Appendix B

Codebook for the Database of Fatal Crash Involvements

Observations: 85,890
Variables: 81

Alphabetic List of Variables

ABS – Antilock brake system (4-wheel) Type: Numeric8

0	Not ABS-equipped
.01-.99	proportion of vehicles with ABS (optional but cannot be identified for an individual vehicle from the 1st 12 digits of its VIN)
1	ABS-equipped

AWD – All-wheel-drive or 4-wheel-drive Type: Numeric8

0	FWD or RWD – i.e., not equipped with AWD or 4-wheel-drive
.01-.99	proportion of vehicles with AWD or 4-wheel-drive (optional but cannot be identified from 1st 12 digits of VIN)
1	equipped with AWD or 4-wheel-drive

BLOCKER – Voluntary vehicle-to-vehicle compatibility certification Type: Numeric8

0	Not certified (or not a pickup truck or SUV)
1	Certified, Option 1 (bumper height overlap with passenger cars)
2	Certified, Option 2 (“blocker beam” or other secondary energy-absorbing structure)

BOD2 – Passenger car body type Type: Numeric8

0	Not a passenger car
1	2-door convertible
2	2-door coupe or sedan
3	3-door hatchback
4	4-door sedan
5	5-door hatchback
6	Station wagon

CARS – Number of passenger cars in the crash Type: Numeric8

0 – 44	Number of passenger cars in transport involved in the crash

CG – Car group Type: Numeric8

1306-65001	Download 10Formats2011.sas, CarGroup2011.docx, or LTVGroup2011.docx for valid codes

CGP – Car group codes for merging with IHS Automotive data Type: Numeric8

1306-65001	Download 10Formats2011.sas, CarGroup2011.docx, or LTVGroup2011.docx for valid codes

COMBO – Side air bag with torso/head protection ("combination" bag) Type: Numeric8

0	Not equipped with combo bags
.01-.99	proportion of vehicles with combo bags (optional but cannot be identified from 1st 12 digits of VIN)
.75	Combo bag for driver only
1	Combo bags for driver and RF passenger (Note: a combo bag is a single bag that protects the head and torso; separate curtains and torso bags are coded CURTAIN=1, TORSO=1, COMBO=0)

COUNTY – County FIPS code Type: Numeric3

1 – 840	3-digit FIPS code for the county (unmodified FARS variable)

CRSH – Crash type Type: Numeric8

1	1st-event rollover
2	Hit fixed object
3	Hit pedestrian/bike/motorcycle
4	Hit heavy vehicle (i.e., GVWR ≥ 10,000 pounds)
5	Hit passenger car of known mass
6	Hit LTV of known mass and GVWR < 10,000 pounds
11	Other non-collision (fire, immersion, fell from vehicle,…)
12	Hit train
13	Hit animal, working vehicle, or on-road object
14	Single-vehicle crash, no non-occupants: other/unclear type
15	Single-vehicle crash involving non-occupants: other/unclear type
16	Single vehicle: fatal to multiple or other traffic units
21	Hit car of unknown mass
22	Hit LTV of unknown mass
23	Hit "other" type of vehicle (snowmobile, farm equipment, construction machinery,…)
24	Hit unknown type of vehicle
25	2-vehicle crash: fatal to non-occupants or parked-vehicle-occupants in addition to, possibly, occupants of vehicles in transport
31	3+ vehicle crash: fatal only to occupants of vehicles in transport
32	3+ vehicle crash: fatal to non-occupants or parked-vehicle-occupants in addition to, possibly, occupants of vehicles in transport

CURBWT – Curb weight (pounds) Type: Numeric8

1807 – 7710	Curb weight in pounds

CURTAIN – Head curtain air bags for front-seat occupants Type: Numeric8

0	Not equipped with head curtain bags
.01-.99	proportion of vehicles with curtain bags (optional but cannot be identified from 1st 12 digits of VIN)
1	Head curtains for driver and RF passenger

CY – Calendar year Type: Numeric8

2005 – 2011	Calendar year in which the crash occurred

DEATHS – Case vehicle occupant fatalities Type: Numeric3

0 – 9	Number of occupant fatalities in the case vehicle (unmodified FARS variable)

DENS3 – County population density Type: Numeric8

0.1-66951	Inhabitants per square mile in the county where the crash occurred, based on 2000 census

DRVAGE – Driver age Type: Numeric8

14 – 96	Age of the driver (unknown or out-of-range excluded)

DRVMALE – Male driver Type: Numeric8

0	Female driver
1	Male driver (non-reported gender excluded)

ESC – Electronic stability control Type: Numeric8

0	Not ESC-equipped
.01-.99	proportion of vehicles with ESC (optional but cannot be identified for an individual vehicle from the 1st 12 digits of its VIN)
1	ESC-equipped

FATALS – Fatalities in the crash Type: Numeric3

1 – 12	Total number of fatalities in the crash, including occupants of any vehicles (in transport or not-in-transport) and non-occupants (unmodified FARS variable)

FOOTPRNT – Footprint (square feet) Type: Numeric8

26.8 – 80.9	Footprint in square feet (TRAKWDTH X WB_MIN converted to square feet)

GE10 – GVWR ≥ 10,000 pounds Type: Numeric8

0	GVWR (gross vehicle weight rating) < 10,000 pounds
1	GVWR ≥ 10,000 pounds

HARM_EV – First harmful event Type: Numeric3

1 – 99	First harmful event in the crash (unmodified FARS variable)

HIFAT_ST – High-fatality-rate State Type: Numeric8

0	One of the 26 States with < 160 crash fatalities per million vehicle registration years in 2005-2011
1	One of the 24 States with > 160 crash fatalities per million vehicle registration years in 2005-2011

HOUR – Hour when the crash occurred Type: Numeric3

0 – 24	Hour when the crash occurred, military time (unmodified FARS variable)

HVYTRKS – Number of heavy vehicles in the crash Type: Numeric8

0 – 13	Number of heavy vehicles in transport involved in the crash

LTVS – Number of LTVs in the crash Type: Numeric8

0 – 51	Number of LTVs in transport involved in the crash

MAK2 – Vehicle Make Type: Numeric8

2	Jeep
3	Hummer
6	Chrysler
7	Dodge
11	Sprinter
12	Ford
13	Lincoln
14	Mercury
18	Buick
19	Cadillac
20	Chevrolet
21	Oldsmobile
22	Pontiac
23	GMC
24	Saturn
30	Volkswagen
32	Audi
33	Mini-Cooper
34	BMW
35	Nissan
37	Honda
38	Isuzu
39	Jaguar
41	Mazda
42	Mercedes-Benz
45	Porsche
47	Saab
48	Subaru
49	Toyota (including Scion)
51	Volvo

52	Mitsubishi
53	Suzuki
54	Acura
55	Hyundai
58	Infiniti
59	Lexus
62	Land-Rover
63	Kia
65	Smart

MAXVEHNO – Highest VEH_NO of vehicles hitting non-occupants Type: Numeric8

1 – 99	Highest VEH_NO of the vehicles that struck and fatally injured a non-occupant

MCYCLES – number of motorcycles in the crash Type: Numeric8

0 – 25	Number of motorcycles in transport involved in the crash

MINVEHNO – Lowest VEH_NO of vehicles hitting non-occupants Type: Numeric8

1 – 99	Lowest VEH_NO of the vehicles that struck and fatally injured a non-occupant

MM2 – Make-model Type: Numeric8

2001-65031	Download 10Formats2011.sas, CarGroup2011.docx, or LTVGroup2011.docx for valid codes

MMP – Make-model codes for merging with IHS Automotive data Type: Numeric8

2001-65031	Download 10Formats2011.sas, CarGroup2011.docx, or LTVGroup2011.docx for valid codes

MY – Model year Type: Numeric8

2003 – 2010	Model year of the case vehicle

M_HARM – Most harmful event Type: Numeric3

1 – 99	Most harmful event for the case vehicle (unmodified FARS variable)

NITE – Time of day when the crash occurred Type: Numeric8

0	6:00 a.m. to 6:59 p.m.
1	7:00 p.m. to 5:59 a.m.

NONOCC – Number of non-occupant fatalities in the crash Type: Numeric8

0 – 5	Number of non-occupant fatalities in the crash

OBODY – Body type of the other vehicle Type: Numeric8

1 – 99	Body type of the other vehicle in a 2-vehicle crash (unmodified FARS variable BODY_TYP for the other vehicle)

OCC – Number of occupant fatalities in the crash Type: Numeric8

0 – 12 Number of occupant fatalities in the crash (including occupants of other vehicles in transport)

OCG2 – Car group (or LTV group) of the other vehicle Type: Numeric8

1203-99999 5-digit VIN-derived vehicle group (CG) of the other vehicle in a 2-vehicle crash (Download 10Formats2011.sas, CarGroup2011.docx, or LTVGroup2011.docx for valid codes)

OCURBWT – Curb weight (pounds) of the other vehicle Type: Numeric8

190 – 7710 Curb weight in pounds of the other vehicle in a 2-vehicle crash

OMAKMOD – FARS make and model of the other vehicle Type: Numeric8

2001-99999 Make and model of the other vehicle in a 2-vehicle crash (unmodified FARS variable MAK_MOD for the other vehicle)

OMM2 – Make and model of the other vehicle Type: Numeric8

2001-99999 5-digit VIN-derived make-model (MM2) of the other vehicle in a 2-vehicle crash (Download 10Formats2011.sas, CarGroup2011.docx, or LTVGroup2011.docx for valid codes)

OMOD_YR – Model year of the other vehicle Type: Numeric8

1924 – 9999 Model year of the other vehicle in a 2-vehicle crash (unmodified FARS variable MOD_YEAR for the other vehicle)

OTHVEH – Number of other-type vehicles in the crash Type: Numeric8

0 – 1 Number of other-type vehicles (snowmobiles, farm equipment, …) in transport involved in the crash

OVIN – VIN of the other vehicle Type: Character12

12-character VIN of the other vehicle in a 2-vehicle crash (unmodified FARS variable VIN for the other vehicle)

OVINA –VINA_MOD of the other vehicle Type: Character3

VINA_MOD of the other vehicle in a 2-vehicle crash (unmodified FARS variable VINA_MOD for the other vehicle)

OVTYP – Type of the other vehicle in a 2-vehicle crash Type: Numeric8

1 Passenger car
2 LTV
3 Heavy vehicle
4 Motorcycle
5 Other (snowmobile, farm equipment, construction machinery,…)
9 Unknown

OVTYP2 – Type (detailed) of the other vehicle in a 2-vehicle crash Type: Numeric8

1	Passenger car
2.1	CUV
2.2	Minivan
2.3	Astro/Safari/Aerostar
2.4	Truck-based LTV
3	Heavy vehicle
4	Motorcycle
5	Other (snowmobile, farm equipment, construction machinery,…)
9	Unknown

OWTFLAG – Source of curb weight for the other vehicle Type: Numeric8

0	Good VIN, MY 1985-2007, weight in database
1	Good VIN, filled in some gaps in MY 1985-1999 database
2	MM2 not defined, but FARS supplies a VIN_WGT
3	MY 1981-1984 car with MM2 decoded, use FARS VIN_WGT
4	Weights in database for RV cutaways, etc. excluded body; reset to 5000
5	Good VIN, MY 1981-1984 or 2008-2009, use 1985 or 2007 weights
6	Filled in approximate weight based on MAK_MOD
7	Car or LTV, could not define a weight
9	Not a car or LTV

PARK – Number of non-transport-vehicle-occupant fatalities Type: Numeric8

0 – 4	Number of non- transport-vehicle-occupant fatalities in the crash

PASSIVE – Frontal air bags Type: Numeric8

0	Not equipped with frontal air bags
2	Dual frontal air bags
3	Dual frontal air bags with a manual on-off switch for the RF passenger
9	Unknown if equipped and/or what type

RDSUR – Road surface condition Type: Numeric8

0	Dry
1	Wet, muddy, or oily
2	Snow, ice, or slush
9	Unknown

ROAD_FNC – Roadway function class Type: Numeric3

1 –99	Roadway function class (unmodified FARS variable)

ROLLCURT – Head curtain air bags designed to deploy in rollovers Type: Numeric8

0	Not equipped with rollover curtain bags
.01-.99	proportion of vehicles with rollover curtain bags (optional but cannot be identified from 1st 12 digits of VIN)
1	Rollover curtains for driver and RF passenger (Note: CURTAIN should also be coded 1)

RURAL – County population density Type: Numeric8

0	Crash occurred in a county with ≥ 250 inhabitants per square mile in the 2000 census
1	Crash occurred in a county with < 250 inhabitants per square mile

SPDLIM55 – Speed limit 55+ Type: Numeric8

0	Speed limit < 55 mph or not reported, for all roadways involved in the crash
1	Speed limit ≥ 55 mph for at least one roadway involved in the crash

SP_LIMIT – Speed limit Type: Numeric3

0 – 99	Highest speed limit of roadways involved in the crash (unmodified FARS variable)

SQUADCAR – Police model Type: Numeric8

0	Not a Ford Crown Victoria or Chevrolet Impala "police" model and not a 2004-2005 Chevrolet Impala SS
1	Ford Crown Victoria or Chevrolet Impala "police" model or 2004-2005 Chevrolet Impala SS

STATE – State FIPS code Type: Numeric3

1 – 56	2-digit FIPS code for the State (unmodified FARS variable)

ST_CASE – State-case ID number Type: Numeric4

10001–560168	State-case ID number (unmodified FARS variable)

SUR_COND – Roadway surface condition Type: Numeric3

1 –9	Roadway surface condtition (unmodified FARS variable)

TORSO – Side air bag with torso protection Type: Numeric8

0	Not equipped with torso bags
.01-.99	proportion of vehicles with torso bags (optional but cannot be identified from 1st 12 digits of VIN)
.25	Torso bag for RF passenger only
1	Torso bags for driver and RF passenger

TRAKWDTH – Track width (inches, average of front and rear wheels) Type: Numeric8

45.2 – 72.65	Average of front and rear track width, in inches

TRKTYP – LTV type (case vehicle) Type: Numeric8

0	Passenger car
1	Compact pickup truck (download LTVGroup2011.docx for more information)
2	Full-sized pickup truck with GVWR < 10,000 pounds
3	Compact SUV
4	Full-sized SUV
5	Minivan
6	Full-sized van with GVWR < 10,000 pounds
7	Pickup-car (e.g., Subaru Baja)
12	300-series pickup truck with GVWR ≥ 10,000 pounds
16	300-series van with GVWR ≥ 10,000 pounds

UNKVEH – Number of unknown-type vehicles in the crash Type: Numeric8

0 – 5	Number of unknown-type vehicles in transport involved in the crash

V1 – 1st character of the VIN Type: Character1
V2 – 2nd character of the VIN Type: Character1
V3 – 3rd character of the VIN Type: Character1
V4 – 4th character of the VIN Type: Character1
V5 – 5th character of the VIN Type: Character1
V6 – 6th character of the VIN Type: Character1
V7 – 7th character of the VIN Type: Character1
V8 – 8th character of the VIN Type: Character1
V11 – 11th character of the VIN Type: Character1
V12 – 12th character of the VIN Type: Character1

VEHAGE – Vehicle age in years (CY – MY) Type: Numeric8

0 – 8	Age of the case vehicle (years)

VEH_NO –Vehicle ID number Type: Numeric3

1 – 89	Vehicle ID number (unmodified FARS variable)

VE_FORMS – Number of vehicle forms submitted Type: Numeric3

1 – 92	Number of vehicle-in-transport forms submitted for this crash (unmodified FARS variable)

VINA_MOD Type: Character3
3-character make-model code (unmodified FARS variable)

VTYP – Case vehicle type Type: Numeric8

1	Passenger car, 2 doors
2	Passenger car, 4 doors
3	Pickup truck, light duty (compact or 150-series)
4	Pickup truck, heavy duty (250- or 350-series)
5	SUV, truck-based
6	CUV (crossover SUV)

7	Minivan, except Chevrolet Astro or GMC Safari
7.1	Chevrolet Astro or GMC Safari
8	Full-sized van

WHEELB – Wheelbase (inches) Type: Numeric8

73.0 – 170.3	Wheelbase