NATIONAL AUTOMOTIVE SAMPLING SYSTEM (NASS)

CRASHWORTHINESS DATA SYSTEM

Analytical User's Manual

2008 File

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

TABLE OF CONTENTS

SECTION 1

INTRODUCTION

The National Automotive Sampling System (NASS) Crashworthiness Data System (CDS) is a nationwide crash data collection program sponsored by the U.S. Department of Transportation. It is operated by the National Center for Statistics and Analysis (NCSA) of the National Highway Traffic Safety Administration (NHTSA). NASS began data collection in 1979.

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 all police-reported motor vehicle traffic crash reports; and (2) the Crashworthiness Data System (CDS) which collects additional detailed information on a sample of all police-reported light motor vehicle traffic crashes.

The NASS CDS provides an automated, comprehensive national traffic crash database. Data collection is accomplished at 24 geographic sites, called Primary Sampling Units (PSUs). In 2008, three PSUs were dropped from the system so that the 2008 NASS CDS file contains data from 24 PSUs. These data are weighted to represent all police reported motor vehicle crashes occurring in the USA during the year involving passenger cars, light trucks and vans that were towed due to damage.

Comparing the 1988-2008 files with files from years prior to 1988 is not recommended. The principal attributes of the NASS CDS 1988-2008 files include: focusing on crashes involving automobiles and automobile derivatives, light trucks and vans with gross vehicle weight less than 10,000 pounds (4,537 kg); giving special consideration to late model year vehicles (the five most recent model years [four, beginning in 1996]); emphasizing the more serious injury crashes; eliminating the pedestrian and non-motorist record, the driver record and vehicle registration information. A revised set of data collection forms was designed in 1988 for the crashworthiness data system. Some features are: the introduction of an Accident Event Record to capture all events in the crash; the creation of three new vehicle records (General Vehicle, Exterior Vehicle, Interior Vehicle); and the separation of occupant records into an Occupant Assessment Record and an Occupant Injury Record, wherein all injuries are coded.

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

This manual and the NASS 2008 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)

2000 Injury Coding Manual

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

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

1988-1996 NASS CDS Variable-Attribute Structure Manual

The first document is available from the DOT/Volpe National Transportation Systems Center (VNTSC), DTS-64, 55 Broadway, Cambridge, Massachusetts 02142-1093. The second document is available from the Society of Automotive Engineers (SAE), Warrendale, Pennsylvania 15096. The third document is internal and cannot be distributed; however users may contact the Association for the Advancement of Automotive Medicine (AAAM) to order a copy of the "Abbreviated Injury Scale (AIS) 1990 - Update 98" which is the basis for NASS injury coding. 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 - NVS-411, National Highway Traffic Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

SECTION 2

CHANGES IN 2008

(**Note:** Abbreviations are used to indicate SAS names of data elements. Example: VEHICLE MAKE (SAS Label: MAKE) is abbreviated to VEHICLE MAKE (SAS: MAKE)

EVENT RECORD

OBJECT CONTACTED (SAS Name: OBJCONT)
Added Attributes:
    METAL GUARDRAIL (46)
    CABLE BARRIER GUARDRAIL (47)
Changed Attribute Label
    From: OTHER TRAFFIC BARRIER (INCLUDES GUARDRAIL) (SPECIFY) (56)
    To: OTHER TRAFFIC BARRIER (SPECIFY) (56)

GENERAL VEHICLE RECORD

CHANGE IN CODING PROCEDURE FOR NOT-IN-TRANSPORT VEHICLES
Summary: For those vehicles with TRANSPORT STATUS (SAS: TRANSTAT) equal to NOT IN TRANSPORT (2) or WORKING VEHICLE (3), an abbreviated GENERAL VEHICLE RECORD is completed.

Variables in the GENERAL VEHICLE RECORD for NOT IN TRANSPORT or WORKING VEHICLES:
PRIMARY SAMPLING UNIT NUMBER (SAS: PSU)
CASE NUMBER - STRATUM (SAS: CASEID)
CASE NUMBER (SAS: CASENO)
STRATUM (SAS: STRATIF)
VERSION NUMBER (SAS: VERSION)
VEHICLE NUMBER (SAS: VEHNO)
VEHICLE MODEL YEAR (SAS: MODELYR)
VEHICLE MAKE (SAS: MAKE)
VEHICLE MODEL (SAS: MODEL)
BODY TYPE (SAS: BODYTYPE)
VEHICLE IDENTIFICATION NUMBER (SAS: VIN)
VEHICLE SPECIAL USE (SAS: VEHUSE)
TRANSPORT STATUS (SAS: TRANSTAT)
VEHICLE CURB WEIGHT (SAS: CURBWGT)
VEHICLE CARGO WEIGHT (SAS: CARGOWGT)
TYPE OF VEHICLE INSPECTION (SAS: INSPTYPE)

In addition, all derived variables and all PCVINA supplied variables are included in the abbreviated GV Record.

VEHICLE MAKE (SAS: MAKE),
VEHICLE MODEL (SAS: MODEL) and
VEHICLE MODEL YEAR (SAS: MODELYR)

The following new models were added in 2008:

Vehicle Make	SAS Code	Vehicle Model	SAS Code	Model Year	Body Type
Cadillac	31	Escalade EXT	31		31
Dodge	07	Journey	27	2009	14
Infiniti	58	EX35	40	2008	06
Mini	69	Cooper	54		
Nissan	35	Rogue	51	2008	06
Pontiac	22	G8	24	2008	04
Pontiac	22	Vibe	32	2008	06
Saturn	24	Outlook	10	2008	06
Saturn	24	Astra	11	2008	
Smart	65	ForTwo	31	2008	
Toyota	49	Scion XD	52	2008	

ROLLOVER INITIATION OBJECT CONTACTED (SAS: ROLLOBJ)
Added Attributes:
    METAL GUARDRAIL (46)
    CABLE BARRIER GUARDRAIL (47)
Changed Attribute Label
    From: OTHER TRAFFIC BARRIER (INCLUDES GUARDRAIL) (SPECIFY) (56)
    To: OTHER TRAFFIC BARRIER (SPECIFY) (56)

Changed Variable Name
    From: LOCATION ON VEHICLE WHERE INITIAL PRINCIPAL TRIPPING FORCE
        IS APPLIED (SAS: TRIPLOC)
    To: LOCATION ON VEHICLE WHERE INITIATING ROLLOVER FORCE IS
        APPLIED

PRE ROLLOVER MANEUVER (SAS: PROLLMAN) (GV73)
Added Variable with the following Attributes:
    NO ROLLOVER (1)
    DEPARTING ROADWAY (TO PAVED SURFACE) (2)
    DEPARTING ROADWAY (TO NON-PAVED SURFACE) (3)
    DEPARTING ROADWAY (FROM PAVED SURFACE) (4)
    RETURNING TO ROADWAY (FROM NON-PAVED SURFACE) (5)

ON ROADWAY MANEUVER (6)
OFF ROADWAY MANEUVER (7)
UNKNOWN (.U IN SAS) (9)

INTERRUPTED ROLL? (SAS: INTEROLL) (GV74)
Added Variable with the following Attributes:
YES (1)
NO (2)
NO ROLLOVER (8)
UNKNOWN (.U IN SAS) (9)

ESTIMATED DISTANCE OF ROLLOVER (SAS: ROLLDIST) (GV75)
Added Variable with the following Attributes:
NO ROLLOVER (000)
MEASUREMENT IN WHOLE METERS (001-499)
500 OR MORE METERS (500)
END-OVER-END (998)
UNKNOWN (.U in SAS) (999)

EXTERIOR VEHICLE RECORD

CHANGE IN CODING PROCEDURE FOR NOT-IN-TRANSPORT VEHICLES
Summary: For those vehicles with TRANSPORT STATUS (SAS: TRANSTAT) equal to NOT IN TRANSPORT (2) or WORKING VEHICLE (3), an abbreviated EXTERIOR VEHICLE RECORD is completed.

Variables in the EXTERIOR VEHICLE RECORD for NOT IN TRANSPORT or WORKING VEHICLES:
PRIMARY SAMPLING UNIT NUMBER (SAS: PSU)
CASE NUMBER - STRATUM (SAS: CASEID)
CASE NUMBER (SAS: CASENO)
STRATUM (SAS: STRATIF)
VERSION NUMBER (SAS: VERSION)
VEHICLE NUMBER (SAS: VEHNO)
(HIGHEST DELTA "V" and SECOND HIGHEST DELTA "V")
ACCIDENT EVENT SEQUENCE NUMBER (SAS: ACCSEQ1, ACCSEQ2)
OBJECT CONTACTED (SAS: OBJCONT1, OBJCONT2)
DIRECTION OF FORCE (SAS: DOF1, DOF2)
DEFORMATION LOCATION (SAS: GAD1, GAD2)
LONGITUDINAL OR LATERAL LOCATION (SAS: SHL1, SHL2)
VERTICAL OR LATERAL LOCATION (SAS: SVL1, SVL2)
TYPE OF DAMAGE DISTRIBUTION (SAS: TDD1, TDD2)
DEFORMATION EXTENT (SAS: EXTENT1, EXTENT2)
CRUSH PROFILE - L (SAS: DVL, SDVL)

CRUSH PROFILE - C1 (SAS: DVC1, SDVC1)
CRUSH PROFILE - C2 (SAS: DVC2, SDVC2)
CRUSH PROFILE - C3 (SAS: DVC3, SDVC3)
CRUSH PROFILE - C4 (SAS: DVC4, SDVC4)
CRUSH PROFILE - C5 (SAS: DVC5, SDVC5)
CRUSH PROFILE - C6 (SAS: DVC6, SDVC6)
CRUSH PROFILE - D (SAS: DVD, SDVD)
UNDEFORMED END WIDTH (SAS: UNDENDW)
DIRECT DAMAGE WIDTH (SAS: DIRDAMW)
ORIGINAL WHEELBASE (SAS: WHEELBAS)
ORIGINAL AVERAGE TRACK WIDTH (SAS: ORIGAVTW)
CDCS DOCUMENTED - NOT CODED (SAS: DOCCDC)
RESEARCHER'S ASSESSMENT OF VEHICLE DISPOSITION (SAS: TOWRES)
ALTERED VEHICLE? (SAS: ALTVEH)

OBJECT CONTACTED (SAS: OBJCONT1)
OBJECT CONTACTED (SAS: OBJCONT2)
 Added Attributes:
      METAL GUARDRAIL (46)
      CABLE BARRIER GUARDRAIL (47)
Changed Attribute Label
      From: OTHER TRAFFIC BARRIER (INCLUDES GUARDRAIL) (SPECIFY) (56)
      To: OTHER TRAFFIC BARRIER (SPECIFY) (56)

DAMAGE TO FUEL CELL-1 (SAS: FUELDAM1)
DAMAGE TO FUEL CELL-2 (SAS: FUELDAM2)
Changed Attributes Labels:
      From: DEFORMED, NO SEAM FAILURE (2)
      To: DEFORMED, NO SEAM SEPARATION (2)
      From: DEFORMED, WITH SEAM FAILURE (3)
      To: DEFORMED, WITH SEAM SEPARATION (3)

INTERIOR VEHICLE RECORD

Changed Variable Name:
      From: DAMAGE/FAILURE ASSOCIATED WITH DOOR, TAILGATE OR HATCH
          OPENING IN COLLISION (LF, RF, LR, RR, TG/H) (SAS: FAILLF, FAILLR,
          FAILRF, FAILRR, FAILTG)
      To: DAMAGE/SEPARATION ASSOCIATED WITH DOOR, TAILGATE OR HATCH
          OPENING IN COLLISION (LF, RF, LR, RR, TG/H)

DAMAGE/SEPARATION ASSOCIATED WITH DOOR, TAILGATE OR HATCH OPENING IN COLLISION (LF, RF, LR, RR, TG/H) (SAS: FAILLF, FAILLR, FAILRF, FAILRR, FAILTG)
Changed Attributes Labels:
    From: DOOR NOT OPENED/FAILURE NOT ASSESSED (1)
    To: DOOR NOT OPENED/SEPARATION NOT ASSESSED (1)
    From: LATCH/STRIKER FAILURE DUE TO DAMAGE (2)
    To: LATCH/STRIKER SEPARATION DUE TO DAMAGE (2)
    From: HINGE FAILURE DUE TO DAMAGE (3)
    To: HINGE SEPARATION DUE TO DAMAGE (3)
    From: DOOR STRUCTURE FAILURE DUE TO DAMAGE (4)
    To: DOOR STRUCTURE SEPARATION DUE TO DAMAGE (4)
    From: DOOR SUPPORT (I. E., PILLAR, SILL, ROOF SIDE RAIL, ETC.) FAILURE DUE TO DAMAGE (5)
    To: DOOR SUPPORT (I. E., PILLAR, SILL, ROOF SIDE RAIL, ETC.) SEPARATION DUE TO DAMAGE (5)
    From: LATCH/STRIKER AND HINGE FAILURE DUE TO DAMAGE (6)
    To: LATCH/STRIKER AND HINGE SEPARATION DUE TO DAMAGE (6)
    From: OTHER FAILURE (SPECIFY) (7)
    To: OTHER SEPARATION (SPECIFY) (7)

INTRUDING COMPONENT (SAS: INCOMP1-INCOMP10)

Added Attributes:
    DOOR/FORWARD UPPER QUADRANT (35)
    DOOR/FORWARD LOWER QUADRANT (36)
    DOOR/REAR UPPER QUADRANT (37)
    DOOR/REAR LOWER QUADRANT (38)
    DOOR/UNDETERMINED LOCATION (41)
    MULTIPLE/OTHER SEVERE INTRUSIONS (96)
Deleted Attribute:
    DOOR PANEL (SIDE) (11)

LOCATION OF INTRUSION (SAS: INLOC1-INLOC10)
Added Attribute:
    MULTIPLE/OTHER SEVERE INTRUSIONS (88)

MAGNITUDE OF INTRUSION (SAS: INMAG1-INMAG10)
Added Attribute:
    MULTIPLE/OTHER SEVERE INTRUSIONS (8)

DOMINANT CRUSH DIRECTION (SAS: CDRIR1-CDRIR10)
Added Attribute:
    MULTIPLE/OTHER SEVERE INTRUSIONS (8)

OCCUPANT ASSESSMENT RECORD

Changed Variable Name:
    From: MANUAL (ACTIVE) BELT FAILURE MODES DURING ACCIDENT (SAS:
        MANFAIL)
    To: MANUAL (ACTIVE) BELT MALFUNCTION MODES DURING CRASH

MANUAL (ACTIVE) BELT MALFUNCTION MODES DURING CRASH (SAS: MANFAIL)
Changed Attributes Labels:
    From: NO MANUAL BELT FAILURE(S) (1)
    To: NO MANUAL BELT MALFUNCTION(S) (1)
    From: OTHER MANUAL BELT FAILURE (SPECIFY) (8)
    To: OTHER MANUAL BELT MALFUNCTION (SPECIFY) (8)

Changed Variable Name:
    From: AUTOMATIC (PASSIVE) BELT FAILURE MODES DURING ACCIDENT
    (SAS: ABLTFAIL)
    To: AUTOMATIC (PASSIVE) BELT MALFUNCTION MODES DURING CRASH

AUTOMATIC (PASSIVE) BELT MALFUNCTION MODES DURING CRASH (SAS:
MANFAIL)
Changed Attributes Labels:
    From: NO AUTOMATIC BELT FAILURE(S) (01)
    To: NO AUTOMATIC (PASSIVE) BELT MALFUNCTION(S) (01)
    From: OTHER AUTOMATIC BELT FAILURE (SPECIFY) (08)
    To: OTHER AUTOMATIC BELT MALFUNCTION (SPECIFY) (08)
    From: BELT INTEGRITY LOSS DUE TO STRUCTURAL FAILURE-COMPONENT
    MOVEMENT (10)
    To: BELT INTEGRITY LOSS DUE TO STRUCTURAL MOVEMENT (10)

WAS THERE DAMAGE TO THE AIR BAG? (SAS: BAGDAMAG)
 Added Attribute:
    POST CRASH DAMAGE (13)

SOURCE OF AIR BAG DAMAGE (SAS: BAGDAMSO)
Deleted Attribute:
    RESCUE OR EMERGENCY EFFORTS (7)

SEAT PERFORMANCE (SAS: SEATPERF)
Changed Attributes Labels:
    From: NO SEAT PERFORMANCE FAILURE(S) (1)
    To: SEAT ASSEMBLY INTACT (1)
    From: SEAT ADJUSTERS FAILED (2)

To: SEAT ADJUSTER MECHANISM SEPARATED/DEFORMED (2)
From: SEAT BACK FOLDING LOCKS OR "SEAT BACK" FAILED (3)
To: SEAT BACK FOLDING LOCKS OR SEAT BACK STRUCTURE SEPARATION (3)
From: SEAT TRACK/ANCHORS FAILED (4)
To: SEAT TRACK/ANCHORS SEPARATED/DEFORMED (4)

CHILD SAFETY SEAT MAKE/MODEL (SAS: CHMAKE)

Additions and modifications for 2008

SAS Code	Make Description	Model Description
148	Eddie Bauer	Deluxe Infant Car Seat
150	Baby Trend	Latch Loc
284	Cosco/Dorel	Alpha Luxe Echelon
359	Britax	Frontier
506	Cosco/Dorel	Alpha Omega Elite
507	Safety 1st	Sport 3 Phase
866	Evenflo	Bolero

FETAL MORTALITY (SAS: FETALDOA) (OA75)
Added Variable with following Attributes:
   NO OR UNKNOWN (1)
   YES (2)
   NOT APPLICABLE (8)

OCCUPANT INJURY RECORD

INJURY SOURCE (SAS: INJSOU)
Added Attributes:
   LEFT SIDE GLASS (LAMINATED) REINFORCED BY EXTERIOR OBJECT (SPECIFY) (061)
   LEFT SIDE PANEL FORWARD OF A1/A2 PILLAR (062)
   LEFT SIDE PANEL REAR OF THE B-PILLAR (063)
   LEFT FORWARD UPPER QUADRANT (073)
   LEFT FORWARD LOWER QUADRANT (074)
   LEFT REAR UPPER QUADRANT (075)
   LEFT REAR LOWER QUADRANT (076)
   LEFT ARMREST/HARDWARE IN FORWARD UPPER QUADRANT (077)
   LEFT ARMREST/HARDWARE IN FORWARD LOWER QUADRANT (078)
   LEFT ARMREST/HARDWARE IN REAR UPPER QUADRANT (079)
   LEFT ARMREST/HARDWARE IN REAR LOWER QUADRANT (080)

RIGHT SIDE GLASS (LAMINATED) REINFORCED BY EXTERIOR OBJECT (SPECIFY) (111)
RIGHT SIDE PANEL FORWARD OF A1/A2 PILLAR (112)
RIGHT SIDE PANEL REAR OF THE B-PILLAR (113)
RIGHT FORWARD UPPER QUADRANT (121)
RIGHT FORWARD LOWER QUADRANT (122)
RIGHT REAR UPPER QUADRANT (123)
RIGHT REAR LOWER QUADRANT (124)
RIGHT ARMREST/HARDWARE IN FORWARD UPPER QUADRANT (125)
RIGHT ARMREST/HARDWARE IN FORWARD LOWER QUADRANT (126)
RIGHT ARMREST/HARDWARE IN REAR UPPER QUADRANT (127)
RIGHT ARMREST/HARDWARE IN REAR LOWER QUADRANT (128)
TREE (552)
POLE (553)
TRAFFIC BARRIER (INCLUDES JERSEY BARRIER, GUARDRAILS, ETC.) (554)

Change Attributes:
From: LEFT SIDE (LAMINATED) REINFORCED BY EXTERNAL OBJECT (SPECIFY) (060)
To: OTHER LEFT SIDE OBJECT (SPECIFY) (060)
From: RIGHT SIDE GLASS (LAMINATED) REINFORCED BY EXTERNAL OBJECT (110)
To: OTHER RIGHT SIDE OBJECT (SPECIFY) (110)

Deleted Attributes:
LEFT SIDE INTERIOR SURFACE, EXCL. HARDWARE OR ARMREST (051)
LEFT SIDE ARMREST OR HARDWARE (052)
RIGHT SIDE INTERIOR SURFACE, EXCL. HARDWARE OR ARMREST (101)
RIGHT SIDE ARMREST OR HARDWARE (102)
INTERIOR LOOSE OBJECT (SPECIFY) (571)

Change Attributes Labels:
From: OTHER VEHICLE OR OBJECT (SPECIFY) (598)
To: OTHER OBJECT (SPECIFY) (598)
From: UNKNOWN VEHICLE OR OBJECT (599)
To: UNKNOWN OBJECT (599)

SECTION 3

THE SAMPLING SYSTEM AND SAMPLE DESIGN

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

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

Stage 1 - Select PSU's

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

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

Stage 2 - Select Police Jurisdictions

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

Stage 3 - Select Crashes

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

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

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

SAMPLING VARIABLES

The stratification category (1) by type of vehicle is [a] "CDS applicable"---passenger cars, light trucks and vans and [b] "Non-CDS Applicable 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"---2005 through 2009 or "non-late model year"---2004 or before.

SAMPLING STRATA

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

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

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

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

hospital. If the crash involved more than one CDS applicable vehicle, at least two of the CDS applicable vehicles must be towed.

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

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

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

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

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

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

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

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

Table 3-1
2008 NASS CDS Strata

Late Model Year (LMY) Vehicle Involvement	Most Severe Police Reported Injury							
	Fatal Injury K	Transported					Non-transported	
		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
Injury not in Towed LMY CDS Veh.	B	K	D	K	D	F	H	in Scope

Note: Late Model Year refers to 2005 through 2009 model years.

Sampling

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

PSU Inflation Factor

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

The sum of the PSU Inflation Factors for all crashes sampled within a PSU is an unbiased estimate of the number of crashes which occurred during the year in that PSU. Unbiased estimates of crash characteristics for a PSU can be obtained by multiplying the value of the characteristic for each crash sampled in the PSU by that crash's PSU Inflation Factor and summing.

National Inflation Factor

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

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

Ratio Inflation Factor

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

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

SECTION 4

DERIVED VARIABLES

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

SPECIFICATION FOR DERIVED VARIABLES
VARIABLE NAME - LOCATION - DESCRIPTION

(Note: Abbreviations are used to indicate SAS names of data elements and flat file locations, record number and position. Example: MAXIMUM TREATMENT IN THIS ACCIDENT (SAS Label: ATREAT; Flat File Position: Record Number 11, Position 33) is abbreviated to MAXIMUM TREATMENT IN THIS ACCIDENT (SAS: ATREAT)

MAXIMUM TREATMENT IN THIS ACCIDENT (SAS: ATREAT)

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

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

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

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

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

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

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

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

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

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

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

NUMBER OF SERIOUSLY INJURED OCCUPANTS IN THIS ACCIDENT (SAS: AINJSER)

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

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

Missing Values: Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS

applicable vehicles -BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Occupant injury records will be missing for: (1) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2) Non-towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00. If none of the occupants in the crash has an occupant injury record or if, on all the occupant assessment records the only codes in OA70 are equal to "97, 99 or 00", then use code "00" (None) for this derived variable. If there are no occupants in any towed CDS applicable vehicle in the crash, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.
SAS Codes: .N for Blank (Not Collected). Unknown is not a valid code.

NUMBER OF INJURED OCCUPANTS IN THIS ACCIDENT (SAS: AINJURED)

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

Source: NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70).
Missing Values: Occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with - BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00. Non-towed CDS applicable vehicles with no known occupant injuries will have codes-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00. If, on all the occupant assessment records in the crash, the only codes in OA70 are equal to "99 or 00", then use code "00" (None) for this derived variable. If there are no occupants in any towed CDS applicable vehicle in the crash, then use code "BLANK" (Not Collected) on the Flat file and ".N" (Not Collected) on the SAS file.
SAS Codes: .N for Blank (Not Collected). Unknown is not a valid code.

ALCOHOL INVOLVEMENT IN THIS ACCIDENT (SAS: ALCINV)

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

      1   YES
      2   NO
      9   UNKNOWN

This variable is derived by scanning the POLICE REPORTED ALCOHOL PRESENCE FOR DRIVER (GV13) and ALCOHOL TEST RESULT FOR DRIVER (GV14) variables on each general vehicle record in the crash. The ALCOHOL INVOLVEMENT codes are derived as follows:

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

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

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

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

DAY OF WEEK (SAS: DAYWEEK)

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

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

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

PSU INFLATION FACTOR (SAS: PSUWGT)

This eight place numeric value has three implied decimal places. It indicates the within PSU sampling weight for each crash in that PSU's sample.

This weight is not on the current year file.
Source: Computed by NHTSA Headquarters.

Missing Values: None.
SAS Codes: None.

NATIONAL INFLATION FACTOR (SAS: NATWGT)

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

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

RATIO INFLATION FACTOR (SAS: 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 (SAS: DRGINV)

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

    1   YES
    2   NO
    3   UNKNOWN

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

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

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

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

Source: POLICE REPORTED OTHER DRUG PRESENCE FOR DRIVER (GV15) and OTHER DRUG SPECIMEN TEST RESULT (GV16).

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

MANNER OF COLLISION (SAS: MANCOLL)

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

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

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

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

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

PSU STRATA (SAS: PSUSTRAT)

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

> 01 - 12

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

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

MAXIMUM TREATMENT IN THIS VEHICLE (SAS: VTREAT)

This single place numeric value indicates the most intensive treatment given to any occupant of this towed CDS applicable vehicle using the following order of codes:

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

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

Source: TREATMENT-MORTALITY (OA62).
Missing Values: Occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles with - BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. If none of the occupants in the vehicle has an occupant assessment record, then use code "BLANK" (Not Collected) on the Flat file and use code ".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 (SAS: VAIS)

This single place numeric value indicates the single most severe injury level reported for any occupant in this towed CDS applicable 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. If none of the occupants in this vehicle has an occupant injury record, then scan the NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70) variable on the occupant assessment record. Use the following order of codes: if "97", then code "7"; if "99", then code "9"; if "00", then code "0".

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

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

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

NUMBER SERIOUSLY INJURED IN THIS VEHICLE (SAS: VINJSER)

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

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

Missing Values: Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non towed CDS applicable vehicles -BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9; (3) Towed CDS applicable vehicles with no occupants-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE

DISPOSITION (GV10) equals 1 and NUMBER OF OCCUPANT FORMS SUBMITTED (GV39) equals 0. Occupant injury records will be missing for: (1)Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2) Non towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00.

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

NUMBER INJURED IN THIS VEHICLE (SAS: VINJURED)

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

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

VIN LENGTH (SAS: 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 (SAS: OTVEHWGT)

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

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

This variable is derived by scanning the OBJECT CONTACTED (EV05) variable from the HIGHEST DELTA "V" as coded on the exterior vehicle record. If the object contacted is another CDS applicable vehicle, then the weight is derived by scanning the VEHICLE CURB WEIGHT (GV43) variable as coded on the general vehicle record for the other CDS applicable vehicle.
Source: OBJECT CONTACTED (EV05), BODY TYPE (GV07) & VEHICLE CURB WEIGHT (GV43).
Missing Values: Exterior vehicle records will be missing and variables GV37-67 on general vehicle records will not be coded for Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99. If the most severe impact is between an inspected CDS applicable vehicle and a non CDS applicable vehicle, then use code "BLANK" (Not Collected) on the Flat file and use ".N" (Not Collected) on the SAS file. Exterior vehicle records will be missing for CDS applicable vehicles which are not inspected- BODY TYPE (GV07) equals 01-49 and TYPE OF VEHICLE INSPECTION (GV67) equals 0. Use code "BLANK" (Not Collected) on the Flat file and use ".N" (Not Collected) on the SAS file. If the OBJECT CONTACTED (EV05) variable is blank (non collision event) for an inspected CDS applicable vehicle, then use code 998 (Not Applicable).
SAS Codes: .N for Blank (Not Collected) and .U for 999 (Unknown)

BODY TYPE OF THE OTHER VEHICLE (SAS: OTBDYTYP)

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

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

This variable is derived by scanning the OBJECT CONTACTED (EV05) variable from the HIGHEST DELTA "V" as coded on the exterior vehicle record. If the object contacted is

another vehicle, then the body type is derived by scanning the BODY TYPE (GV07) variable as coded on the general vehicle record for the other vehicle.

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

(**Note:** The following 20 data elements are supplied by PC VINA. The value "9" in a variable indicates an unknown VIN. A "Blank" in an alphanumeric variable or a "." in a numeric variable indicates an error in the VIN.)

VINA MAKE (SAS: VINMAKE)

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

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Values: If VINA VEHICLE TYPE is unknown (U), then VIN MAKE will be blank.
SAS Codes: None.

VINA MODEL (PASSENGER VEHICLE) (SAS: VINAMOD)

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

This variable is derived by the VINA analysis scanning the VEHICLE IDENTIFICATION NUMBER (GV08).
Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA MODEL (PASS. VEH.) will be blank.
SAS Codes: None.

VINA SERIES (TRUCKS) (SAS: SERTR)

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

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

Missing Value: If VINA VEHICLE TYPE is equal to Passenger Vehicle (P), Motorcycle (M) or Unknown (U), then VINA SERIES (TRUCKS) will be blank.
SAS Codes: None.

VINA BODY TYPE (SAS: VINBT)

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

Body Type Codes

Passenger Vehicles			
AM	Ambulance	UT	Utility **
CB	Cab & Chassis (Luv)	WW	Wide Wheel Wagon
CP	Coupe	2D	Sedan 2 Dr.
CV	Convertible	2F	Formal Hardtop 2 Dr.
C4	Coupe 4 Dr.		
HB	Hatchback*	2H (81-03)	Hatchback 2 Dr.
HR	Hearse	2L	Liftback 3 Dr.
HT	Hardtop *	2P	Pillard Hardtop 2 Dr.
IN	Incomplete Passenger	2T	Hardtop 2 Dr.
LB	Liftback	2W	Wagon 2 Dr.
LM	Limousine	3D	Runabout 3 Dr.
NB	Notchback	3P	Coupe 3 Dr.
PK	Pickup **	4D	Sedan 4 Dr.
PN	Panel **	4H (81-03)	Hatchback 4 Dr.
P2	2 Passenger Low	4L	Liftback 5 Dr.
P4	4 Passenger Low	4P	Pillard Hardtop 4 Dr.
RD	Roadster	4T	Hardtop 4 Dr.
SB	Sport Hatchback	4W	Wagon 4 Dr.
SC	Sport Coupe	5D	Sedan 5 Dr.

SD	Sedan *		
SV	Sport Van		
SW	Station Wagon		

*   Used only when number of doors is unknown
**   To code trucks commonly registered as passenger vehicles

Trucks			
AC	Auto Carrier	MV	Maxi Van
AR	Armored Truck	MW	Maxi Wagon
BU	Bus	MY	Motorized Cutaway
CB	Chassis and Cab	PC	Club Cab Pickup
CC	Conventional Cab	PD	Parcel Delivery
CG	Cargo Van	PK	Pickup
CH	Crew Chassis	PM	Pickup with Camper mounted on bed
CL	Club Chassis	PN	Panel
CM	Concrete or Transit Mixer	PS	Super Cab Pickup
CR	Crane	RD	Roadster (Jeep, Jeep Commando)
CS	Super Cab/Chassis Pickup	SN	Step Van
CU	Custom Pickup	SP	Sport Pickup
CV	Convertible (Jeep Commando, Suzuki Samarai, Dodge Dakota)	ST	Stake or Rack
CW	Crew Pickup	SV	Sports Van
CY	Cargo Cutaway	SW	Station Wagon (Jeep Wagonneer, Dodge Sportsman A100, Toyota Landcruiser)
DP	Dump	TL	Tilt Tandem
DS	Tractor Truck (diesel)	TM	Tandem
EC	Extended Cargo Van	TN	Tank
ES	Extended Sport Van	TR	Tractor Truck (Gasoline)

EV	Ext Van	UT	Utility (Blazer, Jimmy, Scout, etc.)
EW	Extended Window Van	VC	Van Camper
FB	Flat-bed or Platform	VD	Display Van
FC	Forward Control	VN	Van
FT	Fire Truck	VT	Vanette (including Metro and Handy Van)
GG	Garbage or Refuse	VW	Window Van
GL	Gliders	WK	Tow Truck Wrecker
GN	Grain	WW	Wide Wheel Wagon
HO	Hopper	XT	Travelall
IC	Incomplete Chassis	YY	Cutaway
IE	Incomplete Ext Van	2W	2 Dr. Wagon
LG	Logger	3B	3 Dr. Extended Cab / Chassis
LL	Suburban & Carry All	3C	4 Dr. Extended Cab Pickup
LM	Limousine		
MH	Motorized Home	4B	4 Dr. Extended Cab / Chassis
MP	Multi-purpose	4C	4 Dr. Extended Cab Pickup
S1	One Seat	4W	4 Dr. Wagon
S2	Two Seat	8V	8 Passenger Sport Van
TB	Tilt Cab		

Motorcycles			
AT	All terrain	MY	Mini Cycle
EN	Enduro	RC	Racer
MK	Mini Bike	RS	Road/Street
MM	Mini Moto Cross	RT	Road/Trail
MP	Moped	T	Dirt
MR	Mini Road/Trail	TL	Trail/Dirt
MS	Motor Scooter	TR	Trails

MX	Moto Cross		

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA BODY TYPE will be blank.
SAS Codes: None.

VINA ROOF TYPE (SAS: ROOF1)

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

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

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

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

VINA ROOF TYPE (OPTIONAL 1) (SAS: ROOF2)

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

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

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

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

VINA ROOF TYPE (OPTIONAL 2) (SAS: ROOF3)

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

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

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

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

VINA ANTI-LOCK BRAKES (SAS: ANTILOCK)

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

1	Not Available
2	4 wheel standard
3	Rear only standard
4	ABS standard, wheels unknown
5	4 wheel optional
6	Rear only optional
7	ABS optional, wheels unknown
9	Unknown

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

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

VINA FRONT WHEEL DRIVE (SAS: FRTWHLDR)

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

N   No
Y   Yes
*   Some vehicles of this series

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA FRONT WHEEL DRIVE will be blank.
SAS Codes: None.

VINA FOUR WHEEL DRIVE (SAS: FOURWHDR)

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

N   No
Y   Yes
*   Some vehicles of this series

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA FOUR WHEEL DRIVE will be blank.
SAS Codes: None.

VINA RESTRAINT TYPE (SAS: RESTYPE)

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

A   Active (manual) belts
B   Driver front air bag/passenger side belt unknown
C   Dual front air bags/belt system unknown
D   Dual front air bag/passenger side passive belts
E   Dual front air bags/active belts
F   Dual front air bags/passive belts
G   Dual air bags front and side/belts unknown

H	Dual air bags front, head and sides/belts unknown
I	Dual air bags front, head and sides/passive belts
J	Dual air bags front and sides/passive belts
K	Dual air bags front and sides/active belts
L	Dual air bags front, head and sides/active belt
M	Driver front air bag/passenger side active belt
N	If unable to determine
P	Passive (automatic) belts
R	Dual air bags front and side/active belts w/ automatic passenger sensor
S	Dual air bags front, head, and side/active belts w/ automatic passenger sensor
T	Dual air bags front/active belts/rear passenger side air bag
U	(1985-1998) Unknown restraint type
U	(1999-Present) Dual front air bags/active belts with passenger side deactivation cutoff switch
V	Dual air bags front, head and side/active belts/rear dual side air bags
W	Dual air bags front, head and side/active belts w/ automatic passenger sensor/ rear dual side airbags
X	Dual air bags front/side air bag, driver-side only/active belts
Y	Dual front and side air bags with passenger deactivation switch
3	Dual front & head airbags with passenger sensor; active belts
4	Dual front airbags with passenger sensor; active belts
7	Dual front, side & head airbags, Rear head airbags; active belts
9	Unknown

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA RESTRAINT TYPE will be blank.
SAS Codes: None.

VINA CARBURETION (PASS VEH) (SAS: CARBUR)

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

Carburetion Codes and Meanings		

Code	Number of BBL	Description of Engine
(a number)	Number specified by the code	Number of barrels for the engine (e.g. 4)
A*	1	Lower HP
B*	1	Higher HP
C	1	Turbo
D*	1	Turbo Low HP
E*	1	Turbo High HP
F	Unknown	A fuel injection rating code used when the manufacturer=s specifications do not show the number of barrels.
G	1	Electronically controlled
H	Unknown	A high performance rating code used when the manufacturer=s specifications do not show the number of barrels.
J*	2	Lower HP
K*	2	Higher HP
L	2	Turbo
M*	2	Turbo Low HP
N*	2	Turbo High HP
P	2	Electronically controlled
Q	Unknown	Electronically controlled
R	4	Electronically controlled
S*	4	Lower HP
T	1,2 or 4	Turbo Fuel Injected
U*	4	Higher HP
V	4	Turbo
W*	4	Turbo Low HP
X*	4	Turbo High HP
Y	Unknown	Turbo

Z	Unknown	Super Charged

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

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is equal to Trucks (T), Motorcycle (M) or unknown (U), then VINA CARBURETION (PASS VEH) will be blank.
SAS Codes: None.

VINA FUEL CODE (SAS: FUELCODE)

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

B	Electric and gasoline hybrid engine
C	Gasoline engine that can be easily converted to a gaseous powered engine (powered by natural gas, propane, etc.)
D	Diesel
E	Electric
F	Flexible Fuel
G	Gas
H	Ethanol Fuel Only
M	Methanol Fuel Only
N	Compressed Natural Gas
P	Propane

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA FUEL CODE will be blank.
SAS Codes: None.

VINA WEIGHT CODE (TRUCKS) (SAS: WGTCDTR)

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

1	6,000 and less
2	6,001 - 10,000
3	10,001 - 14,000
4	14,001 - 16,000
5	16,001 - 19,500
6	19,501 - 26,000

7	26,001 - 33,000
8	33,001 - and more
9	weight unknown

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

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

VINA VEHICLE TYPE (SAS: VEHTYPE)

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

P	Passenger Vehicle
T	Truck
M	Motorcycle
U	Unknown

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: None.
SAS Codes: None.

VINA WHEELS/DRIVING WHEELS (TRUCKS) (SAS: WHLDRWHL)

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

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

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

VINA DAYTIME RUNNING LIGHTS (SAS: DAYRUNLT)

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

S	Standard
O	Optional
N	Not Available
U	Unknown

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA DAYTIME RUNNING LIGHTS will be blank.
SAS Codes: None.

VINA BASE SHIPPING WEIGHT (PASS VEH & M/C) (SAS: VEHWGT)

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

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

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

VINA MOTORCYCLE CC's ENGINE DISPLACEMENT (SAS: MCYCLDS)

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

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).
Missing Value: If VINA VEHICLE TYPE is equal to Passenger Vehicle (P), Truck (T) or unknown (U), then VINA MOTORCYCLE CC's ENGINE DISPLACEMENT will be blank.
SAS Codes: "." for Blank.

VINA MODEL YEAR (SAS: VINMODYR)

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

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

Source: VEHICLE IDENTIFICATION NUMBER (GV08).

Missing Value: If VINA VEHICLE TYPE is unknown (U), then VINA MODEL YEAR will be blank.
SAS Codes: "." for Blank.

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

This single place numeric value indicates the single most severe injury level reported for this occupant of a towed CDS applicable 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 (OA70) variable on the occupant assessment record. Use the following order of codes: if "97", then code "7"; if "99", then code "9"; if "00", then code "0".
Source: A.I.S. SEVERITY (OI010...OI100) and NUMBER OF RECORDED INJURIES FOR THIS OCCUPANT (OA70).
Missing Values: None (if you do not have an occupant injury record, you will have an occupant assessment record for each occupant of a towed CDS applicable vehicle). Occupant injury and occupant assessment records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles -BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9. Occupant injury records will be missing for: (1)Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 97, 99 or 00; (2)Non-towed CDS applicable vehicles -BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9.
SAS Codes: .U for 9 (Unknown).

OCCUPANT I.S.S. (SAS: 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 using the following order of codes:

6	MAXIMUM (UNTREATABLE) INJURY
5	CRITICAL INJURY
4	SEVERE INJURY
3	SERIOUS INJURY

2	MODERATE INJURY
1	MINOR INJURY
0	NOT INJURED

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

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

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

BODY REGION - AIS-85 (SAS: BODYREG)

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

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

U	Injured, unknown region	O	Whole body
		W	Wrist - hand

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

Source: BODY REGION (AIS-90) (OI006...OI096), TYPE OF ANATOMIC STRUCTURE (OI007...OI097), SPECIFIC ANATOMIC STRUCTURE (OI008...OI098), LEVEL OF INJURY (OI009..OI099) and coded table.

Missing Values: Occupant injury records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles - BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9; (3) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00.

SAS Codes: None

LESION - AIS-85 (SAS: LESION)

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

A	Abrasion	Z	Fracture and dislocation
M	Amputation	U	Injured, unknown lesion
V	Avulsion	L	Laceration
B	Burn	O	Other
K	Concussion	P	Perforation, puncture
C	Contusion	R	Rupture
N	Crush	S	Sprain
G	Detachment, separation	T	Strain
D	Dislocation	E	Total severance, transection
F	Fracture		

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

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

Missing Values: Occupant injury records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles - BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9; (3) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE

DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00.
SAS Codes: None

SYSTEM ORGAN - AIS-85 (SAS: SYSORG)

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

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

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

Source: BODY REGION (AIS-90) (OI006...OI096), TYPE OF ANATOMIC STRUCTURE (OI007...OI097), SPECIFIC ANATOMIC STRUCTURE (OI008...OI098), LEVEL OF INJURY (OI009..OI099) and coded table.
Missing Values: Occupant injury records will be missing for: (1) Non CDS applicable vehicles-BODY TYPE (GV07) equals 50-99; (2) Non-towed CDS applicable vehicles - BODY TYPE (GV07) equals 01-49 AND POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 0 or 9; (3) Towed CDS applicable vehicles with no known occupant injuries-BODY TYPE (GV07) equals 01-49, POLICE REPORTED VEHICLE DISPOSITION (GV10) equals 1 and NUMBER OF RECORDED INJURIES THIS OCCUPANT (OA70) equals 99 or 00.
SAS Codes: None

SECTION 5

SAS FILE

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

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

SAS Data Base Contents

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

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

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

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

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

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

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

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

```
             The SAS System                    17:39 Thursday, July 30, 2009

                                The CONTENTS Procedure

                                      Directory

                            Libref          NASS2008
                            Engine          V9
                            Physical Name   e:\anal2008
                            File Name       e:\anal2008


                          Member      File
           #   Name       Type        Size   Last Modified

           1   ACCIDENT   DATA       386048  30Jul09:18:10:06
           2   ACC_DESC   DATA      2262016  30Jul09:18:10:06
           3   EVENT      DATA       398336  30Jul09:18:10:06
           4   GV         DATA      3228672  30Jul09:18:10:06
           5   OA         DATA      2556928  30Jul09:18:10:07
           6   OI         DATA      2073600  30Jul09:18:10:08
           7   PERS_PRO   DATA      2122752  30Jul09:18:10:06
           8   TYP_ACC    DATA       508928  30Jul09:18:10:05
           9   VE         DATA      1328128  30Jul09:18:10:06
          10   VEH_PRO    DATA       926720  30Jul09:18:10:06
          11   VI         DATA      1901568  30Jul09:18:10:07
```

The CONTENTS Procedure

Data Set Name	NASS2008.ACCIDENT	Observations	5167
Member Type	DATA	Variables	21
Engine	V9	Indexes	0
Created	Thursday, July 30, 2009 06:10:06 PM	Observation Length	72
Last Modified	Thursday, July 30, 2009 06:10:06 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	8192
Number of Data Set Pages	47
First Data Page	1
Max Obs per Page	113
Obs in First Data Page	64
Number of Data Set Repairs	0
File Name	e:\anal2008\accident.sas7bdat
Release Created	9.0101M3
Host Created	XP_PRO

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
1	AAIS	Num	3	MAXIMUM KNOWN AIS IN ACCIDENT
20	ADMINSS	Num	3	ADMINISTRATIVE USE
2	AINJSER	Num	3	NUMBER OF SERIOUSLY INJURED OCCUPANTS
3	AINJURED	Num	3	TOTAL NUMBER OF INJURED OCCUPANTS
4	ALCINV	Num	3	ALCOHOL INVOLVED IN ACCIDENT
5	ATREAT	Num	3	MAXIMUM TREATMENT IN ACCIDENT
6	CASEID	Char	4	CASE NUMBER - STRATUM
7	CASENO	Num	3	CASE SEQUENCE NUMBER
8	DAYWEEK	Num	3	DAY OF WEEK OF ACCIDENT
9	DRGINV	Num	3	DRUG INVOLVED
10	EVENTS	Num	3	NUMBER OF RECORDED EVENTS IN ACCIDENT
11	MANCOLL	Num	3	MANNER OF COLLISION
12	MONTH	Num	3	MONTH OF ACCIDENT
13	PSU	Num	3	PRIMARY SAMPLING UNIT NUMBER
14	PSUSTRAT	Num	3	PRIMARY SAMPLING UNIT STRATIFICATION
15	RATWGT	Num	8	RATIO INFLATION FACTOR
16	STRATIF	Char	1	CASE STRATUM
17	TIME	Num	4	TIME OF ACCIDENT
18	VEHFORMS	Num	3	NUMBER GENERAL VEHICLE FORMS SUBMITTED
21	VERSION	Num	3	VERSION NUMBER
19	YEAR	Num	3	YEAR OF ACCIDENT

Sort Information

Sorted by	PSU CASENO
Validated	YES
Character Set	ANSI

The CONTENTS Procedure

Data Set Name	NASS2008.ACC_DESC	Observations	23112
Member Type	DATA	Variables	7
Engine	V9	Indexes	0
Created	Thursday, July 30, 2009 06:10:05 PM	Observation Length	97
Last Modified	Thursday, July 30, 2009 06:10:05 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	8192
Number of Data Set Pages	276
First Data Page	1
Max Obs per Page	84
Obs in First Data Page	65
Number of Data Set Repairs	0
File Name	e:\anal2008\acc_desc.sas7bdat
Release Created	9.0101M3
Host Created	XP_PRO

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
6	CASEID	Char	4	CASE NUMBER – STRATUM
3	CASENO	Num	3	CASE SEQUENCE NUMBER
5	LINENO	Num	3	LINE NUMBER
2	PSU	Num	3	PRIMARY SAMPLING UNIT NUMBER
4	STRATIF	Char	1	CASE STRATUM
1	TEXT71	Char	80	SUMMARY TEXT
7	VERSION	Num	3	VERSION NUMBER

Sort Information

Sorted by	PSU CASENO LINENO
Validated	YES
Character Set	ANSI

The CONTENTS Procedure

Data Set Name	NASS2008.EVENT	Observations	9716
Member Type	DATA	Variables	13
Engine	V9	Indexes	0
Created	Thursday, July 30, 2009 06:10:06 PM	Observation Length	40
Last Modified	Thursday, July 30, 2009 06:10:06 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

```
Data Set Page Size          4096
Number of Data Set Pages    97
First Data Page             1
Max Obs per Page            101
Obs in First Data Page      37
Number of Data Set Repairs  0
File Name                   e:\anal2008\event.sas7bdat
Release Created             9.0101M3
Host Created                XP_PRO
```

Alphabetic List of Variables and Attributes

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

Sort Information

```
Sorted by      PSU CASENO ACCSEQ
Validated      YES
Character Set   ANSI
```

The CONTENTS Procedure

Data Set Name	NASS2008.GV	Observations	9402
Member Type	DATA	Variables	102
Engine	V9	Indexes	0
Created	Thursday, July 30, 2009 06:10:06 PM	Observation Length	336
Last Modified	Thursday, July 30, 2009 06:10:06 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	16384
Number of Data Set Pages	197
First Data Page	1
Max Obs per Page	48
Obs in First Data Page	9
Number of Data Set Repairs	0
File Name	e:\anal2008\gv.sas7bdat
Release Created	9.0101M3
Host Created	XP_PRO

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
1	ACCSEQDV	Num	3	ACCIDENT SEQUENCE NO FOR HIGHEST DELTA V
2	ACCTYPE	Num	3	ACCIDENT TYPE
3	ALCTEST	Num	3	ALCOHOL TEST RESULT FOR DRIVER
44	ALIGNMNT	Num	3	ROADWAY ALIGNMENT
5	ANGOTHER	Num	3	HEADING ANGLE FOR OTHER VEHICLE
4	ANGTHIS	Num	3	HEADING ANGLE FOR THIS VEHICLE
87	ANTILOCK	Num	3	ANTILOCK BRAKES
7	BAREQSP	Num	3	BARRIER EQUIVALENT SPEED
8	BODYTYPE	Num	3	VEHICLE BODY TYPE
91	CARBUR	Char	1	CARBURETION
9	CARGOWGT	Num	3	VEHICLE CARGO WEIGHT
10	CASEID	Char	4	CASE NUMBER – STRATUM
11	CASENO	Num	3	CASE SEQUENCE NUMBER
6	CLIMATE	Num	3	WEATHER
12	CONDTREE	Num	3	POST COLLISION CONDITION OF TREE OR POLE
13	CURBWGT	Num	4	VEHICLE CURB WEIGHT
96	DAYRUNLT	Char	1	DAYLIGHT RUNNING LIGHTS
15	DOCTRAJ	Num	3	DOCUMENTATION OF TRAJECTORY DATA
17	DRINKING	Num	3	POLICE REPORTED ALCOHOL PRESENCE
16	DRIVDIST	Num	3	DRIVER'S DISTRACTION/INATTENTION TO DRIVING
18	DRPRES	Num	3	DRIVER PRESENCE IN VEHICLE
74	DRUGS	Num	3	REPORTED OTHER DRUG
19	DRZIP	Num	4	DRIVER'S ZIP CODE
20	DVBASIS	Num	3	BASIS FOR TOTAL DELTA V (HIGHEST)
21	DVCONFID	Num	3	CONFIDENCE IN RECONSTRUCTION
14	DVEST	Num	3	ESTIMATED HIGHEST DELTA V
22	DVLAT	Num	3	LATERAL COMPONENT OF DELTA V
23	DVLONG	Num	3	LONGITUDINAL COMPONENT OF DELTA V
24	DVTOTAL	Num	3	TOTAL DELTA V
25	ENERGY	Num	4	ENERGY ABSORPTION
26	ETHNICIT	Num	3	ETHNICITY
89	FOURWHDR	Char	1	FOUR WHEEL DRIVE
27	FOVERIDE	Num	3	FRONT OVERRIDE/UNDERRIDE THIS VEHICLE
88	FRTWHLDR	Char	1	FRONT WHEEL DRIVE
92	FUELCODE	Char	1	FUEL CODE

```
 28    IMPACTSP    Num     3    IMPACT SPEED
 29    INSPTYPE    Num     3    TYPE OF VEHICLE INSPECTION
 55    INTEROLL    Num     3    INTERRUPTED ROLLOVER
 30    LANES       Num     3    NUMBER OF LANES
 31    LGTCOND     Num     3    LIGHT CONDITIONS
 32    MAKE        Num     3    VEHICLE MAKE
 33    MANEUVER    Num     3    ATTEMPTED AVOIDANCE MANEUVER
 78    MCYCLDS     Num     4    MOTORCYCLE ENGINE DISPLACEMENT
 34    MODEL       Num     3    VEHICLE MODEL
 35    MODELYR     Num     4    VEHICLE MODEL YEAR
 36    OCCFORMS    Num     3    NUMBER OF OCCUPANT FORMS SUBMITTED
 37    OCUPANTS    Num     3    NUMBER OF OCCUPANTS THIS VEHICLE
 39    PREEVENT    Num     3    INITIAL CRITICAL (PRECRASH) EVENT
 41    PREILOC     Num     3    PRE-IMPACT LOCATION
 42    PREISTAB    Num     3    PRE-IMPACT STABILITY
 40    PREMOVE     Num     3    PRE-EVENT MOVEMENT PRIOR REC CRIT EVENT
 46    PROFILE     Num     3    ROADWAY PROFILE
 54    PROLLMAN    Num     3    PRE ROLLOVER MANEUVER
 43    PSU         Num     3    PRIMARY SAMPLING UNIT NUMBER
 48    RACE        Num     3    RACE
 38    RATWGT      Num     8    RATIO INFLATION FACTOR
 49    RELINTER    Num     3    RELATION TO JUNCTION
 90    RESTYPE     Char    1    RESTRAINT TYPE
 50    ROLINDIR    Num     3    DIRECTION OF INITIAL ROLL
 51    ROLINLOC    Num     3    LOCATION OF ROLLOVER
 52    ROLINTYP    Num     3    ROLLOVER INITIATION TYPE
 56    ROLLDIST    Num     3    ESTIMATED DISTANCE OF ROLLOVER
 53    ROLLOBJ     Num     3    ROLLOVER INITIATION OBJECT CONTACTED
 57    ROLLOVER    Num     3    ROLLOVER
 84    ROOF1       Num     3    ROOF
 85    ROOF2       Num     3    OPTIONAL ROOF 1
 86    ROOF3       Num     3    OPTIONAL ROOF 2
 58    ROVERIDE    Num     3    REAR OVERRIDE/UNDERRIDE THIS VEHICLE
 82    SERTR       Char    3    VIN SERIES TRUCK
 59    SPECOTH     Num     3    OTHER DRUG: SPECIMEN TEST RESULTS
 60    SPLIMIT     Num     3    SPEED LIMIT
 61    STRATIF     Char    1    CASE STRATUM
 45    SURCOND     Num     3    ROADWAY SURFACE CONDITION
 47    SURTYPE     Num     3    ROADWAY SURFACE TYPE
 62    TOWHITCH    Num     3    TOWED TRAILING UNIT
 63    TOWPAR      Num     3    POLICE REPORTED VEHICLE DISPOSITION
 64    TRAFCONT    Num     3    TRAFFIC CONTROL DEVICE
 68    TRAFFLOW    Num     3    TRAFFICWAY FLOW
 65    TRANSTAT    Num     3    TRANSPORT STATUS
 67    TRAVELSP    Num     3    POLICE REPORTED TRAVEL SPEED
 66    TRCTLFCT    Num     3    TRAFFIC CONTROL DEVICE FUNCTIONING
 69    TRIPLOC     Num     3    LOC. ON VEH. WHERE INIT TRIP FORCE APPL
102    VAIS        Num     8    MAXIMUM KNOWN AIS IN THIS VEHICLE
 70    VEHNO       Num     3    VEHICLE NUMBER
 94    VEHTYPE     Char    1    TYPE OF VEHICLE
 71    VEHUSE      Num     3    VEHICLE SPECIAL USE
 79    VEHWGT      Num     4    VIN VEHICLE WEIGHT
 76    VERSION     Num     3    VERSION NUMBER
 72    VIN         Char   12    VEHICLE IDENTIFICATION NUMBER
 81    VINAMOD     Char    3    VIN MODEL CARS AND TRUCKS
 83    VINBT       Char    2    VIN BODY TYPE
 99    VINJSER     Num     8    NUMBER SERIOUSLY INJURED IN THIS VEHICLE
100    VINJURED    Num     8    NUMBER INJURED IN THIS VEHICLE
 73    VINLNGTH    Num     3    VIN LENGTH
 80    VINMAKE     Char    4    VIN MAKE
 77    VINMODYR    Num     4    VIN MODEL YEAR
 75    VINO        Num     3    VINO
101    VTREAT      Num     8    MAXIMUM TREATMENT IN THIS VEHICLE
 93    WGTCDTR     Num     3    TRUCK WEIGHT CODE
 95    WHLDRWHL    Num     3    NUMBER WHEELS/NUMBER OF DRIVE WHEELS
 98    OTBDYTYP    Num     3    BODY TYPE OF THE OTHER VEHICLE
 97    OTVEHWGT    Num     4    WEIGHT OF THE OTHER VEHICLE
```

```
                              Sort Information

                    Sorted by      PSU CASENO VEHNO
                    Validated      YES
                    Character Set  ANSI



             The SAS System              17:39 Thursday, July 30, 2009

                          The CONTENTS Procedure

Data Set Name      NASS2008.OA                  Observations          10833
Member Type        DATA                         Variables             76
Engine             V9                           Indexes               0
Created            Thursday, July 30, 2009 06:10:07 PM  Observation Length  232
Last Modified      Thursday, July 30, 2009 06:10:07 PM  Deleted Observations  0
Protection                                      Compressed            NO
Data Set Type                                   Sorted                YES
Label
Data Representation WINDOWS_32
Encoding           wlatin1  Western (Windows)


                    Engine/Host Dependent Information

             Data Set Page Size           16384
             Number of Data Set Pages     156
             First Data Page              1
             Max Obs per Page             70
             Obs in First Data Page       25
             Number of Data Set Repairs   0
             File Name                    e:\anal2008\oa.sas7bdat
             Release Created              9.0101M3
             Host Created                 XP_PRO


               Alphabetic List of Variables and Attributes

   #    Variable   Type   Len    Label

   1    ABELTAVL   Num    3      AUTOMATIC BELT SYSTEM AVAILABILITY/FUNC
   2    ABELTUSE   Num    3      AUTOMATIC BELT (PASSIVE) SYSTEM USE
   3    ABELTYPE   Num    3      AUTOMATIC (PASSIVE) BELT SYSTEM TYPE
   4    ABLTFAIL   Num    3      AUTOMATIC (PASSIVE) BELT SYSTEM FAILURE
   5    AGE        Num    3      AGE OF OCCUPANT
   6    BAGAVAIL   Num    3      AIR BAG SYSTEM AVAILABILITY
  50    BAGAVOTH   Num    3      OTHER FRONTAL AIR BAG AVAILABILITY/FUNCTION
   7    BAGAVRPT   Num    3      POLICE REPORTED AIRBAG AVAILABILITY/FUNCTION
  19    BAGCDC     Num    3      CDC FOR AIR BAG DEPLOYMENT IMPACT
  10    BAGDAMAG   Num    3      WAS THERE DAMAGE TO THE AIR BAG
  64    BAGDAMSO   Num    3      SOURCE OF AIR BAG DAMAGE
   8    BAGDEPLY   Num    3      AIR BAG SYSTEM DEPLOYED
  51    BAGDEPOT   Num    3      OTHER AIR BAG SYSTEM DEPLOYMENT
   9    BAGEVENT   Num    3      AIR BAG DEPLOYMENT ACCIDENT EVENT SEQUENCE NUMBER
  11    BAGFAIL    Num    3      AIR BAG SYSTEM FAILURE
  32    BAGFLDAM   Num    3      WERE AIR BAG MODULE COVER FLAPS DAMAGED
  33    BAGFLOPN   Num    3      DID AIR BAG MODULE COVER FLAPS OPEN AT DESG TEAR PTS
  40    BAGMAINT   Num    3      PRIOR MAINTENANCE/SERVICE ON AIR BAG
  12    BAGTYPE    Num    3      TYPE OF AIR BAG
  13    BELTANCH   Num    3      SHOULDER BELT UPPER ANCHORAGE ADJUSTMENT
  54    BELTSOU    Num    3      PRIMARY SOURCE OF BELT USE DETERMINATION
  75    BICARB     Num    3      ARTERIAL BLOOD GASES (ABG) HC03
  74    BLOOD      Num    3      WAS THE OCCUPANT GIVEN BLOOD?
  14    CASEID     Char   4      CASE NUMBER - STRATUM
  15    CASENO     Num    3      CASE SEQUENCE NUMBER
  16    CAUSE1     Num    3      1ST MEDICALLY REPORTED CAUSE OF DEATH
```

```
17   CAUSE2      Num    3    2ND MEDICALLY REPORTED CAUSE OF DEATH
18   CAUSE3      Num    3    3RD MEDICALLY REPORTED CAUSE OF DEATH
20   CHHARNES    Num    3    CHILD SAFETY SEAT HARNESS USAGE
21   CHMAKE      Num    3    CHILD SAFETY SEAT MAKE/MODEL
22   CHORIENT    Num    3    CHILD SAFETY SEAT ORIENTATION
23   CHSHIELD    Num    3    CHILD SAFETY SEAT SHIELD USAGE


24   CHTETHER    Num    3    CHILD SAFETY SEAT TETHER USAGE
25   CHTYPE      Num    3    TYPE OF CHILD SAFETY SEAT
26   DEATH       Num    3    TIME TO DEATH
27   DVBAG       Num    3    LONGITUDINAL COMPONENT OF DELTA V FOR AIR BAG
28   EJCTAREA    Num    3    EJECTION AREA
29   EJCTMED     Num    3    EJECTION MEDIUM
30   EJECTION    Num    3    EJECTION
31   ENTRAP      Num    3    ENTRAPMENT
47   EYEWEAR     Num    3    WAS THE OCCUPANT WEARING EYE-WEAR
53   FETALDOA    Num    3    FETAL MORTALITY
73   GLASGOW     Num    3    GLASGOW COMA SCALE (GCS) SCORE
34   HEADREST    Num    3    HEAD RESTRAINT TYPE/DAMAGE BY OCCUPANT
35   HEIGHT      Num    3    HEIGHT OF OCCUPANT
36   HOSPSTAY    Num    3    HOSPITAL STAY
37   INJNUM      Num    3    NUMBER RECORDED INJURIES THIS OCCUPANT
38   INJSEV      Num    3    INJURY SEVERITY (POLICE RATING)
39   ISS         Num    3    INJURY SEVERITY SCORE
41   MAIS        Num    3    MAXIMUM KNOWN OCCUPANT AIS
42   MANAVAIL    Num    3    MANUAL BELT SYSTEM AVAILABILITY
43   MANFAIL     Num    3    MANUAL BELT FAILURE MODE DURING ACCIDENT
44   MANUSE      Num    3    MANUAL BELT SYSTEM USE
46   MEDFACIL    Num    3    TYPE MEDICAL FACILITY INITIAL TREATMENT
45   MEDSTA      Num    3    MEDIUM STATUS (PRIOR TO IMPACT)
48   OCCMOBIL    Num    3    OCCUPANT MOBILITY
49   OCCNO       Num    3    OCCUPANT NUMBER
52   PARUSE      Num    3    POLICE REPORTED RESTRAINT USE
55   POSTURE     Num    3    OCCUPANT'S POSTURE
56   PREVACC     Num    3    HAD VEHICLE BEEN IN PREVIOUS ACCIDENTS
57   PSU         Num    3    PRIMARY SAMPLING UNIT NUMBER
58   RATWGT      Num    8    RATIO INFLATION FACTOR
59   ROLE        Num    3    OCCUPANT'S ROLE
60   SEATPERF    Num    3    SEAT PERFORMANCE (THIS POSITION)
61   SEATPOS     Num    3    OCCUPANT'S SEAT POSITION
67   SEATRACK    Num    3    SEAT TRACK ADJUSTED POSITION PRIOR TO IMPACT
62   SEATTYPE    Num    3    SEAT TYPE (THIS OCCUPANT POSITION)
63   SEX         Num    3    OCCUPANT'S SEX
65   STBACINC    Num    3    SEAT BACK INCLINE PRIOR AND POST IMPACT
72   STORIENT    Num    3    SEAT ORIENTATION (THIS OCCUPANT POS.)
66   STRATIF     Char   1    CASE STRATUM
68   TREATMNT    Num    3    TREATMENT - MORTALITY
69   VEHNO       Num    3    VEHICLE NUMBER
76   VERSION     Num    3    VERSION NUMBER
70   WEIGHT      Num    3    OCCUPANT'S WEIGHT
71   WORKDAYS    Num    3    WORKING DAYS LOST


                        Sort Information

            Sorted by      PSU CASENO VEHNO OCCNO
            Validated      YES
            Character Set  ANSI
```

The CONTENTS Procedure

Data Set Name	NASS2008.OI	Observations	28471
Member Type	DATA	Variables	23
Engine	V9	Indexes	0
Created	Thursday, July 30, 2009 06:10:07 PM	Observation Length	72
Last Modified	Thursday, July 30, 2009 06:10:07 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	8192
Number of Data Set Pages	253
First Data Page	1
Max Obs per Page	113
Obs in First Data Page	62
Number of Data Set Repairs	0
File Name	e:\anal2008\oi.sas7bdat
Release Created	9.0101M3
Host Created	XP_PRO

Alphabetic List of Variables and Attributes

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

            The SAS System   17:39 Thursday, July 30, 2009

                          The CONTENTS Procedure

Data Set Name   NASS2008.PERS_PRO   Observations   21701
Member Type   DATA   Variables   7
Engine   V9   Indexes   0
Created   Thursday, July 30, 2009 06:10:06 PM   Observation Length   97
Last Modified   Thursday, July 30, 2009 06:10:06 PM   Deleted Observations 0
Protection   Compressed   NO
Data Set Type   Sorted   YES
Label
Data Representation   WINDOWS_32
Encoding   wlatin1 Western (Windows)

                        Engine/Host Dependent Information

              Data Set Page Size   8192
              Number of Data Set Pages   259
              First Data Page   1
              Max Obs per Page   84
              Obs in First Data Page   65
              Number of Data Set Repairs 0
              File Name   e:\anal2008\pers_pro.sas7bdat
              Release Created   9.0101M3
              Host Created   XP_PRO

                 Alphabetic List of Variables and Attributes

            #   Variable   Type   Len   Label

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

                              Sort Information

                  Sorted by   PSU CASENO LINENO
                  Validated   YES
                  Character Set ANSI

The SAS System   17:39 Thursday, July 30, 2009

The CONTENTS Procedure

Data Set Name   NASS2008.TYP_ACC   Observations   5167
Member Type   DATA   Variables   7
Engine   V9   Indexes   0
Created   Thursday, July 30, 2009 06:10:05 PM   Observation Length   97
Last Modified   Thursday, July 30, 2009 06:10:05 PM   Deleted Observations   0
Protection   Compressed   NO
Data Set Type   Sorted   YES
Label
Data Representation   WINDOWS_32
Encoding   wlatin1 Western (Windows)

                    Engine/Host Dependent Information

        Data Set Page Size   8192
        Number of Data Set Pages   62
        First Data Page   1
        Max Obs per Page   84
        Obs in First Data Page   65
        Number of Data Set Repairs 0
        File Name   e:\anal2008\typ_acc.sas7bdat
        Release Created   9.0101M3
        Host Created   XP_PRO

                Alphabetic List of Variables and Attributes

        #   Variable   Type   Len   Label

        6   CASEID   Char   4   CASE NUMBER - STRATUM
        3   CASENO   Num   3   CASE SEQUENCE NUMBER
        5   LINENO   Num   3   LINE NUMBER
        2   PSU   Num   3   PRIMARY SAMPLING UNIT NUMBER
        4   STRATIF   Char   1   CASE STRATUM
        1   TEXT66   Char   80   SUMMARY TEXT
        7   VERSION   Num   3   VERSION NUMBER

                        Sort Information

            Sorted by   PSU CASENO LINENO
            Validated   YES
            Character Set   ANSI

```
                  The SAS System              17:39 Thursday, July 30, 2009

                          The CONTENTS Procedure

Data Set Name          NASS2008.VE                  Observations          7062
Member Type            DATA                         Variables             63
Engine                 V9                           Indexes               0
Created                Thursday, July 30, 2009 06:10:06 PM   Observation Length    184
Last Modified          Thursday, July 30, 2009 06:10:06 PM   Deleted Observations  0
Protection                                          Compressed            NO
Data Set Type                                       Sorted                YES
Label
Data Representation    WINDOWS_32
Encoding               wlatin1  Western (Windows)


                    Engine/Host Dependent Information

              Data Set Page Size         16384
              Number of Data Set Pages   81
              First Data Page            1
              Max Obs per Page           88
              Obs in First Data Page     41
              Number of Data Set Repairs 0
              File Name                  e:\anal2008\ve.sas7bdat
              Release Created            9.0101M3
              Host Created               XP_PRO


                 Alphabetic List of Variables and Attributes

   #    Variable   Type    Len     Label

   1    ACCSEQ1    Num     3       ACCIDENT EVENT SEQUENCE (HIGHEST)
   2    ACCSEQ2    Num     3       ACCIDENT EVENT SEQUENCE (2ND HIGHEST)
   3    ALTVEH     Num     3       MULTI-STAGE MANUFACTURED/CERT. ALT. VEH.
   5    CASEID     Char    4       CASE NUMBER - STRATUM
   6    CASENO     Num     3       CASE SEQUENCE NUMBER
   7    DIRDAMW    Num     3       DIRECT DAMAGE WIDTH
   8    DOCCDC     Num     3       CDCs DOCUMENTED BUT NOT CODED ON FILE?
  17    DOF1       Num     3       DIRECTION OF FORCE (HIGHEST)
  18    DOF2       Num     3       DIRECTION OF FORCE (2ND HIGHEST)
   9    DVC1       Num     3       CRUSH PROFILE C1 (HIGHEST)
  10    DVC2       Num     3       CRUSH PROFILE C2 (HIGHEST)
  11    DVC3       Num     3       CRUSH PROFILE C3 (HIGHEST)
  12    DVC4       Num     3       CRUSH PROFILE C4 (HIGHEST)
  13    DVC5       Num     3       CRUSH PROFILE C5 (HIGHEST)
  14    DVC6       Num     3       CRUSH PROFILE C6 (HIGHEST)
  15    DVD        Num     3       CRUSH PROFILE D (HIGHEST)
  16    DVL        Num     3       CRUSH PROFILE L (HIGHEST)
  20    EXTENT1    Num     3       DEFORMATION EXTENT (HIGHEST)
  21    EXTENT2    Num     3       DEFORMATION EXTENT (2ND HIGHEST)
```

```
24    FIRE       Num    3    FIRE OCCURRENCE
25    FIREORIG   Num    3    ORIGIN OF FIRE
22    FUELCAP1   Num    3    LOCATION OF FUEL TANK-1 FILLER CAP
23    FUELCAP2   Num    3    LOCATION OF FUEL TANK-2 FILLER CAP
26    FUELDAM1   Num    3    DAMAGE TO FUEL TANK-1
27    FUELDAM2   Num    3    DAMAGE TO FUEL TANK-2
36    FUELEAK1   Num    3    LEAKAGE LOCATION OF FUEL SYSTEM-1
37    FUELEAK2   Num    3    LEAKAGE LOCATION OF FUEL SYSTEM-2
38    FUELGT2    Num    3    EQUIPPED WITH MORE THAN TWO FUEL TANKS
30    FUELLOC1   Num    3    LOCATION OF FUEL TANK-1
31    FUELLOC2   Num    3    LOCATION OF FUEL TANK-2
32    FUELTNK1   Num    3    TYPE OF FUEL TANK-1
33    FUELTNK2   Num    3    TYPE OF FUEL TANK-2
34    FUELTYP1   Num    3    FUEL TYPE-1
35    FUELTYP2   Num    3    FUEL TYPE-2
28    GAD1       Char   1    DEFORMATION LOCATION (HIGHEST)
29    GAD2       Char   1    DEFORMATION LOCATION (2ND HIGHEST)
39    OBJCONT1   Num    3    OBJECT CONTACTED (HIGHEST)
40    OBJCONT2   Num    3    OBJECT CONTACTED (2ND HIGHEST)
 4    ORIGAVTW   Num    3    ORIGINAL AVERAGE TRACK WIDTH
41    PDOF1      Num    3    CLOCK DIRECTION FOR PDOF IN DEGREES (HIGHEST CDC)
42    PDOF2      Num    3    CLOCK DIRECTION FOR PDOF IN DEG. (2ND HIGHEST CDC)
43    PSU        Num    3    PRIMARY SAMPLING UNIT NUMBER
44    RATWGT     Num    8    RATIO INFLATION FACTOR
45    SDVC1      Num    3    CRUSH PROFILE C1 (2ND HIGHEST)
46    SDVC2      Num    3    CRUSH PROFILE C2 (2ND HIGHEST)
47    SDVC3      Num    3    CRUSH PROFILE C3 (2ND HIGHEST)
48    SDVC4      Num    3    CRUSH PROFILE C4 (2ND HIGHEST)
49    SDVC5      Num    3    CRUSH PROFILE C5 (2ND HIGHEST)
50    SDVC6      Num    3    CRUSH PROFILE C6 (2ND HIGHEST)
51    SDVD       Num    3    CRUSH PROFILE D (2ND HIGHEST)
52    SDVL       Num    3    CRUSH PROFILE L (2ND HIGHEST)
53    SHL1       Char   1    SPECIFIC LONGITUDINAL LOCATION (HIGHEST)
54    SHL2       Char   1    SPECIFIC LONGITUDINAL LOC. (2ND HIGHEST)
55    STRATIF    Char   1    CASE STRATUM
56    SVL1       Char   1    SPECIFIC VERTICAL LOCATION (HIGHEST)
57    SVL2       Char   1    SPECIFIC VERTICAL LOCATION (2ND HIGHEST)
58    TDD1       Char   1    TYPE OF DAMAGE DISTRIBUTION (HIGHEST)
59    TDD2       Char   1    TYPE OF DAMAGE DISTRIBUTION(2ND HIGHEST)
60    TOWRES     Num    3    RESEARCHER ASSESSMNT VEHICLE DISPOSITION
19    UNDENDW    Num    3    UNDEFORMED END WIDTH
61    VEHNO      Num    3    VEHICLE NUMBER
63    VERSION    Num    3    VERSION NUMBER
62    WHEELBAS   Num    8    ORIGINAL WHEELBASE
```

Sort Information

```
Sorted by      PSU CASENO VEHNO
Validated      YES
Character Set  ANSI
```

```
                The SAS System              17:39 Thursday, July 30, 2009

                          The CONTENTS Procedure

Data Set Name          NASS2008.VEH_PRO                  Observations          9402
Member Type            DATA                              Variables             7
Engine                 V9                                Indexes               0
Created                Thursday, July 30, 2009 06:10:06 PM   Observation Length    97
Last Modified          Thursday, July 30, 2009 06:10:06 PM   Deleted Observations  0
Protection                                               Compressed            NO
Data Set Type                                            Sorted                YES
Label
Data Representation    WINDOWS_32
Encoding               wlatin1  Western (Windows)


                    Engine/Host Dependent Information

          Data Set Page Size         8192
          Number of Data Set Pages   113
          First Data Page            1
          Max Obs per Page           84
          Obs in First Data Page     65
          Number of Data Set Repairs 0
          File Name                  e:\anal2008\veh_pro.sas7bdat
          Release Created            9.0101M3
          Host Created               XP_PRO


                 Alphabetic List of Variables and Attributes

     #     Variable    Type    Len     Label

     6     CASEID      Char      4     CASE NUMBER - STRATUM
     3     CASENO      Num       3     CASE SEQUENCE NUMBER
     5     LINENO      Num       3     LINE NUMBER
     2     PSU         Num       3     PRIMARY SAMPLING UNIT NUMBER
     4     STRATIF     Char      1     CASE STRATUM
     1     TEXT81      Char     80     SUMMARY TEXT
     7     VERSION     Num       3     VERSION NUMBER


                           Sort Information

               Sorted by       PSU CASENO LINENO
               Validated       YES
               Character Set   ANSI
```

The CONTENTS Procedure

Data Set Name	NASS2008.VI	Observations	6061
Member Type	DATA	Variables	98
Engine	V9	Indexes	0
Created	Thursday, July 30, 2009 06:10:06 PM	Observation Length	304
Last Modified	Thursday, July 30, 2009 06:10:06 PM	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label			
Data Representation	WINDOWS_32		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	16384
Number of Data Set Pages	116
First Data Page	1
Max Obs per Page	53
Obs in First Data Page	9
Number of Data Set Repairs	0
File Name	e:\anal2008\vi.sas7bdat
Release Created	9.0101M3
Host Created	XP_PRO

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
49	ADAPTEQ	Num	3	ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT
1	CASEID	Char	4	CASE NUMBER – STRATUM
2	CASENO	Num	3	CASE SEQUENCE NUMBER
51	CDRIR1	Num	3	1ST DOMINANT CRUSH DIRECTION
55	CDRIR2	Num	3	2ND DOMINANT CRUSH DIRECTION
59	CDRIR3	Num	3	3RD DOMINANT CRUSH DIRECTION
63	CDRIR4	Num	3	4TH DOMINANT CRUSH DIRECTION
67	CDRIR5	Num	3	5TH DOMINANT CRUSH DIRECTION
71	CDRIR6	Num	3	6TH DOMINANT CRUSH DIRECTION
75	CDRIR7	Num	3	7TH DOMINANT CRUSH DIRECTION
79	CDRIR8	Num	3	8TH DOMINANT CRUSH DIRECTION
83	CDRIR9	Num	3	9TH DOMINANT CRUSH DIRECTION
87	CDRIR10	Num	3	10TH DOMINANT CRUSH DIRECTION
96	COLMTELE	Num	3	TELESCOPING STEERING COLUMN ADJUSTMENT
97	COLMTILT	Num	3	TILT STEERING COLUMN ADJUSTMENT
50	COLUMTYP	Num	3	STEERING COLUMN TYPE
3	FAILLF	Num	3	LF DAMAGE/FAILURE ASSOCIATED W
4	FAILLR	Num	3	LR DAMAGE/FAILURE - OPENING IN COLLISION
5	FAILRF	Num	3	RF DAMAGE/FAILURE - OPENING IN COLLISION
6	FAILRR	Num	3	RR DAMAGE/FAILURE - OPENING IN COLLISION

7	FAILTG	Num	3	TG DAMAGE/FAILURE - OPENING IN COLLISION
8	GLIMPBL	Num	3	BL GLAZING DAMAGE FROM IMPACT FORCES
9	GLIMPLF	Num	3	LF GLAZING DAMAGE FROM IMPACT FORCES
10	GLIMPLR	Num	3	LR GLAZING DAMAGE FROM IMPACT FORCES
11	GLIMPOTH	Num	3	OTHER GLAZING DAMAGE FROM IMPACT FORCES
12	GLIMPRF	Num	3	RF GLAZING DAMAGE FROM IMPACT FORCES
13	GLIMPRR	Num	3	RR GLAZING DAMAGE FROM IMPACT FORCES
14	GLIMPRUF	Num	3	ROOF GLAZING DAMAGE FROM IMPACT FORCES
15	GLIMPWS	Num	3	WS GLAZING DAMAGE FROM IMPACT FORCES
16	GLOCCBL	Num	3	BL GLAZING DAMAGE FROM OCCUPANT CONTACT
17	GLOCCLF	Num	3	LF GLAZING DAMAGE FROM OCCUPANT CONTACT
18	GLOCCLR	Num	3	LR GLAZING DAMAGE FROM OCCUPANT CONTACT
19	GLOCCOTH	Num	3	OTHER GLAZING DAMAGE FROM OCC. CONTACT
20	GLOCCRF	Num	3	RF GLAZING DAMAGE FROM OCCUPANT CONTACT
21	GLOCCRR	Num	3	RR GLAZING DAMAGE FROM OCCUPANT CONTACT
22	GLOCCRUF	Num	3	ROOF GLAZING DAMAGE FROM OCC. CONTACT
23	GLOCCWS	Num	3	WS GLAZING DAMAGE FROM OCCUPANT CONTACT
24	GLPREBL	Num	3	BL WINDOW PRECRASH GLAZING STATUS
25	GLPRELF	Num	3	LF WINDOW PRECRASH GLAZING STATUS
26	GLPRELR	Num	3	LR WINDOW PRECRASH GLAZING STATUS
27	GLPREOTH	Num	3	OTHER WINDOW PRECRASH GLAZING STATUS
28	GLPRERF	Num	3	RF WINDOW PRECRASH GLAZING STATUS
29	GLPRERR	Num	3	RR WINDOW PRECRASH GLAZING STATUS
30	GLPRERUF	Num	3	ROOF WINDOW PRECRASH GLAZING STATUS
31	GLPREWS	Num	3	WS WINDOW PRECRASH GLAZING STATUS
32	GLTYPBL	Num	3	BL TYPE OF WINDOW/WINDSHIELD GLAZING
33	GLTYPLF	Num	3	LF TYPE OF WINDOW/WINDSHIELD GLAZING
34	GLTYPLR	Num	3	LR TYPE OF WINDOW/WINDSHIELD GLAZING
35	GLTYPOTH	Num	3	OTHER TYPE OF WINDOW/WINDSHIELD GLAZING
36	GLTYPRF	Num	3	RF TYPE OF WINDOW/WINDSHIELD GLAZING
37	GLTYPRR	Num	3	RR TYPE OF WINDOW/WINDSHIELD GLAZING
38	GLTYPRUF	Num	3	ROOF TYPE OF WINDOW/WINDSHIELD GLAZING
39	GLTYPWS	Num	3	WS TYPE OF WINDOW/WINDSHIELD GLAZING
53	INCOMP1	Num	3	1ST INTRUDING COMPONENT
57	INCOMP2	Num	3	2ND INTRUDING COMPONENT
61	INCOMP3	Num	3	3RD INTRUDING COMPONENT
65	INCOMP4	Num	3	4TH INTRUDING COMPONENT
69	INCOMP5	Num	3	5TH INTRUDING COMPONENT
73	INCOMP6	Num	3	6TH INTRUDING COMPONENT
77	INCOMP7	Num	3	7TH INTRUDING COMPONENT
81	INCOMP8	Num	3	8TH INTRUDING COMPONENT
85	INCOMP9	Num	3	9TH INTRUDING COMPONENT
89	INCOMP10	Num	3	10TH INTRUDING COMPONENT
52	INLOC1	Num	3	1ST LOCATION OF INTRUSION
56	INLOC2	Num	3	2ND LOCATION OF INTRUSION
60	INLOC3	Num	3	3RD LOCATION OF INTRUSION
64	INLOC4	Num	3	4TH LOCATION OF INTRUSION
68	INLOC5	Num	3	5TH LOCATION OF INTRUSION
72	INLOC6	Num	3	6TH LOCATION OF INTRUSION
76	INLOC7	Num	3	7TH LOCATION OF INTRUSION
80	INLOC8	Num	3	8TH LOCATION OF INTRUSION
84	INLOC9	Num	3	9TH LOCATION OF INTRUSION
88	INLOC10	Num	3	10TH LOCATION OF INTRUSION
54	INMAG1	Num	3	1ST MAGNITUDE OF INTRUSION
58	INMAG2	Num	3	2ND MAGNITUDE OF INTRUSION
62	INMAG3	Num	3	3RD MAGNITUDE OF INTRUSION
66	INMAG4	Num	3	4TH MAGNITUDE OF INTRUSION
70	INMAG5	Num	3	5TH MAGNITUDE OF INTRUSION
74	INMAG6	Num	3	6TH MAGNITUDE OF INTRUSION
78	INMAG7	Num	3	7TH MAGNITUDE OF INTRUSION
82	INMAG8	Num	3	8TH MAGNITUDE OF INTRUSION
86	INMAG9	Num	3	9TH MAGNITUDE OF INTRUSION
90	INMAG10	Num	3	10TH MAGNITUDE OF INTRUSION
91	ODOMETER	Num	3	ODOMETER READING
40	OPENLF	Num	3	LF DOOR, TAILGATE OR HATCH OPENING
41	OPENLR	Num	3	LR DOOR, TAILGATE OR HATCH OPENING
42	OPENRF	Num	3	RF DOOR, TAILGATE OR HATCH OPENING
43	OPENRR	Num	3	RR DOOR, TAILGATE OR HATCH OPENING

```
44    OPENTG       Num       3    TG DOOR, TAILGATE OR HATCH OPENING
92    PANELDAM     Num       3    INSTRUMENT PANEL DAMAGE - OCC. CONTACT
45    PASINTEG     Num       3    PASSENGER COMPARTMENT INTEGRITY
46    PSU          Num       3    PRIMARY SAMPLING UNIT NUMBER
93    RATWGT       Num       8    RATIO INFLATION FACTOR
94    RDEFLOC      Num       3    LOCATION STEERING RIM/SPOKE DEFORMATION
95    RIMDEF       Num       3    STEERING RIM/SPOKE DEFORMATION
47    STRATIF      Char      1    CASE STRATUM
48    VEHNO        Num       3    VEHICLE NUMBER
98    VERSION      Num       3    VERSION NUMBER
```

                          Sort Information
                 Sorted by   PSU CASENO VEHNO
                 Validated   YES
                 Character Set ANSI

APPENDIX A

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

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

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

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

999 - Unknown vehicle

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

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

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

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

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

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

APPENDIX C

MISSING RECORD RULES

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

Accident Record   One required for every crash.

Accident Event Record   At least one required for every crash.

General Vehicle Record
    Complete Record: One required for every CDS applicable vehicle (GV07=01-49).
    Partial Record: (1) One required (completed through variable GV36) for every non CDS applicable vehicle (GV07=50-99).
        (2) One required (completed for variables GV01-GV09, GV43, GV44, GV67 & GV70) for every not-in-transport or working vehicle (TRANSTAT=2 or 3).

Exterior Vehicle Record
    Complete Record: One required for every inspected (GV67=1-3) CDS applicable vehicle (GV07=01-49) involved in a CDC applicable event.
    Partial Record: (1) One required for every inspected CDS applicable vehicle not involved in a CDC applicable event (variables EV04-19 will be blank).
        (2) One required (completed for variables EV01-EV32) for every not-in-transport or working vehicle (TRANSTAT=2 or 3).
    Missing Record: (1) Not inspected (GV67=0) CDS applicable vehicle.
        (2) Non CDS applicable vehicle (GV07=50-99).

Interior Vehicle Record
    Complete Record: Towed (GV10=1), inspected (GV67=1-3), CDS applicable vehicle (GV07=01-49).
    Missing Record: (1) Towed, not inspected (GV67=0) CDS applicable vehicle.
        (2) Not towed (GV10=0 or 9) CDS applicable vehicle.
        (3) Non CDS applicable vehicle (GV07=50-99).
        (4) Not-in-transport or working vehicle (TRANSTAT=2 or 3).

Occupant Assessment Record
    Complete Record: Towed (GV10=1), CDS applicable vehicle (GV07=01-49).
    Missing Record: (1) Not towed (GV10=0 or 9), CDS applicable vehicle.
        (2) Non CDS applicable vehicle (GV07=50-99).

Occupant Injury Record

Complete Record:	Towed (GV10=1), CDS applicable vehicle (GV07=01-49) with an occupant having a recorded injury (OA70=01-96).
Missing Record:	(1) Towed, CDS applicable vehicle with occupant not having a recorded injury (OA70=00, 97, 99). (2) Not towed (GV10=0 or 9), CDS applicable vehicle. (3) Non CDS applicable vehicle (GV07=50-99).

APPENDIX D

CDC AND DELTA-V

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

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

Clock Direction is coded as follows:

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

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

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

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

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

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

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

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

Vertical - Front, Rear, or Side Impacts

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

Lateral - Top and Undercarriage Impacts

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

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

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

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

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

Delta-V.

NASS-CDS uses a computer model that provides a measure of crash severity in terms of delta-v. In vehicle-to-vehicle crashes, the model assumes that the two vehicles approach each other at an impact velocity, reach a common velocity, and then separate. Delta-v is equal to the impact velocity minus the separation velocity. Other factors being equal, the greater the delta-v during a collision, the greater the potential for occupant injury.

Delta-V = Impact Velocity – Separation Velocity

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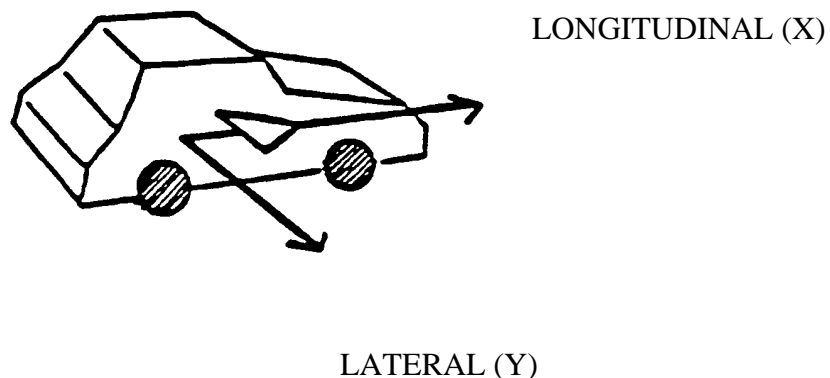

LONGITUDINAL (X)

LATERAL (Y)

Figure D-1

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

APPENDIX E

SELECTED COUNTS

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

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

Total Number of Type Accident Records............................	5,167
Total Number of Accident Description Records....................	23,112
Total Number of Vehicle Profile Records...........................	9,402
Total Number of Person Profile Records............................	21,701
Total Number of Accident Records..................................	5,167
Total Number of Accident Event Records...........................	9,716
Total Number of General Vehicle Records..........................	9,402
Total Number of Exterior Vehicle Records.........................	7,062
Total Number of Interior Vehicle Records..........................	6,061
Total Number of Occupant Assessment Records...................	10,833
Total Number of Occupant Injury Records..........................	28,471

APPENDIX F

PSU DEMOGRAPHIC DATA

(1)   PSU Codes
(2)   PSU Description
(3)   Population (2000 & 1990)
(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 PSUs are included to give researchers supplementary information on the nature of the PSUs when analyzing NASS data.

All data was taken from 2000 U.S. Census figures available at **http://factfinder.census.gov** .

POPULATION
Table GCT-PH1 of the Census 2000 Summary File 1 (SF1) - Population, Housing Units, Area, and Density: 2000.

POPULATION BY AGE GROUP
Table DP-1 of the Census 2000 Summary File 1 (SF1) - Profile of General Demographic Characteristics: 2000.

WORKERS AND MEANS OF TRANSPORTATION TO WORK
Table DP-3 of the Census 2000 Summary File 3 (SF3) - Sample Data - Profile of Selected Economic Characteristics: 2000.

HOUSING UNITS AND AVAILABILITY
Table H44 of the Census 2000 Summary File (SF3) - Sample Data - Tenure By Vehicles Available - Universe: Occupied housing units.

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

SMSA – (Standard Metropolitan Statistical Area) – A standard Census Bureau designation of the region around a city in the United States, collected from a variety of sources.

2000 Census: POPULATION

PSU	2000	1990	% Change	Land Area
P02	177,749	165,304	7.5	1,126
P03	2,465,326	2,300,664	7.2	71
P04	510,916	433,203	17.9	636
P05	750,097	678,111	10.6	483
P06	1,517,550	1,585,577	-4.3	136
P08	947,103	966,570	-2.0	675
P09	922,061	830,422	11.0	946
P11	322,895	282,937	14.1	710
P12	436,141	430,459	1.3	640
P13	170,200	158,983	7.1	509
P41	291,754	271,074	7.6	55
P43	627,846	423,380	47.3	832
P45	382,032	335,749	13.8	508
P48	185,701	167,098	11.1	1,947
P49	1,188,580	1,006,877	18.0	331
P72	2,896,016	2,783,726	4.0	228
P73	484,564	475,594	1.9	497
P74	463,585	416,444	11.3	331
P75	531,813	441,500	20.5	922
P76	93,371	74,778	24.9	11,244
P78	179,741	120,739	48.9	10,014
P79	5,362,996	4,948,333	8.4	3,554
P81	1,173,660	991,060	18.4	2,044
P82	563,374	516,259	9.1	84

PSU TOTAL   **22,645,071**   **20,804,841**   **8.8**   **38,523**
USA   **281,421,906**   **248,709,873**   **13.2**

Table: GCT-PH1. Population, Housing Units, Area, and Density: 2000
Data Set: Census 2000 Summary File 1 (SF 1)

2000 Census: POPULATION BY AGE GROUP

PSU	< 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 44	45 to 64	>= 65
P02	9,758	12,127	12,610	12,070	10,735	9,831	43,000	43,907	23,711
P03	182,599	189,677	182,866	177,281	183,217	197,427	560,887	508,714	282,658
P04	32,181	34,396	33,898	28,690	23,528	25,579	107,397	111,987	113,260
P05	47,290	51,341	52,874	45,759	36,970	45,816	183,068	175,182	111,797
P06	98,161	112,111	112,726	110,701	117,609	114,353	330,421	307,746	213,722
P08	53,747	60,381	63,781	55,840	41,122	50,939	216,582	231,502	173,382
P09	66,543	74,014	70,022	66,485	64,643	67,372	237,205	204,424	71,353
P11	20,130	20,296	19,630	27,987	38,444	27,705	75,935	66,497	26,271
P12	31,622	35,181	33,562	31,279	26,698	28,973	100,435	97,784	50,607
P13	11,675	13,307	13,783	12,679	10,247	10,619	38,717	37,286	21,887
P41	16,293	16,946	16,458	15,730	15,349	20,032	73,539	69,942	47,465
P43	45,142	46,090	43,320	41,020	48,939	55,998	173,074	127,891	46,372
P45	23,371	23,984	23,846	26,976	31,408	27,396	88,561	88,075	48,415
P48	12,041	12,383	12,144	15,965	20,547	13,948	38,755	38,940	20,978
P49	98,785	89,942	79,546	81,733	106,190	126,340	293,702	210,041	102,301
P72	218,522	224,012	200,802	200,962	239,252	280,558	685,909	547,196	298,803
P73	34,639	36,745	35,954	36,423	30,870	30,506	106,668	109,525	63,234
P74	34,293	34,241	34,050	34,145	34,163	36,246	108,314	97,338	50,795
P75	33,549	37,199	39,932	36,952	29,737	34,120	136,634	132,545	51,096
P76	6,428	7,091	7,646	7,374	2,117	2,165	9,265	13,576	10,159
P78	13,679	14,470	14,236	13,177	12,127	10,800	34,217	35,491	31,544
P79	413,077	462,861	432,407	398,292	366,253	400,894	1,401,078	1,156,230	569,544
P81	79,106	86,703	86,567	78,613	65,583	79,986	305,921	277,216	113,965
P82	26,215	24,459	23,425	29,648	51,014	61,809	155,550	123,447	67,807

PSU Totals	1,608,846	1,719,957	1,646,085	1,585,781	1,606,762	1,759,412	5,504,834	4,812,482	2,611,126

Table: DP-1. Profile of General Demographic Characteristics: 2000

Data Set: Census 2000 Summary File 1 (SF 1)

2000 Census: WORKERS AND MEANS OF TRANSPORTATION TO WORK

NOTE: This table will be updated as new Census information is released.

PSU	Workers (16 & Older)	Number Using Car/Truck/Van (drove alone)	% Using Car/Truck/Van (drove alone)	Number Using Car/Truck/Van (carpool)	% Using Car/Truck/Van (carpool)	Number Using Public Transit (incl. taxi)	% Using Public Transit (incl. Taxi)	Number Walked	% Walked	Number Other (incl. Work at home)	% Other
P02	81,726	63,804	78.1%	8,459	10.4%	1,803	2.2%	3,079	3.8%	4,581	5.6%
P03	901,027	202,070	22.4%	72,231	8.0%	517,635	57.4%	78,933	8.8%	30,158	3.4%
P04	209,328	173,156	82.7%	21,991	10.5%	4,071	1.9%	3,220	1.5%	6,890	3.3%
P05	379,832	337,317	88.8%	31,393	8.2%	16,555	4.4%	9,963	2.6%	15,122	4.0%
P06	569,761	280,315	49.2%	73,156	12.8%	144,936	25.4%	51,564	9.1%	14,443	2.5%
P08	582,362	419,829	72.1%	58,512	10.0%	61,085	10.5%	24,006	4.1%	17,773	3.1%
P09	459,392	313,103	68.2%	74,145	16.1%	48,805	10.6%	9,358	2.1%	13,690	3.0%
P11	169,169	128,514	76.0%	14,386	8.5%	5,494	3.2%	12,445	7.4%	6,648	3.9%
P12	187,587	158,120	84.3%	19,845	23.1%	2,319	1.2%	2,307	1.2%	4,838	2.6%
P13	75,376	63,303	84.0%	7,831	10.4%	417	0.6%	1,065	1.4%	2,564	3.4%
P41	134,620	102,834	76.4%	16,339	12.1%	5,471	4.1%	2,880	2.1%	5,750	4.3%
P43	338,602	274,674	81.1%	37,823	11.2%	4,153	1.2%	5,847	1.7%	15,156	4.5%
P45	184,824	156,194	84.5%	17,017	9.2%	1,286	0.7%	4,113	2.2%	5,883	3.2%
P48	81,167	67,797	83.5%	9,074	11.2%	398	0.5%	1,731	2.1%	2,167	2.7%
P49	537,006	380,265	70.8%	95,437	17.8%	29,361	5.5%	10,466	1.9%	20,498	3.8%
P72	1,192,139	597,598	50.1%	172,722	14.5%	310,924	26.1%	67,556	5.7%	43,339	3.7%
P73	208,957	168,666	80.7%	23,566	11.3%	6,707	3.2%	4,136	2.0%	5,517	2.6%
P74	433,600	354,993	81.9%	46,692	10.8%	7,597	1.8%	9,537	2.2%	14,781	3.4%
P75	289,302	230,033	79.5%	28,848	10.0%	9,514	3.3%	3,762	1.3%	17,145	5.9%
P76	31,587	23,353	73.9%	5,280	16.7%	98	0.3%	1,110	3.5%	1,547	4.9%
P78	51,675	49,081	95.0%	9,264	17.9%	588	1.1%	2,678	5.2%	2,015	3.9%
P79	3,858,750	2,714,944	70.4%	582,020	15.1%	254,091	6.6%	113,004	2.9%	163,918	4.2%
P81	911,677	626,576	68.7%	109,573	12.0%	87,298	9.6%	33,137	3.6%	45,441	5.0%
P82	316,493	178,964	56.5%	35,387	11.2%	55,652	17.6%	23,291	7.4%	16,251	5.1%

Table: DP-3. Profile of Selected Economic Characteristics: 2000

Data Set: Census 2000 Summary File 3 (SF 3) - Sample Data

2000 Census: HOUSING UNITS AND AVAILABILITY

NOTE: This table will be updated as new Census information is released.

PSU	All Occupied Housing Units	Number With No Vehicle Available	% With No Vehicles Available	Number With 1 Vehicle Available	% With 1 Vehicle Available	Number with 2+ Vehicles Available	% With 2+ Vehicles Available
P02	67,499	5,706	9.7%	23,541	34.9%	38,252	56.7%
P03	880,727	501,803	57.0%	291,238	33.1%	87,686	10.0%
P04	200,402	16,574	8.3%	79,234	39.5%	104,594	52.2%
P05	286,098	18,151	6.3%	93,845	32.8%	174,102	60.9%
P06	590,071	210,866	35.7%	248,085	42.1%	131,120	22.2%
P08	537,150	87,279	16.2%	211,896	39.4%	237,975	44.3%
P09	328,278	31,988	9.7%	121,003	36.9%	175,287	53.4%
P11	125,327	8,527	6.8%	45,755	36.5%	71,045	56.7%
P12	169,825	13,305	7.8%	60,404	35.6%	96,116	56.6%
P13	63,330	4,673	7.4%	21,153	33.4%	37,504	59.2%
P41	126,073	15,402	12.2%	62,406	49.5%	50,268	39.9%
P43	242,040	11,818	4.9%	77,582	32.1%	152,640	63.1%
P45	157,872	11,696	7.4%	53,588	33.9%	92,588	58.6%
P48	71,938	6,126	8.5%	24,362	33.9%	41,450	57.6%
P49	451,697	49,163	10.9%	207,737	46.0%	194,797	43.1%
P72	1,061,928	306,336	28.8%	461,677	43.5%	293,908	27.7%
P73	181,633	19,324	10.6%	66,018	36.3%	96,291	53.0%
P74	339,052	31,368	9.3%	126,465	37.3%	181,219	53.4%
P75	208,110	8,390	4.0%	59,792	28.7%	139,928	67.2%
P76	33,373	2,526	7.6%	11,764	35.3%	19,083	57.2%
P78	62,210	4,352	7.0%	25,070	40.3%	32,788	52.7%
P79	3,133,774	393,309	12.6%	1,158,027	37.0%	1,582,438	50.5%
P81	710,916	66,244	9.3%	251,637	35.4%	393,035	55.3%
P82	258,510	42,180	16.3%	109,813	42.5%	106,517	41.2%

Table: H44. TENURE BY VEHICLES AVAILABLE [15] - Universe: Occupied housing units

Data Set: Census 2000 Summary File 3 (SF 3) - Sample Data