIGHEST)
16	OBJCONT2	Num	4	50	OBJECT CONTACTED (2ND HIGHEST)
17	DOF2	Num	4	54	DIRECTION OF FORCE (2ND HIGHEST)
18	GAD2	Char	1	58	DEFORMATION LOCATION (2ND HIGHEST)
19	SHL2	Char	1	59	SPECIFIC LONGITUDINAL LOC. (2ND HIGHEST)
20	SVL2	Char	1	60	SPECIFIC VERTICAL LOCATION (2ND HIGHEST)
21	TDD2	Char	1	61	TYPE OF DAMAGE DISTRIBUTION(2ND HIGHEST)
22	EXTENT2	Num	4	62	DEFORMATION EXTENT (2ND HIGHEST)
23	DVL	Num	4	66	CRUSH PROFILE L (HIGHEST)
24	DVC1	Num	4	70	CRUSH PROFILE C1 (HIGHEST)
25	DVC2	Num	4	74	CRUSH PROFILE C2 (HIGHEST)
26	DVC3	Num	4	78	CRUSH PROFILE C3 (HIGHEST)
27	DVC4	Num	4	82	CRUSH PROFILE C4 (HIGHEST)
28	DVC5	Num	4	86	CRUSH PROFILE C5 (HIGHEST)
29	DVC6	Num	4	90	CRUSH PROFILE C6 (HIGHEST)
30	DVD	Num	4	94	CRUSH PROFILE D (HIGHEST)
31	SDVL	Num	4	98	CRUSH PROFILE L (2ND HIGHEST)
32	SDVC1	Num	4	102	CRUSH PROFILE C1 (2ND HIGHEST)
33	SDVC2	Num	4	106	CRUSH PROFILE C2 (2ND HIGHEST)
34	SDVC3	Num	4	110	CRUSH PROFILE C3 (2ND HIGHEST)
35	SDVC4	Num	4	114	CRUSH PROFILE C4 (2ND HIGHEST)
36	SDVC5	Num	4	118	CRUSH PROFILE C5 (2ND HIGHEST)
37	SDVC6	Num	4	122	CRUSH PROFILE C6 (2ND HIGHEST)
38	SDVD	Num	4	126	CRUSH PROFILE D (2ND HIGHEST)
39	DOCCDC	Num	4	130	CDCs DOCUMENTED BUT NOT CODED ON FILE?
40	TOWRES	Num	4	134	RESEARCHER ASSESSMNT VEHICLE DISPOSITION
41	WHEELBAS	Num	8	138	ORIGINAL WHEELBASE
42	RATWGT	Num	7	146	RATIO INFLATION FACTOR
43	ALTVEH	Num	4	153	MULTI-STAGE MANUFACTURED/CERT. ALT. VEH.
44	FIRE	Num	4	157	FIRE OCCURRENCE
45	FIREORIG	Num	4	161	ORIGIN OF FIRE
46	FUELTANK	Num	4	165	TYPE OF FUEL TANK
47	PSUSTRAT	Num	4	169	PSU STRATUM

CONTENTS PROCEDURE

Data Set Name: NASS92.VI   Type:
Observations: 5856   Record Len: 397
Variables: 98
Label:

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

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 #  Variable  Type  Len  Pos  Label
95  BOLSTDEF  Num    4   378  KNEE BOLSTER DEFORMED - OCCUPANT CONTACT
 2  CASEID    Char   4     8  CASE NUMBER - STRATUM
 3  CASENO    Num    4    12  CASE SEQUENCE NUMBER
53  CDRIR1    Num    4   210  1ST DOMINANT CRUSH DIRECTION
57  CDRIR2    Num    4   226  2ND DOMINANT CRUSH DIRECTION
61  CDRIR3    Num    4   242  3RD DOMINANT CRUSH DIRECTION
65  CDRIR4    Num    4   258  4TH DOMINANT CRUSH DIRECTION
69  CDRIR5    Num    4   274  5TH DOMINANT CRUSH DIRECTION
73  CDRIR6    Num    4   290  6TH DOMINANT CRUSH DIRECTION
77  CDRIR7    Num    4   306  7TH DOMINANT CRUSH DIRECTION
81  CDRIR8    Num    4   322  8TH DOMINANT CRUSH DIRECTION
85  CDRIR9    Num    4   338  9TH DOMINANT CRUSH DIRECTION
89  CDRIR10   Num    4   354  10TH DOMINANT CRUSH DIRECTION
90  COLUMTYP  Num    4   358  STEERING COLUMN TYPE
13  FAILLF    Num    4    50  LF DAMAGE/FAILURE ASSOCIATED W
15  FAILLR    Num    4    58  LR DAMAGE/FAILURE - OPENING IN COLLISION
14  FAILRF    Num    4    54  RF DAMAGE/FAILURE - OPENING IN COLLISION
16  FAILRR    Num    4    62  RR DAMAGE/FAILURE - OPENING IN COLLISION
17  FAILTG    Num    4    66  TG DAMAGE/FAILURE - OPENING IN COLLISION
23  GLIMPBL   Num    4    90  BL GLAZING DAMAGE FROM IMPACT FORCES
19  GLIMPLF   Num    4    74  LF GLAZING DAMAGE FROM IMPACT FORCES
21  GLIMPLR   Num    4    82  LR GLAZING DAMAGE FROM IMPACT FORCES
25  GLIMPOTH  Num    4    98  OTHER GLAZING DAMAGE FROM IMPACT FORCES
20  GLIMPRF   Num    4    78  RF GLAZING DAMAGE FROM IMPACT FORCES
22  GLIMPRR   Num    4    86  RR GLAZING DAMAGE FROM IMPACT FORCES
24  GLIMPRUF  Num    4    94  ROOF GLAZING DAMAGE FROM IMPACT FORCES
18  GLIMPWS   Num    4    70  WS GLAZING DAMAGE FROM IMPACT FORCES
31  GLOCCBL   Num    4   122  BL GLAZING DAMAGE FROM OCCUPANT CONTACT
27  GLOCCLF   Num    4   106  LF GLAZING DAMAGE FROM OCCUPANT CONTACT
29  GLOCCLR   Num    4   114  LR GLAZING DAMAGE FROM OCCUPANT CONTACT
33  GLOCCOTH  Num    4   130  OTHER GLAZING DAMAGE FROM OCC. CONTACT
28  GLOCCRF   Num    4   110  RF GLAZING DAMAGE FROM OCCUPANT CONTACT
30  GLOCCRR   Num    4   118  RR GLAZING DAMAGE FROM OCCUPANT CONTACT
32  GLOCCRUF  Num    4   126  ROOF GLAZING DAMAGE FROM OCC. CONTACT
26  GLOCCWS   Num    4   102  WS GLAZING DAMAGE FROM OCCUPANT CONTACT
96  GLOVOPEN  Num    4   382  DID GLOVE COMPARTMENT DOOR OPEN
47  GLPREBL   Num    4   186  BL WINDOW PRECRASH GLAZING STATUS
43  GLPRELF   Num    4   170  LF WINDOW PRECRASH GLAZING STATUS
45  GLPRELR   Num    4   178  LR WINDOW PRECRASH GLAZING STATUS
49  GLPREOTH  Num    4   194  OTHER WINDOW PRECRASH GLAZING STATUS
44  GLPRERF   Num    4   174  RF WINDOW PRECRASH GLAZING STATUS
46  GLPRERR   Num    4   182  RR WINDOW PRECRASH GLAZING STATUS
48  GLPRERUF  Num    4   190  ROOF WINDOW PRECRASH GLAZING STATUS
42  GLPREWS   Num    4   166  WS WINDOW PRECRASH GLAZING STATUS
39  GLTYPBL   Num    4   154  BL TYPE OF WINDOW/WINDSHIELD GLAZING
35  GLTYPLF   Num    4   138  LF TYPE OF WINDOW/WINDSHIELD GLAZING
37  GLTYPLR   Num    4   146  LR TYPE OF WINDOW/WINDSHIELD GLAZING
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#	Variable	Type	Len	Pos	Label
41	GLTYPOTH	Num	4	162	OTHER TYPE OF WINDOW/WINDSHIELD GLAZING
36	GLTYPRF	Num	4	142	RF TYPE OF WINDOW/WINDSHIELD GLAZING
38	GLTYPRR	Num	4	150	RR TYPE OF WINDOW/WINDSHIELD GLAZING
40	GLTYPRUF	Num	4	158	ROOF TYPE OF WINDOW/WINDSHIELD GLAZING
34	GLTYPWS	Num	4	134	WS TYPE OF WINDOW/WINDSHIELD GLAZING
51	INCOMP1	Num	4	202	1ST INTRUDING COMPONENT
55	INCOMP2	Num	4	218	2ND INTRUDING COMPONENT
59	INCOMP3	Num	4	234	3RD INTRUDING COMPONENT
63	INCOMP4	Num	4	250	4TH INTRUDING COMPONENT
67	INCOMP5	Num	4	266	5TH INTRUDING COMPONENT
71	INCOMP6	Num	4	282	6TH INTRUDING COMPONENT
75	INCOMP7	Num	4	298	7TH INTRUDING COMPONENT
79	INCOMP8	Num	4	314	8TH INTRUDING COMPONENT
83	INCOMP9	Num	4	330	9TH INTRUDING COMPONENT
87	INCOMP10	Num	4	346	10TH INTRUDING COMPONENT
50	INLOC1	Num	4	198	1ST LOCATION OF INTRUSION
54	INLOC2	Num	4	214	2ND LOCATION OF INTRUSION
58	INLOC3	Num	4	230	3RD LOCATION OF INTRUSION
62	INLOC4	Num	4	246	4TH LOCATION OF INTRUSION
66	INLOC5	Num	4	262	5TH LOCATION OF INTRUSION
70	INLOC6	Num	4	278	6TH LOCATION OF INTRUSION
74	INLOC7	Num	4	294	7TH LOCATION OF INTRUSION
78	INLOC8	Num	4	310	8TH LOCATION OF INTRUSION
82	INLOC9	Num	4	326	9TH LOCATION OF INTRUSION
86	INLOC10	Num	4	342	10TH LOCATION OF INTRUSION
52	INMAG1	Num	4	206	1ST MAGNITUDE OF INTRUSION
56	INMAG2	Num	4	222	2ND MAGNITUDE OF INTRUSION
60	INMAG3	Num	4	238	3RD MAGNITUDE OF INTRUSION
64	INMAG4	Num	4	254	4TH MAGNITUDE OF INTRUSION
68	INMAG5	Num	4	270	5TH MAGNITUDE OF INTRUSION
72	INMAG6	Num	4	286	6TH MAGNITUDE OF INTRUSION
76	INMAG7	Num	4	302	7TH MAGNITUDE OF INTRUSION
80	INMAG8	Num	4	318	8TH MAGNITUDE OF INTRUSION
84	INMAG9	Num	4	334	9TH MAGNITUDE OF INTRUSION
88	INMAG10	Num	4	350	10TH MAGNITUDE OF INTRUSION
93	ODOMETER	Num	4	370	ODOMETER READING
8	OPENLF	Num	4	30	LF DOOR, TAILGATE OR HATCH OPENING
10	OPENLR	Num	4	38	LR DOOR, TAILGATE OR HATCH OPENING
9	OPENRF	Num	4	34	RF DOOR, TAILGATE OR HATCH OPENING
11	OPENRR	Num	4	42	RR DOOR, TAILGATE OR HATCH OPENING
12	OPENTG	Num	4	46	TG DOOR, TAILGATE OR HATCH OPENING
94	PANELDAM	Num	4	374	INSTRUMENT PANEL DAMAGE - OCC. CONTACT
7	PASINTEG	Num	4	26	PASSENGER COMPARTMENT INTEGRITY
1	PSU	Num	4	4	PRIMARY SAMPLING UNIT NUMBER
98	PSUSTRAT	Num	4	393	PSU STRATUM
97	RATWGT	Num	7	386	RATIO INFLATION FACTOR
92	RDEFLOC	Num	4	366	LOCATION STEERING RIM/SPOKE DEFORMATION
91	RIMDEF	Num	4	362	STEERING RIM/SPOKE DEFORMATION
4	STRATIF	Char	1	16	CASE STRATUM
6	VEHNO	Num	4	22	VEHICLE NUMBER
5	VERSION	Num	5	17	VERSION NUMBER

#	Variable	Type	Len	Pos	Label
1	PSU	Num	4	4	PRIMARY SAMPLING UNIT NUMBER
2	CASEID	Char	4	8	CASE NUMBER - STRATUM
3	CASENO	Num	4	12	CASE SEQUENCE NUMBER
4	STRATIF	Char	1	16	CASE STRATUM
5	VERSION	Num	5	17	VERSION NUMBER
6	VEHNO	Num	4	22	VEHICLE NUMBER
7	PASINTEG	Num	4	26	PASSENGER COMPARTMENT INTEGRITY
8	OPENLF	Num	4	30	LF DOOR, TAILGATE OR HATCH OPENING
9	OPENRF	Num	4	34	RF DOOR, TAILGATE OR HATCH OPENING
10	OPENLR	Num	4	38	LR DOOR, TAILGATE OR HATCH OPENING
11	OPENRR	Num	4	42	RR DOOR, TAILGATE OR HATCH OPENING
12	OPENTG	Num	4	46	TG DOOR, TAILGATE OR HATCH OPENING
13	FAILLF	Num	4	50	LF DAMAGE/FAILURE ASSOCIATED W
14	FAILRF	Num	4	54	RF DAMAGE/FAILURE - OPENING IN COLLISION
15	FAILLR	Num	4	58	LR DAMAGE/FAILURE - OPENING IN COLLISION
16	FAILRR	Num	4	62	RR DAMAGE/FAILURE - OPENING IN COLLISION
17	FAILTG	Num	4	66	TG DAMAGE/FAILURE - OPENING IN COLLISION
18	GLIMPWS	Num	4	70	WS GLAZING DAMAGE FROM IMPACT FORCES
19	GLIMPLF	Num	4	74	LF GLAZING DAMAGE FROM IMPACT FORCES
20	GLIMPRF	Num	4	78	RF GLAZING DAMAGE FROM IMPACT FORCES
21	GLIMPLR	Num	4	82	LR GLAZING DAMAGE FROM IMPACT FORCES
22	GLIMPRR	Num	4	86	RR GLAZING DAMAGE FROM IMPACT FORCES
23	GLIMPBL	Num	4	90	BL GLAZING DAMAGE FROM IMPACT FORCES
24	GLIMPRUF	Num	4	94	ROOF GLAZING DAMAGE FROM IMPACT FORCES
25	GLIMPOTH	Num	4	98	OTHER GLAZING DAMAGE FROM IMPACT FORCES
26	GLOCCWS	Num	4	102	WS GLAZING DAMAGE FROM OCCUPANT CONTACT
27	GLOCCLF	Num	4	106	LF GLAZING DAMAGE FROM OCCUPANT CONTACT
28	GLOCCRF	Num	4	110	RF GLAZING DAMAGE FROM OCCUPANT CONTACT
29	GLOCCLR	Num	4	114	LR GLAZING DAMAGE FROM OCCUPANT CONTACT
30	GLOCCRR	Num	4	118	RR GLAZING DAMAGE FROM OCCUPANT CONTACT
31	GLOCCBL	Num	4	122	BL GLAZING DAMAGE FROM OCCUPANT CONTACT
32	GLOCCRUF	Num	4	126	ROOF GLAZING DAMAGE FROM OCC. CONTACT
33	GLOCCOTH	Num	4	130	OTHER GLAZING DAMAGE FROM OCC. CONTACT
34	GLTYPWS	Num	4	134	WS TYPE OF WINDOW/WINDSHIELD GLAZING
35	GLTYPLF	Num	4	138	LF TYPE OF WINDOW/WINDSHIELD GLAZING
36	GLTYPRF	Num	4	142	RF TYPE OF WINDOW/WINDSHIELD GLAZING
37	GLTYPLR	Num	4	146	LR TYPE OF WINDOW/WINDSHIELD GLAZING
38	GLTYPRR	Num	4	150	RR TYPE OF WINDOW/WINDSHIELD GLAZING
39	GLTYPBL	Num	4	154	BL TYPE OF WINDOW/WINDSHIELD GLAZING
40	GLTYPRUF	Num	4	158	ROOF TYPE OF WINDOW/WINDSHIELD GLAZING
41	GLTYPOTH	Num	4	162	OTHER TYPE OF WINDOW/WINDSHIELD GLAZING
42	GLPREWS	Num	4	166	WS WINDOW PRECRASH GLAZING STATUS
43	GLPRELF	Num	4	170	LF WINDOW PRECRASH GLAZING STATUS
44	GLPRERF	Num	4	174	RF WINDOW PRECRASH GLAZING STATUS
45	GLPRELR	Num	4	178	LR WINDOW PRECRASH GLAZING STATUS
46	GLPRERR	Num	4	182	RR WINDOW PRECRASH GLAZING STATUS
47	GLPREBL	Num	4	186	BL WINDOW PRECRASH GLAZING STATUS
48	GLPRERUF	Num	4	190	ROOF WINDOW PRECRASH GLAZING STATUS
49	GLPREOTH	Num	4	194	OTHER WINDOW PRECRASH GLAZING STATUS
50	INLOC1	Num	4	198	1ST LOCATION OF INTRUSION
51	INCOMP1	Num	4	202	1ST INTRUDING COMPONENT
52	INMAG1	Num	4	206	1ST MAGNITUDE OF INTRUSION
53	CDRIR1	Num	4	210	1ST DOMINANT CRUSH DIRECTION

#	Variable	Type	Len	Pos	Label
54	INLOC2	Num	4	214	2ND LOCATION OF INTRUSION
55	INCOMP2	Num	4	218	2ND INTRUDING COMPONENT
56	INMAG2	Num	4	222	2ND MAGNITUDE OF INTRUSION
57	CDRIR2	Num	4	226	2ND DOMINANT CRUSH DIRECTION
58	INLOC3	Num	4	230	3RD LOCATION OF INTRUSION
59	INCOMP3	Num	4	234	3RD INTRUDING COMPONENT
60	INMAG3	Num	4	238	3RD MAGNITUDE OF INTRUSION
61	CDRIR3	Num	4	242	3RD DOMINANT CRUSH DIRECTION
62	INLOC4	Num	4	246	4TH LOCATION OF INTRUSION
63	INCOMP4	Num	4	250	4TH INTRUDING COMPONENT
64	INMAG4	Num	4	254	4TH MAGNITUDE OF INTRUSION
65	CDRIR4	Num	4	258	4TH DOMINANT CRUSH DIRECTION
66	INLOC5	Num	4	262	5TH LOCATION OF INTRUSION
67	INCOMP5	Num	4	266	5TH INTRUDING COMPONENT
68	INMAG5	Num	4	270	5TH MAGNITUDE OF INTRUSION
69	CDRIR5	Num	4	274	5TH DOMINANT CRUSH DIRECTION
70	INLOC6	Num	4	278	6TH LOCATION OF INTRUSION
71	INCOMP6	Num	4	282	6TH INTRUDING COMPONENT
72	INMAG6	Num	4	286	6TH MAGNITUDE OF INTRUSION
73	CDRIR6	Num	4	290	6TH DOMINANT CRUSH DIRECTION
74	INLOC7	Num	4	294	7TH LOCATION OF INTRUSION
75	INCOMP7	Num	4	298	7TH INTRUDING COMPONENT
76	INMAG7	Num	4	302	7TH MAGNITUDE OF INTRUSION
77	CDRIR7	Num	4	306	7TH DOMINANT CRUSH DIRECTION
78	INLOC8	Num	4	310	8TH LOCATION OF INTRUSION
79	INCOMP8	Num	4	314	8TH INTRUDING COMPONENT
80	INMAG8	Num	4	318	8TH MAGNITUDE OF INTRUSION
81	CDRIR8	Num	4	322	8TH DOMINANT CRUSH DIRECTION
82	INLOC9	Num	4	326	9TH LOCATION OF INTRUSION
83	INCOMP9	Num	4	330	9TH INTRUDING COMPONENT
84	INMAG9	Num	4	334	9TH MAGNITUDE OF INTRUSION
85	CDRIR9	Num	4	338	9TH DOMINANT CRUSH DIRECTION
86	INLOC10	Num	4	342	10TH LOCATION OF INTRUSION
87	INCOMP10	Num	4	346	10TH INTRUDING COMPONENT
88	INMAG10	Num	4	350	10TH MAGNITUDE OF INTRUSION
89	CDRIR10	Num	4	354	10TH DOMINANT CRUSH DIRECTION
90	COLUMTYP	Num	4	358	STEERING COLUMN TYPE
91	RIMDEF	Num	4	362	STEERING RIM/SPOKE DEFORMATION
92	RDEFLOC	Num	4	366	LOCATION STEERING RIM/SPOKE DEFORMATION
93	ODOMETER	Num	4	370	ODOMETER READING
94	PANELDAM	Num	4	374	INSTRUMENT PANEL DAMAGE - OCC. CONTACT
95	BOLSTDEF	Num	4	378	KNEE BOLSTER DEFORMED - OCCUPANT CONTACT
96	GLOVOPEN	Num	4	382	DID GLOVE COMPARTMENT DOOR OPEN
97	RATWGT	Num	7	386	RATIO INFLATION FACTOR
98	PSUSTRAT	Num	4	393	PSU STRATUM

Data Set Name: NASS92.OA   Type:
Observations: 11576   Record Len: 241
Variables: 59
Label:

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

#	Variable	Type	Len	Pos	Label
50	ABELTAVL	Num	4	201	AUTOMATIC BELT SYSTEM AVAILABILITY/FUNC
51	ABELTUSE	Num	4	205	AUTOMATIC BELT (PASSIVE) SYSTEM USE
52	ABELTYPE	Num	4	209	AUTOMATIC (PASSIVE) BELT SYSTEM TYPE
54	ABLTFAIL	Num	4	217	AUTOMATIC (PASSIVE) BELT SYSTEM FAILURE
53	ABLTPROP	Num	4	213	PROPER USE OF AUTO (PASSIVE) BELT SYSTEM
8	AGE	Num	4	30	AGE OF OCCUPANT
24	BAGAVAIL	Num	4	94	AIR BAG SYSTEM AVAILABILITY
25	BAGDEPLY	Num	4	98	AIR BAG SYSTEM DEPLOYED
26	BAGFAIL	Num	4	102	AIR BAG SYSTEM FAILURE
59	BICARB	Num	4	237	ARTERIAL BLOOD GASES (ABG) HC03
58	BLOOD	Num	4	233	WAS THE OCCUPANT GIVENT BLOOD?
2	CASEID	Char	4	8	CASE NUMBER - STRATUM
3	CASENO	Num	4	12	CASE SEQUENCE NUMBER
43	CAUSE1	Num	4	170	1ST MEDICALLY REPORTED CAUSE OF DEATH
44	CAUSE2	Num	4	174	2ND MEDICALLY REPORTED CAUSE OF DEATH
45	CAUSE3	Num	4	178	3RD MEDICALLY REPORTED CAUSE OF DEATH
34	CHHARNES	Num	4	134	CHILD SAFETY SEAT HARNESS USAGE
31	CHMAKE	Num	4	122	CHILD SAFETY SEAT MAKE/MODEL
33	CHORIENT	Num	4	130	CHILD SAFETY SEAT ORIENTATION
35	CHSHIELD	Num	4	138	CHILD SAFETY SEAT SHIELD USAGE
36	CHTETHER	Num	4	142	CHILD SAFETY SEAT TETHER USAGE
32	CHTYPE	Num	4	126	TYPE OF CHILD SAFETY SEAT
42	DEATH	Num	4	166	TIME TO DEATH
16	EJCTAREA	Num	4	62	EJECTION AREA
17	EJCTMED	Num	4	66	EJECTION MEDIUM
15	EJECTION	Num	4	58	EJECTION
19	ENTRAP	Num	4	74	ENTRAPMENT
57	GLASGOW	Num	4	229	GLASGOW COMA SCALE (GCS) SCORE
28	HEADREST	Num	4	110	HEAD RESTRAINT TYPE/DAMAGE BY OCCUPANT
10	HEIGHT	Num	4	38	HEIGHT OF OCCUPANT
40	HOSPSTAY	Num	4	158	HOSPITAL STAY
46	INJNUM	Num	4	182	NUMBER RECORDED INJURIES THIS OCCUPANT
37	INJSEV	Num	4	146	INJURY SEVERITY (POLICE RATING)
48	ISS	Num	4	190	INJURY SEVERITY SCORE
47	MAIS	Num	4	186	MAXIMUM KNOWN OCCUPANT AIS
20	MANAVAIL	Num	4	78	MANUAL BELT SYSTEM AVAILABILITY
23	MANFAIL	Num	4	90	MANUAL BELT FAILURE MODE DURING ACCIDENT
22	MANPROPR	Num	4	86	PROPER USE OF MANUAL BELTS
21	MANUSE	Num	4	82	MANUAL BELT SYSTEM USE
39	MEDFACIL	Num	4	154	TYPE MEDICAL FACILITY INITIAL TREATMENT
18	MEDSTA	Num	4	70	MEDIUM STATUS (PRIOR TO IMPACT)
7	OCCNO	Num	4	26	OCCUPANT NUMBER
27	PARUSE	Num	4	106	POLICE REPORTED RESTRAINT USE
14	POSTURE	Num	4	54	OCCUPANT'S POSTURE
1	PSU	Num	4	4	PRIMARY SAMPLING UNIT NUMBER
55	PSUSTRAT	Num	4	221	PSU STRATUM
49	RATWGT	Num	7	194	RATIO INFLATION FACTOR
12	ROLE	Num	4	46	OCCUPANT'S ROLE
30	SEATPERF	Num	4	118	SEAT PERFORMANCE (THIS POSITION)
13	SEATPOS	Num	4	50	OCCUPANT'S SEAT POSITION
29	SEATTYPE	Num	4	114	SEAT TYPE (THIS OCCUPANT POSITION)
9	SEX	Num	4	34	OCCUPANT'S SEX
56	STORIENT	Num	4	225	SEAT ORIENTATION (THIS OCCUPANT POS.)
4	STRATIF	Char	1	16	CASE STRATUM
38	TREATMNT	Num	4	150	TREATMENT - MORTALITY
6	VEHNO	Num	4	22	VEHICLE NUMBER
5	VERSION	Num	5	17	VERSION NUMBER
11	WEIGHT	Num	4	42	OCCUPANT'S WEIGHT
41	WORKDAYS	Num	4	162	WORKING DAYS LOST

CONTENTS PROCEDURE
----Variables Ordered by Position----

#	Variable	Type	Len	Pos	Label
1	PSU	Num	4	4	PRIMARY SAMPLING UNIT NUMBER
2	CASEID	Char	4	8	CASE NUMBER - STRATUM
3	CASENO	Num	4	12	CASE SEQUENCE NUMBER
4	STRATIF	Char	1	16	CASE STRATUM
5	VERSION	Num	5	17	VERSION NUMBER
6	VEHNO	Num	4	22	VEHICLE NUMBER
7	OCCNO	Num	4	26	OCCUPANT NUMBER
8	AGE	Num	4	30	AGE OF OCCUPANT
9	SEX	Num	4	34	OCCUPANT'S SEX
10	HEIGHT	Num	4	38	HEIGHT OF OCCUPANT
11	WEIGHT	Num	4	42	OCCUPANT'S WEIGHT
12	ROLE	Num	4	46	OCCUPANT'S ROLE
13	SEATPOS	Num	4	50	OCCUPANT'S SEAT POSITION
14	POSTURE	Num	4	54	OCCUPANT'S POSTURE
15	EJECTION	Num	4	58	EJECTION
16	EJCTAREA	Num	4	62	EJECTION AREA
17	EJCTMED	Num	4	66	EJECTION MEDIUM
18	MEDSTA	Num	4	70	MEDIUM STATUS (PRIOR TO IMPACT)
19	ENTRAP	Num	4	74	ENTRAPMENT
20	MANAVAIL	Num	4	78	MANUAL BELT SYSTEM AVAILABILITY
21	MANUSE	Num	4	82	MANUAL BELT SYSTEM USE
22	MANPROPR	Num	4	86	PROPER USE OF MANUAL BELTS
23	MANFAIL	Num	4	90	MANUAL BELT FAILURE MODE DURING ACCIDENT
24	BAGAVAIL	Num	4	94	AIR BAG SYSTEM AVAILABILITY
25	BAGDEPLY	Num	4	98	AIR BAG SYSTEM DEPLOYED
26	BAGFAIL	Num	4	102	AIR BAG SYSTEM FAILURE
27	PARUSE	Num	4	106	POLICE REPORTED RESTRAINT USE
28	HEADREST	Num	4	110	HEAD RESTRAINT TYPE/DAMAGE BY OCCUPANT
29	SEATTYPE	Num	4	114	SEAT TYPE (THIS OCCUPANT POSITION)
30	SEATPERF	Num	4	118	SEAT PERFORMANCE (THIS POSITION)
31	CHMAKE	Num	4	122	CHILD SAFETY SEAT MAKE/MODEL
32	CHTYPE	Num	4	126	TYPE OF CHILD SAFETY SEAT
33	CHORIENT	Num	4	130	CHILD SAFETY SEAT ORIENTATION
34	CHHARNES	Num	4	134	CHILD SAFETY SEAT HARNESS USAGE
35	CHSHIELD	Num	4	138	CHILD SAFETY SEAT SHIELD USAGE
36	CHTETHER	Num	4	142	CHILD SAFETY SEAT TETHER USAGE
37	INJSEV	Num	4	146	INJURY SEVERITY (POLICE RATING)
38	TREATMNT	Num	4	150	TREATMENT - MORTALITY
39	MEDFACIL	Num	4	154	TYPE MEDICAL FACILITY INITIAL TREATMENT
40	HOSPSTAY	Num	4	158	HOSPITAL STAY
41	WORKDAYS	Num	4	162	WORKING DAYS LOST
42	DEATH	Num	4	166	TIME TO DEATH
43	CAUSE1	Num	4	170	1ST MEDICALLY REPORTED CAUSE OF DEATH
44	CAUSE2	Num	4	174	2ND MEDICALLY REPORTED CAUSE OF DEATH
45	CAUSE3	Num	4	178	3RD MEDICALLY REPORTED CAUSE OF DEATH
46	INJNUM	Num	4	182	NUMBER RECORDED INJURIES THIS OCCUPANT
47	MAIS	Num	4	186	MAXIMUM KNOWN OCCUPANT AIS
48	ISS	Num	4	190	INJURY SEVERITY SCORE
49	RATWGT	Num	7	194	RATIO INFLATION FACTOR
50	ABELTAVL	Num	4	201	AUTOMATIC BELT SYSTEM AVAILABILITY/FUNC
51	ABELTUSE	Num	4	205	AUTOMATIC BELT (PASSIVE) SYSTEM USE
52	ABELTYPE	Num	4	209	AUTOMATIC (PASSIVE) BELT SYSTEM TYPE
53	ABLTPROP	Num	4	213	PROPER USE OF AUTO (PASSIVE) BELT SYSTEM
54	ABLTFAIL	Num	4	217	AUTOMATIC (PASSIVE) BELT SYSTEM FAILURE
55	PSUSTRAT	Num	4	221	PSU STRATUM
56	STORIENT	Num	4	225	SEAT ORIENTATION (THIS OCCUPANT POS.)
57	GLASGOW	Num	4	229	GLASGOW COMA SCALE (GCS) SCORE
58	BLOOD	Num	4	233	WAS THE OCCUPANT GIVENT BLOOD?
59	BICARB	Num	4	237	ARTERIAL BLOOD GASES (ABG) HC03

CONTENTS PROCEDURE

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Data Set Name:  NASS92.OI              Type:
Observations:   33236                  Record Len: 73
Variables:      20
Label:
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-----Alphabetic List of Variables and Attributes-----

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 #  Variable  Type  Len  Pos  Label
14  AIS       Num    4   42   A.I.S. SEVERITY (O.I.C. - A.I.S.)
11  ASPECT    Char   1   39   ASPECT (O.I.C. - A.I.S.)
10  BODYREG   Char   1   38   BODY REGION (O.I.C. - A.I.S.)
 2  CASEID    Char   4    8   CASE NUMBER - STRATUM
 3  CASENO    Num    4   12   CASE SEQUENCE NUMBER
17  DIRINJ    Num    4   54   DIRECT/INDIRECT INJURY
 8  INJNO     Num    4   30   INJUR  Y NUMBER
15  INJSOU    Num    4   46   INJURY SOURCE
18  INTRUNO   Num    4   58   OCCUPANT AREA INTRUSION NO.
12  LESION    Char   1   40   LESION (O.I.C. - A.I.S.)
 7  OCCNO     Num    4   26   OCCUPANT NUMBER
 1  PSU       Num    4    4   PRIMARY SAMPLING UNIT NUMBER
20  PSUSTRAT  Num    4   69   PSU STRATUM
19  RATWGT    Num    7   62   RATIO INFLATION FACTOR
16  SOUCON    Num    4   50   INJURY SOURCE CONFIDENCE LEVEL
 9  SOUDAT    Num    4   34   SOURCE OF INJURY DATA
 4  STRATIF   Char   1   16   CASE STRATUM
13  SYSORG    Char   1   41   SYSTEM/ORGAN (O.I.C. - A.I.S.)
 6  VEHNO     Num    4   22   VEHICLE NUMBER
 5  VERSION   Num    5   17   VERSION NUMBER
```

CONTENTS PROCEDURE
----Variables Ordered by Position----

```
49  #  Variable  Type  Len  Pos  Label
     1  PSU       Num    4    4   PRIMARY SAMPLING UNIT NUMBER
     2  CASEID    Char   4    8   CASE NUMBER - STRATUM
     3  CASENO    Num    4   12   CASE SEQUENCE NUMBER
     4  STRATIF   Char   1   16   CASE STRATUM
     5  VERSION   Num    5   17   VERSION NUMBER
     6  VEHNO     Num    4   22   VEHICLE NUMBER
     7  OCCNO     Num    4   26   OCCUPANT NUMBER
     8  INJNO     Num    4   30   INJUR  Y NUMBER
     9  SOUDAT    Num    4   34   SOURCE OF INJURY DATA
    10  BODYREG   Char   1   38   BODY REGION (O.I.C. - A.I.S.)
    11  ASPECT    Char   1   39   ASPECT (O.I.C. - A.I.S.)
    12  LESION    Char   1   40   LESION (O.I.C. - A.I.S.)
    13  SYSORG    Char   1   41   SYSTEM/ORGAN (O.I.C. - A.I.S.)
    14  AIS       Num    4   42   A.I.S. SEVERITY (O.I.C. - A.I.S.)
    15  INJSOU    Num    4   46   INJURY SOURCE
    16  SOUCON    Num    4   50   INJURY SOURCE CONFIDENCE LEVEL
    17  DIRINJ    Num    4   54   DIRECT/INDIRECT INJURY
    18  INTRUNO   Num    4   58   OCCUPANT AREA INTRUSION NO.
    19  RATWGT    Num    7   62   RATIO INFLATION FACTOR
    20  PSUSTRAT  Num    4   69   PSU STRATUM
```

APPENDIX A

DATA COLLECTION FORMS

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

APPENDIX B

CODING INFORMATION FOR VEHICLE MAKE/MODEL
(These 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
701-734 -	Motored Cycles/ATCs/ATVs (including motorcycles, mopeds, minibikes, motorscooters and dirt bikes) (701 - 706 Motorcycles/Mopeds) (731 - 734 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" -Standard 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

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

Trucks and Buses
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

<u>Other</u>

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)

<u>Unknown</u>

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

APPENDIX C

MISSING RECORD RULES

Under the NASS Crashworthiness Data System (CDS) the rules for the presence or absence of forms (records) in an accident 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 an accident which includes (1) a towed, inspected, CDS applicable vehicle or (2) a non-towed, inspected, CDS applicable, AOPS 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 accident.

Accident Event Record   At least one required for every accident.

General Vehicle Record
     Complete Record: One required for every CDS applicable vehicle (GV07=01-49).
       Partial Record: One required (completed through variable GV15) for every non CDS applicable vehicle (GV07=50-99).

Exterior Vehicle Record
     Complete Record: One required for every inspected (GV35=1 or 2) 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 (GV35=0) CDS applicable vehicle.
                               (2) Non CDS applicable vehicle (GV07=50-99).

Interior Vehicle Record
     Complete Record: (1) Towed (GV09=1), inspected (GV35=1 or 2), CDS applicable vehicle (GV07=01-49).
                               (2) Not towed (GV09=0 or 9), inspected, CDS applicable, AOPS (GV36=1) vehicle.
       Missing Record: (1) Towed, not inspected (GV35=0) CDS applicable vehicle.
                               (2) Not towed (GV09=0 or 9) CDS applicable, Non AOPS (GV36=0) vehicle.
                               (3) Non CDS applicable vehicle (GV07=50-99).

Occupant Assessment
     Complete Record: (1) Towed (GV09=1), CDS applicable vehicle (GV07=01-49).
                               (2) Not towed (GV09=0 or 9), CDS applicable, AOPS (GV36=1) vehicle

Missing Record:	(1) Not towed (GV09=0 or 9), CDS applicable, Non AOPS (GV36=0) vehicle. (2) Non CDS applicable vehicle (GV07=50-99).

Occupant Injury Record

Complete Record:	(1) Towed (GV09=1), CDS applicable vehicle (GV07=01-49) with an occupant having a recorded injury (OA43=01-96). (2) Not towed (GV09=0 or 9), CDS applicable, AOPS (GV36=1) with an occupant having a recorded injury.
Missing Record:	(1) Towed, CDS applicable vehicle with no occupant having a recorded injury (OA43=00,97,99). (2) Not towed (GV09=0 or 9), CDS applicable, Non AOPS (GV36=0) vehicle. (3) Non CDS applicable vehicle (GV07=50-99).

APPENDIX D

CDC AND DELTA-V

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

$$? V = V \text{ common} - V \text{ approach}$$

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.
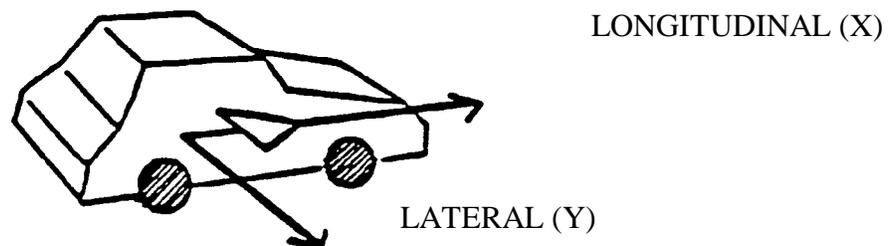

LONGITUDINAL (X)

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 Accident Records 4,956
!   Total Number of Accident Event Records 9,357
!   Total Number of General Vehicle Records 8,504
!   Total Number of Exterior Vehicle Records 6,326
!   Total Number of Interior Vehicle Records 5,856
!   Total Number of Occupant Assessment Records 11,576
!   Total Number of Occupant Injury Records 33,236

PSU DEMOGRAPHIC DATA

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

```
                              POPULATION


                                          PERCENT              LAND
     PSU         1990          1980        CHANGE              AREA


     P02        165,304       158,158       +4.5              1131
     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       +5.0               506
     P48        167,098       153,264       +9.0              1961
     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      +18.0               917
     P76         74,778        71,348       +4.8             11219
     P78        120,739        90,554      +33.3              9994
     P79      4,948,333     4,149,319      +19.3              3554
     P81        991,060       775,903      +27.7              2044
     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	1O TO 14	15 TO 19	20 TO 24
P02	11396	11045	10150	11765	12206
P03	178420	165956	164476	164977	179622
P04	28816	27497	26434	25568	24228
P05	45837	43619	39570	39910	44516
P06	115871	104113	100472	107408	135952
P08	61325	59345	54992	54766	56554
P09	64026	58331	53667	59426	77972
P11	19160	17431	15395	24922	39623
P12	33436	33652	33493	33647	30825
P13	12854	12930	12082	11336	10353
P41	16068	14648	12681	13713	16586
P43	30174	27295	25468	29177	40887
P45	21426	21148	20155	24918	30077
P48	10818	11073	11539	15863	19330
P49	81138	70967	61951	65369	91074
P72	216468	201140	190488	200988	235616
P73	34039	37502	38942	36770	30902
P74	33314	32489	29325	28498	31740
P75	33469	34032	31125	29471	25841
P76	5771	6388	6418	5781	3973
P78	10160	10104	9608	9091	9573
P79	416258	377775	348590	364937	419299
P81	75665	74986	67462	62023	65249
P82	29269	23842	20057	25641	48364

POPULATION BY AGE GROUP (1990) CONT.

PSU	25 TO 29	30 TO 44	45 TO 64	65 & OVER
P02	14201	41415	32628	21498
P03	204387	538749	419020	285057
P04	30151	91778	78323	100408
P05	56186	165576	140904	101993
P06	142337	347907	290803	240714
P08	72966	232418	208629	165575
P09	88137	220574	151373	56916
P11	29635	71793	43592	21226
P12	34807	102684	84086	43829
P13	12576	36925	29149	20798
P41	22707	64861	55147	54663
P43	46171	118537	72478	33193
P45	28850	81291	65194	42690
P48	13062	36760	29473	19180
P49	120170	254770	163547	97891
P72	278694	645300	484450	330182
P73	35923	109188	93649	58679
P74	39112	101480	73153	47333
P75	37177	128350	86421	35614
P76	4502	14717	15167	12061
P78	9670	24212	20826	17495
P79	478019	1217438	859606	466411
P81	89923	275550	191520	88692
P82	55845	149538	85303	78400

WORKERS AND MEANS OF TRANSPORTATION TO WORK

PSU	WORKERS	% USING CAR, TRUCK OR VAN	% IN CARPOOLS	% USING PUBLIC TRANSIT
P02	78,739	88.6	12.3	1.7
P03	907,010	31.3	8.8	58.0
P04	178,966	92.7	13.3	2.0
P05	352,960	88.8	10.0	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	19.0	11.2
P11	148,727	83.1	9.6	3.0
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	93.0	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	3.0
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	11.0	4.9
P82	279,748	70.5	11.8	15.9

HOUSING UNITS AND VEHICLE AVAILABILITY

PSU	ALL OCCUPIED HOUSING UNITS	PERCENT WITH VEHICLES AVAILABLE		
		NONE	1	2 OR MORE
P02	60,807	9.0	33.2	57.8
P03	828,199	56.7	33.2	10.1
P04	168,147	8.9	42.0	49.1
P05	254,995	7.0	32.6	60.4
P06	603,075	38.1	40.5	21.4
P08	387,778	13.3	38.0	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	54.0
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	62.0
P45	133,639	9.4	33.8	56.8
P48	61,099	10.2	32.0	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