MULTIDISCIPLINARY ACCIDENT INVESTIGATION DATA FILE

Editing Manual and Reference Information

Volume I

1976 EDITING MANUAL

HIGHWAY SAFETY RESEARCH INSTITUTE
THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48109

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16. Abstract

This report documents in two volumes the editing conventions and reference information used in processing Multidisciplinary Accident Investigation reported case vehicles into a time-shared accident data bank.

Volume I (Editing Manual) uses an "Annotated Collision Performance and Injury Report" Revision 3 and Air Cushion Restraint System (ACRS) Supplement. The text documents the editing procedure and the interpretations of each question (variable) on the CPIR form and its supplements. Volume II (Reference Information) is a compilation of reference information (e.g., original steering column angles) available to the data editors.

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MULTIDISCIPLINARY ACCIDENT INVESTIGATION DATA FILE

EDITING MANUAL AND REFERENCE INFORMATION

VOLUME I

1976 EDITING MANUAL

HIGHWAY SAFETY RESEARCH INSTITUTE
SYSTEMS ANALYSIS DIVISION
DATA OPERATIONS GROUP
THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48109

CONTRACT NUMBER:
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NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
WASHINGTON, D.C. 20590

MARCH, 1976

ACKNOWLEDGEMENTS

This project was conducted for the U. S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), Washington, D. C., under contract number DOT-HS-5-01134 from February 1975 to March 1976. The Project Director was James O'Day, Head, Systems Analysis Division, Highway Safety Research Institute (HSRI), and the Principal Investigator was Joseph C. Marsh IV, Assistant Research Scientist.

The primary objective of this project was the data editing and computer processing of the NHTSA-sponsored Multidisciplinary Accident Investigation in-depth accident investigation reports into automated computer data files. Marion (Mickey) J. Compton managed the flow of case processing with the able assistance of Wendy Barhydt, John Barron, Lois Compton, Paul Cornell, Mike Hagan, Tom Mog, Leslie Pettis, and Carol Whitney as data editors. Lee Ferris and Ginny Cornell were keypunchers; Joe Dunne, Tom Lawson, and Steven Tolkin handled the computer processing of the data.

The MDAI cases have been automated by HSRI from 1969 to date. Since 1972 the data editing protocol and reference information used in case processing has been documented in an annual "Editing Manual and Reference Information" report. In this year's edition, the interpretations of questions have been rewritten (Volume I - Editing Manual) and the reference tables updated (Volume II - Reference Information), primarily due to the skillful and diligent efforts of Ms. Carol Whitney.

Acknowledgement must be made of the contributions of the authors of previous editions (e.g., Steven Tolkin and Steven Vanek) and the current staff who reviewed this edition. The guidance provided by Jesse Watt, Contract Technical Manager, and the NHTSA Accident Investigation Division staff is also acknowledged, along with the comments provided by the MDAI teams (such as University of Southern California). Our thanks to Shirley Adams for typing this volume in a format suitable for computer publication.

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SECTION 1

INTRODUCTION

In-depth traffic accident investigation data reported on the Annotated Collision Performance And Injury Report (CPIR) Revision 3 (Section 2) are edited and maintained as computer files in the HSRI Automated Data Access and Analysis System (ADAAS) accident data bank. This two volume manual includes a compilation of reference information (e.g., original dimensions) and editing conventions used in preparing newly-received reports for inclusion in the computer data bank.

This is the basic reference and instructional document used in daily operations and in the training of new case editors. It also serves to document the editing process. The manual is also usefully employed by accident investigators preparing CPIR forms and data analysts using the CPIR computer files.

The editing conventions precede the reference information and are organized around the CPIR form itself. The conventions are documented in two formats. In Section 2, some editing rules and all the new code values are included on the Annotated CPIR pages for quick reference. Section 3 describes the editing process and the specific interpretations for each question.

A three-part number has been used to reference the appropriate CPIR page number, punch card number, and column number for each question. Thus, the sequence (7.3.12-24) refers to CPIR page 7, card 3, and columns 12 through 24, which is the Case Vehicle Identification Number.

```
Page Number
| Card Number
| | Column Numbers
| | |
(7.3.12-24)
```

This manual should be maintained in a loose-leaf notebook so new and revised information sheets can be added. If you wish to receive future updates, please contact the National Highway Traffic Safety Administration, Accident Investigation Division. Any comments, criticisms, or suggestions for improvement are welcome.

BACKGROUND

While the compilation and publication of this manual was sponsored by the DOT, National Highway Traffic Safety Administration under contract number DOT-HS-5-01134, its contents are intended to represent a consensus of the experience of both HSRI and other team CPIR data editors, computer data processors, Motor Vehicle Manufacturers Association (MVMA)- and Department of Transportation- sponsored field investigators, NHTSA Accident Investigation Division personnel, MVMA member-company personnel, and others involved in the utilization and analysis of the CPIR data files.

This manual documents the current editing practices and available reference information. It does not represent the ultimate set of editing conventions and procedures. There is room for many improvements in recording and processing MDAI data. Because of the nature and diversity of the problems relating to crash investigation, recording, and analysis, a universally applicable set of coding conventions and procedures will probably never exist. Thus, this document will continue to change and to grow.

The editing conventions [e.g., use of (888) for Other Vehicle Speed when "not applicable"] have evolved from several years of editing cases for computer processing. They are documented as a guide to our current editors and to assist in training new editors, in order to help assure consistency of interpretation. While helpful to the field investigator as an aid to consistent preparation of the CPIR form, they are not an "accident investigation protocol." While also helpful to the data analyst, they will not, for instance, document biases in the investigators' interpretations.

SECTION 2

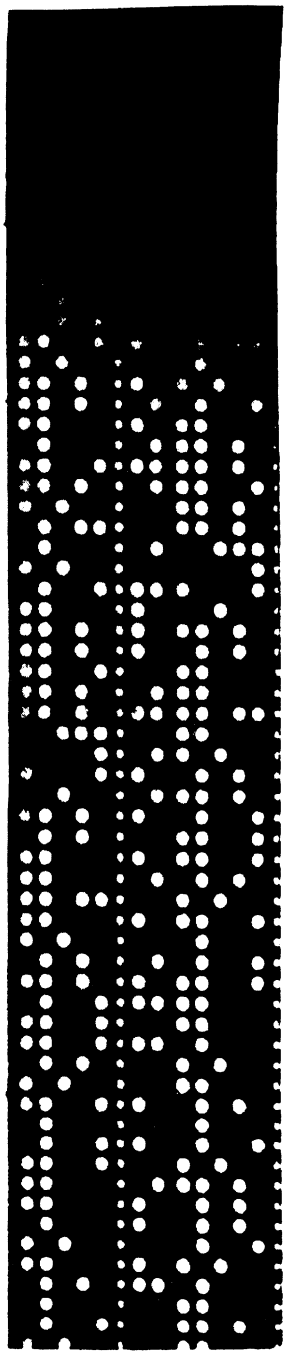
ACCIDENT REPORT FORMS

This section contains a reproduction of the Annotated CPIR form (1/76 Edition) and ACRS Supplement (7/75) used for coding the accident information. The forms have been annotated with editing conventions and new codes, in order to provide the field teams and data editors with a quick reference source.

SECTION 2.1 - Anotated CPIR

ANNOTATED

COLLISION PERFORMANCE and INJURY REPORT



REVISION 3

EDITION 1/76

PG2070

ANNOTATED COLLISION PERFORMANCE AND INJURY REPORT

The original version of this form (GM-PG-2070) was copyrighted by General Motors in 1969. It was developed to promote a widespread interchange of standardized, comprehensive field data among professional research people engaged in accident investigation, and was designed to be used in conjunction with digital computers. It has been used extensively for recording and automating in-depth accident data under the sponsorship of the National Highway Traffic Safety Administration, Motor Vehicle Manufacturers Association, and Canadian Ministry of Transport. The form, as presented here, has evolved through the addition of supplementary forms, new data elements, and refinements of original data elements by other users with GM knowledge. Detailed coding instructions and interpretations have been compiled, along with related reference information, by The University of Michigan, Highway Safety Research Institute. Any questions or suggestions should be directed to one of the sponsoring organizations, or to:

Highway Safety Research Institute
The University of Michigan
Ann Arbor, Michigan 48109

General Instructions

The field investigator should:

1. Follow the sponsoring organization's instructions concerning the selection of case vehicles, data forms (e.g., supplements), and data elements to be coded.

2. Fill in all data elements (punch codes) required in instruction 1 above, including all "grey" areas (e.g., State FIPS code) and all responses to multiple-response questions (e.g., Objects Contacted).

3. Include an extra set of Occupant pages (28-30D; cards 11-26, 80-95) for each occupant beyond the first.

4. Check that all coded information agrees with the case documentation (e.g., narrative, photos) and is consistent with other coded responses.

5. Refer to and use the 1976 Editing Manual* and 1976 Reference Information* (or later editions) and/or other detailed instructions provided by the team sponsor for the specific interpretation and coding protocol for each data element or question. Other reference documents include: (a) Collision Deformation Classification - SAE J224a, February 1972; (b) The Abbreviated Injury Scale (AIS), (1976 Revision, Including Dictionary), by AMA, SAE, AAAM, 1976.

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*Multidisciplinary Accident Investigation Data File, Editing Manual and Reference Information, Highway Safety Research Institute, Prepared under National Highway Traffic Safety Administration Contract No. DOT-HS-5-01134. March, 1976.
a. "Volume I - 1976 Editing Manual"
b. "Volume II - 1976 Reference Information "

FORM VERSION NUMBER 3 (1)

REPORT NUMBER (2 3 4 5 6 7 8 9)

CARD NUMBER 01 (10 11)

DATE OF COLLISION MO. (12 13) / DAY (14 15) / YR. (16 17)

(99/99/99) Unknown

TIME OF COLLISION _____ AM PM

DATE OF FIELD INVESTIGATION _____

INVESTIGATOR _____

CIRCLE PHOTO RECORDS MADE:
SLIDES NEGATIVES POLAROIDS

LOCATION WHERE VEHICLE WAS EVALUATED:

_____

REPORT PREPARED BY _____

KEYPUNCH ONLY:
DATE REC'D.

PUNCHED

VERIFIED

	PUNCH CODE	CARD COL.
LOCATION STATE: (FIPS Code)	— —	18-19
CITY, TOWNSHIP, ETC.: _____		
AREA (1) URBAN (2) RURAL (0) UNKNOWN	—	20
LOCALITY (1) MANUFACTURING OR INDUSTRIAL (2) SHOPPING OR BUSINESS (3) APARTMENTS (4) SCHOOL OR PLAYGROUND (5) RESIDENTIAL (6) FARM (7) UNDEVELOPED (0) UNKNOWN	—	21
ENVIRONMENTAL CONDITIONS LIMITED ACCESS HIGHWAY (1) YES (2) NO (0) UNKNOWN	—	22
ROAD TOTAL TRAFFIC LANES (1) 1-Lane (2) 2-Lane Case Vehicle (3) 3-Lane (4) 4 or More Lanes (5) 4 or More Lanes Divided (6) Parking Lot, Driveway (7) Other, e.g. RR Tracks, Ramps (0) Unknown	—	23
OTHER ROAD TOTAL TRAFFIC LANES (IF AT INTERSECTION) CHOOSE FROM ABOVE LIST OR (9) NOT APPLICABLE	—	24
TYPE OF ROAD SURFACE (1) Asphalt, Bituminous Concrete (2) CONCRETE (3) GRAVEL (4) MORE THAN ONE TYPE (5) OTHER: _____ (0) UNKNOWN	—	25

Case Vehicle ONLY	PUNCH CODE	CARD COL.
ROAD ALIGNMENT VERTICAL PLANE (1) LEVEL (2) CREST OF HILL (3) SLOPE- 2% grade (4) BOTTOM OF HILL (0) UNKNOWN	—	26
HORIZONTAL PLANE (1) STRAIGHT (2) CURVE (0) UNKNOWN	—	27
SURFACE COVERING (01) DRY WATER (02) DAMP (03) WET (04) PUDDLED (05) UNKNOWN AMOUNT SNOW (06) LOOSE (07) PACKED (08) CONDITION UNKNOWN (09) ICE (10) SLUSH (11) SPILLED GRAVEL (12) OTHER: _____ (00) UNKNOWN	— —	28-29
PRECIPITATION (1) NONE (2) RAIN (3) SNOW (4) HAIL (5) SLEET (6) OTHER: _____ (0) UNKNOWN	—	30
RATE OF PRECIPITATION (3) NOT APPLICABLE (4) LIGHT, MIST (5) MODERATE (6) HEAVY (0) UNKNOWN	—	31
SURFACE SLIPPERY (1) YES (2) NO (0) UNKNOWN	—	32

COLLISION DESCRIPTION

ENVIRONMENTAL CONDITIONS

POSSIBLE MECHANICAL MALFUNCTION

ENVIRONMENTAL CONDITIONS

	PUNCH CODE	CARD COL.
SPEED LIMIT (1) 5-25 MPH (2) 26-30 (3) 31-35 (4) 36-40 (5) 41-45 (6) 46-55 (7) 56-65 (8) 66-75 (9) OVER 75 MPH (0) UNKNOWN	____	33
ROAD DEFECTS (1) YES,TYPE UNKNOWN OR OTHER (2) NO (3) POTHOLE,BUCKLING,ROAD DISREPAIR (4) RAISED OR SUNKEN SEWER (5) RAISED OR SUNKEN RR GRADE CROSSING (6) DROP FROM ROAD TO SHOULDER (0) UNKNOWN	____	34
TEMPERATURE, °F (1) BELOW ZERO (2) 0-19 (3) 20-29 (4) 30-34 (5) 35-39 (6) 40-59 (7) 60-79 (8) 80-99 (9) 100 or over (0) UNKNOWN	____	35
CROSSWIND (1) NONE (2) LIGHT (3) STRONG (4) STRONG & GUSTY (0) UNKNOWN	____	36
TIME OF DAY (1) DAY (2) NIGHT (3) DUSK (4) DAWN (0) UNKNOWN	____	37
VISIBILITY LIMITATION (for accident) (1) None (2) Cloudy - Dark (3) Fog (4) Smoke (5) Windshield Condition (6) Glare (7) Other:_____ (8) Rain (9) Snow (0) Unknown	____	38
VISIBILITY OBSTRUCTION (for accident) (1) None (2) Building (3) Sign (4) Bushes (5) Tree (6) Hill or Curve in Road (7) Other:_____ (8) Vehicle in Transport (9) Parked Vehicle (0) Unknown	____	39

POSSIBLE MECHANICAL MALFUNCTION

INVESTIGATION OF THE POSSIBILITY OF MECHANICAL MALFUNCTION

THIS SECTION SHOULD BE FILLED OUT IF A MECHANICAL MALFUNCTION IS RECOGNIZED, OR SUSPECTED BY THE INVESTIGATOR OR WAS ALLEGED TO HAVE CONTRIBUTED TO THE ACCIDENT INVOLVING THIS VEHICLE. SUPPORT ANY ITEMS CHECKED OR NOTATED BY COMMENTS.

CHECK ITEMS INVOLVED:

- ☐ BRAKE SYSTEM
- ☐ EXHAUST SYSTEM
- ☐ STEERING SYSTEM
- ☐ SUSPENSION SYSTEM
- ☐ TIRES
- ☐ ELECTRICAL SYSTEM
- ☐ THROTTLE CONTROLS
- ☐ DRIVER CONTROLS
- ☐ POWER TRAIN
- ☐ FUEL SYSTEM
- ☐ VISIBILITY ITEMS
- ☐ OTHER: _____

	PUNCH CODE	CARD COL.
NUMBER OF ITEMS INVOLVED	____	40
WAS COMMENT ABOUT MECHANICAL MALFUNCTION MADE BY ANY PERSON(s)? (1) YES (2) NO (0) UNKNOWN	____	41

IF "YES", GIVE COMMENT(s) AND NAME(s) AND ADDRESS(es) OF PERSON(s):

POSSIBLE MECHANICAL MALFUNCTION

COMMENTS AND OBSERVATIONS OF INVESTIGATOR ABOUT THE POSSIBILITY OF MECHANICAL MALFUNCTIONS:

INVESTIGATOR: _____

DATE OF INVESTIGATION: _____

DATE OF REPORT: _____

GENERAL INFORMATION

IMPAIRMENT

COLLISION TYPE

COLLISION CONFIGURATION (of case vehicle)

	PUNCH CODE	CARD COL.
VEHICLE TO OBJECT (1,2,0)*	___	42
ROLLOVER (1,2,0)* (90° or more)	___	43
RAN OFF THE ROADWAY (1,2,0)* (Before first impact)	___	44
VEHICLE TO VEHICLE (1) Yes, Configuration unknown (2) No (3) Head-on (F to F) (4) Intersection type L (5) Side-swipe (6) Rear-impact (F and B) (7) Other: _____ (8) Intersection type T (0) Unknown	___	45
VEHICLE TO STOPPED VEHICLE (1,2,0)* (Either vehicle)	___	46
VEHICLE TO MOVING VEHICLE (1,2,0)*	___	47
OTHER CONFIGURATION (1,2,0)* (5) Non-Collision only (6) Vehicle-part to Vehicle (7) Vehicle to O.V. Trailer (8) Self-induced (9) Veh to Object to Veh	___	48
VEHICLES INVOLVED TOTAL NUMBER (INCLUDING CASE VEHICLE) In Accident (0) Unknown	___	49

OBJECTS CONTACTED

Enter Only Damage- or Injury-Producing Objects in Order of Contact

	PUNCH CODE	CARD COL.
(02) None (00) Unknown Object (03) Other Automobile (04) Ground (rollover only) (05) Guardrail (06) Bridge (rail) (07) Sign (08) Ditch (09) Embankment (snowbank) (10) Culvert (11) Fence (12) Pole or Tree (13) Pedestrian (14) Large Animal (15) Motorcycle (16) Large Truck--Type Unknown (see 20-25) (17) Train (18) Pedalcycle (bicycle+) (19) Building (20) Light/Pickup Truck, Small Van, Carryall (22) Tractor without trailer (23) Van delivery (walk-in/step van) (24) Straight truck, motor home (25) Tractor-trailer combination (26) Multi-purpose vehicle (jeep) (28) Bus (29) Trailer (40) Object disengaging from other vehicle (50) Hydrants, short posts, stumps (51) Mailbox (rural), small posts/trees (52) Pier, Pillar (e.g., bridge support) (53) Retaining wall, abutment, Hiway fixtures (54) Impact attenuator (55) Breakaway Fixtures (99) Other	___ ___ ___ ___ ___ ___	50-51 52-53 54-55 56-57

CASE VEHICLE DRIVER'S ABILITY TO DRIVE IMPAIRED BY

(CHOOSE NO MORE THAN TWO)

	PUNCH CODE	CARD COL.
(00) UNKNOWN (02) NONE (03) DRINKING INVOLVED (Broad) (04) Drunk By Local Legal Standards (05) ASLEEP (BAC given) (06) FATIGUE (07) RECKLESSNESS (08) INATTENTION (09) LACK OF TRAINING (10) EMOTIONAL STATE (11) MEDICATION (12) Drugs (narcotic) (13) ILLNESS (or otherwise) (14) INFIRMITIES (15) PHYSICALLY HANDICAPPED (16) OTHER: _____	___ ___ ___ ___	58-59 60-61

SOURCE OF INFORMATION:

_____

_____

TRAFFIC VIOLATION

(EITHER DRIVER)

(1) YES
(2) NO
(0) UNKNOWN
DESCRIBE VIOLATION: _____

_____

Citation need not be issued, but only indicated.

PUNCH CODE ___ CARD COL. 62

LEGAL ACTION

WAS TRAFFIC VIOLATION CITATION ISSUED TO ANYONE? (1,2,0)* ___ CARD COL. 63

IF "YES", CIRCLE VIOLATOR:

DRIVER OF CASE VEHICLE
DRIVER OF OTHER VEHICLE
PEDESTRIAN
OTHER: _____

_____

(Accident Point of View)

TYPE OF LOSS

	PUNCH CODE	CARD COL.
PERSONAL INJURY (1,2,0)*	___	64
PROPERTY DAMAGE (1,2,0)*	___	65

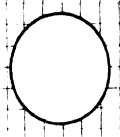
*WHERE (1,2,0) IS INDICATED, USE 1 FOR YES
2 FOR NO
0 FOR UNKNOWN

COLLISION SKETCH

Based on Information From _____

1. Draw heavy lines to show highway detail at the location of collison.
2. Give name of streets and highways and US, State and Interstate Route numbers, if any.
3. Identify all objects in sketch. Case vehicle should always be labeled "A". Time sequence numbers may be added (e.g., A1, A2).
4. Include dimensions when possible.

INDICATE NORTH BY ARROW



DESCRIBE COLLISION EVENTS _____

INFORMATION SOURCES: _____

REPORTED BY: _____
(Attach Police Report)

COMMENTS (Include 3rd vehicle speed estimate) _____

CASE VEHICLE	PUNCH CODE	CARD COL.
ESTIMATED SPEED* (MPH)		
PRIOR TO IMPACT	___ ___ ___	66-68
ESTIMATED BY: _____		
At FIRST Impact	___ ___ ___	69-71
ESTIMATED BY: _____		

OTHER VEHICLE	PUNCH CODE	CARD COL.
ESTIMATED SPEED* (MPH)		
PRIOR TO IMPACT	___ ___ ___	72-74
ESTIMATED BY: _____		
At FIRST Impact	___ ___ ___	75-77
ESTIMATED BY: _____		

*IF SPEEDS ARE UNKNOWN, ENTER 999; (888) for Other Vehicle "not applicable"

END OF CARD 01

OTHER VEHICLE

NOTE: A complete analysis of this accident requires that a minimum amount of information be obtained on the other vehicle(s) involved. Therefore, the information on this page should be completed even though a separate long form may be filled out on these other vehicles.

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD 0 (10) 2 (11)

OTHER VEHICLE DESCRIPTION

VEHICLE IDENTIFICATION NUMBER

12	13	14	15	16	17	18	19	20	21	22	23	24

MAKE _____

MODEL _____

CODE TO BE INSERTED

25 26 27 28 29

MODEL YEAR 19 __ (30) __ (31)

Shipping Weight (pounds) __ (32) __ (33) __ (34) __ (35)

ODOMETER READING (IF OVER 100,000: USE 99 999) __ (36) __ (37) __ (38) __ (39) __ (40)

	PUNCH CODE	CARD COL.
BODY STYLE **(Code Sun Roof as 1 to 5, not 6)** **(1)** 2-Door Hardtop (no upper B pillar) **(2)** 2-Door Sedan or Coupe (any upper B) **(3)** 4-Door Hardtop **(4)** 4-Door Sedan **(5)** Station Wagon or Pickup Car **(6)** Convertible - soft or hard shell **(7)** Van (not walk-in) **(8)** Truck (inc. pickups+carryalls) **(9)** Other (e.g. bus, jeep, train) **(0)** Unknown	__	41
NUMBER OF CYLINDERS OR ROTORS (Enter "0" if Unknown)	__	42
HIGH PERFORMANCE/AIR BAG EQUIPPED (0) No A/B: Unk if High Perf. (1) No A/B: High Performance (2) No A/B; Not High Perf. Air Bag Equipped (any engine) and: (4) Any Deployments (5) No Deployments (6) Deployment Unknown (9) Both High Performance and A/B Equipped Unknown	__	43
NUMBER OF OCCUPANTS	__ __	44-45
VEHICLE LOADING (4) BELOW FULL RATED LOAD (5) NEAR FULL RATED LOAD (6) ABOVE FULL RATED LOAD (0) UNKNOWN	__	46

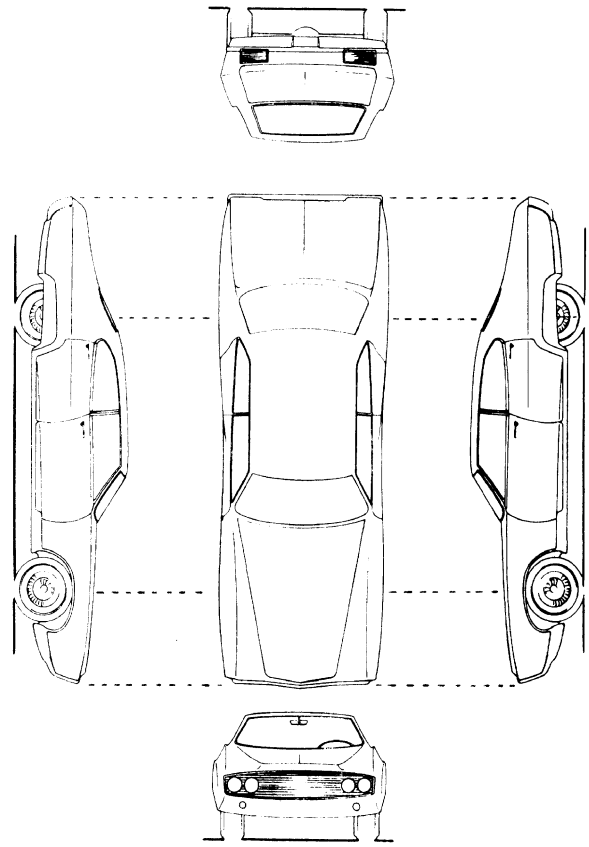
*WHERE (1,2,0) IS INDICATED, USE 1 FOR YES 2 FOR NO

DAMAGE INDEX (OTHER VEHICLE)

__ __ (47) (48) — __ __ __ __ (49) (50) (51) (52) — __ (53)

VEHICLE DAMAGE

(This space may be used to enter details and notes about the other vehicle. See page 9 for instructions.)



COMMENTS: _____

IF SEPARATE REPORT WAS MADE, GIVE REPORT NUMBER _____

END OF CARD 02

OTHER VEHICLE

CASE VEHICLE

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD 0 (10) 3 (11)

CASE VEHICLE DESCRIPTION

VEHICLE IDENTIFICATION NUMBER

12	13	14	15	16	17	18	19	20	21	22	23	24

MAKE _____

MODEL _____

CODE TO BE INSERTED

25 26 27 28 29

MODEL YEAR 19 __ (30) __ (31)

Shipping Weight (pounds) __ (32) __ (33) __ (34) __ (35)

ODOMETER READING (IF OVER 100,000: USE 99 999) __ (36) __ (37) __ (38) __ (39) __ (40)

	PUNCH CODE	CARD COL.
BODY STYLE (Code Sun Roof as 1 to 5, not 6) (1) 2-Door Hardtop (no upper B pillar) (2) 2-Door Sedan or Coupe (any upper B) (3) 4-Door Hardtop (4) 4-Door Sedan (5) Station Wagon or Pickup Car (6) Convertible - soft or hard shell (7) Van (not walk-in) (8) Truck (incl. pickups+carryalls) (9) Other (e.g. bus, jeep, train) (0) Unknown	____	41
BODY STRUCTURE (1) Body and Frame (2) Unitized (3) Integral-Stub Frame (4) Body and Platform-Frame (e.g.,VW bug) (9) Other: _____ (0) Unknown	____	42
NUMBER OF CYLINDERS OR ROTORS (Enter "0" if Unknown)	____	43
HIGH PERFORMANCE/AIR BAG EQUIPPED (0) No A/B; Unk if High Perf. (1) No A/B; High Performance (2) No A/B; Not High Perf. Air Bag Equipped (any engine) and: (4) Any Deployments (5) No Deployments (6) Deployment Unknown (9) Both High Performance and A/B Equipped Unknown	____	44
NUMBER OF OCCUPANTS (Enter 99 if unknown)	__ __	45-46

*WHERE (1,2,0) IS INDICATED, USE 1 FOR YES
2 FOR NO
0 FOR UNKNOWN

	PUNCH CODE	CARD COL.
VEHICLE LOADING (4) BELOW FULL RATED LOAD (5) NEAR FULL RATED LOAD (6) ABOVE FULL RATED LOAD (0) UNKNOWN	____	47
EQUIPMENT OPTIONS **TRANSMISSION** (4) AUTOMATIC + Semi Automatic (5) MANUAL (0) UNKNOWN	____	48
STEERING (4) POWER (5) MANUAL (0) UNKNOWN	____	49
BRAKES (4) POWER (5) MANUAL (0) UNKNOWN	____	50
BRAKES - TYPE (4) DRUM - ALL WHEELS (5) DISC - FRONT WHEELS (6) DISC - ALL WHEELS (0) UNKNOWN	____	51
BRAKE ANTI-LOCK DEVICE (2) NONE INSTALLED (4) TWO-WHEEL (5) FOUR-WHEEL (0) UNKNOWN	____	52
Top Position at Time of Collision (3) Solid Top - Not Applicable (4) Convertible Soft Top Up or Closed (5) Retracted Soft Top or Hard Shell Removed (6) Removable Hard Shell Installed (7) Sun Roof - Closed (8) Sun Roof - Open (0) Unknown	____	53

CASE VEHICLE REPAIR OR REPLACEMENT COST $ __ (54) __ (55) __ (56) __ (57)
Unknown (9999)

CASE VEHICLE DAMAGE INDEX

PRIMARY DAMAGE

__ (58) __ (59) __ (60) __ (61) __ (62) __ (63) __ (64)

SECONDARY DAMAGE

__ (65) __ (66) __ (67) __ (68) __ (69) __ (70) __ (71)

Unknown or None (99-0000-0)

END OF CARD 03

EXTERIOR DAMAGE

SHEET METAL

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD — 10: 0, 11: 4

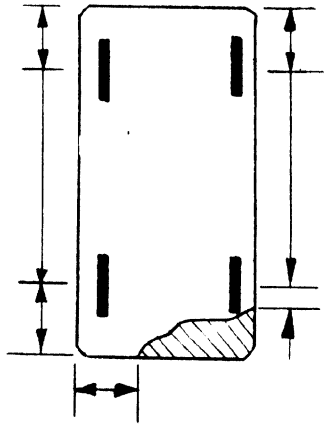
SHEET METAL DAMAGE (Direct)	PUNCH CODE	CARD COL.
FRONT (1,2,0)*	___	12
REAR (1,2,0)*	___	13
LEFT SIDE (1,2,0)*	___	14
RIGHT SIDE (1,2,0)*	___	15
ROOF (1,2,0)*	___	16
OTHER (1,2,0)*: _____	___	17
REMARKS: _____		

SHEET METAL CRUSH (Direct)		
INSERT MAXIMUM CRUSH DIMENSION TO THE NEAREST INCH. DIMENSIONS MUST AGREE WITH DIAGRAMS ON FACING PAGE. (INSERT "99", IF UNKNOWN INSERT "98", IF 98 INCHES OR OVER)		
FRONT (INCHES)	___ ___	18-19
REAR	___ ___	20-21
LEFT SIDE	___ ___	22-23
RIGHT SIDE	___ ___	24-25
ROOF	___ ___	26-27
OTHER:	___ ___	28-29

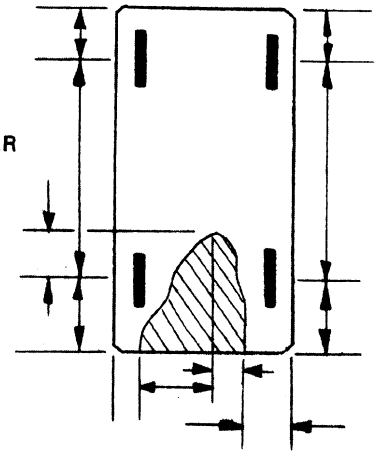
*WHERE (1,2,0) IS INDICATED, USE 1 FOR YES
2 FOR NO
0 FOR UNKNOWN

EXAMPLES.

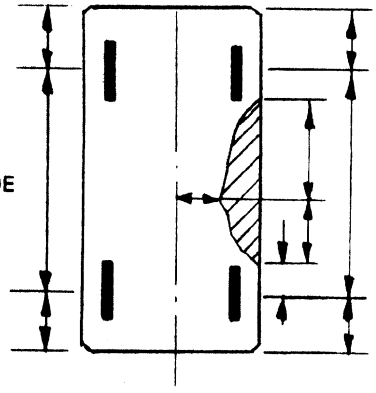
FRONT OR REAR



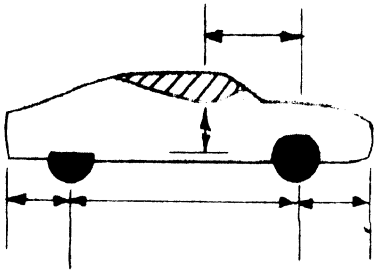
FRONT OR REAR



SIDE



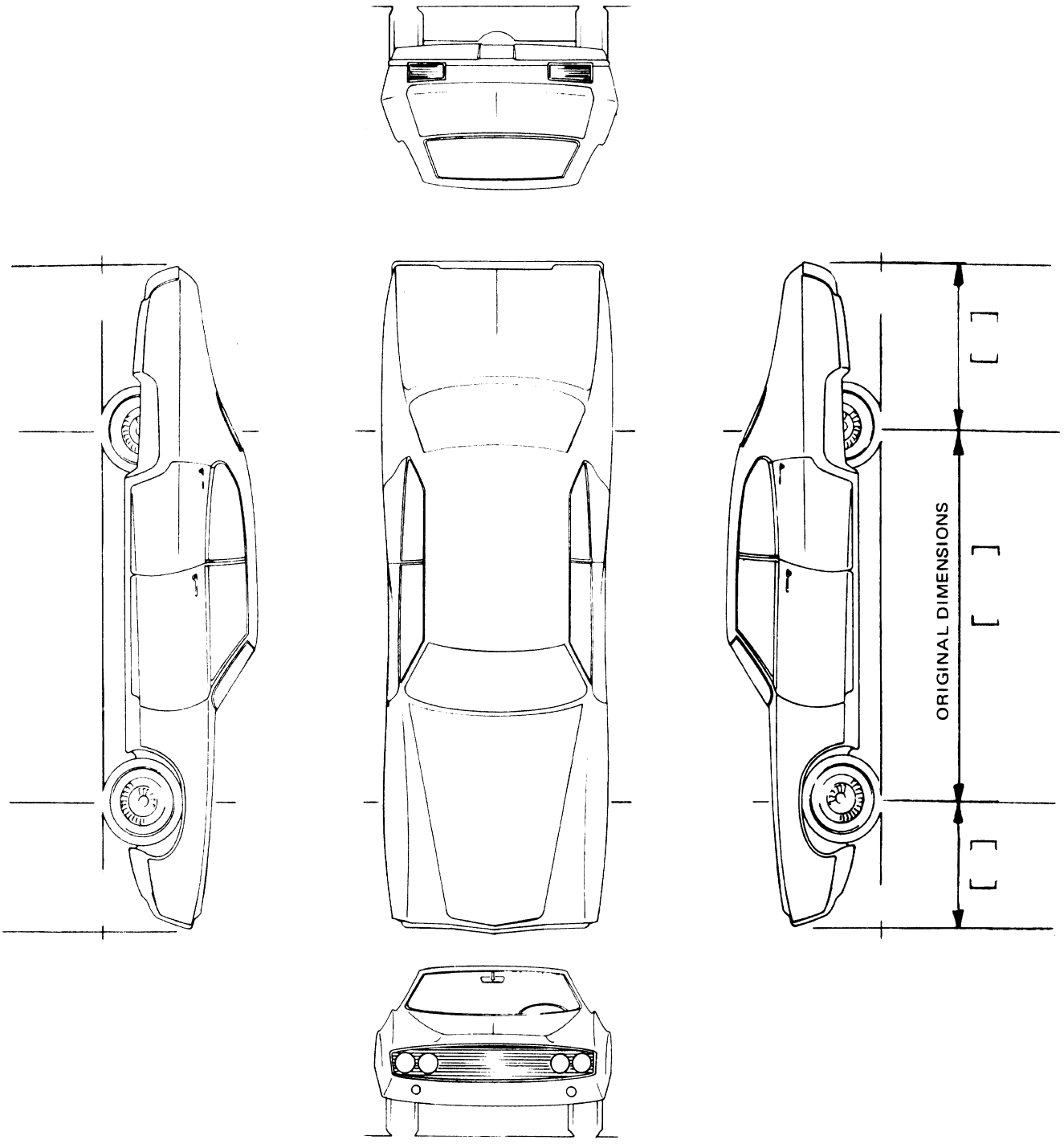
ROOF
(REFERENCE TO TOP OF DOOR SILL OR WINDOW SILL)



EXTERIOR DAMAGE

FIELD INVESTIGATOR INSTRUCTIONS:

1. Indicate crushed areas by outlining new perimeter of vehicle and shading the damaged areas on the large sketch below. Use as many sketches as ncessary to completely describe the damage.
2. Enter the dimensions on the sketch(es) measured to the point of maximum penetration by the object(s) contacted. Use the examples on the facing page as a guide.
3. Enter the three dimensions to the center of the wheels (wheelbase, front and rear overhangs) on both sides of the car.
4. Add other dimensions as necessary to completely describe the damage.



WHEELS AND TIRES

WHEELS

	PUNCH CODE	CARD COL.
ORIGINAL EQUIPMENT TYPE		
FRONT (1,2,0)*	____	30
REAR (1,2,0)*	____	31
DAMAGED (1,2,0)*	____	32

DESCRIBE DAMAGE AND NON O.E. WHEELS

_____

_____

_____

TIRES

		PUNCH CODE	CARD COL.
TREAD TYPE			
(4) REGULAR (5) NON-STUDDED SNOW (6) STUDDED SNOW (7) 'SLICK' (8) LEFT AND RIGHT SIDES DIFFERENT (9) OTHER: _____ (0) UNKNOWN	FRONT	____	33
	REAR	____	34
TREAD WEAR			
(4) LIGHT (5) MEDIUM (6) HEAVY (7) BALD (8) LEFT AND RIGHT SIDES DIFFERENT (9) OTHER: _____ (0) UNKNOWN	FRONT	____	35
	REAR	____	36
PROFILE			
(4) REGULAR 80,78 (5) WIDE OVAL 70,60,50 (6) LEFT AND RIGHT SIDES DIFFERENT (7) OTHER: _____ (0) UNKNOWN	FRONT	____	37
	REAR	____	38
CARCASS TYPE			
(4) BIAS PLY (5) BELTED-BIAS PLY (6) RADIAL PLY (7) LEFT AND RIGHT SIDES DIFFERENT (8) OTHER: _____ (0) UNKNOWN	FRONT	____	39
	REAR	____	40

TIRES (CONT'D.)

SIZE

FRONT — LEFT _____ / RIGHT _____

REAR — LEFT _____ / RIGHT _____

MANUFACTURER

FRONT — LEFT _____ / RIGHT _____

REAR — LEFT _____ / RIGHT _____

MODEL

FRONT — LEFT _____ / RIGHT _____

REAR — LEFT _____ / RIGHT _____

CODE

FRONT — LEFT _____ / RIGHT _____

REAR — LEFT _____ / RIGHT _____

LOAD RANGE

FRONT — LEFT _____ / RIGHT _____

REAR — LEFT _____ / RIGHT _____

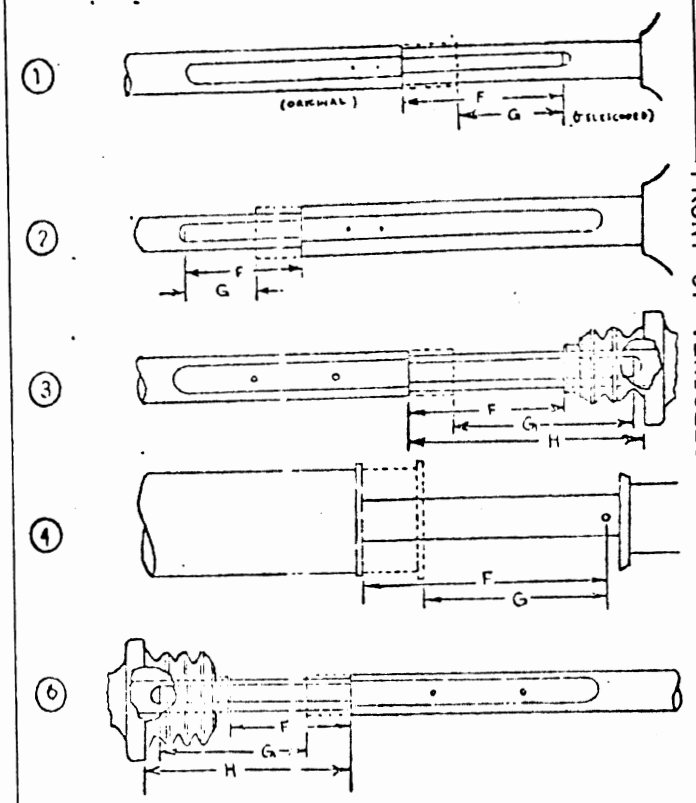
*WHERE (1,2,0) IS INDICATED, USE 1 FOR YES
2 FOR NO
0 FOR UNKNOWN

FRONT EXTERIOR

HOOD PERFORMANCE (FRONT OF VEHICLE)	PUNCH CODE	CARD COL.
HOOD LATCH(ES)		
RELEASED (1,2,3,0)*	___	41
DAMAGED (1,2,3,0)*	___	42
JAMMED (1,2,3,0)*	___	43
HOOD HINGES		
LEFT — DAMAGED (1,2,3,0)	___	44
LEFT — SEPARATED (1,2,3,4,5,0)**	___	45
RIGHT — DAMAGED (1,2,3,0)	___	46
RIGHT — SEPARATED (1,2,3,4,5,0)**	___	47
HOOD REMAINED ON VEHICLE (1,2,3,0)	___	48
REAR EDGE OF HOOD		
ELEVATED (1,2,3,0)	___	49
CONTACTED WINDSHIELD (1,2,3,0)	___	50
PENETRATED WINDSHIELD (1,2,3,0)*	___	51
OPTIONAL HOOD INSTALLED (1,2,3,0)	___	52
ENGINE OR TRANSMISSION MOUNT SEPARATION (1,2,3,4,5,0)	___	53
STEERING COLUMN FLEXIBLE COUPLING		
EQUIPPED (2) No	___	54
Yes (1) Type Unknown (6) Rag (7) Pot (8) Universal (9) Other	___	55
(0) Unknown	___	56
SEPARATED (1,2,3,4,5,0)**		
OTHER DAMAGE (1,2,3,0)*		
DESCRIBE: _____		

ENGINE COMPARTMENT TELESCOPING UNIT

(SEE DRAWING ON PAGE 18 FOR LOCATION)



FRONT OF VEHICLES

LOWER TELESCOPING SHAFT

HOOD

TYPE OF UNIT
- (5) None Installed
- (1-6) See Sketch Above
- (8) Double U-Joint or Flexible Cable Joint
- (9) Others _____
- (0) Unknown

PUNCH ___ 57

ORIGINAL LENGTH, (F) _____

TELESCOPED LENGTH, (G) _____

DIFFERENCE (F-G) _____
(tolerance ± 0.6 in.)

(777) Device Extended
(888) Not Equipped, (999) Unknown
(998) Compressed, Unknown Amount

58 59 60

END OF CARD 04

*USE: 1=YES 2=NO 3=NOT APPLICABLE 0=UNKNOWN

**USE: 1=YES, TYPE UNKNOWN 2=NO 3=NOT APPLICABLE 4=PARTIAL SEPARATION 5=COMPLETE SEPARATION 0=UNKNOWN

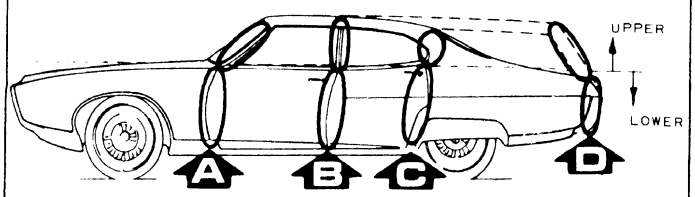
FIRE

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD 0 (10) 5 (11)

	PUNCH CODE	CARD COL.
FIRE (Accident Viewpoint) (1) Fire - time unknown (2) No Fire (4) Pre-Crash Fire Start (5) At-Crash Fire Start (6) Post-Crash Fire Start (0) Unknown	____	12
EXTENT OF FIRE (to Case Vehicle) (3) No Fire, Not Applicable (4) Minor - easily extinguished (5) Major (e.g., entire interior or engine) (0) Unknown	____	13
FIRE ORIGIN (in Case Vehicle) (3) No Fire, Not Applicable (4) Engine Compartment (5) Passenger Compartment (6) Luggage Compartment (7) Fuel Tank, lines, filler (8) Other: _____ (0) Unknown	____	14

NOTES ABOUT FIRE: _____

LEFT PILLARS



LEFT EXTERIOR

LEFT PILLARS	PUNCH CODE	CARD COL
If left pillars were not damaged or separated or left roof side rail was not damaged or buckled, place a "1" in code column. Code remainder of column	____	15
A-PILLAR		
UPPER — DAMAGED (1,2,0)*	____	16
UPPER — SEPARATED (1,2,3,4,5,0)**	____	17
LOWER — DAMAGED (1,2,0)*	____	18
LOWER — SEPARATED (1,2,3,4,5,0)**	____	19
B-PILLAR (Also Rear Pillar on Pick-Up Truck, Corvette, Camaro, Firebird)		
UPPER — DAMAGED (1,2,3,0)*	____	20
UPPER — SEPARATED (1,2,3,4,5,0)**	____	21
LOWER — DAMAGED (1,2,0)*	____	22
LOWER — SEPARATED (1,2,3,4,5,0)**	____	23
C-PILLAR		
UPPER — DAMAGED (1,2,3,0)*	____	24
UPPER — SEPARATED (1,2,3,4,5,0)**	____	25
LOWER — DAMAGED (1,2,3,0)*	____	26
LOWER — SEPARATED (1,2,3,4,5,0)**	____	27
D-PILLAR (Station Wagon & Limousine)		
UPPER — DAMAGED (1,2,3,0)*	____	28
UPPER — SEPARATED (1,2,3,4,5,0)**	____	29
LOWER — DAMAGED (1,2,3,0)*	____	30
LOWER — SEPARATED (1,2,3,4,5,0)**	____	31
LEFT ROOF SIDE RAIL		
DAMAGED (1,2,3,0)*	____	32
BUCKLED (1,2,3,0)*	____	33

*USE: 1=YES 3=NOT APPLICABLE
2=NO 0=UNKNOWN

**USE: 1=YES, TYPE UNKNOWN 4=PARTIAL SEPARATION
2=NO 5=COMPLETE SEPARATION
3=NOT APPLICABLE 0=UNKNOWN

LEFT EXTERIOR

SIDE STRUCTURE – LEFT SIDE	PUNCH CODE	CARD COL.
LEFT BODY MOUNT SEPARATION (1,2,3,0)* — Unitized	____	34
If door hinges and latches were not damaged and doors did not jam or open during collision, and continuity of the side structure was maintained, place a "1" in code column. Code remainder of column	____	35
DOOR LATCHES — LEFT FRONT — DAMAGED (1,2,3,0)*	____	36
LEFT FRONT — RELEASED (1,2,3,0)*	____	37
LEFT REAR — DAMAGED (1,2,3,0)*	____	38
LEFT REAR — RELEASED (1,2,3,0)*	____	39
DOOR HINGES — LEFT FRONT — DAMAGED (1,2,3,0)*	____	40
LEFT FRONT — SEPARATED (1,2,3,4,5,0)**	____	41
LEFT REAR — DAMAGED (1,2,3,0)*	____	42
LEFT REAR — SEPARATED (1,2,3,4,5,0)**	____	43
CONTINUITY OF SIDE STRUCTURE MAINTAINED (1,2,3,0)* i.e., Is Side Boundary Broken Not restricted to vehicles with reinforced side structure.	____	44
DOORS OPENED DURING COLLISION — LEFT — FRONT (1,2,0)*	____	45
LEFT — REAR (1,2,3,0)*	____	46
DOORS JAMMED CLOSED — LEFT — FRONT (1,2,0)*	____	47
LEFT — REAR (1,2,3,0)*	____	48

*USE: 1=YES 2=NO 3=NOT APPLICABLE 0=UNKNOWN

**USE: 1=YES, TYPE UNKNOWN 2=NO 3=NOT APPLICABLE 4=PARTIAL SEPARATION 5=COMPLETE SEPARATION 0=UNKNOWN

REAR EXTERIOR

FUEL TANK AND LINES	PUNCH CODE	CARD COL.
APPROXIMATE FUEL LEVEL AT TIME OF IMPACT (4) LESS THAN 1/2 (5) 1/2 OR MORE (0) UNKNOWN	____	49
TANK RETENTION (4) COMPLETE RETENTION (5) PARTIAL DISENGAGEMENT (6) COMPLETE DISENGAGEMENT (0) UNKNOWN	____	50
TANK DEFORMED (1,2,0)* includes neck	____	51
FUEL LEAKAGE PRESENT (1,2,0)*	____	52
LOCATION OF LEAKS — FROM THE TANK (1,2,3,0)*	____	53
FROM THE NECK (1,2,3,0)*	____	54
FROM THE LINES (1,2,3,0)*	____	55
TRAILER AND HITCH (1) Yes, Type Unknown (2) No hitch (3) Ball and Socket, Temporary Bumper (e.g., rental clamp-on) (4) Ball and Socket, Bumper only (e.g., light truck) (5) Ball and Socket - Frame Hitch (e.g., frame and bumper) (6) Equalizing, load distributing (7) Ring and Pintle (e.g., double tractor) (8) Fifth Wheel (e.g., semi) (9) Other (e.g., clevis and pin) (0) Unknown	____	56
TRAILER BEING TOWED (AT TIME OF COLLISION) (1) Yes, Type Unknown (2) No (hitch, no trailer) (3) Not Applicable (no hitch) (4) Travel Trailer/Camper (5) Mobile Home (6) Boat/Snowmobile/ATV Trailer (7) Rental/Cargo Trailer (8) Car (9) Other: _____ (0) Unknown	____	57

TRAILER

FUEL TANK

LEFT SIDE STRUCTURE

REAR EXTERIOR

TRUNK

TAILGATE

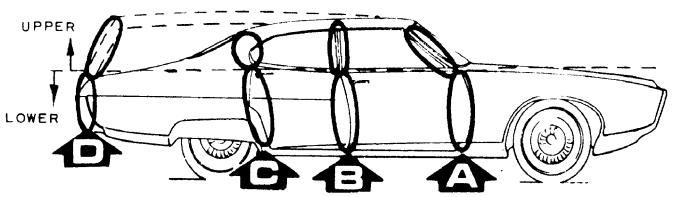
LUGGAGE AREA

	PUNCH CODE	CARD COL.
TAILGATE (HATCHBACK) PERFORMANCE Includes back doors of Vans		
LATCHES		
RELEASED (1,2,3,0)*	____	58
DAMAGED (1,2,3,0)*	____	59
LATCH OR TAILGATE JAMMED (1,2,3,0)*	____	60
HINGES OR TRACKS (CLAM SHELL)		
BOTTOM LEFT — DAMAGED (1,2,3,0)*	____	61
BOTTOM LEFT — SEPARATED (1,2,3,4,5,0)**	____	62
BOTTOM RIGHT — DAMAGED (1,2,3,0)*	____	63
BOTTOM RIGHT — SEPARATED (1,2,3,4,5,0)**	____	64
TOP LEFT — DAMAGED (1,2,3,0)*	____	65
TOP LEFT — SEPARATED (1,2,3,4,5,0)**	____	66
TOP RIGHT — DAMAGED (1,2,3,0)*	____	67
TOP RIGHT — SEPARATED (1,2,3,4,5,0)**	____	68
EQUIPPED WITH TWO-WAY TAILGATE (1,2,3,0)* (6) Disappearing Tailgate	____	69
TAILGATE ELECTRIC WINDOW OPERABLE (1,2,3,0)*	____	70
END OF CARD 05		

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD 0 (10) 6 (11)

TRUNK LID PERFORMANCE (REAR OF VEHICLE)	PUNCH CODE	CARD COL.
LATCHES		
RELEASED (1,2,3,0)*	____	12
DAMAGED (1,2,3,0)*	____	13
LATCH OR LID JAMMED (1,2,3,0)*	____	14
HINGES		
LEFT — DAMAGED (1,2,3,0)*	____	15
LEFT — SEPARATED (1,2,3,4,5,0)**	____	16
RIGHT — DAMAGED (1,2,3,0)*	____	17
RIGHT — SEPARATED (1,2,3,4,5,0)**	____	18
TRUNK or PARTITIONED LUGGAGE AREA DAMAGED (1,2,3,0)	____	19
SPARE TIRE SEPARATION (1,2,3,4,0) (4) for spare tire not initially attached	____	20
TRUNK - PASSENGER COMPARTMENT PARTITION DAMAGE (1,2,3,0)*	____	21
BACKLIGHT HEADER (REAR WINDOW TOP FRAME) BACKLIGHT HEADER DAMAGED OR BUCKLED (1,2,3,0)* convertible	____	22

RIGHT PILLARS



*USE: 1=YES 2=NO 3=NOT APPLICABLE 0=UNKNOWN

**USE: 1=YES, TYPE UNKNOWN 2=NO 3=NOT APPLICABLE 4=PARTIAL SEPARATION 5=COMPLETE SEPARATION 0=UNKNOWN

RIGHT EXTERIOR

RIGHT PILLARS

	PUNCH CODE	CARD COL.
If right pillars were not damaged or separated or right roof side rail was not damaged or buckled, place a "1" in code column. Code remainder of column	____	23
A-PILLARS		
UPPER — DAMAGED (1,2,0)*	____	24
UPPER — SEPARATED (1,2,3,4,5,0)**	____	25
LOWER — DAMAGED (1,2,0)*	____	26
LOWER — SEPARATED (1,2,3,4,5,0)**	____	27
B-PILLAR (ALSO REAR PILLAR ON PICK-UP TRUCK, CORVETTE, CAMARO, FIREBIRD)		
UPPER — DAMAGED (1,2,3,0)*	____	28
UPPER — SEPARATED (1,2,3,4,5,0)**	____	29
LOWER — DAMAGED (1,2,0)*	____	30
LOWER — SEPARATED (1,2,3,4,5,0)**	____	31
C-PILLAR		
UPPER — DAMAGED (1,2,3,0)*	____	32
UPPER — SEPARATED (1,2,3,4,5,0)**	____	33
LOWER — DAMAGED (1,2,3,0)*	____	34
LOWER — SEPARATED (1,2,3,4,5,0)**	____	35
D-PILLAR (STATION WAGON & LIMOUSINE)		
UPPER — DAMAGED (1,2,3,0)*	____	36
UPPER — SEPARATED (1,2,3,4,5,0)**	____	37
LOWER — DAMAGED (1,2,3,0)*	____	38
LOWER — SEPARATED (1,2,3,4,5,0)**	____	39

RIGHT ROOF SIDE RAIL

DAMAGED (1,2,3,0)*	____	40
BUCKLED (1,2,3,0)*	____	41

WINDSHIELD HEADER

DAMAGED OR BUCKLED (1,2,0)*	____	42

SIDE STRUCTURE – RIGHT SIDE

	PUNCH CODE	CARD COL.
RIGHT BODY MOUNT SEPARATION (1,2,3,0)* (Unitized)	____	43
If door hinges and latches were not damaged and doors did not jam or open during collision, and continuity of the side structure was maintained, place a "1" in code column. Code remainder of column	____	44
DOOR LATCHES		
RIGHT FRONT — DAMAGED (1,2,3,0)*	____	45
RIGHT FRONT — RELEASED (1,2,3,0)*	____	46
RIGHT REAR — DAMAGED (1,2,3,0)*	____	47
RIGHT REAR — RELEASED (1,2,3,0)*	____	48
DOOR HINGES		
RIGHT FRONT — DAMAGED (1,2,3,0)*	____	49
RIGHT FRONT — SEPARATED (1,2,3,4,5,0)**	____	50
RIGHT REAR (Hinge or track) — DAMAGED (1,2,3,0)*	____	51
RIGHT REAR (Hinge or track) — SEPARATED (1,2,3,4,5,0)**	____	52
CONTINUITY OF SIDE STRUCTURE MAINTAINED (1,2,3,0)* i.e., Is Side Boundary Broken Not restricted to vehicles with reinforced side structure.	____	53
DOORS OPENED DURING COLLISION		
RIGHT — FRONT (1,2,0)*	____	54
RIGHT — REAR (1,2,3,0)*	____	55
DOORS JAMMED CLOSED		
RIGHT — FRONT (1,2,0)*	____	56
RIGHT — REAR (1,2,3,0)*	____	57

*USE: 1=YES 3=NOT APPLICABLE
2=NO 0=UNKNOWN

**USE: 1=YES, TYPE UNKNOWN 4=PARTIAL SEPARATION
2=NO 5=COMPLETE SEPARATION
3=NOT APPLICABLE 0=UNKNOWN

RIGHT SIDE STRUCTURE

RIGHT PILLARS

STEERING WHEEL

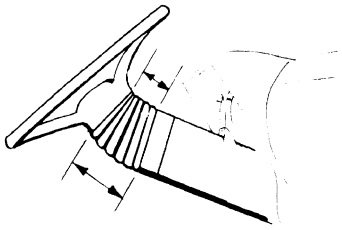
STEERING WHEEL	PUNCH CODE	CARD COL.
TYPE GM only, others and unknown use (99).	___	58-59
NOTES ON NON-ORIGINAL EQUIPMENT STEERING WHEEL: _____ _____ _____		
STEERING WHEEL RIM		
DAMAGE (2) NONE (4) SLIGHTLY DEFORMED (5) SEVERELY BENT (6) BROKEN (0) UNKNOWN	___	60
OCCUPANT CONTACT (1,2,3,0)	___	61
STEERING WHEEL SPOKES		
NUMBER OF SPOKES (ENTER "0" IF UNKNOWN)	___	62
DAMAGE (2) NONE (4) SLIGHTLY DEFORMED (5) SEVERELY BENT (6) BROKEN (0) UNKNOWN	___	63
OCCUPANT CONTACT (1,2,3,0)	___	64
HORN RING, HORN BUTTON(S), OR SPOKE SHROUD OR DRIVER AIR BAG COVER DAMAGED (1,2,0)*	___	65
OCCUPANT CONTACT (1,2,3,0)	___	66

STEERING WHEEL ENERGY ABSORBING DEVICE (SEE DRAWING ON PAGE 18 FOR LOCATION) EQUIPPED (1,2,0)*	PUNCH CODE	CARD COL.
	___	67

ENERGY ABSORBING DEVICE FINAL POSITION

MEASURE THE MINIMUM AND MAXIMUM OVERALL LENGTH OF THE ENERGY ABSORBING DEVICE (BETWEEN THE STEERING WHEEL AND STEERING COLUMN).

ENTER THESE LENGTHS BELOW

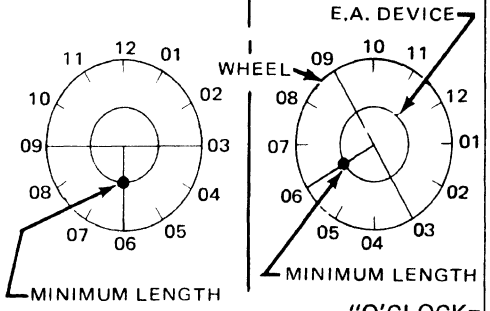


MAX. = _____ in.; MIN. = _____ in.

THE E.A. DEVICE ROTATES WITH THE STEERING WHEEL. WE WANT TO KNOW WHERE THIS MINIMUM LENGTH OCCURRED (AROUND THE CIRCUMFERENCE OF THE E.A. DEVICE) WITH RESPECT TO THE SPOKES. RECORD BELOW THE O'CLOCK POSITION AT WHICH THIS MINIMUM LENGTH WAS MEASURED.

EXAMPLES

O'CLOCK = 0 6 | O'CLOCK = 0 6



"O'CLOCK= ___ ___ (ENTER 00 IF UNKNOWN)

68 69

ENERGY ABSORBING DEVICE COMPRESSION

FOLLOWING TO BE FILLED IN BY ANALYSIS GROUP (ENTER 99.9 IF UNKNOWN)

ORIGINAL LENGTH (H) _____ IN.

DAMAGED MAX. LENGTH (X) _____ IN.

DIFFERENCE (H-X) _____ IN.

ORIGINAL LENGTH (H) _____ IN.

DAMAGED MIN. LENGTH (Y) _____ IN.

DIFFERENCE (H-Y) _____ IN.

DEVICE EXTENDED
(4) X GREATER THAN H
(5) X AND Y GREATER THAN H
(6) NEITHER
(0) UNKNOWN
(8) NOT APPLICABLE

8's for Not Equipped

___ ___.___ 70 71 72

___ ___.___ 73 74 75

___ 76

*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 2 FOR NO 3 FOR NOT APPLICABLE 0 FOR UNKNOWN

END OF CARD 06

STEERING WHEEL AND COLUMN

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD 0 (10) 7 (11)

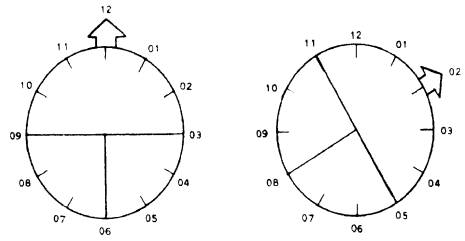
STEERING WHEEL POSITION AT TIME OF COLLISION

PUNCH CODE	CARD COL.

IN WHAT O'CLOCK POSITION WAS THE NORMAL TOP OF THE WHEEL POINTED WHEN THE COLLISION OCCURRED?

EXAMPLES

O'CLOCK = 1 2 O'CLOCK = 0 2



(NORMAL STRAIGHT AHEAD)

(00) UNKNOWN

O'CLOCK = ___ ___ | 12-13

Steering Wheel Pad or Air Bag

S.W. Pad Equipped (1,2,0)*
Steering Wheel Air Bag:
(4) Deployment
(5) Equipped-No Deployment
(6) Deployment Unknown
(9) Both Pad and Air Bag Unknown

___ | 14

S.W. Pad Deformed or Contact to Driver Air Bag(1,2,3,0)*

___ | 15

TILT FEATURE

EQUIPPED (1,2,0)*

___ | 16

FINAL POSITION

(3) NOT APPLICABLE
(4) NORMAL
(5) TILTED UP
(6) TILTED DOWN
(0) UNKNOWN

___ | 17

TELESCOPING FEATURE

EQUIPPED (1,2,0)*

___ | 18

FINAL POSITION

(3) NOT APPLICABLE
(4) NORMAL
(5) ABOVE NORMAL
(6) BELOW NORMAL
(0) UNKNOWN

___ | 19

SWING-AWAY FEATURE

PUNCH CODE	CARD COL.

EQUIPPED (1,2,0)* ___ | 20

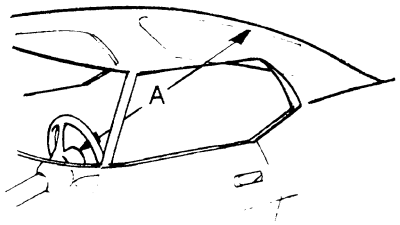
FINAL POSITION
(3) NOT APPLICABLE
(4) NORMAL
(5) RIGHT OF NORMAL
(0) UNKNOWN

___ | 21

FINAL COLUMN POSITION

MEASURE THE DISTANCE FROM THE STEERING WHEEL CENTER TO THE TOP OF THE REAR WINDOW GLASS, DIRECTLY BEHIND THE HUB. ("A" IN SKETCH).

ENTER THIS DISTANCE IN BLANK "A".



A: _____ INCHES

COLUMN MOVEMENT

If top or rear window glass is displaced, then use (999)

(ENTER 99.9 IF UNKNOWN)

FROM A CORRESPONDING UNDAMAGED VEHICLE, MAKE A MEASUREMENT SIMILAR TO "A" ABOVE, AND RECORD IT IN BLANK "B". (PLACE TILT STEERING WHEEL IN MID-POSITION AND TELESCOPING COLUMNS IN FULL DOWN POSITION).

ORIGINAL DIMENSION (B) _____ IN.

DAMAGED VEHICLE DIMENSION (A) _____ IN.

DIFFERENCE |A-B| _____
tolerance ± 1.0

___ ___ . ___ | 22 23 24

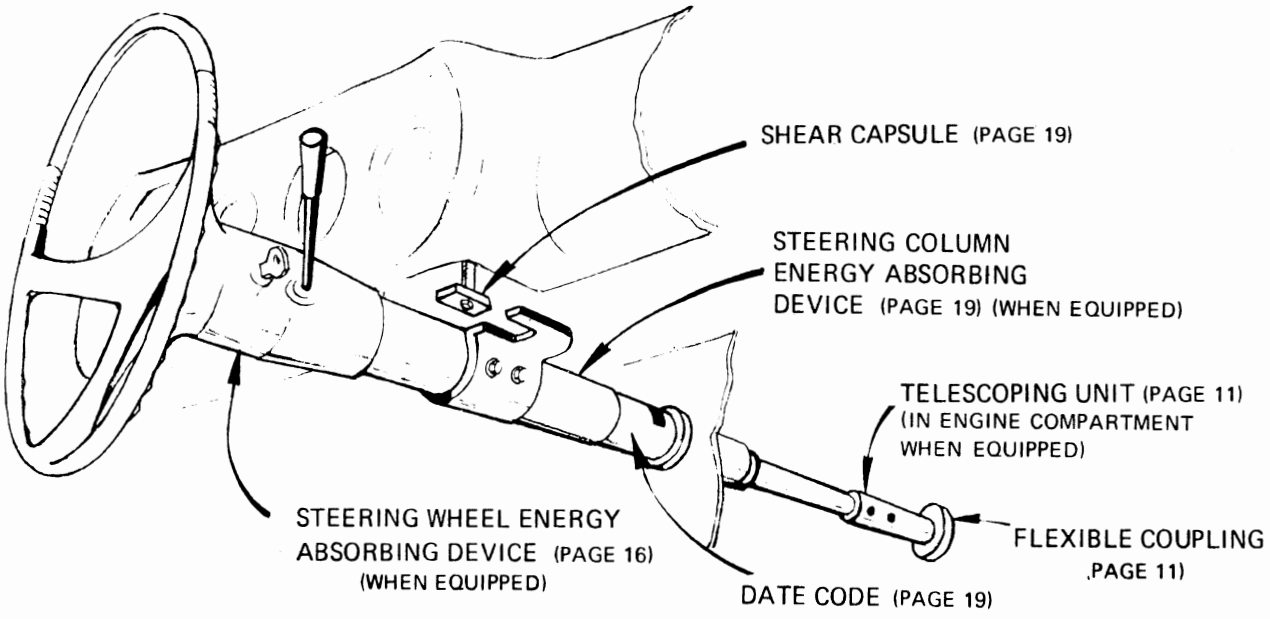
DIRECTION OF MOVEMENT

(4) FORWARD (A GREATER THAN B)
(5) REARWARD (A LESS THAN B)
(6) NEITHER
(0) UNKNOWN

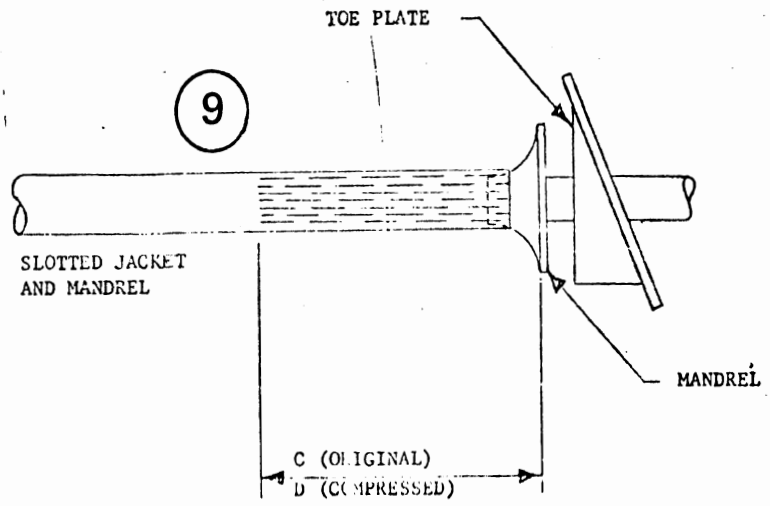
___ | 25

*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO 0 FOR UNKNOWN

STEERING COLUMN (CONT'D.)

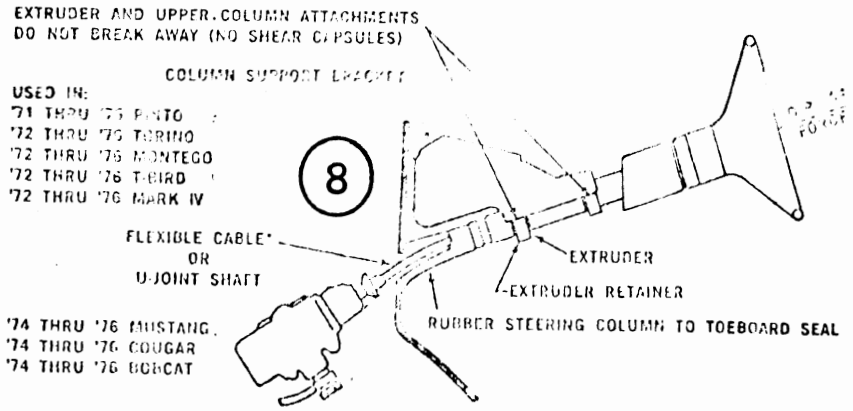


1974 CHRYSLER CORPORATION ENERGY ABSORBING STEERING COLUMN



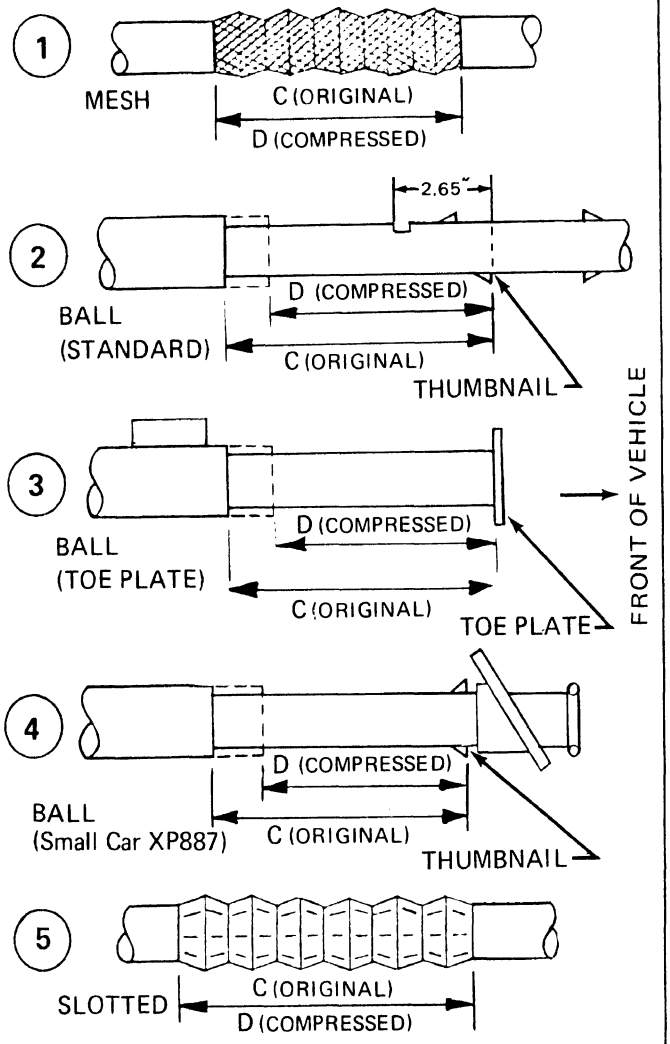
FORD ENERGY ABSORBING "MINI" COLUMN

(1971-76 PINTO; 1972-76 TORINO, MONTEGO, T-BIRD, MARK IV) AND
1975-76 BOBCAT; 1974-76 MUSTANG & COUGAR, AND 1975-76 GRANADA & MONARCH



STEERING COLUMN (CONT'D.)

STEERING COLUMN ENERGY ABSORBING DEVICE SEE ALSO: page 18



STEERING COLUMN ENERGY ABSORBING DEVICE
TYPE OF DEVICE

PUNCH

(7) Not Equipped
(1) Mesh
(2) Ball (Standard)
(3) Ball (with Toe Plate)
(4) Ball (Vega)
(5) Slotted
(6) Other:_____ (e.g. Colt)
(8) Ford Mini-Column
(9) Chrysler Slotted Jacket and Mandrel (1974+)
(0) Unknown

26

(SEE DRAWING ON PAGE 18 FOR LOCATION)

ORIGINAL LENGTH, (C) _____

COMPRESSED LENGTH, (D) _____

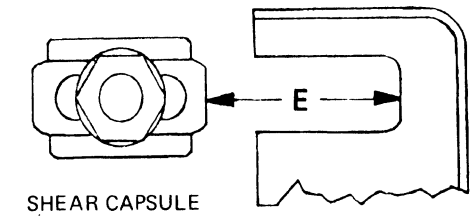
COMPRESSION, (C-D) _____

(777) Device Extended
(888) Not Equipped, (999) Unknown
(998) Compressed, Unknown Amount

27 28 . 29

SHEAR CAPSULE SEPARATION

(SEE DRAWING ON PAGE 18 FOR LOCATION)



SHEAR CAPSULE (FASTENED TO INSTRUMENT PANEL)

SHEAR CAPSULE BRACKET (FASTENED TO STEERING COLUMN)

NOTE: WHEN CAPSULES HAVE SEPARATED IT MAY BE NECESSARY TO LIFT COLUMN ASSEMBLY INTO POSITION AGAINST INSTRUMENT PANEL BEFORE MEASURING.

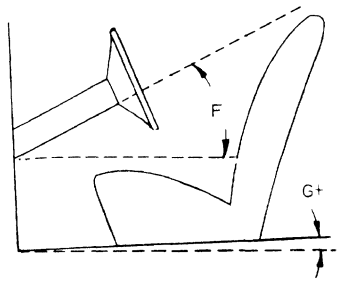
SHEAR CAPSULE SEPARATION (E)

(888) Not Equipped, (999) Unknown
(998) Separated, Unknown Amount

PUNCH

30 31 . 32

STEERING COLUMN VERTICAL ANGLE



MEASURE THE ANGLE THE STEERING COLUMN MAKES WITH THE HORIZONTAL ('F' IN DIAGRAM ABOVE), AND THE ANGLE THE DOOR SILL MAKES WITH THE HORIZONTAL ('G' IN DIAGRAM) AND ENTER THEM BELOW. ANGLES WHICH TILT DOWN TOWARD THE FRONT OF THE CAR ARE POSITIVE.

(NOTE: LIFT COLUMN INTO POSITION FOR MEASUREMENT)

F: _____ DEGREES; G: _____ DEGREES

COLUMN VERTICAL ROTATION

PUNCH

FINAL COLUMN POSITION

COLUMN ANGLE (F)_____
(Relative to Ground)

VEHICLE ANGLE (G)_____

COLUMN ANGLE (F-G=H)_____
(Relative to Vehicle)

FROM A CORRESPONDING UNDAMAGED VEHICLE, MAKE A MEASUREMENT SIMILAR TO "H" ABOVE AND RECORD IT IN BLANK "J"

ORIGINAL DIMENSION (J)_____

DAMAGED VEHICLE DIMENSION (H)_____

COLUMN ROTATION (H-J)_____
(ENTER 99 IF UNKNOWN) tolerance ± 1°
98 Rotated - Unknown amount

Either + or -

33 34

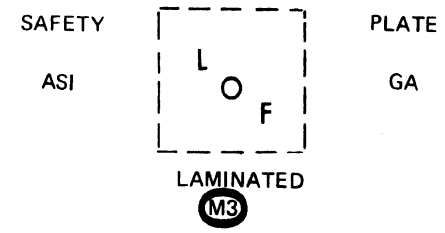
PASSENGER COMPARTMENT

GENERAL INFORMATION	PUNCH CODE	CARD COL.
PASSENGER COMPARTMENT REDUCED IN SIZE (1,2,0)*	____	35
EXTERNAL OBJECT INTRUSION (1,2,0)* DESCRIBE ON FOLD-OUT FLY-LEAF	____	36
INTERNAL LOOSE OBJECT (1,2,0)*	____	37
VERTICAL ROTATION OF INSTRUMENT PANEL (1,2,0)*	____	38
FIREWALL (COWL) DEFORMATION (1,2,0)*	____	39
FLOORPAN DEFORMATION (1,2,0)* (INCLUDING TOEPAN)	____	40
WINDSHIELD		
CRACKED (1,2,3,0)*	____	41
BROKEN (1,2,3,0)* (Plastic Interlayer Torn)	____	42
OCCUPANT CONTACT (1,2,3,0)*	____	43
CRACKED OR BROKEN BY OCCUPANT CONTACT (1,2,3,0)*	____	44
BOND SEPARATED (1,2,0)* (IF "YES", ESTIMATE PERCENT____)	____	45
WINDSHIELD CODE (YY) Unknown	__ __	46-47

WINDSHIELD MARK

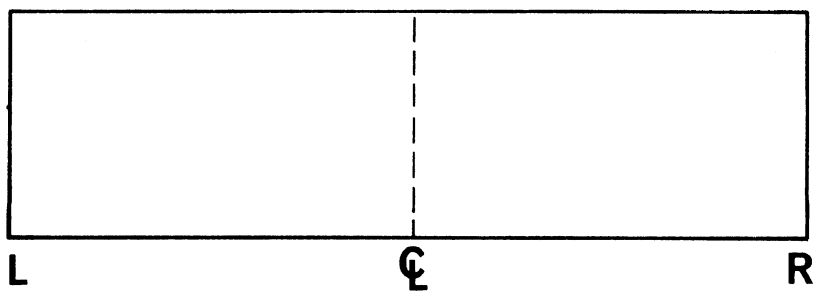
DRAW GLASS MANUFACTURER'S WINDSHIELD MARK WHICH IS LOCATED ALONG THE BOTTOM OF THE WINDSHIELD AT CENTER OR AT ONE CORNER.

EXAMPLE OF TYPICAL MARK:



MARK ON CASE VEHICLE:

LOCATE AREA OF WINDSHIELD INTEREST OR DAMAGE WITH DIMENSIONS (VERTICAL & HORIZONTAL) ON THIS DIAGRAM OF THE WINDSHIELD AS VIEWED FROM INSIDE.



*WHERE (1,2,3,0) IS INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO 0 FOR UNKNOWN

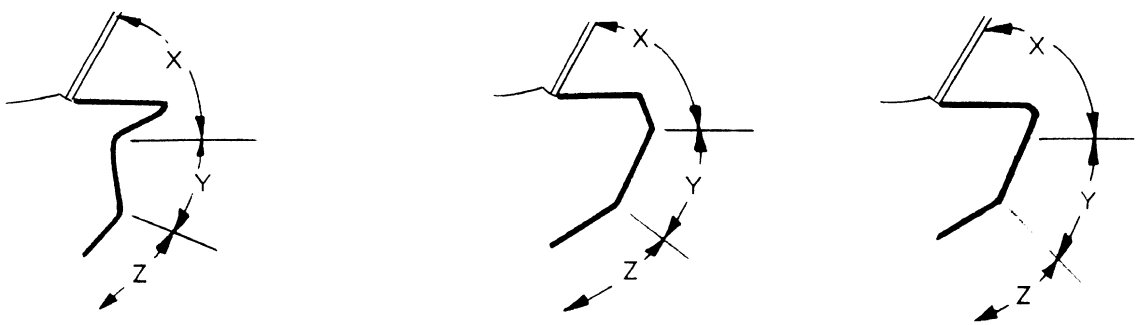
PASSENGER COMPARTMENT

INSTRUMENT PANEL	EQUIPPED (1,2,0)* PUNCH CODE	EQUIPPED (1,2,0)* CARD COL.	DAMAGED (1,2,3,0)* PUNCH CODE	DAMAGED (1,2,3,0)* CARD COL.	OCCUPANT CONTACT (inc. probable) (1,2,3,0)* PUNCH CODE	OCCUPANT CONTACT (inc. probable) (1,2,3,0)* CARD COL.
UPPER PANEL ("X" IN DIAGRAMS)			___	48	___	49
MIDPANEL ("Y" IN DIAGRAMS)			___	50	___	51
LOWER PANEL ("Z" IN DIAGRAMS)			___	52	___	53
ASHTRAY			___	54	___	55
CONTROL KNOBS AND LEVERS			___	56	___	57
GLOVE COMPARTMENT AREA			___	58	___	59
INSTRUMENTS			___	60	___	61
PARKING BRAKE RELEASE OR BRACKET	___	62	___	63	___	64
AIR CONDITIONING OUTLETS OR UPPER VENTILATION OUTLETS	___	65	___	66	___	67
HEATER OR AIR CONDITIONING DUCTS	___	68	___	69	___	70
RADIO	___	71	___	72	___	73
OTHER: _____ (MORE THAN ONE ITEM MAY BE NOTED) e.g. package shelf, CB radio, tape deck			___	74	___	75

Passenger - Air Bag:
(4) Deployment
(5) Equipped-No Deployment
(6) Deployment Unknown
(9) Both Other Damage and Air Bag Equipped Unknown

END OF CARD 07

TYPICAL PANEL DIAGRAMS



*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO 0 FOR UNKNOWN

PASSENGER COMPARTMENT

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD $\frac{0}{10}$ $\frac{8}{11}$

OTHER INTERIOR ITEMS (FRONT OF VEHICLE)

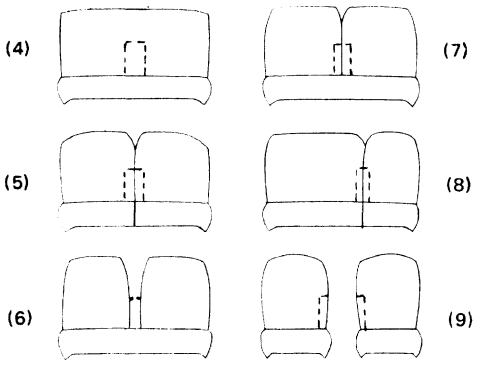
	EQUIPPED (1,2,0)*		DAMAGED (1,2,3,0)*		OCCUPANT CONTACT (1,2,3,0)*	
	PUNCH CODE	CARD COL.	PUNCH CODE	CARD COL.	PUNCH CODE	CARD COL.
FOOT CONTROLS			___	12	___	13
IGNITION KEYS			___	14	___	15
REAR VIEW MIRROR			___	16	___	17
SUNVISOR AND FITTINGS			___	18	___	19
WINDSHIELD TOP MOLDING			___	20	___	21
LEFT A–PILLAR (UPPER OR LOWER)			___	22	___	23
RIGHT A-PILLAR (UPPER OR LOWER)			___	24	___	25
CONSOLE	___	26	___	27	___	28
TRANSMISSION SELECTOR LEVER						
ON STEERING COLUMN	___	29	___	30	___	31
ON CONSOLE OR FLOOR	___	32	___	33	___	34

*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO 0 FOR UNKNOWN

OTHER INTERIOR DAMAGE

PASSENGER COMPARTMENT (CONT'D.)

SEATS

	PUNCH CODE	CARD COL.
TYPE OF FRONT SEAT		
 (4) (7) (5) (8) (6) (9)		
(0) UNKNOWN 3) Drivers Seat Only	___	35
FOLDING BACKS (1,2,0)*	___	36
DELUXE ACCESSORIES (1) Deluxe Accessories (2) None (4) Reclining Seatbacks (0) Unknown	___	37
TYPE OF SEAT ADJUSTERS Driver's Side (4) MANUAL (5) POWER (6) RIGID (7) OTHER: _____ (0) UNKNOWN	___	38
TYPE OF SEAT ADJUSTMENT Driver's Side (3) NONE (NOT APPLICABLE) (4) 2-WAY (5) 4-WAY (6) 6-WAY (7) OTHER: _____ (0) UNKNOWN (8) Swivel Seats	___	39
DAMAGE TO ADJUSTERS (1,2,0)* Include Rigid	___	40
TYPE OF DAMAGE TO ADJUSTERS (CHOOSE TWO:rank in order of severity) (2) None (4) Chucking (some free play) (5) Deformed (e.g. Released or Jammed) (6) Separated (0) Unknown	___	41
(8) Swivel Damaged	___	42
LOCATION OF SEPARATION (3) NOT APPLICABLE (4) AT FLOOR (5) AT ADJUSTER (6) AT SEAT (0) UNKNOWN	___	43

	PUNCH CODE	CARD COL.
POSITION OF SEAT PRIOR TO CRASH DRIVER S SEAT (4) FORWARD (5) MIDDLE (6) REARWARD (0) UNKNOWN	___	44
RIGHT FRONT PASSENGER'S SEAT code the same if bench seat (3) NOT APPLICABLE (No Seat) (4) FORWARD (5) MIDDLE (6) REARWARD (0) UNKNOWN	___	45
DAMAGE TO FRONT SEAT		
BACKREST DAMAGE (1,2,0)*	___	46
CUSHION DAMAGE (1,2,0)*	___	47
CONTACTED BY REAR OCCUPANT (1,2,3,0)* If no rear occupant	___	48
SEAT CENTER ARMRESTS (FRONT)		
EQUIPPED (1,2,0)*	___	49
DAMAGED (1,2,3,0)*	___	50
HEAD RESTRAINTS (FRONT) Driver's Side		
EQUIPPED (1,2,0)* Integral	___	51
REMOVED PRIOR TO COLLISION (1,2,3,0)*	___	52
RETAINED DURING COLLISION (,1,2,3,0)*	___	53
DAMAGED (1,2,3,0)*	___	54
OCCUPANT CONTACT (1,2,3,0)*	___	55
HEAD RESTRAINT ADJUSTMENT AT TIME OF COLLISION Driver's Side (3) Not Applicable, None (4) UP from seat top (5) DOWN on seat top (0) Unknown (6) Integral	___	56

SEATS

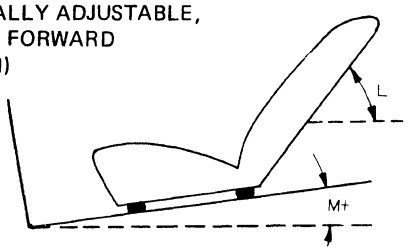
PASSENGER COMPARTMENT (CONT'D.)

SEATS (CONT'D)

	PUNCH CODE	CARD COL.
FRONT SEAT BACK LOCKS		
LEFT or center — EQUIPPED (1,2,3,0)*	____	57
LEFT or center — HELD (1,2,3,0)*	____	58
RIGHT — EQUIPPED (1,2,3,0)*	____	59
RIGHT — HELD (1,2,3,0)*	____	60

FRONT SEAT BACK ANGLE

MEASURE THE FRONT SEAT BACK ANGLE AT THE LEFT AND RIGHT SEAT BACK FRAMES. (IF SEAT BACK ANGLE IS NORMALLY ADJUSTABLE, MOVE TO FORWARD POSITION)



MEASURE THE ANGLE THE SEAT BACK MAKES WITH HORIZONTAL (L IN DIAGRAM), AND THE ANGLE THE DOOR SILL MAKES WITH HORIZONTAL (M IN DIAGRAM) AND ENTER BELOW.

LEFT SIDE	RIGHT SIDE
L ____ DEG. M ____ DEG.	L ____ DEG. M ____ DEG.

SEAT BACK ROTATION

	DEGREES LEFT	DEGREES RIGHT	PUNCH CODE	CARD COL.
FINAL SEAT ANGLE (ENTER 99 IF UNKNOWN)				
SEAT ANGLE (L) (Relative to Ground)	____	____		
VEHICLE ANGLE (M)	____	____		
SEAT ANGLE (L-M=P) (Relative to Vehicle)	____	____		
FROM A CORRESPONDING UNDAMAGED VEHICLE, MAKE A MEASUREMENT SIMILAR TO "P" ABOVE AND RECORD IT IN BLANK "R" BELOW.				
ORIGINAL ANGLE (R)	____	____	(98) Rotated - Unknown amount	
DAMAGED SEAT ANGLE (P)	____	____		
DIFFERENCE |R-P| tolerance ±2°	____	____		
LEFT SEAT ANGLE DIFFERENCE			__ __	61-62
RIGHT SEAT ANGLE DIFFERENCE			__ __	63-64

TYPE OF REAR SEAT

(2) NO SEAT
(4) NON-FOLDING
(5) FOLDING
(0) UNKNOWN

	____	65
	END OF CARD 08	

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD 0 (10) 9 (11)

DAMAGE TO REAR SEAT	PUNCH CODE	CARD COL.
BACKREST DAMAGED OR LOOSENED (1,2,3,0)*	____	12
CUSHION DAMAGED OR LOOSENED (1,2,3,0)*	____	13
SEAT CENTER ARMRESTS (REAR)		
EQUIPPED (1,2,3,0)*	____	14
DAMAGED (1,2,3,0)*	____	15
REAR SEAT BACK LOCKS		
LEFT OR CENTER — EQUIPPED (1,2,3,0)*	____	16
LEFT OR CENTER — HELD (1,2,3,0)*	____	17
RIGHT — EQUIPPED (1,2,3,0)*	____	18
RIGHT — HELD (1,2,3,0)*	____	19
THIRD SEAT		
EQUIPPED (1,2,0)*	____	20
BACKREST DAMAGED (1,2,3,0)*	____	21
CUSHION DAMAGED (1,2,3,0)*	____	22
BACKLIGHT (REAR WINDOW)		
DAMAGED (1,2,3,0)*	____	23
OCCUPANT CONTACT (1,2,3,0)*	____	24
BACKLIGHT HEADER		
DAMAGED (1,2,3,0)* convertible	____	25
OCCUPANT CONTACT (1,2,3,0)*	____	26
WINDOWS CLOSED AT TIME OF COLLISION (3=no window)		
LEFT FRONT (1,2,3,0)*	____	27
LEFT REAR (1,2,3,0)*	____	28
RIGHT FRONT (1,2,3,0)*	____	29
RIGHT REAR (1,2,3,0)*	____	30
BACKLIGHT (1,2,3,0)*	____	31
ALL SIDE WINDOWS OPERABLE AFTER COLLISION (1,2,3,0)*	____	32
POWER SIDE WINDOWS EQUIPPED (1,2,0)* (PUT NOTES ON FOLD-OUT FLY-LEAF)	____	33

*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO 0 FOR UNKNOWN

WINDOWS

SEATS

PASSENGER COMPARTMENT (CONT'D.)

LEFT SIDE INTERIOR

		DAMAGED (1,2,3,0)*		OCCUPANT CONTACT (1,2,3,0)*	
		PUNCH CODE	CARD COL.	PUNCH CODE	CARD COL.
FRONT	DOOR	____	34	____	35
	HARDWARE	____	36	____	37
	ARMREST	____	38	____	39
	GLASS	____	40	____	41
REAR	DOOR AREA	____	42	____	43
	HARDWARE	____	44	____	45
	ARMREST	____	46	____	47
	GLASS	____	48	____	49
ROOF SIDE RAIL		____	50	____	51
B-PILLAR (ALSO REAR PILLAR ON PICK-UP TRUCK, CORVETTE, FIREBIRD & CAMARO)		____	52	____	53
C-PILLAR		____	54	____	55
D-PILLAR (REAR PILLAR ON STATION WAGONS & LIMOUSINES)		____	56	____	57
OTHER: _____		____	58	____	59

END OF CARD 09

*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO 0 FOR UNKNOWN

PASSENGER COMPARTMENT (CONT'D.)

RIGHT SIDE INTERIOR

ROOF INTERIOR

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD 1/10 0/11

RIGHT SIDE INTERIOR

		DAMAGED (1,2,3,0)* PUNCH CODE	DAMAGED (1,2,3,0)* CARD COL.	OCCUPANT CONTACT (1,2,3,0)* PUNCH CODE	OCCUPANT CONTACT (1,2,3,0)* CARD COL.
FRONT	DOOR		12		13
	HARDWARE		14		15
	ARMREST		16		17
	GLASS		18		19
REAR	DOOR AREA		20		21
	HARDWARE		22		23
	ARMREST		24		25
	GLASS		26		27
ROOF SIDE RAIL			28		29
B-PILLAR (ALSO REAR PILLAR ON PICK-UP TRUCK, CORVETTE, FIREBIRD & CAMARO)			30		31
C-PILLAR			32		33
D-PILLAR (REAR PILLAR ON STATION WAGONS & LIMOUSINES)			34		35
OTHER: _____			36		37
ROOF INTERIOR	HEADLINING		38		39
	Code (3), if top down or removed				
	ROOF STRUCTURE		40		4

END OF CARD 10

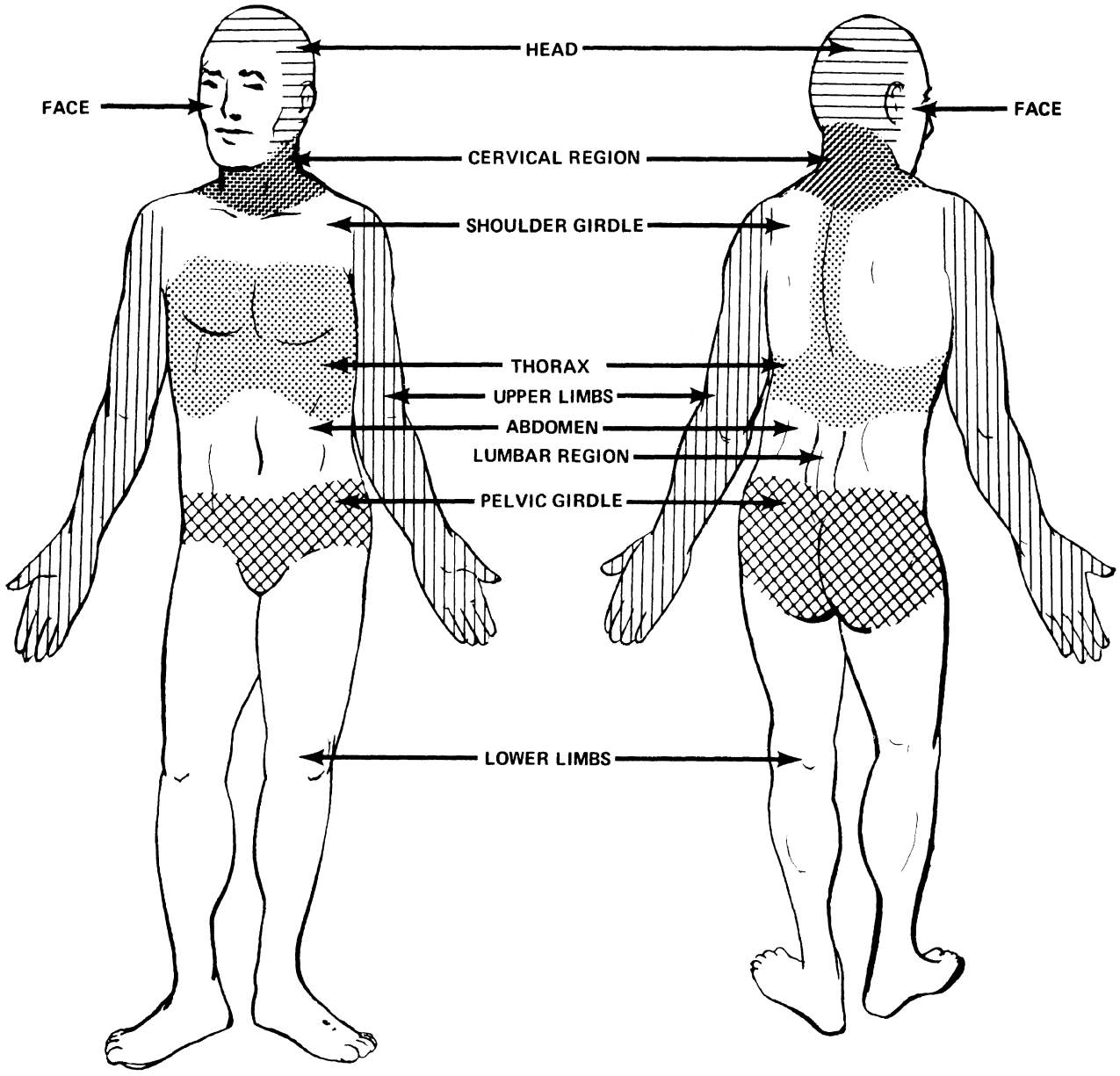
*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO 0 FOR UNKNOWN

OCCUPANT INFORMATION SECTION

1. THIS SECTION IS TO BE FILLED IN FOR EACH OCCUPANT, WHETHER INJURED OR NOT.

2. IF THERE IS MORE THAN ONE OCCUPANT, USE ADDITIONAL BLANK COPIES OF THIS FORM AND ATTACH OCCUPANT PAGES TO THIS REPORT.

3. THE FOLLOWING FIGURE IS AN EXPLANATION OF THE BODY REGIONS LISTED ON PAGES 30.



OCCUPANT INFORMATION

OCCUPANT

DUPLICATE COLUMNS 1-9 FROM PRECEDING CARD ___/___ 10 11

	PUNCH CODE	CARD COL.
OCCUPANT NUMBER	__ __	12-13
SEAT LOCATION (3) EXTERNAL TO PASS. COMP. (e.g., bed of pickup) (4) FRONT (5) REAR (6) THIRD (7) OTHER: _____ (0) UNKNOWN	____	
POSITION ON SEAT (3) EXTERNAL TO PASS. COMP. (4) LEFT (5) LEFT CENTER (6) CENTER (7) RIGHT CENTER (8) RIGHT (9) ALL (Lying on seat) (0) UNKNOWN	____	
POSTURE (1) SITTING ON SEAT (2) ON LAP OR IN ARMS (3) STANDING ON SEAT (4) STANDING ON FLOOR (5) IN BASSINET (6) IN CHILD SEAT (7) LYING ON SEAT (8) LYING OR SITTING ON FLOOR OR OTHER OBJECT (0) UNKNOWN	____	16
AGE YEARS, OR	__ __	17-18
MONTHS (INFANTS) to 24 months	__ __	19-20
(ENTER "0"S IF UNKNOWN)		
WEIGHT, LBS. (ENTER "0"S, IF UNKNOWN)	__ __ __	21-23
HEIGHT, INCHES (ENTER "0"S, IF UNKNOWN)	__ __	24-25
SEX (4) Male (5) Female (6) Large Animal (0) Unknown	____	26

RESTRAINT SYSTEM	PUNCH CODE	CARD COL.
LAP BELT		
EQUIPPED FOR THIS POSITION (1,2,0)*	____	27
WORN BY OCCUPANT (1,2,3,0)*	____	28
WORN CORRECTLY (1,2,3,0)*	____	29
LOCKING RETRACTOR (1,2,3,0)*	____	30
UPPER TORSO RESTRAINT Upper Torso Belt and/or Air Bag Equipped (1) No A/B & Upper Belt Equipped (2) No A/B & Upper Belt Not Equipped (0) No A/B & Upper Belt Unk if Equipped (4) A/B Equipped & Upper Belt Equipped (5) A/B Equipped & Upper Belt Not Equipped (6) A/B Equipped & Upper Belt Unk if Equipped (9) Both A/B & Upper Belt Unk if Equipped	____	31
Upper Torso Belt and/or Air Bag Used (1) No Deployment or No Bag; Upper Belt Worn (2) No Deployment or No Bag; Upper Belt Not Worn (3) No Deployment or No Bag; No Upper Belt (0) No Deployment or No Bag; Unknown if Worn (4) Deployment; Upper Belt Worn (5) Deployment; Upper Belt Not Worn (6) Deployment; No Upper Belt (7) Deployment; Upper Belt Unknown if Worn (9) Both Upper Torso Worn or Air Bag Deployed Unknown	____	32
WORN CORRECTLY (1,2,3,0)*	____	33
INERTIA REEL (1,2,3,0)*	____	34
LAP AND/OR UPPER TORSO RESTRAINT USAGE CODE	__ __	[illegible]
TYPE OF UPPER TORSO RESTRAINT USED (3) No Torso Restraint Used (4) 3-point (5) 4-point (6) Other (e.g. VW passive restraint system) (7) Air Bag Deployed & No Belts Used (8) Air Bag Deployed & Any Belts Used (9) Air Bag Deployed & Unknown Belt Use (0) Unknown	____	37
CHILD RESTRAINT SYSTEM: NOTE MAKE AND MODEL NUMBER _____ _____		
CHILD RESTRAINT CODE (99 none)	__ __	38-39
	____	40
	____	41

*WHERE (1,2,0) OR (1,2,3,0) ARE INDICATED, USE 1 FOR YES 3 FOR NOT APPLICABLE
2 FOR NO . 0 FOR UNKNOWN

OCCUPANT INFORMATION

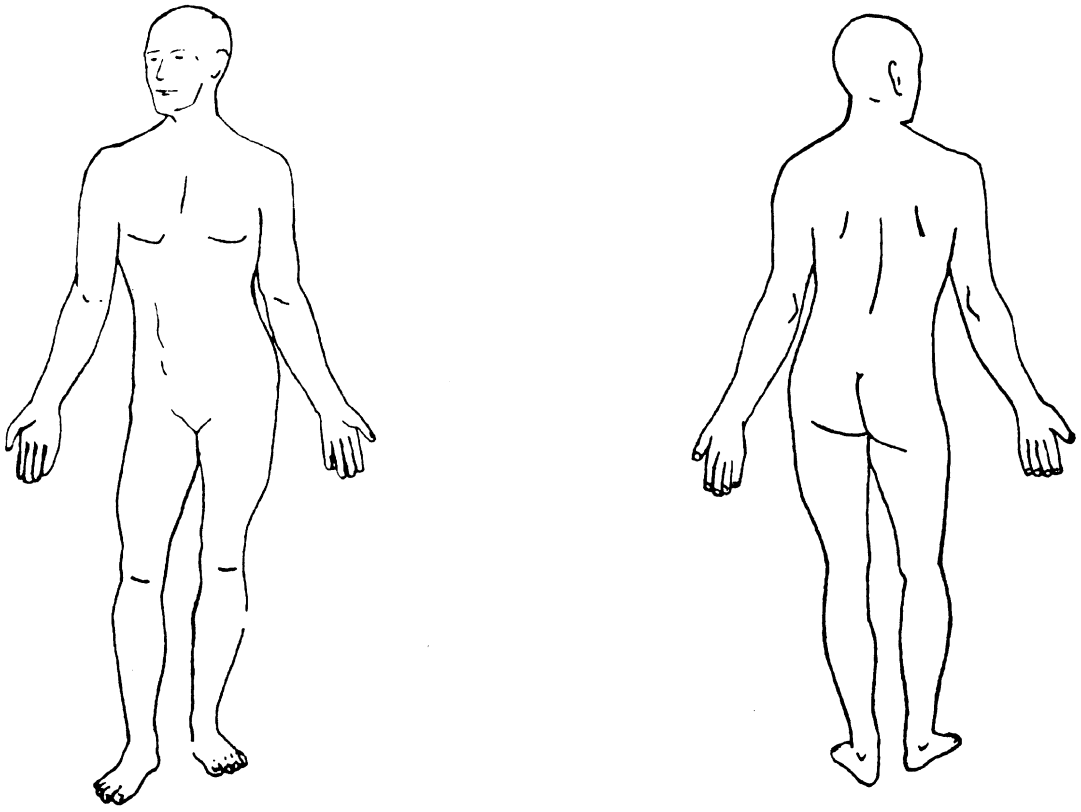
EJECTION	PUNCH CODE	CARD COL.
DEGREE OF EJECTION (2) NONE (4) PARTIAL (5) COMPLETE (0) UNKNOWN	____	42
AREA OF EJECTION (3) NOT APPLICABLE (1) WINDOW, LEFT SIDE (2) " , RIGHT SIDE (4) " , REAR (5) DOOR, LEFT SIDE (6) " , RIGHT SIDE (7) TAILGATE (8) WINDSHIELD (9) ROOF OR OPEN CONVERTIBLE OR FROM EXTERNAL AREA (0) UNKNOWN	____	43
TREATMENT/MORTALITY (0) None (1) First Aid - On-scene or outpatient (2) Hospitalized - Observation under 24 Hours (3) Hospitalized - Significant Treatment or over 24 Hours (4) Fatal - Dead at Scene (5) Fatal - Dead on Arrival at Hospital (6) Fatal - Dead within 24 Hours (7) Fatal - Dead 24 hours to 1 year (8) Fatal - Time of Death Unknown (9) Unknown	____	44
OVERALL SEVERITY OF INJURIES (USE 1976 AIS) (00) NONE (01) MINOR (02) NON-DANGEROUS, MODERATE (03) NON-DANGEROUS, SEVERE (04) DANGEROUS, SERIOUS (05) DANGEROUS, CRITICAL (06) MAXIMUM, UNTREATABLE (98) INJURY UNKNOWN (99) INJURED, SEVERITY UNKNOWN	__ __	45-46
	END OF CARD	

*HOSPITALIZED: INJURIES REQUIRING HOSPITAL RECUPERATION AND TREATMENT FOR A PERIOD OF AT LEAST ONE DAY. "HELD FOR OBSERVATION ONLY" IS NOT CONSIDERED "HOSPITALIZED" IN THIS DEFINITION.

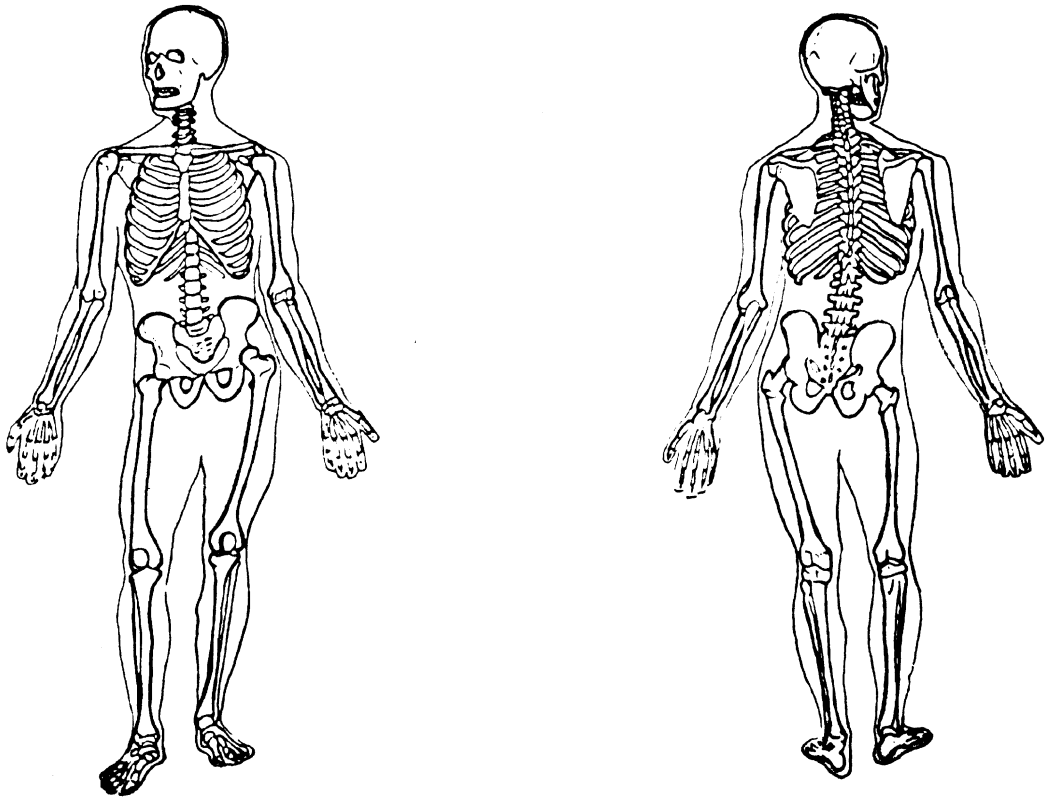
NOTES

OCCUPANT

INDICATE LOCATION OF INJURIES, INCLUDING MAJOR BRUISES



SOFT TISSUE INJURIES



SKELETAL INJURIES

Source of Information _____

OCCUPANT INJURY DETAIL

1. This page is only for the occupant just described.
2. Enter occupant number from page 28 in col 12-13.(This refers only to the order in which in which occupant information is entered and is not related to seated position.)
3. Enter severity code (only one per box) for each type of injury to each body region. (Mark boxes with 1-6,9 only.) Use 1976 AIS injury severity codes.
4. Do not fill in the boxes where there was no injury.
5. If you are reasonably assured that one or more specific components or area(s) contacted by this occupant resulted in an associable injury, enter the proper code(s) code(s) in the starred (*) section. (See Page 30A for codes.)
6. DO not fill in the boxes where there was no contact.

1-9	CARD NUMBER 10-11	OCCUPANT NO. 12-13	BODY REGION	★ ENTER CODE(S) FOR AREA(S) OF POSSIBLE CONTACT 14-15	16-17	18-19	20-21	ENTER SEVERITY CODES: OVERALL INJURY TO BODY REGION 22	FRACTURE 23	LACERATION 24	CONTUSION 25	COMPLAINT OF PAIN 26	ABRASION 27	CONCUSSION 28	BURN 29	HEMORRHAGE 30	OTHER 31
	12		INTERNAL ORGANS														
DUPLICATE FROM PRECEDING CARD	13		BRAIN														
	14		FACE														
	15		HEAD														
	16		NECK (CERVICAL REGION)														
	17		SHOULDER GIRDLE														
	18		RIGHT UPPER LIMB														
	19		LEFT UPPER LIMB														
	20		CHEST & UPPER BACK (THORAX)														
	21		LOWER BACK (LUMBAR REGION)														
	22		ABDOMEN														
	23		PELVIC GIRDLE														
	24		RIGHT LOWER LIMB														
	25		LEFT LOWER LIMB														
	26		WHOLE BODY														

OCCUPANT

KEYPUNCH NOTE: Each line represents one card. Punch only the lines with handwritten information.

30A

OCCUPANT CONTACT CODES

FRONT OF PASSENGER COMPARTMENT

(12) Windshield
(10) Sunvisor, Fitting(s) and/or Top Molding

(05) Instrument Panel (specific area unknown)
(54) Upper Instrument Panel (X)
(55) Middle Instrument Panel (Y)
(56) Lower Instrument Panel (Z)
(81) Ash Tray (instrument panel)
(02) Glove Compartment Area
(47) Air Bag (ACRS) Compartment Door/Cover

(57) Beneath Instrument Panel
(53) Parcel Tray
(48) Knee Restraint
(86) Vertical Console

(28) Foot Controls (incl parking brake pedal)

(09) Steering Assembly (specific area unknown)
(65) Steering Wheel (includes rim & spokes)
(66) Steering Wheel Column
(59) Transmission Lever on Column

(03) Hardware Item (specific item unknown)
(82) Instrument(s)
(83) Control Knob(s) and Lever(s) (front)
(84) Parking Brake Handle (in front)
(67) Ignition Key
(06) Mirror
(04) Heater or Air Conditioning Ducts
(01) Air Conditioning or Ventilation Outlet(s)
(08) Radio (built-in)
(58) Add-on Tape Deck, Radio, AC
(10) Sunvisor, Fitting(s) and/or Top Molding

FLOOR

(40) Floor
(27) Console on Floor or Between Seats
(44) Transmission Lever on Floor or Console
(85) Parking Brake Handle on Floor or Console
(28) Foot Controls (incl Parking brake pedal)

INTERIOR-GENERAL

(11) Transmission Selector Lever (location unk)
(59) Transmission Lever on Steering Column
(44) Transmission Lever on Floor or Console
(07) Parking Brake Handle (location unknown)
(84) Parking Brake Handle in Front
(85) Parking Brake Handle on Floor on Console
(28) Foot Control (incl parking brake pedal)
(29) Front Seat back(s)
(51) Front Seat Cushion
(50) Rear Seat Cushion and Back
(30) Head Restraint
(49) Armrest on Seat
(89) Under Seat Bottom

(33) Restraint System Hardware
(34) Restraint System Webbing
(87) Air Cushion Skin (Air bag)
(47) Air Bag Compartment Door/Cover
(48) Knee Restraint
(30) Head Restraint

(31) Interior Loose Object
(32) Other Occupant(s)
(52) Internal Flying Glass (From Any Source)

SIDES

(20) Surface of Side Interior
(19) Hardware on Side or Door
(13) Armrest on Side or Door
(24) Coat Hooks
(22) Window Glass (side)
(21) Window Frames (side)
(26) Roof Side Rail
(14) A-Pillar
(15) B-Pillar
(16) C-Pillar
(17) D-Pillar

REAR

(88) Surface of Rear Interior
(23) Backlight (rear window)
(39) Backlight Header
(50) Rear Seat Cushion and Back

ROOF

(25) Roof or Convertible Top
(10) Sunvisor Fitting(s) and/or Top Molding
(26) Roof Side Rail
(24) Coat Hook
(18) Dome Light
(39) Backlight Header

EXTERIOR SURFACE OF CASE VEHICLE

(37) Outside Surface of Case Vehicle (Specific Area Unknown)
(35) Hood of Case Vehicle
(60) Exterior of Case Vehicle Hardware (e.g., Outside Mirrors, Antenna, Trim)
(62) Exterior Side Roof Rail of Case Vehicle
(63) Trunk Lid of Case Vehicle
(64) Tires of Case Vehicle

BEYOND CASE VEHICLE BOUNDARY

(36) Area Exterior to Car (Specific Area Unknown)
(70) Hood of Other Vehicle
(71) Other Vehicle Exterior Hardware (e.g., Outside Mirrors, Antenna, Trim)
(73) Exterior Side Roof Rail of Other Vehicle
(74) Headlight or Front Grill of Other Vehicle
(75) Trunk of Other Vehicle
(76) Outside Surface of Other Vehicle
(77) Tires of Other Vehicle
(78) Ground
(79) Water
(80) Exterior Object (Not Vehicle, Ground or Water): _____

PENETRATING OBJECTS

(61) Other Vehicle
(72) Objects: _____

MISCELLANEOUS

(38) Other (e.g., fire): _____
(98) Impact Force, "Whiplash," Hyperextension/Compression
(99) No Contact (invalid field form code)
(00) Unknown Area of Contact

OCCUPANT INJURY CLASSIFICATION (OIC)

1 BODY REGION

- H Head-Skull
- F Face
- N Neck
- S Shoulder
- X Upper Extremities
- A Arm (Upper)
- E Elbow
- R Forearm
- W Wrist-Hand
- C Chest
- M Abdomen
- B Back
- P Pelvic-Hip
- Y Lower Extremities
- T Thigh
- K Knee
- L Leg (Lower)
- Q Ankle-Foot
- O Whole Body
- U Unknown

2 ASPECT

- R Right
- L Left
- B Bilateral
- C Central
- A Anterior/Front
- P Posterior/Back
- S Superior/Upper
- I Inferior/Lower
- W Whole Region
- U Unknown

3 LESION

- L Laceration
- C Contusion
- A Abrasion
- F Fracture
- P Pain
- K Concussion
- H Hemorrhage
- V Avulsion
- R Rupture
- S Sprain
- D Dislocation
- N Crushing
- M Amputation
- B Burn
- X Asphyxia
- O Other
- U Unknown

4 SYSTEM/ORGAN

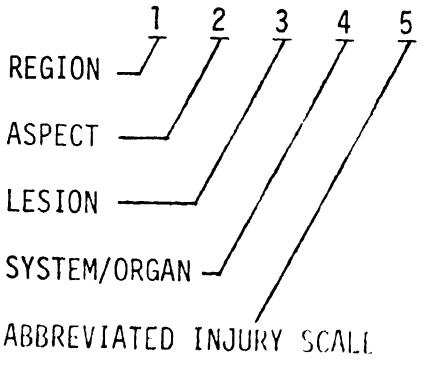
- S Skeletal
- V Vertebrae
- J Joints
- D Digestive
- L Liver
- N Nervous System
- B Brain
- C Spinal Cord
- E Eyes, Ears

Cardiovascular

- A Arteries
- H Heart
- Q Spleen
- G Urogenital
- K Kidneys
- R Respiratory
- P Pulmonary, Lungs
- M Muscles
- I Integumentary
- W All systems in region
- U Unknown

5 AIS

- 0 None
- 1 Minor
- 2 Moderate
- 3 Severe
- 4 Serious
- 5 Critical
- 6 Maximum
- 9 Unknown



7 CASE I.D. NUMBER ___ ___ — ___ ___ ___ ___ ___ — ___ CARD 8 0 OCCUPANT NUMBER ___ ___
1 2 4 9 10 12

Role of Individual at First Impact ___ 14
(0) Unknown
(1) Motor Vehicle Driver
(2) Motor Vehicle Passenger (not driver)

Posture ___ 15
(10) Sitting on Seat
(11) Sitting on Seat in Abnormal Position (e.g., Feet on Dash, Sideways, Etc.)
(12) Sitting on Console
(20) On Lap or in Arms
(30) Standing on Seat
(40) Standing on Floor
(47) Standing - External to Passenger Compartment
(50) In Bassinet
(60) In Child Seat
(65) In Child Harness
(70) Lying on Seat
(80) Lying or Sitting on Passenger Floor
(83) Lying or Sitting on Other Object in Passenger Compartment
(85) On Station Wagon Cargo Floor or Fold Seat Back
(87) Lying or Sitting - External to Passenger Compartment
(98) Other: _____
(00) Unknown

Non-Impact Medical Conditions for Each Occupant ___ 17
(0) None
(1) Yes - Time and Type Unknown
(2) Pre-Crash Fatal (Clinical Death at Wheel)
(3) Pre-Crash Non-Fatal (Prior Injury, Stroke)
(4) Pregnant
(5) Post-Crash Fatal (Drowning)
(6) Post-Crash Non-Fatal Injury
(8) Other: _____
(9) Unknown

Occupant Alcohol Involvement/Test ___ 18
(0) Unknown (999 Below)
(1) No Test, Alcohol Not Suspected (000 Below)
(2) No Test, Alcohol Indicated & No Test Requested (999 Below)
(3) No Test, Test Requested & Refused (999 Below)
(4) No Test, Reason Unknown & Alcohol Indicated (999 Below)
(5) No Test, But Charged (DWI) Booked Drunk
(6) No Test, Fled Scene
(8) BAC Tested, Results Not Provided (999 Below)
(9) BAC Tested and Results Reported (BAC Below)

Occupant Blood Alcohol Level (MG %) ___ ___ ___ 19
(999) Unknown, No Results
(000) No Drinking or "-Results"
____ Record Actual MG %

Occupant Alcohol Test ___ 22
(1) Yes, Type Unknown
(2) None
(4) Urine
(5) Spinal
(6) Breath
(7) Blood
(8) Other: _____
(9) Several of Above
(0) Unknown

Seat Belt Buzzer/Interlock Equipped ___ 23
(0) Unknown
(1) Equipped, Type Unknown
(2) Not Equipped
(4) Non-Cycled Buzzer
(5) Ignition Interlock
(6) 4-second buzzer (post-interlock)
(9) Other: _____

Seat Belt Buzzer Operational ___ 24
(0) Unknown if Operational
(1) Yes, Operational
(2) Not Operational, Reason Unknown
(3) Not Applicable, Not Equipped

System Inhibited by:
(4) Fastening Belts Together (Behind Occupant, Behind Seat, Under Seat, in Front of Seat, Etc.)
(5) Disconnection, Removal, Intentional Destruction
(6) Fixing in Pulled-out Position (Knotted, Twisted, Folded Back, Tucked into Seat, Hooked to Upper Belt, Etc.)
(7) Temporarily Fixing (Sitting on Belt, Holding onto Belt, Hooked on Door, Etc.)
(8) Letting it Buzz
(9) Other: (Defective) _____

Ignition Interlock Operational (1, 2, 3, 0) ___ 25

Passive Restraint System Equipped ___ 26
(1) Yes, Type Unknown
(2) No
(4) Air Bag
(5) Knee and Torso Restraint (e.g., VW)
(9) Other: _____
(0) Unknown

Activated ___ 27
(1) Yes
(2) No
(3) Not Applicable
(0) Unknown

Restraint System Malfunction or Separation ___ 28
(1) Yes, Area Unknown
(2) No
(3) Not Applicable, No Restraints Equipped
(4) At Buckle
(5) In Webbing
(6) At Anchorage
(7) In Retractor
(8) In Passive System
(0) Unknown Whether Malfunction Occurred

Investigator Judgement of Restraint System Effectiveness ___ 29
(0) Unknown
(1) Reduced Injury Severity
(2) Could Have Reduced Severity if Worn (Correctly)
(3) No Opinion
(4) Could Not Have Reduced Severity if Worn
(5) Did Not Reduce Overall Severity
(6) Did Increase Overall Severity
(7) Would Have Increased Severity if Worn
(8) More Restraints Would Have Been Better

Treatment/Mortality ___ ___ 30

(00) None
(01) First Aid at Scene
(02) Treated at Hospital/Clinic But Not Admitted
(03) Hospitalized (Observation less than 24 Hours)
(04) Hospitalized for Over 24 Hours or Significant Treatment
(05) Fatal - Dead at Scene
(06) Fatal - DOA
(07) Fatal - Dead Within 24 Hours
(08) Fatal - Dead 24 Hours - 1 Year
(09) Fatal - Dead, Period Unknown
(99) Unknown

EMS Contributory to Severity (0,1,2) ___ 32

Was Emergency Medical Services (EMS) contributory to injury severity or fatality, e.g., because of delays or due to improper/ insufficient/no treatment on-scene or in-transport?

(4) Exemplary Service

Autopsy Performed (0,1,2,3) ___ 33

Overall Police Injury Severity (KABC) ___ 34
(Note: Report Police Judgement)

(0) O,D No Injury
(1) C Possible Injury
(2) B Nonincapacitating Injury
(3) A Incapacitating Injury
(4) K Fatal Injury
(5) Reported as Injured, no KABC Code
(9) Unknown

OCCUPANT INJURY CLASSIFICATION

DUPLICATE FROM PRECEDING CRD

1-9	CARD NUMBER 10-11	OCCUPANT NO. 12-13	Place contacts in order of probability (horizontally). Start with most probable in col. 14-15. FOUR AREA(S) OF POSSIBLE CONTACT 14-15	16-17	18-19	20-21
	81					
	82					
	83					
	84					
	85					
	86					
	87					
	88					
	89					
	90					
	91					
	92					
	93					
	94					
	95					

PRIMARY OIC				
BODY REGION 22	ASPECT 23	LESION 24	SYSTEM/ORGAN 25	SEVERITY 26

ASSOCIATED OIC'S				
BODY REGION 27	ASPECT 28	LESION 29	SYSTEM/ORGAN 30	SEVERITY 31

ASSOCIATED OIC'S				
BODY REGION 32	ASPECT 33	LESION 34	SYSTEM/ORGAN 35	SEVERITY 36

THIS PAGE IS TO BE CODED BY HSRI DATA EDITOR, NOT FIELD TEAM.

CPIR Supplement (1/76) 3/1

Report Number

1 2 3 - 4 5 6 7 8 - 9

Card Number 9 0 (10 11)

REPORTING DATA (99999) for Unknown

Date of Field Investigation

MO DAY YEAR

12 13 14 15 16 17

Date Submitted/Published (inside title page)

18 19 20 21 22 23

Team case number

24 25 26 27 28 29 30 31 32 33 34

HSRI CPIR Editor

(1)	JD	(A)	DS/JB	(J)	AT
(2)	PG	(B)	HS/CW	(K)	BW
(3)	BB	(C)	TS/BJ	(L)	JS
(4)	BP	(D)	DL	(M)	JW
(5)	BG	(E)	JA/KP	(N)	ST
(6)	SV	(F)	PJ/BM	(P)	KF
(7)	PK	(G)	TM/PC	(Q)	BP
(8)	JW	(H)	JD/AR	(R)	PS
(9)	AM	(I)	GB/WB	(S)	MH
(0)	Unknown			(T)	RC

(U)	CC				
(V)	LC				
(W)	KT				
(X)	MH				
(Y)	RP				
(Z)	GZ				

35

Number of CASE VEHICLES reported in accident (Completed CPIRs) 36

Original Vehicle Report Form

(0) No Form
(1) CPIR - R1
(2) CPIR - R2
(3) CPIR - R3
(5) CPIR - B (truck form)
(7) CPIR - Baylor
(8) UCLA - TRG
(9) Other

37

Recommendations/Conclusions

31

Matrix Cell			Number (9) for "9 or More"
	Human		38
1	Pre-Crash	___	
2	Crash	___	
3	Post-Crash	___	
	Vehicle		
4	Pre-Crash	___	
5	Crash	___	
6	Post-Crash	___	
	Environment		
7	Pre-Crash	___	
8	Crash	___	
9	Post-Crash	___	

H S
47 48 49 50 51 52 53 54 55 56

P B
57 58 59 60 61 62 63 64 65 66

Other Vehicle CPIR Report No.
If 3 Case Vehicles, link 1 to 2, 2 to 3, and 3 to 1.

67 68 - 69 70 71 72 73 - 74

Date First Edited

75 76 - 77 78 - 79 80

end of card 90

2nd edited by:

Date:

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Duplicate Col 1-9 from Preceeding 9 1

32

SUPPORTING DATA INCLUDED

(1) Yes
(2) No
(3) Not applicable
(0) Unknown

	Code	Col.
Psychological Factors		
Psychological Review	—	12
Any Personal Interviews (1,2,0)	—	13
Katz Adjustment Scales (KAS) (1,2,0)	—	14
Michigan Alcoholism Screening Test (UM) (1,2,0)	—	15
Driver's License Record (Previous Accidents)	—	16
Medical Factors(included)		
Medical Examiners Autopsy	—	17
AFIP Medicolegal Autopsy	—	18
Toxicological/Alcohol Test Includes Breathalyzer Case Driver Only	—	19
Injury Causation Analysis	—	20
Injury Summary Diagram	—	21
X-Rays(taken or included)	—	22
Medical History	—	23
Accident Factors (included)		
Map Location	—	24
Collision Diagram/Sketch	—	25
Site Accident History	—	26
Narrative Description	—	27
Police Report	—	28
Who Estimated Speeds for Case Vehicle (0) No One (1) Investigator (2) Police (3) Driver (4) Witness/Passenger (8) Other:_____ (9) Unknown		
Prior to Impact	—	29
At Impact	—	30

	Code	Col
Vehicle Factors		
NHTSA Vehicle Condition And Maintenance Report	—	31
If (1) then 1		
Mechanical Malfunction Inspection	—	32
Record of Inspection	—	33
Registration Record	—	34
Sheet Metal Crush Diagram/Sketch	—	35
Inches, Coded	—	36
Measurements Taken		
Telescoping Unit	—	37
EA Steering Wheel	—	38
A (Column to Rear)	—	39
EA Steering Column	—	40
VIN Included	—	41
VDI Included	—	42
VM/M Code Included	—	43
Photographs (number)		
Prints	— —	44 45
Slides	— —	46 47
Site/Location Photos	— —	48 49
+ Vehicle Exterior Photos	— —	50, 51
+ Vehicle Interior Photos	— —	52, 53
+ Autopsy/Medical Photos	— —	54 55
Total Number Photos	— —	56, 57
(99 Unknown) (98) over 97		

SPARE (leave blank)

58 59 60 61 62 63 64

End of Card 91

Duplicate Col. 1-9 from Preceeding 9 2 (10 11)

	Code	Col
CASE VEHICLE MALFUNCTION From CPIR page 2 (1) yes (2) no (0) unknown		
(01) Brake System	—	12
(02) Exhaust System	—	13
(03) Steering System	—	14
(04) Suspension System	—	15
(05) Tires	—	16
(06) Electrical System	—	17
(07) Throttle System	—	18
(08) Driver Controls	—	19
(09) Power Train	—	20
(10) Fuel System	—	21
(11) Visibility Items	—	22
(12) Other: _____	—	23
(13) Applicable, but unknown	—	24
Primary Item Noted Above (01 to 13) from above (00) None (99) Unknown	— —	25,26
Had Routine Maintenance been Performed	—	27

	Code	Col
CASE VEHICLE DRIVER'S RECORD		
Driver Education (1) None, or informal (2) High school (3) Commercial (4) Started but did not complete (5) Military (6) Professional (8) Other: _____ (9) Yes, Unknown source (0) Unknown	—	28
Number* of Previous Moving Violations	—	29
Number* of Previous Collisions	—	30
Number* of Previous License Suspensions	—	31
* Use (8) for "More than 7." Use (9) for unknown.		

CASE VEHICLE DRIVER'S TRIP PLAN

Origin
(1) Home
(2) Work
(3) Shopping, errands
(4) Recreation
(5) Friend/Relatives
(6) Cocktail Lounge/ Bar/Wet Party
(7) Church
(8) School
(9) Other
(0) Unknown — 32

Destination
Code as above — 33

Route Familiarity (1,2,0) — 34

Area Familiarity (1,2,0) — 35

Route Useage
(1) Daily
(2) Weekly (1-4 times, frequently)
(3) Monthly (1-3 times)
(4) Quarterly (1-2 times)
(5) Annually (1-3 times)
(6) Less than annually
(7) Never
(0) Unknown — 36

TIME (2400 hour clock) of:
(9999 Unknown)

Departure — — — — (37)

Impact — — — — (41) From CPIR page 1

Expected Arrival — — — — (45)

34

PSYCHOLOGICAL FACTORS
(Case Driver)

Code | Col

Stress That Day

(1) Argument with Relations or Friends.
(2) Argument with Boss or Co-worker
(3) Loss of Friend or Relative
(4) Financial Difficulty
(5) School Problems/ Work Problems
(6) Legal/Police Problems
(7) Social Agency/Consulor Problems
(8) Other: _____
(9) None
(0) Unknown

— | 49

Marital Status

(1) Single
(2) Married
(3) Common Law
(4) Separated
(5) Divorced
(6) Widowed
(0) Unknown

— | 50

Occupation (1970 Census Users Guide) See Reference Manual

(10) White Collar
(11) Professional, Technical
(12) Manager, Administrator (except Farm)
(13) Sales workers
(14) Clerical, kindred

(20) Blue Collar
(21) Craftsmen, kindred
(22) Operatives, except transport
(23) Transport equipment operatives (drivers)
(24) Laborers, except farm

(30) Farm Workers
(31) Farmers, Farm managers
(32) Farm laborers, Farm foreman

(40) Service Workers
(41) Service workers, except below
(42) Private household workers

(50) Housewife
(60) Student
(70) Military
(80) Retired
(90) Unemployed (over a month)

(00) Unreported, Unknown

— — | 51, 52

Note: If several jobs, use major time
If temp. unemployed, use last job

PHYSIOLOGICAL FACTORS
(Case Driver)

Code | Co.

Permanent Physiological Conditions

(1) Infirmities (Arthritis, Senility, etc.)
(2) Diabetes
(3) Brain (Epilepsy, Stroke)
(4) Cardio-Vascular (Heart failure, Angina, Infection)
(5) Vision/Hearing Restricted
(6) Respiratory Condition
(7) Paraplegic, amputee
(8) Other: _____
(9) None
(0) Unknown

— | 53

Transient Physiological Condition

(Choose no more than two)
See CPIR page 4

(00) Unknown
(02) None
(03) Blackouts
(04) Dozing
(05) Fatigue
(06) Drunk
(07) Drinking Involved
(08) Drug or Medication (See Pa S5)
(09) Flu, Headcold, etc.
(10) Fractured Member
(11) Menstrual Period
(12) Pregnancy
(13) Hangover
(14) Not wearing corrective lenses
(99) Other: _____

— — | 54

— — | 55, 56

Non-Impact Medical Condition All Case Occupants Not Just Driver

(0) None
(1) Yes - Time and Type Unknown
(2) Pre-Crash Fatal (Clinical Death at Wheel)
(3) Pre-Crash Non-Fatal (Prior Injury, Stroke)
(4) Pre-Crash Unknown Type
(5) Post-Crash Fatal (Drowning)
(6) Post-Crash Non-Fatal
(7) Post-Crash Unknown Type
(8) Other: _____
(9) Unknown

— | 57

Card 92
Continued

Code	Col

Pharmacological Agents Noted
(noted, but not necessarily causal)

(1) Yes, Unknown or Other: _____ — 59
(2) None noted, No BA test, (000) Below
(3) Stimulants, Prescriptive/Narcotics (Amphetamines, cocaine, bennies)
(4) Stimulants, Over-the-Counter (Caffiene, 'no doz')
(5) Depressants, Prescriptive/Narcotics (Barbiturates, opiates, tranquilizers)
(6) Depressants, Over-the-Counter (Alcohol, sleeping compounds)
(7) Antihistamines
(8) Hallucinogens (LSD, DMT, mescaline, psilocybin)
(9) Marijuana
(0) Unknown

Blood Alcohol Level (MG %)

— — — 60 61 62

(999) Unknown, No Results
(000) No Drinking, or "—Results"

Code

CRASH FACTORS

Inital Clock Direction of Rollover
(Case vehicle, horizontal clock)

(12) - - Over Front End
(09) - Over Left
(03) - Over Right
(06) - - Over Back End
(00) No Rollover
(98) Rollover, Direction Unknown
(99) Unknown if Rollover

— — 63,64

POST CRASH FACTORS

Case Vehicle, Final Location

(1) In Traffic Way
(2) On Shoulder
(3) Off-Road, Median
(4) Off-Road, Side
(5) In Water Way
(9) Other: _____
(0) Unknown

— 65

Case Vehicle, Final Attitude
O'Clock Position

(12) ——— Upright
(09) — (03) On Side
(06) ——— Inverted
(00) On End
(99) Unknown
O'Clock=

— — 66,67

Post Accident Factors (for accident):

Fire Control used, if fire (1,2,0)	—	69
Extrication used (1,2,0)	—	69
Ambulance Service used (1,2,0)	—	70
Towing Service used (1,2,0)	—	71

Duplicate col 1-9 from preceeding 9 3
36 10 11

ACCIDENT VIEWPOINT

Location of First Harmful Event

	Code	Col.
General Locality (1) Expressway (Limit Access) (2) Urban (3) Urban-Rural (House near road) (4) Rural (Fields) (9) Unknown	—	12
Particular Location (01) 1-Lane, Not Intersection (02) 2-Lane, Not Intersection (03) 3-Lane, Not Intersection (04) More than 3-Lane (05) Off Road (06) Intersection (07) Expressway (08) Interchange, Main Lanes (09) Interchange, Other Lanes (Ramps) (10) Bridges, Tunnels, Viaducts (11) Parking Lots (12) Driveways (99) Unknown	— —	13,14

Report Numbers of Vehicles Ranked in Order of Responsibility for Causing Collisions

All 0's for No Vehicle
NOTE→ All 8's for Non-Case Vehicle
All 9's for Unknown
Fill in all Responses

Most Responsible Vehicle

15 16 17 18 19 20 21 22

Second Most Responsible Vehicle

23 24 25 26 27 28 29 30

Third Most Responsible Vehicle

31 32 33 34 35 36 37 38

	Code	Col.
Responsibility of Case Vehicle (1) Most Responsible (2) Second Most Responsible (3) Third Most Responsible ... Etc. (9) Missing Data	—	39

Total Energy Available

Greatest Kinetic Energy for collision. See Energy Table. Use 9999 for unknown.

— — • — — ($*10^5$)
40 41 42 43 (9998) for over 9997

PRE-CRASH MOVEMENT OF MOST RESPONSIBLE VEHICLE

	Code	Col.
Pre-Crash Basic Movement (1) Straight Ahead (2) Turning, Curve Following (3) U Turn (4) Reverse, Backing (5) Lane Changing (6) Parked, Stopped (7) Entering, Leaving Driveway (use 4 if backing) (8) Starting to Move (9) Unknown	—	44
Character of Movement (00) Straight Ahead (01) Straight Ahead, Road turned to left (02) Straight Ahead, Road turned to Right (03) Off RHS of Road (04) Off RHS of Lane (05) Off RHS, and back again (06) Veered Right (07) Turned Hard Right (08) Off LHS of Road (09) Off LHS of Lane (10) Off LHS, and back again (11) Veered Left (12) Turned Hard Left (13) Vehicle Stopped (14) Other (15) Straight backward (99) Unknown	— —	45,46
Primary Factor Responsible For Accident (2) Driver Error (aware or unaware) (3) Vehicle Defect (4) Trafficway Defect (5) Ambience (9) Unknown	—	47

Card 93 Continued

Most Responsible Vehicle: Primary Error (pick first and second most significant)

Code	Col.

(00) No Error
(01) Under Estimation
(02) Falling Asleep, Blackout, Death-at-Wheel
(03) Diverted Attention, inattention
(04) Inexperienced Driving or Erratic Driving
(05) Drunken Driving, Drinking Involved, or Narcotics or Medication
(06) Right of Way
(07) Turning Error, improper turn
(08) Signalling Error
(09) Speeding, too fast for conditions
(10) Overtaking
(11) Following too Closely
(12) Signs, Signals Disobeyed
(13) Wrong Way into oncoming traffic
(14) Lack of Lights — — | 48 49
(15) Lack of Brakes
(16) Other: _____
(17) Avoidance Maneuver
(18) Over correction maneuver
(99) Unknown — — | 50 51

Avoidance Maneuvers

Code	Col

(0) None
(1) Braking
(2) Steering
(3) Braking and Steering
(4) Acceleration
(5) Acceleration and Steering
(6) Brake Release
(7) Deceleration (e.g. engine braking or down shifting)
(8) Other
(9) Unknown

Most Responsible Vehicle — | 54

Second Most Responsible Vehicle — | 55

Vehicle Combination (e.g. 5,6 = Bus, Motorcycle)

(0) No other Vehicles
(1) Large Car (> 3800 lbs)
(2) Medium Car (2800-3800 lbs)
(3) Small Car (< 2800 lbs)
(4) Truck (Includes Vans, Pickups, & carryalls)
(5) Bus
(6) Motorcycle
(7) Utility or Jeep
(8) Other: _____
(9) Unknown

Most Responsible Vehicle — | 56

Second Most Responsible Vehicle — | 57

Movement of Second Most Responsible Vehicle

Code	Col.
9	52

(0) No Second Vehicle
(1) Straight Ahead
(2) Left Turning
(3) Right Turning
(4) Stopped
(5) Other: _____
(9) Unknown — | 58

Hazardous Road Conditions (for accident)
(Rank by Significance)
Cause Only

Code	Col.
9	53

(0) None
(1) Surface Under Water
(2) Surface Slippery (oil, ice, water, etc.)
(3) Shoulders Slippery
(4) Weather Obstructions (snow, fog, etc.)
(5) Light (sun, headlight, etc.)
(6) Obstacle on Road (e.g. car)
(7) Road Construction, Repair or Disrepair
(8) Other: _____ — | 59
(9) Unknown — | 60

End of card 93

Revision 3

Report Number — Card Type

2 3 - 4 5 6 7 8 - 9 — 10 9 11 4

HSRI ANALYSIS

Not to be filled in by field investigator

Case Vehicle

MPH at First Impact
(999 Unknown) 12 13 14

Primary Damage Index
(99-0000-0 Unknown)

15 16 - 17 18 19 20 - 21

Secondary Damage Index

22 23 - 24 25 26 27 - 28

Sheet Metal Crush
(98 if over 97 inches)
(99 if unknown)

	Code	Col.
Front (Inches)		29, 30
Rear		31, 32
Left Side		33, 34
Right Side		35, 36
Roof		37, 38
Other		39, 40

Other Vehicle

MPH at First Impact
(888 for N/A) 41 42 43

Primary Damage Index
(99-0000-0) Unknown, No damage, No Other Vehicle

44 45 - 46 47 48 49 - 50

Comments:

7 _ _ - _ _ _ _ _ - _
1 2 4 9

	DAMAGE ANALYSIS, CASE VEHICLE	CONCURRENT DAMAGE, OTHER VEHICLE
Primary Deformation		
CDC (VDI) CARD 4 5 (10)	_ _ - _ _ _ - _ (12–18)	_ _ - _ _ _ - _ (19–)
INCHES CRUSH (Match 1st CDC Letter)	_ _ (30)	_ _ (32)
CONFIGURATION	_ (34)	
CRASH EVENT NUMBER	_ (35)	
SPEED AT IMPACT, WITH ERROR	_ _ _ ± _ _ (36–39)	_ _ _ ± _ _ (41–44)
Secondary Deformation		
CDC (VDI)	_ _ - _ _ _ - _ (50–)	_ _ - _ _ _ - _ (57–)
INCHES CRUSH (Match 1st CDC Letter)	_ _ (68)	_ _ (70)
CONFIGURATION CARD 4 6 (10)	_ (12)	
CRASH EVENT NUMBER	_ (13)	
SPEED AT IMPACT, WITH ERROR	_ _ _ ± _ _ (14–17)	_ _ _ ± _ _ (19–22)
Tertiary Deformation		
CDC (VDI)	_ _ - _ _ _ - _ (28–34)	

Notes:
1. Bracketed Information is Optional; Blank=Unknown
2. 99-0000-0 = Unknown or No CDC
3. For Speeds, 9's = Unknown Speeds, 8's = N/A; No Other Vehicle
4. For Inches Crush, 9's = Unknown, 0's = No Crush or N/A--No Other Vehicle
5. Crash Event: 0=none, 9=unknown

SEQUENCE OF CRASH EVENTS — Code 5 pairs in sequence

40

	Crash Event	Vehicle or Object Contacted
Event #1	35 —	37 —
Event #2	39 —	— —
Event #3	43 —	— —
Event #4	47 —	— —
Event #5	51 —	— —

All Crash Events and involved Objects/Vehicles are coded beginning with the first damage-or injury-producing event. Then code each case vehicle event chronologically until the vehicle stops. Both series of Event and Vehicle/Object codes are pairs. No Event, No Object = (99), (99).

SIDE DOOR GUARD BEAM

Beam Present

(2) No Beam in Doors
(3) No Doors → SKIP REST OF PAGE — 55

YES:
(4) Front Door Only
(5) Front and Rear

(0) Unknown

Front or Rear Door Direct Damage

(2) NO Direct Damage → SKIP REST OF PAGE
(3) N/A, No Door

YES: (1) CDC Unknown
(4) Primary CDC
(5) Secondary CDC
(6) Tertiary CDC
(9) Other or Minor

(0) Unknown

	Left	Right
Front	56	57
Rear	58	59

Maximum Inches Crush (Doors)
(00) = No Crush or No Door

Front	60 —	62 —
Rear	64 —	66 —

Beam Involvement

(2) No Involvement
(3) N/A, No Door or No Beam

YES: (1) Extent Unknown
(4) Beam Contact Only

DAMAGED (Bent or Dent)
(5) No Separation
(6) Unknown Separation
DAMAGED and SEPARATED
(7) Extent Unknown
(8) Partial Separation
(9) Complete Separation

Front	68	69
Rear	70	71

(0) Unknown

CRASH EVENTS** (1/76)

Vehicle to Vehicle

'1) Both Moving
(2) Case Vehicle Stopped
(3) Other Vehicle Stopped

(0) Direction Unknown
(1) Same Direction: Struck Other Vehicle
(2) Same Direction: Struck By Other Vehicle
(3) Same Direction: Other, Unknown
(4) Opposite Direction
(7) Angled (>15°): Struck Other Vehicle
(8) Angled (>15°): Struck By Other Vehicle
(9) Angled (>15°): Other, Unknown

Vehicle to Object

On-Roadway Object Collision
(4) Struck:

Off-Roadway Object Collision
(5) Struck:

(0) And Other or Unknown *
(1) And Deflected (or Rebounded) *
(2) And Went Over *
(3) And Crashed Through *
(4) And Stopped *
(5) And Rotated Around *
(6) And Was Impaled By *
(7) And Remained on Top of *
(8) From Behind *

'7) Ran Off/Reenter Roadway
(object contacted=99)

(0) Other or Unknown Action
(1) Off Left Side, No Median
(2) Off Left Side, Into Median
(3) Off Right Side
(4) Off, Other or Unknown
(5) Reenter, Same Direction
(6) Reenter, Opposing Direction
(7) Reenter, Other or Unknown
(8) Crossed Median Into Opposing Lanes
(9) Crossed Centerline Into Opposing Lanes

(8) Miscellaneous Events

Case Vehicle:

Towed Vehicle or Part:

Vehicle:

(0) Other, Unknown*
(1) Overturns (>90°)*
(2) Projected Into Air & then strikes object*
(3) Went Up/Down Embankment
(4) Entered Body of Water
(5) Spins, Skids, Swerves Out-of-Control
(6) Struck by Falling, Protruding or Thrown-Up Object*
(7) Occupant Incurs Injury Before/Without Vehicle Crash
(8) Breaks Loose or Jackknifes Without Damage to Vehicle
(9) Contacts Itself or Part, Doing Self-Induced Damage *

'9) Concluding Event:

(0) Other, Unknown
(1) Coasted to Rest
(3) Stopped Abruptly
(4) Braked/Skidded/Spun to Rest, on Wheels
(5) Skidded/Spun to Rest, Not on Wheels
(7) Under-Control, Pulled-Over
(8) Under-Control, Continued On

(00) Unknown (99) No Event

*Code object contacted
**This is to be used only on the Damage Analysis Supplement.

01-39 Autos and Trucks
40-69 Other Vehicles
70-76 Pedestrians and On-Roadway Objects
80-97 Off-Roadway Objects
98 Other: _____
99 No Object
00 Unknown

Vehicles

01 Intermediate (GM A Body)
02 Standard/Full Size (B Body)
03 Luxury (C Body) or Limousine (D Body)
04 Mini Specialty (Mustang II)
05 Standard Luxury (E Body)
06 Specialty Pony (F Body)
07 Intermediate Luxury (A-SP Body)
08 Compact (X Body & Y Body)
09 Sub-compact Mini-Imported (VW)
10 Super Sport (Corvette)
17 Pickup-Car (Ranchero)
18 Sub-compact/Mini-USA (H Body)
19 European Sports Cars (MG)
20 Unknown Automobile Body

Size	Standard	Specialty	Sports
Mini	09,13	04	19
Compact	08	06	10
Intermediate	01,17	07	--
Standard	02	05	--
Luxury/Limo	03	--	--

Multipurpose Passenger Vehicle

14 Utility (Jeep, Bronco)
15 Carryall/Panel Truck
16 Pickup Truck w. Canopy/Shell Cover
17 Pickup Car w. Canopy/Shell cover
21 Motor Home
22 Pickup Truck with Slide-in Camper
23 Pickup-Car w. Slide-in Camper
31 Chassis-Mounted Camper

Truck

11 Small Van (Econoline)
12 Pickup
13 Unknown Light Truck (<1½ Ton)
15 Carryall/Panel Truck
16 Pickup-Camper (Canopy, Shell)
22 Slide-in Camper
30 Unknown Truck Type
31 Chassis-Mounted Camper
33 Delivery Van (Walk-in)
34 Straight Truck
35 Truck-Tractor
36 Chassis-Cab
37 Unknown Heavy Truck (>1½ Ton)
38 Tractor + Semi-Trailer (Semi)
39 Truck (or Semi) + Full Trailer(s)

Bus

40 Unknown Bus Type
41 School Bus
42 Inter City (between)
43 Intra City (within)
44 Streetcar (on tracks)

Motorcycles

50 Unknown Motorcycle Type
51 1-75cc
52 76-125cc
53 126-250cc
54 251-500cc
55 501-750cc
56 751+cc
57 3-wheels (or with Sidecar)

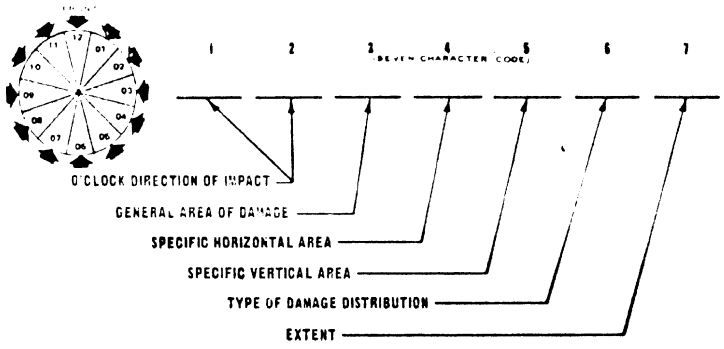
Special Purpose Vehicles

60 Unknown/Other Special Vehicle
61 Snowmobile
62 ATV, All Terrain Vehicles
63 Amphibious Vehicle
64 Farm Vehicles
65 Construction Vehicles
66 Trailer-Private (camper)
67 Trailer-Commercial (cargo)
68 Train (Cars)
69 Locomotive, Switcher

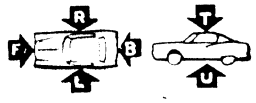
Objects

70 Pedestrian
71 Bicyclist, Other Pedalcycle
72 Pedestrian Conveyance (e.g. Person Riding Animal, Cart, etc.)
73 Large Animal
74 Fallen Objects such as Objects Dislodged from Other Vehicles, Fallen Trees, Rocks, etc.
75 Traffic Cones, Barrels, Construction Barriers
76 Construction or Emergency Equipment
77 Sign Posts, Utility Pole, Tree
78 Ditch
79 Embankment, Snowbank
80 Ground (Rollover Only)
81 Curb (Damage Producing Impacts Only)
82 Culvert
83 Fence
84 Hydrants, Short Posts, Stumps
85 Small Posts/Trees, Rural Mail Boxes, Delineators, Mile Markers
86 Building
87 Pier, Pillar (e.g. Bridge Support)
88 Abutment, Retaining Wall
89 Bridge Rail
90 Guard Rail, Leading Section
91 Guard Rail, Middle or Unknown Section
92 Guard Rail, Trailing Section
93 Guard Posts (Timber, Metal, Concrete)
94 Cable, Fence Barrier
95 Concrete Barrier (Median)
96 Impact Attenuator
97 Breakaway Fixtures

COLLISION DEFORMATION CLASSIFICATION - SAE J224a

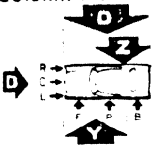


Column No. 3



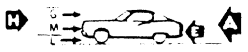
- **F** - FRONT
- **R** - RIGHT SIDE
- **B** - BACK (REAR)
- **L** - LEFT SIDE
- **T** - TOP
- **U** - UNDER CARRIAGE
- **X** - UNCLASSIFIABLE

Column No. 4



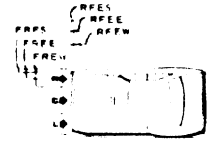
- **D** - DISTRIBUTED
- **L** - LEFT - FRONT OR REAR
- **C** - CENTER - FRONT OR REAR
- **R** - RIGHT - FRONT OR REAR
- **F** - SIDE FRONT - LEFT OR RIGHT
- **P** - SIDE CENTER SECTION - LEFT OR RIGHT
- **B** - SIDE REAR - LEFT OR RIGHT
- **Y** - SIDE OR END - F + P OR L + C
- **Z** - SIDE OR END - B + P OR R + C

Column No. 5



- **A** - ALL
- **H** - TOP OF FRAME TO TOP
- **E** - EVERYTHING BELOW GLASS
- **G** - GLASS AND ABOVE
- **M** - MIDDLE (TOP OF FRAME TO BELTLINE OR HOOD)
- **L** - LOW (BELOW TOP OF FRAME)
- **X** - UNDERCARRIAGE IN COLUMN 3

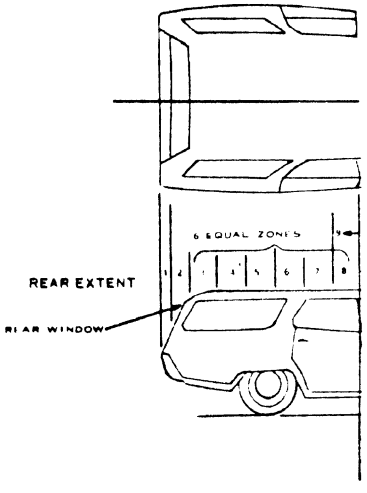
Column No. 6



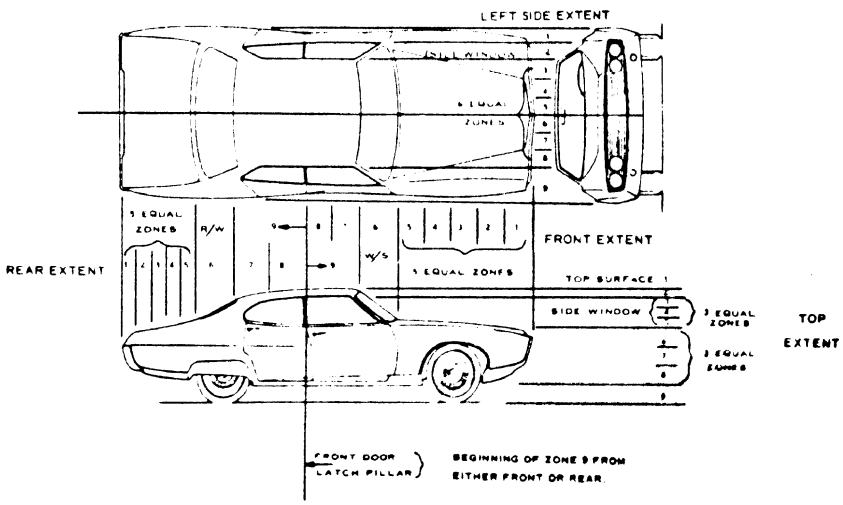
- **W** - WIDE IMPACT AREA
- **N** - NARROW IMPACT AREA
- **S** - SIDE SWIPE
- **O** - ROLLOVER (INCLUDES ROLLING ONTO SIDE)
- **A** - OVERHANGING STRUCTURE
- **E** - CORNER

DEFORMATION EXTENT ZONES

(FOR STATION WAGONS)



(FOR PASSENGER CARS)



ACRS SUPPLEMENT

SECTION 2.2 VEHICLE SECTION

Form Version ⊤ Report No. 2 3 4 5 6 7 8 9 Card No 1 10 2 11

DEPLOYMENT

WHICH CRASH EVENT CAUSED INITIAL DEPLOYMENT OF AIR BAGS ? 12

(1) 1st.Event (6) 6th.Event
(2) 2nd.Event (7) Inadvertent
(3) 3rd.Event deployment
(4) 4th.Event (8) Not Applicable
(5) 5th.Event (9) Unknown

DID A SECONDARY HIGH LEVEL DEPLOYMENT OCCUR ? 13

(1) Yes (3) Not Applicable
(2) No (9) Unknown

IF ANSWER WAS YES, WHICH CRASH EVENT CAUSED THE HIGH LEVEL ? 14

(Use Event Codes Listed Above)
(8) NOT APPLICABLE

WAS DEPLOYED ACRS A FACTOR IN CONTRIBUTING TO AN IMPACT OR CRASH EVENT ? 15

(1) Yes (3) Not Applicable
(2) No (9) Unknown

IF ANSWER WAS YES, WHICH EVENT ? 16

(Use Event Codes Listed Above)
(8) NOT APPLICABLE

IGNITION SWITCH POSITION AT TIME OF IMPACT/CRASH. 17

(1) On (Run) (4) Off
(2) Start (9) Unknown
(3) Accessory

CRASH RECORDER

WAS A CRASH RECORDER INSTALLED ? 18

WAS IT RECOVERED INTACT ? 19

(1) Yes (3) Not Applicable
(2) No (9) Unknown

Report Prepared By:

HISTORY

HAD VEHICLE BEEN INVOLVED IN PRIOR ACCIDENT CAUSING ACRS DEPLOYMENT ? 20

HAD VEHICLE BEEN INVOLVED IN ANY OTHER ACCIDENT ? 21

(1) Yes
(2) No
(9) Unknown

IF THE ANSWER TO EITHER OF THE TWO QUESTIONS WAS YES APPEND REPORT OF PREVIOUS VEHICLE DAMAGE.

WAS OWNER'S ACRS MANUAL OR SYSTEM SUPPLEMENT IN CAR? 22

(1) Yes
(2) No
(9) Unknown

ACRS SYSTEM COMPONENTS

(Excluding knee restraint & EAC)

WAS ANY ACRS SYSTEM COMPONENT OTHER THAN THE AIR BAG DAMAGED IN THE IMPACT/CRASH ? 23

WERE ANY OF THE FOLLOWING COMPONENTS DAMAGED ?

WIRING 24

SENSOR 25

SENSOR/RECORDER 26

OTHER (DESCRIBE) _____ 27

_____

(1) Yes
(2) No
(9) Unknown

ACRS Sys.Comp.(Cont'd)

AIR BAG LIGHT TESTED (Post Crash) — 28

(1) On (Continuous)
(2) On (Approx. 10 sec.)
(3) Off
(4) No Test (Damage)
(9) Unknown

INDICATION OF DISCONNECTED OR LOOSE ELECTRICAL CONNECTORS IN ACRS SYSTEM ? — 29

(1) Yes (Identify; _____

_____

(2) No
(9) Unknown

WINDSHIELD

WAS THERE EVIDENCE OF THE WINDSHIELD CRACKING OR ADHESIVE BOND SEPARATION ? — 30

(1) Yes
(2) No
(9) Unknown

PROBABLE CAUSE OF WINDSHIELD DAMAGE. — 31

(1) Loading from the Air Bag
(2) Struck by Occupant
(3) Struck by Foreign Object
(4) Stress
(5) Other
(6) No Damage(Not Applicable)
(9) Unknown

If More than one-Most Significant

FRONT BUMPER E.A. UNITS — STATUS

INDICATE STATUS OF E.A. UNITS (Final Position)

LEFT (DRIVER SIDE) — 32

RIGHT (PASSENGER SIDE) — 33

STATUS

(1) Normal
(2) Extended
(3) Partial Compression
(4) Complete Compression
(5) Not Applicable
(9) Unknown

FRONT BUMPER CONDITION — DEGREE *

INDICATE DEGREE OF DAMAGE TO FRONT BUMPER.

LEFT 1/3 (DRIVER SIDE) — 34

CENTER @ SENSOR — 35

CENTER 1/3 — 36

RIGHT 1/3 (PASSENGER SIDE) — 37

DEGREE *

(1) None
(2) Rub Strip Damage
(3) Scratches on Metal
(4) Dents on Metal
(5) Heavy Deformation W > 12" or D > 6"
(6) Not Applicable
(9) Unknown

Does Not Include Occupants

CARGO (Describe Below)

LOCATION	WEIGHT #s		
FRONT SEAT	38	39	40
REAR SEAT	41	42	43
LUGGAGE COMPARTMENT ...	44	45	46
UNKNOWN	47	48	49
OTHER (Specify)	50	51	52

WEIGHT #s

000 - None
001 - 998 (Actual Weight Pounds)
999 - Unknown

LOCATION & TYPE

_____

_____

_____

_____

SYSTEM MAINTENANCE

WAS MAINTENANCE OR SERVICE PERFORMED ON THE ACRS? 53

TYPE MAINTENANCE/SERVICE:

MANUFACTURER'S PRESCRIBED MAINTENANCE/SERVICE ? 54

SERVICE FOR PRIOR DEPLOYMENT ? 55

SERVICE FOR ABNORMAL CONDITION ? 56
(If Yes, Describe in Detail)

(1) Yes (3) Not Applicable
(2) No (9) Unknown

IF ACRS MAINTENANCE/SERVICE HAD BEEN PERFORMED. LIST BELOW :

TYPE SERVICE	DATE YR.	DATE MO.	ODOMETER READING
57	58	59 60	61
62	63	64 65	66
67	68	69 70	71

(CODING for the Three Elements Above)

TYPE SERVICE
(1) Prescribed Maintenance
(2) Abnormal Condition
(3) Prior Deployment
(4) None
(9) Unknown

ODOMETER READING
(1) 0001-1000 Miles
(2) 1001-5000 "
(3) 5 - 10000 "
(4) 10- 20000 Miles
(5) 20- 40000 "
(6) 40- 60000 "
(7) Over 60000 "
(8) Not Applicable
(9) Unknown

YEAR
(1) Prior '72
(2) 1972
(3) 1973
(4) 1974
(5) 1975
(6) 1976
(8) N/A
(9) Unknown

MONTH
(01) Jan (08) Aug
(02) Feb (09) Sep
(03) Mar (10) Oct
(04) Apr (11) Nov
(05) May (12) Dec
(06) Jun (88) N/A
(07) Jul (99) Unk

DETAILED DESCRIPTIONS

ACRS SYSTEM COMPONENTS:
(OTHERS DAMAGED)

SYSTEM MAINTENANCE:
(SERVICE for ABNORMAL CONDITION)

ACRS SUPPLEMENT — RESTRAINT SECTION

Form Version 1 Report No. 2 3 4 5 6 7 8 9 Card No. 1 10 11

RESTRAINT SYSTEM TYPE and USE:

Report Prepared By:

ACTIVE SYSTEM :

INFORMATION ON POSITION, TYPE, AND USE OF *ACTIVE RESTRAINT SYSTEM* IS RECORDED IN THE FOLLOWING DATA ELEMENTS AND INCLUSIVE CARD COLUMNS OF THE *OCCUPANT INFORMATION CARDS* (CPIR - CARD NUMBER 11). CODING FOR THE SPECIFIC ELEMENTS ARE LISTED ON PAGE 28, CPIR -REV. # 3, DATED JANUARY '74.

Occupant Number (cc 12-13)
Seat Location (cc 14)
Position on Seat (cc 15)
Lap Belt (cc 27,28,29,30)
Upper Torso (cc 31,32,33,34)
Type System Used (cc 37)

CHILD RESTRAINT SYSTEM :

THE *MAKE* AND *MODEL NUMBER* OF THE *CHILD RESTRAINT SYSTEM* UTILIZED IS ALSO NOTED ON PAGE 28, CPIR LONG FORM (OCCUPANT INFORMATION CARD).

PASSIVE SYSTEM :

TYPE(S) OF PASSIVE RESTRAINT SYSTEM(S) INSTALLED IN VEHICLE.

(1) *Factory Installed ACRS*
(2) *Add-On ACRS*
(3) *Other (Specify)* _____
(4) *None*
(9) *Unknown*

	DRIVER	PASSENGER
	12	13

PRE-IMPACT CONDITION of RESTRAINT SYSTEMS:

ACTIVE SYSTEM :

FRONT LEFT 14
FRONT CENTER 15
FRONT RIGHT 16

(1) *Component Intact*
(2) *Belt Cut*
(3) *Belt Buckled Across/Behind Seat*
(4) *Retractor Portion Rolled/Knotted, Tucked Into Carpet Seam/Seat Track*
(5) *Belt Removed*
(6) *Inter-Lock Bypassed*
(7) *Other (Specify)* _____
(8) *None Installed by Manufacturer*
(9) *Unknown*

CHILD RESTRAINT SYSTEM :

WAS A CHILD RESTRAINT SYSTEM USED ?
(1) *Yes*
(2) *No* (9) *Unknown* 17

CONDITION OF CHILD RESTRAINT
(1) *Good/Satisfactory*
(2) *Damaged/Broken* 18
(3) *Not Applicable* **(No Child Restraint)**
(9) *Unknown*

-DESCRIBE DESIGN OF CHILD RESTRAINT SYSTE

_____

_____

(See Page 28, CPIR Long Form)

WARNING LIGHT:

INDICATE THE PRE-CRASH CONDITION OF THE WARNING LIGHT. 19

(1) On (4) Not Applicable
(2) Off (9) Unknown
(3) Intermittent

RESTRAINT SYS. MALFUNCTION:

ACTIVE SYSTEM :

WAS THERE EVIDENCE OF A SYSTEM MALFUNCTION ?

FRONT LEFT 20

FRONT CENTER 21

FRONT RIGHT 22

PASSIVE SYSTEM :

WAS THERE EVIDENCE OF A SYSTEM MALFUNCTION ?

DRIVER 23

PASSENGER 24

(1) Yes (3) Not Applicable
(2) No (9) Unknown

IF THE ANSWER TO EITHER OF THE TWO QUESTIONS ABOVE WAS YES, DESCRIBE EVIDENCE.

_____

_____

_____

_____

_____

SYSTEM DEPLOYMENT:

INDICATE THE LEVEL OF THE AIR-BAG DEPLOYMENT .

DRIVER 25

PASSENGER 26

(1) Deployed (Low Level)
(2) Deployed (High Level)
(3) Deployed Single Level Sys.
(4) Did Not Deploy
(5) N/A - Not Installed
(6) Other (Specify)_____
(7) Unknown Which Level of Deployment
(9) Unknown if deployed

BAG CONDITION after DEPLOYMENT:

DRIVER 27

PASSENGER 28

(1) Cushion Intact
(2) Bag Split at Seam or Otherwise Torn
(3) Bag Cut by Object in Acc.
(4) Bag But by Object After Accident
(5) Other(i.e.,burned by Lighted Tobacco)
(8) N/A - Did Not Deploy
(9) Unknown

WAS A TEAR LOCATED AT A FOLD ?

DRIVER 29

PASSENGER 30

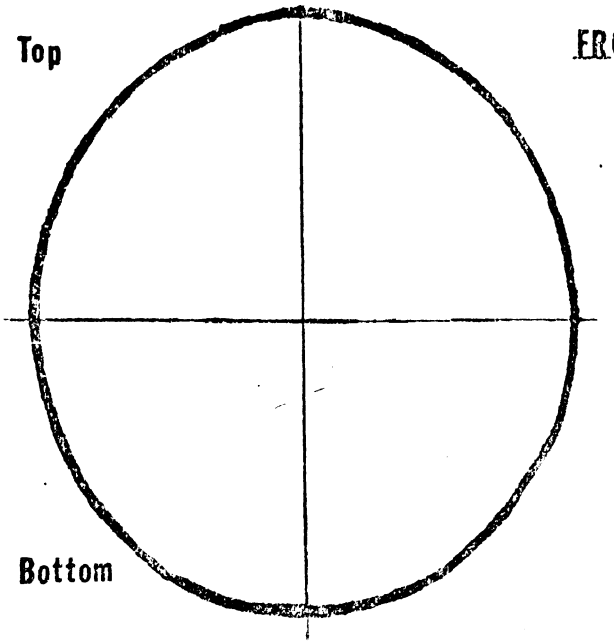
(1) Yes (3) Not Applicable
(2) No (9) Unknown

** NOTE IF THE AIR BAG(S) WERE NOT INTACT, APPEND EVALUATION OF THE CUTS AND/OR TEARS IN THE SPECIFIC AIR BAG(S) .

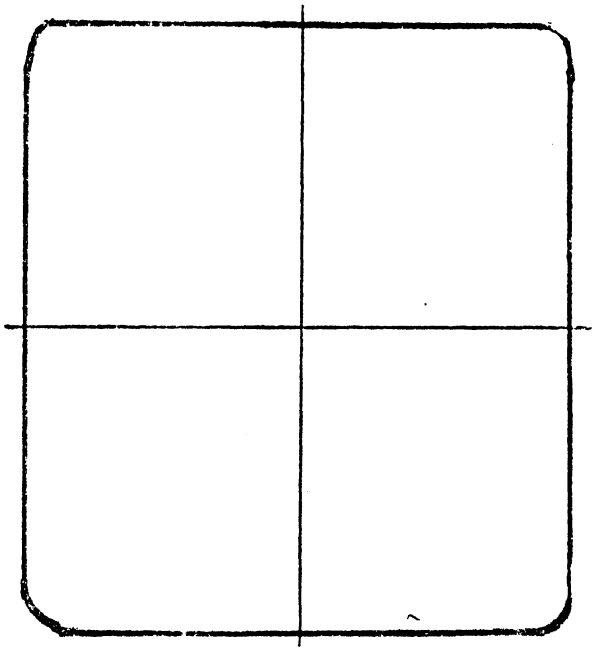
AIR CUSHION DAMAGE:

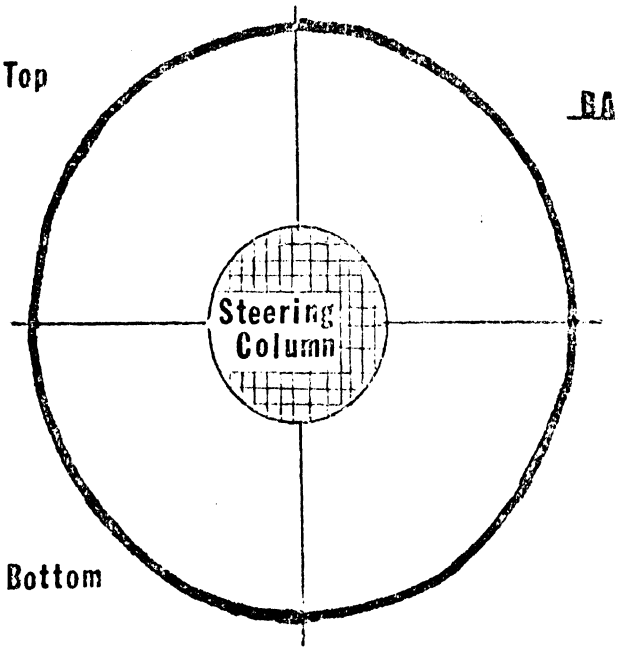
LOCATE THE APPROXIMATE POSITION AND EXTENT OF ALL *AIR CUSHION* DAMAGE(S) ON DIAGRAMS.

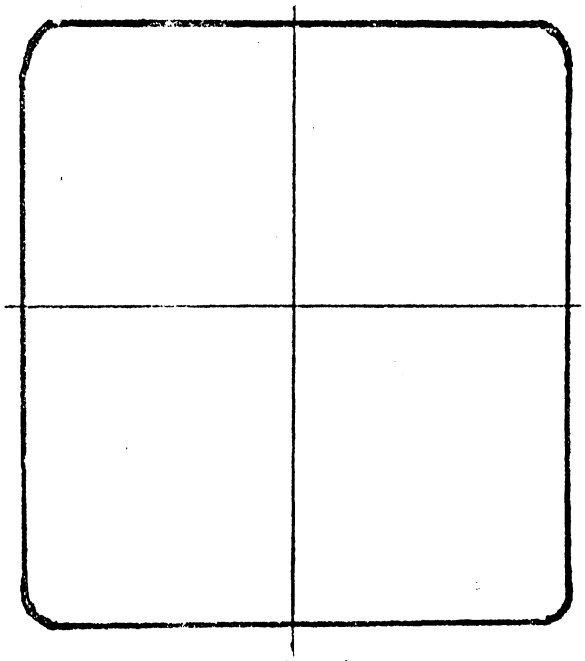
DRIVER



PASSENGER







(INCLUDE DESCRIPTIONS & DIMENSIONS)

AIR BAG PERFORMANCE FACTORS:

WERE THERE OTHER SIGNIFICANT AIR BAG PERFORMANCE FACTORS ?
IF THE ANSWER WAS *YES*, DESCRIBE THE FACTORS: _____

_____

_____

DRIVER ____ 31

PASSENGER ____ 32

(1) Yes (3) N/A (No Deployment)
(2) No (9) Unknown

Restraint Section S-7

DRIVER CONTROL

DID AIR BAG DEPLOYMENT CAUSE THE DRIVER TO LOSE CONTROL OF THE VEHICLE DURING OR AFTER DEPLOYMENT ? 33

IF THE ANSWER WAS YES, DESCRIBE THE SITUATION: _____

(0) No Driver
(1) Yes
(2) No
(3) N/A
(9) Unknown

IF EMPTY PARKED CAR--STOP HERE. IF NO DRIVER, BUT OTHER OCCUPANT--SKIP TO PG. 13.

ACRS SUPPLEMENT — OCCUPANT SECTION

Form Version — 1 Report No. 2 3 4 5 6 7 8 9 Card No. 1 10 4 11

OCCUPANT NUMBER — DRIVER 12 13

Report Prepared By:

DRIVER POSTURE:

DESCRIBE POSTURE AND POSITION ON SEAT OF THE DRIVER INCLUDING SPECIFIC COMMENTS ON HEAD, UPPER TORSO, BUTTOCKS, LEGS, AND FEET. THE POSITION OF THE DRIVER'S HANDS ON WHEEL AND ARMS SHOULD ALSO BE NOTED.

DRIVER ACTIONS:

BRACING:

DID THE DRIVER BRACE PRIOR TO THE IMPACT/CRASH ? 14

(1) Yes (3) Not Applicable
(2) No (9) Unknown

IF THE ANSWER WAS YES, INDICATE HOW THE DRIVER BRACED. 15

(1) With Arms (5) N/A
(2) With Legs (9) Unknown
(3) 1 + 2
(4) Other (Comment on pg. S-11)

WHAT DID DRIVER USE TO BRACE? (Code most significant) 16

(1) Steering Wheel (5) Door
(2) Brake Pedal (6) Other
(3) Toe Pan (7) N/A
(4) Header (9) Unknown

ROTATION:

DID THE DRIVER ROTATE DURING THE IMPACT/CRASH ? 17

(1) Yes (3) Not Applicable
(2) No (9) Unknown

IF YES, IN WHAT MANNER ? 18

(0) N/A (5) 1+3
(1) Rotated Right (6) 1+4
(2) Rotated Left (7) 2+3
(3) Over on Seat(R) (8) 2+4
(4) Over on Seat(L) (9) Unknown

CONTACT with INTERIOR COMPONENTS

STEERING WHEEL:

DID THE *DRIVER* CONTACT THE STEERING WHEEL DURING THE IMPACT/CRASH PHASE OF THE ACCIDENT? 19

(1) *Yes*
(2) *No*
(3) *N/A-No impact/crash*
(9) *Unknown*

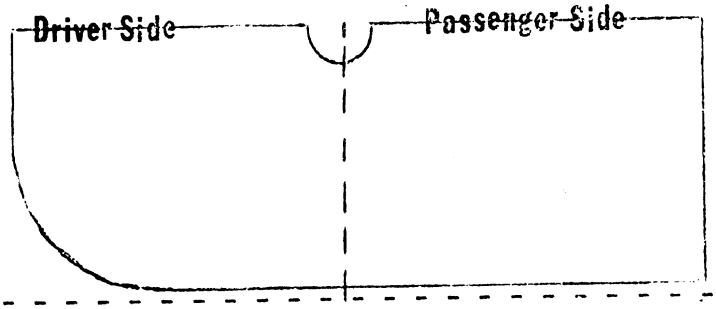
IF THE ANSWER WAS YES, DESCRIBE CIRCUMSTANCES ON PAGE S-9, ALSO INDICATE THE LOCATION OF DRIVER CONTACT WITH THE STEERING WHEEL.

KNEE RESTRAINT PAD:

DID THE *DRIVER* CONTACT THE KNEE RESTRAINT PAD DURING THE IMPACT/CRASH PHASE OF THE ACCIDENT? 20

(1) *Yes*
(2) *No*
(3) *Not Applicable (Ford)*
(9) *Unknown*

IF ANSWER ABOVE WAS YES, SKETCH & LOCATE DIMENSIONALLY DRIVER CONTACT WITH PAD.



DEFORMATION OF KNEE RESTRAINT PAD.

LEFT: 21

(0) *No Contact*
(1) *Contact LEFT of Wheel- No Deformation*
(2) *Contact LEFT of Wheel- Deformation (<1/2")*
(3) *Contact LEFT of Wheel- Deformation (1/2-2")*
(4) *Contact LEFT of Wheel- Deformation (>2")*
(9) *Unknown*

RIGHT: 22

(0) *No Contact*
(1) *Contact RIGHT of Wheel- No Deformation*
(2) *Contact RIGHT of Wheel- Deformation (<1/2")*
(3) *Contact RIGHT of Wheel- Deformation (1/2-2")*
(4) *Contact RIGHT of Wheel- Deformation (>2")*
(9) *Unknown*

DID THE *DRIVER* CONTACT INTERIOR COMPONENTS OTHER THEN THE WHEEL, KNEE RESTRAINT PAD, OR THE DRIVER AIR BAG ? 23

(1) *Yes*
(2) *No* (9) *Unknown*

WAS *DRIVER* CONTACT WITH INTERIOR COMPONENT(S) A RESULT OF INITIAL TRAJECTORY OR SUBSEQUENT REBOUND? 24

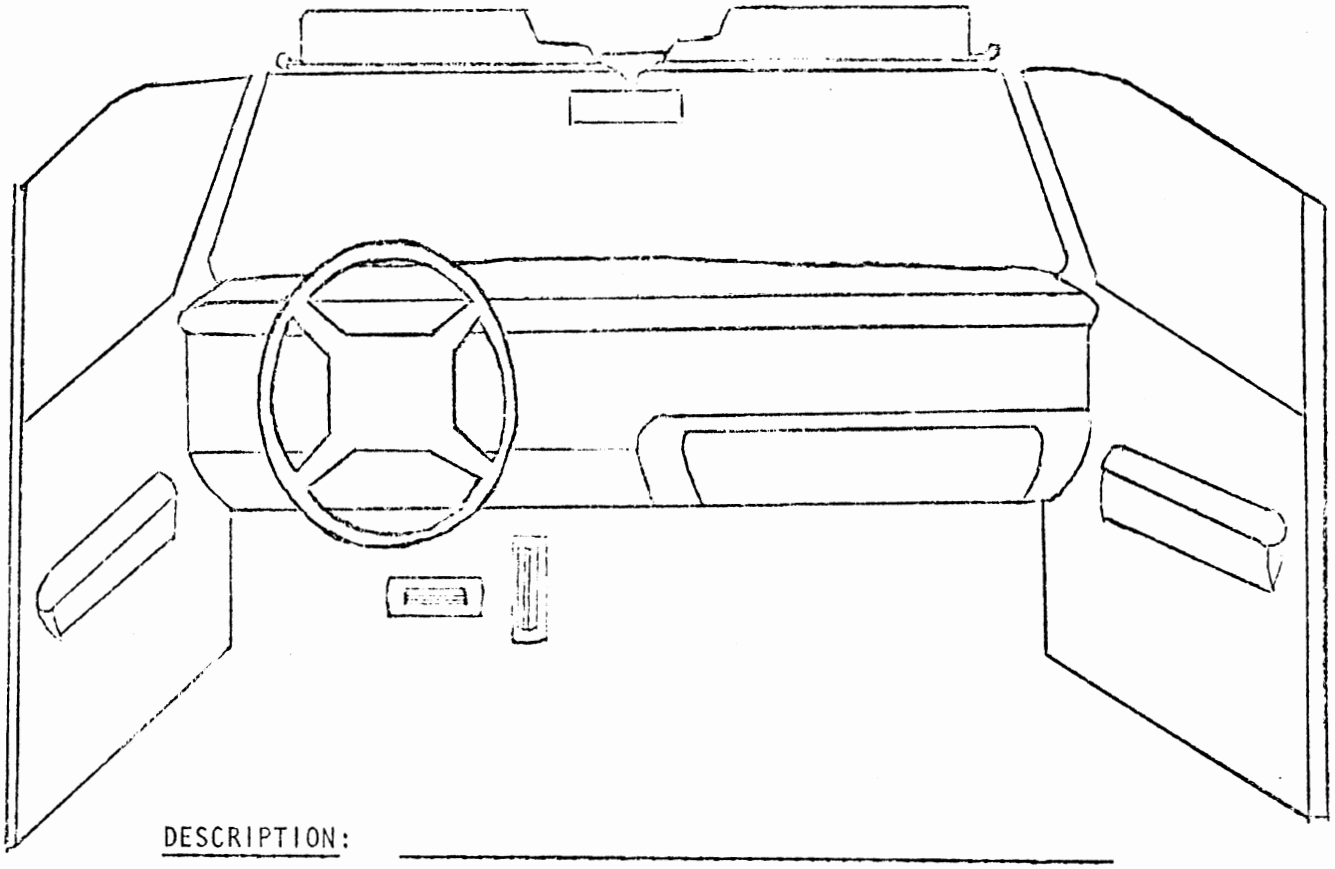
(1) *Rebound*
(2) *Initial Trajectory*
(3) *Not Applicable (no contact)*
(4) *Both Rebound & Initial Trajectory*
(9) *Unknown*

DID *DRIVER* INCUR REBOUND INJURY? 25

(1) *Yes*
(2) *No* (9) *Unknown*

Contact with Int. Comp'ts (Cont'd)

LOCATE AND DESCRIBE ALL EVIDENCE OF PHYSICAL CONTACT WITH THE INDIVIDUAL INTERIOR COMPONENTS INCLUDING THE PATH OF THE DRIVER'S TRAJECTORY.



DESCRIPTION: _____

_____

_____

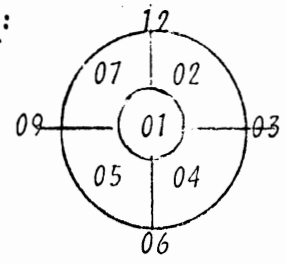
_____

CONTACT with AIR BAG:

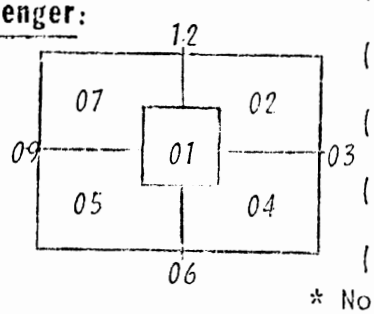
(USE BEST JUDGMENT TO DETERMINE INITIAL CONTACT)

INDICATE THE LOCATION ON EITHER/BOTH AIR BAG OF INITIAL CONTACT.
(Air Bag in Normal Straight Ahead Position)

Driver:



Passenger:



(00) N/A (No Deployment)
(01) Center
(02) Upper Right
(03) Level Right
(04) Lower Right
(05) Lower Left
(06) Even Down
(07) Upper Left
(08) Upper Back
(09) Level Left
(10) Lower Back
(11) Left Side
(12) Even Up
(13) Right Side
(97) Deployed But No Contact
(98) Other _____
(99) Unknown

DRIVER AIR BAG
26 27
PASSENGER A.B.
28 29

* Note O'Clock Position of Wheel-CPIR-Page 17 (cc 12-13)

PHYSICAL DATA:

EYES/SIGHT

WAS THE DRIVER WEARING CORRECTIVE LENSES OR EYEGLASSES? 30

(1) Yes-type unknown (4) Frame
(2) No (5) Contact Lens
(3) N/A (9) Unknown

DID THEY REMAIN ON PERSON? 31

CAUSE INJURY TO DRIVER?

AFFECT DRIVER'S EYESIGHT? 32

INFLICT DAMAGE TO AIR BAG? 33

(1) Yes (3) N/A
(2) No (9) Unknown 34

EARS/HEARING

INDICATE DRIVER'S HEARING CONDITION AFTER AIR BAG DEPLOYMENT .

LEFT EAR 35

RIGHT EAR 36

(1) Normal
(2) Ringing <15 min. (approx)
(3) Ringing >15 min. (approx)
(4) Hearing Affected (Deafened)
(5) Deceased
(6) N/A - Air Bag Not Deployed
(9) Unknown

PHYSICAL IMPAIRMENTS

DID THE DRIVER HAVE ANY PRIOR PHYSICAL IMPAIRMENTS SUCH AS PARAPLEGIA, FUSED VERTEBRAE, ARTIFICIAL EYE, ETC. ? 37

(1) Yes
(2) No
(9) Unknown

IDENTIFY IMPAIRMENT(S). _____

_____

(NOTE ALL ARTIFICIAL LIMBS)

NEUROLOGICAL STATUS:

GIVE APPARENT NEUROLOGICAL STATUS OF THE DRIVER IMMEDIATELY AFTER COLLISION AND/OR AIR BAG DEPLOYMENT . 38

(1) Normal
(2) Disoriented (Dizzy)*
(3) Unconscious
(4) Not Applicable (Deceased)
(9) Unknown

* IF DISORIENTED DESCRIBE SYMPTOMS (On Page S-11)

FOREIGN OBJECTS:

WAS THE DRIVER HOLDING A FOREIGN OBJECT AT THE TIME OF THE IMPACT/CRASH ? 39

(1) Yes
(2) No
(9) Unknown

IF ANSWER WAS YES, IDENTIFY THE OBJECT HELD.
(Package on Lap; Pipe; Food in Mouth; Cigarette; Coffee Cup; Beverage Bottle; Etc.)

_____

DID THE FOREIGN OBJECT CAUSE ANY INJURY ? 40

(1) Yes
(2) No
(3) Not Applicable
(9) Unknown

JEWELRY:

WAS THE DRIVER WEARING JEWELRY, BADGES, OR CARRYING PEN/PENCIL ? 41

(1) Yes
(2) No
(9) Unknown

WAS THE JEWELRY WORN KNOCKED-OFF /BROKEN DURING THE IMPACT/CRASH PHASE OF THE ACCIDENT ? 42

(1) Yes (3) N/A
(2) No (9) Unknown

IF COL. 41 IS NO, CODE 42-48=3

JEWELRY (Cont'd)

INDICATE TYPE OF JEWELRY WORN BY DRIVER.

NECK OR EAR JEWELRY — 43

ARM JEWELRY (WATCH, ETC.) — 44

PIN, BROOCH, or BADGE

PEN and/or PENCIL — 45

(1) Yes
(2) No — 46
(3) Not Applicable
(9) Unknown

DID THE JEWELRY WORN CONTRIBUTE TO A DRIVER INJURY ? — 47

DID THE JEWELRY WORN DAMAGE OR PUNCTURE THE AIR BAG UPON IMPACT? — 48

(1) Yes (3) N/A
(2) No (9) Unknown

FAMILIARITY:

WAS THE DRIVER AWARE THAT THE VEHICLE WAS EQUIPPED WITH A PASSIVE RESTRAINT SYSTEM ? — 49

DID THE DEPLOYED AIR BAG(S) INHIBIT THE DRIVER'S EXIT FROM THE VEHICLE AFTER THE IMPACT/CRASH ? — 50

DID THE DRIVER NOTICE AN UNUSUAL AMOUNT OF SMOKE IN THE VEHICLE INTERIOR AFTER IMPACT/CRASH ? — 51

WAS THE ODOR FROM THE SMOKE PARTICULARLY NOXIOUS TO THE DRIVER ? — 52

(1) Yes
(2) No
(3) Not Applicable
(9) Unknown

COULD THE DRIVER IDENTIFY THE SOURCE OF SMOKE IN THE VEHICLE INTERIOR AS ONE OF THE FOLLOWING: — 53

(1) Fire (Engine Compartment)
(2) Air Bag Deployment
(3) Fire (Passenger Compartment)
(4) Fire (Trunk Area of Vehicle)
(5) Other; _____
(6) Could not determine source.
(7) Not Applicable- No Smoke
(9) Unknown

COMMENTS:

DID THE DRIVER COMMENT ON THE AIR BAG AS A RESTRAINT SYSTEM? — 54

(1) Yes
(2) No (9) Unknown

IF YES, GIVE BRIEF SYNOPSIS OF DRIVER'S COMMENTS RELATIVE TO THE AIR BAG AS A RESTRAINT SYSTEM :

INCLUDE ANY ADDITIONAL COMMENTS THAT MAY BE EITHER RELEVANT TO AIR BAG PERFORMANCE OR UNUSUAL EVENTS AND/OR INCIDENTS WHICH WERE FACTORS IN THE ACCIDENT:

AGES SUPPLEMENT

OCCUPANT SECTION

Form Version — 1 Report No. — — — — — — — — — — Card No. 1 4
2 3 4 5 6 7 8 9 10 11

OCCUPANT NUMBER — PASSENGER — 12 13

Report Prepared By:

PASSENGER POSTURE:

DESCRIBE PASSENGER'S POSTURE AND POSITION ON SEAT INCLUDING SPECIFIC COMMENTS ON HEAD, UPPER TORSO, BUTTOCKS, LEGS AND FEET. THE POSITION OF THE PASSENGER'S ARMS AND HANDS SHOULD ALSO BE NOTED:

PASSENGER ACTIONS:

BRACING:

DID THE PASSENGER BRACE PRIOR TO TO THE IMPACT/CRASH ? — 14

(1) Yes
(2) No
(3) Not Applicable
(9) Unknown

IF THE ANSWER WAS YES, INDICATE HOW THE Passenger BRACED. — 15

(1) With Arms (5) N/A
(2) With Legs (9) Unknown
(3) 1 + 2
(4) Other (Comment on page S-11)

WHAT DID Passenger USE TO BRACE ? (Code Most Significant) — 16

(1) Steering Wheel (5) Door
(2) Brake Pedal (6) Other
(3) Toe Pan (7) N/A
(4) Header (9) Unknown

Passenger Actions (Cont'd)

ROTATION:

DID THE Passenger ROTATE DURING THE IMPACT/CRASH ? — 17

(1) Yes (3) Not Applicable
(2) No (9) Unknown

IF YES, IN WHAT MANNER ? — 18

(0) N/A (5) 1+3
(1) Rotated Right (6) 1+4
(2) Rotated Left (7) 2+3
(3) Over on Seat(R) (8) 2+4
(4) Over on Seat(L) (9) Unknown

CONTACT with INTERIOR COMPONENTS

DID PASSENGER CONTACT THE STEERING WHEEL DURING THE IMPACT/CRASH PHASE OF THE ACCIDENT? 19

(1) Yes
(2) No
(3) NA, no impact/crash
(9) Unknown

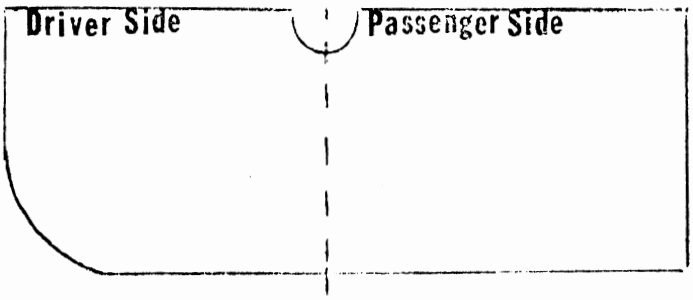
IF THE ANSWER WAS YES, DESCRIBE CIRCUMSTANCES ON PAGE S-14, ALSO INDICATE THE LOCATION OF THE PASSENGER CONTACT WITH THE STEERING WHEEL.

KNEE RESTRAINT PAD:

DID THE PASSENGER CONTACT THE DRIVER KNEE RESTRAINT PAD DURING THE IMPACT/CRASH ? 20

(1) Yes
(2) No
(3) Not Applicable (Ford)
(9) Unknown

IF THE ANSWER ABOVE WAS YES, SKETCH AND LOCATE DIMENSIONALLY PASSENGER CONTACT WITH KNEE RESTRAINT PAD.



DEFORMATION OF KNEE RESTRAINT PAD:

LEFT: 21

(0) No Contact
(1) Contact LEFT of Wheel- No Deformation
(2) Contact LEFT of Wheel- Deformation (<1/2")
(3) Contact LEFT of Wheel- Deformation (1/2-2")
(4) Contact LEFT of Wheel- Deformation (>2")
(9) Unknown

RIGHT: 22

(0) No Contact
(1) Contact RIGHT of Wheel- No Deformation
(2) Contact RIGHT of Wheel- Deformation (<1/2")
(3) Contact RIGHT of Wheel- Deformation (1/2-2")
(4) Contact RIGHT of Wheel- Deformation (>2")
(9) Unknown

DID THE PASSENGER CONTACT ANY INTERIOR COMPONENTS OTHER THEN THE STEERING WHEEL, KNEE RESTRAINT PAD, OR THE PASSENGER AIR BAG ? 23

(1) Yes
(2) No
(9) Unknown

WAS PASSENGER CONTACT WITH INTERIOR COMPONENTS A RESULT OF INITIAL TRAJECTORY OR SUBSEQUENT REBOUND ? 24

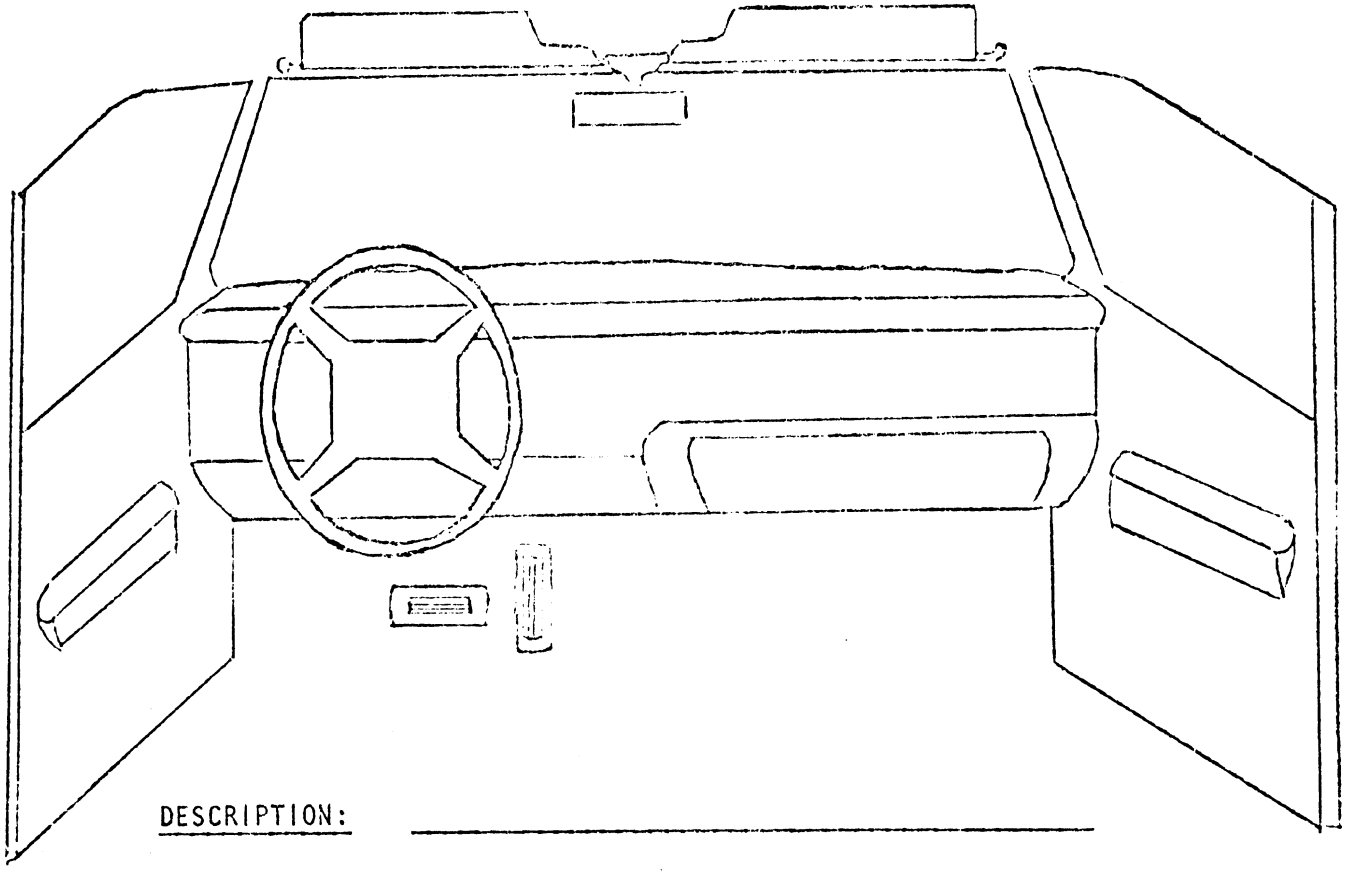
(1) Rebound
(2) Initial Trajectory
(3) Not Applicable (no contacts)
(4) Both Rebound & Initial Trajectory
(9) Unknown

WAS ANY INJURY INCURRED AS A RESULT OF PASSENGER REBOUND ? 25

(1) Yes
(2) No
(9) Unknown

Contact with Int. Comp'ts (Cont'd)

LOCATE AND DESCRIBE ALL EVIDENCE OF PHYSICAL CONTACT WITH THE INDIVIDUAL INTERIOR COMPONENTS INCLUDING THE PATH OF THE PASSENGER'S TRAJECTORY.



DESCRIPTION: _____

_____

_____

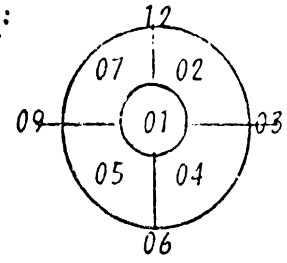
_____

CONTACT with AIR BAG: (Use Best Judgment to Determine Initial Contact)

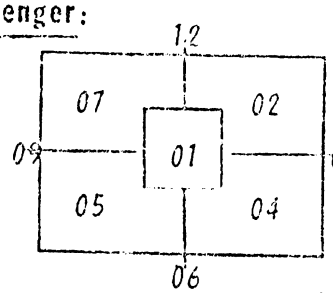
INDICATE THE LOCATION ON EITHER/BOTH AIR BAG OF INITIAL CONTACT.

(AIR BAG IN NORMAL STRAIGHT AHEAD POSITION)

Driver:



Passenger:



(00) N/A (No Deployment)
(01) Center
(02) Upper Right
(03) Level Right
(04) Lower Right
(05) Lower Left
(06) Even Down
(07) Upper Left
(08) Upper Back
(09) Level Left
(10) Lower Back
(11) Left Side
(12) Even Up
(13) Right Side
(97) Deployed But No Contact
(98) Other _____
(99) Unknown

* DRIVER AIR BAG

26 27

PASSENGER A.B.

28 29

* Note O'Clock Position of Wheel-CRIS-Page17 (cc12-c13)

PHYSICAL DATA:

EYES/SIGHT:

WAS THE PASSENGER WEARING CORRECTIVE LENSES OR EYEGLASSES? 30

(1) Yes-type unknown
(2) No
(3) N/A
(4) Frame
(5) Contact Lens
(9) Unknown

DID THEY REMAIN ON PERSON? 31

CAUSE INJURY TO DRIVER? 32

AFFECT DRIVER'S EYESIGHT?

INFLICT DAMAGE TO AIR BAG? 33

(1) Yes (3) N/A
(2) No (9) Unknown 34

EARS/HEARING:

INDICATE PASSENGER'S HEARING CONDITION AFTER AIR BAG DEPLOYMENT.

LEFT EAR 35

RIGHT EAR 36

(1) Normal
(2) Ringing < 15min. (Approx.)
(3) Ringing > 15min. (Approx.)
(4) Hearing Affected (Deafened)
(5) Deceased
(6) N/A-Air Bag Not Deployed
(9) Unknown

PHYSICAL IMPAIRMENTS:

DID THE PASSENGER HAVE ANY PRIOR PHYSICAL IMPAIRMENTS SUCH AS PARAPLEGIA, FUSED VERTEBRAE, ARTIFICIAL EYE, ETC. ? 37

(1) Yes
(2) No
(9) Unknown

IDENTIFY IMPAIRMENTS: _____

_____

_____

(NOTE ALL ARTIFICIAL LIMBS)

NEUROLOGICAL STATUS:

GIVE THE APPARENT NEUROLOGICAL STATUS OF THE PASSENGER IMMEDIATELY AFTER COLLISION AND/OR AIR BAG DEPLOYMENT . 38

(1) Normal
(2) Disoriented (Dizzy)*
(3) Unconscious
(4) Not Applicable (Deceased)
(9) Unknown

*IF DISORIENTED DESCRIBE SYMPTOMS (On Page S-16)

FOREIGN OBJECTS:

WAS THE PASSENGER HOLDING ANY FOREIGN OBJECT AT THE TIME OF THE IMPACT/CRASH ? 39

(1) Yes
(2) No
(9) Unknown

IF ANSWER WAS YES, IDENTIFY THE OBJECT HELD.
(Package on Lap; Pipe; Food in Mouth; Cigarette; Coffee Cup; Beverage Bottle; Etc.)

_____

DID THE FOREIGN OBJECT CAUSE ANY INJURY ? 40

(1) Yes
(2) No
(3) Not Applicable
(9) Unknown

JEWELRY:

WAS THE PASSENGER WEARING JEWELRY, BADGES, OR CARRYING PEN/PENCIL ? 41

(1) Yes
(2) No
(9) Unknown

WAS THE JEWELRY WORN KNOCKED-OFF BROKEN DURING THE IMPACT/CRASH ? 42

(1) Yes (3) N/A
(2) No (9) Unknown

IF COL. 41 IS NO, CODE 42-48=3

JEWELRY: (Cont'd)

INDICATE TYPE OF JEWELRY WORN BY THE PASSENGER.

NECK OR EAR JEWELRY ____ 43

ARM JEWELRY (WATCH, ETC.) ____ 44

PIN, BROOCH, OR BADGE ____ 45

PEN and/or PENCIL ____ 46

(1) Yes (3) Not Applicable
(2) No (9) Unknown

DID THE JEWELRY WORN CONTRIBUTE TO A PASSENGER INJURY ? ____ 47

DID THE JEWELRY WORN DAMAGE OR PUNCTURE THE AIR BAG ON IMPACT ? ____ 48

(1) Yes (3) N/A
(2) No (9) Unknown

FAMILIARITY:

WAS THE PASSENGER AWARE THAT THE VEHICLE WAS EQUIPPED WITH A PASSIVE RESTRAINT SYSTEM ? ____ 49

DID THE DEPLOYED AIR BAG(S) INHIBIT THE PASSENGER'S EXIT FROM THE VEHICLE AFTER THE IMPACT/CRASH ? ____ 50

DID PASSENGER NOTICE AN UNUSUAL AMOUNT OF SMOKE IN THE VEHICLE INTERIOR AFTER IMPACT/CRASH ? ____ 51

WAS THE ODOR FROM THE SMOKE PARTICULARY NOXIOUS TO THE PASSENGER ? ____ 52

(1) Yes

(2) No

(3) Not Applicable

(9) Unknown

COULD THE PASSENGER IDENTIFY THE SOURCE OF SMOKE IN THE VEHICLE INTERIOR AS ONE OF THE FOLLOWING: ____ 53

(1) Fire (Engine Compartment)
(2) Air Bag Deployment
(3) Fire (Passenger Compartment)
(4) Fire (Trunk Area of Vehicle)
(5) Other;

(6) Could not determine source.
(7) Not Applicable -No Smoke
(9) Unknown

COMMENTS:

DID THE PASSENGER COMMENT ON THE AIR BAG AS A RESTRAINT SYSTEM? ____ 54

(1) Yes
(2) No (9) Unknown

IF YES, GIVE BRIEF SYNOPSIS OF PASSENGER'S COMMENTS RELATIVE TO THE AIR BAG AS A RESTRAINT SYSTEM:

INCLUDE ANY ADDITIONAL COMMENTS THAT MAY BE EITHER RELEVANT TO AIR BAG PERFORMANCE OR UNUSUAL EVENTS AND/OR INCIDENTS WHICH WERE FACTORS IN THE ACCIDENT:

SECTION 3

EDITING PROCEDURE & INTERPRETATION OF QUESTIONS

SECTION 3.1

EDITING PROCEDURE

This section documents the steps involved in processing cases. As new case reports arrive, they are logged, edited, second-edited, keypunched, checked by a PDP 11/45 pre-build program, and merged into the computer accident data bank. The data in computer storage are then reviewed and corrections are made.

LOGGING

All new cases are logged in upon arrival. MDAI reports are inventoried against the cover letter enclosed with the cases, and any discrepancies are documented and clarified. The Traffic Unit Compendium (TUC) file, a computer-based log of all units per case, is then updated.

Only passenger cars and light trucks are processed as CPIR case vehicles. This includes utility vehicles (jeeps), small vans, pickup trucks, and carryalls. Heavy trucks, buses, motorcycles, pedestrians, bicycles, and other vehicles appear in the TUC file only.

Once the new cases are logged in, the editors make corrections and additions. A complete copy of each case is stored in the hard-copy file archives.

CASE EDITING

All MDAI cases are first- and second- edited with consistency, correctness, and completeness as the objectives. The second editor writes critiques of the coding errors and inconsistencies for each team and CTM. A completed set of case vehicle data forms contains an Annotated CPIR (Section 3.2), Occupant Supplement (Section 3.3), CPIR Supplement (Section 3.4), Damage Analysis Supplement (Section 3.5), and, if appropriate, an ACRS Supplement (Section 3.6).

Consistency is important for meaningful analysis of the data. The same interpretation of questions should be used by all editors for all cases. The computer-processed forms should adequately represent the case documentation, including photographs and other supporting evidence. Responses to all questions should be internally consistent within the data forms.

When discrepancies appear within a case, the editor should determine the best response by examining all available information. The answer which appears most frequently

throughout the case and is most consistent with other coded responses should be used. Photographs not taken on-scene may show damage incurred after the crash from extrication, towing, or vandalism.

An attempt should be made to accurately represent the information by using available responses. All questions should be answered; blanks are allowed in only a few places (see interpretations). All responses should be numeric except for such variables as team letters, VIN, CDC, OIC. If no category is appropriate, an "other" code must be used, with an explanation written in the margin.

PDP 11/45 PRE-BUILD PROGRAM

The pre-build program on the HSRI PDP 11/45 reads the keypunched and key-verified data, checks for over one hundred different invalid/ wild codes and internal data inconsistencies, and formats the data for file building and merging with the existing data file.

The program prints out "alleged" errors and their locations (case-card-column). Any atypical coding (e.g., Seat Belts Equipped = "no") is flagged as a potential error even though the code value itself is acceptable. Thus, not all the items printed out are necessarily errors requiring corrections.

Hard-copy cases in question are pulled from the files for review. Any corrections made are noted on the hard copy before refiling. The case is then repunched and resubmitted, or a correction sheet is filled out for later application to the newly-updated master tape file. Errors found at any time by editors, HSRI analysts, and other data bank users are corrected in this file. Changes are also made to reflect interpretation changes and new or expanded code lists.

RECENT CHANGES

This year's major changes to the CPIR form and editing manual are summarized here. (See the specific question's interpretation for further explanation.) There is a new ACRS supplement for cars equipped with air bags.

ANNOTATED CPIR

2.1.34	Road Defects (new interpretations and expanded code list)
7.3.25-29	Make/Model Codes (new codes and code changes)
7.3.42	Body Structure (new codes-4,9)
11.4.58-60	Telescoping Unit (new codes-777,998)
17.7.15	Steering Wheel Pad Deformed (or Contact to Driver Air Bag)
17.7.22-25	Column Movement (no longer required for MVMA cases)
19.7.27-29	Steering Column Energy Absorbing Device Device (new code-998)
19.7.30-32	Shear Capsule Separation (new code-998)
21.7.75	Instrument Panel Other (or Contact to Passenger Air Bag)
28.11.14	Seat Location (new code-3)
28.11.15	Position on Seat (new code-3)
28.11.16	Posture (code deleted-9)
29.11.45-46	Overall Severity of Injuries (new AIS-76)
30.12-26	Occupant Contact Areas (new code-47)

OCCUPANT SUPPLEMENT

30C.80.14 Role of Individual (code deleted-3)

30C.80.15-16 Posture (code deleted-13)

CPIR SUPPLEMENT

33.92.28 Driver Education (code change-4)

36.93.15-38 Most Responsible Vehicle
(interpretation change)

36.93.45-46 Character of Movement (new code-15)

36.93.47 Primary Factor Responsible for Accident
(codes changed-1,2)

DAMAGE ANALYSIS SUPPLEMENT

39.45.12-18 Primary CDC
(interpretation change)

ACRS SUPPLEMENT

New Supplement. See Section 3.6.

SECTION 3.2

INTERPRETATION OF CPIR QUESTIONS

FORM VERSION (1.1.1)

This number indicates the original revision of the CPIR (0,1,2,3) used for coding this case vehicle. For light trucks originally coded on truck forms (version B), this column is coded (3).

REPORT NUMBER (1.1.2-9)

The reports are numbered consecutively by the teams; some numbering sequences start over again every year. For example, UNM 95 will be entered as NM 00095, and CAL 75 57 will be recorded as CB 75057 (See section 5--Team Prefix and Case Numbers). An (8) in column 6 indicates an air bag case.

Column 9 contains the case vehicle CPIR number. If there is only one case vehicle, a (1) should always be entered here. If there is more than one CPIR done for an accident, the striking vehicle becomes vehicle 1 and the rest of the case vehicles are numbered consecutively in the order that they became involved in the accident. All vehicles in the same accident with CPIR's to be computer processed should be numbered consecutively. Some teams give each case vehicle in the same accident a different report number. These vehicles should be given different case vehicle numbers, such as VS-72004-1 and VS-72005-2. This is done even if two teams have investigated vehicles in the same accident.c

DATE OF COLLISION (1.1.12-17)

The date of collision should be checked with the case documentation and police report. If it is partially unknown, enter (99) for the unknown part only.

STATE CODE (1.1.18-19)

The state location code is taken from the Federal Information Processing Standards Publication (5-1) and is found under State Codes in the Reference Information Section. Canadian provinces are also given codes.

AREA/LOCALITY (1.1.20-21)

The area and locality are given by the investigator. When the accident site was an expressway, the surrounding locality should be coded here.

ENVIRONMENTAL CONDITIONS (pages 1&2)

All environmental conditions for the time and point of first impact are given by the investigator. Except for the last

two questions (visibility), they apply specifically to the case vehicle. The editor should check the photographs, narrative, and accident diagram for agreement.

LIMITED ACCESS HIGHWAY (1.1.22)

If the accident occurred on a limited-access highway, the Particular Location (36.93.13-14) should be coded (07) to (09).

ROAD TOTAL TRAFFIC LANES (1.1.23)

This question refers to the road on which the case vehicle was traveling and may be different for other vehicles involved in the accident. If the collision happened at an intersection, the editor should choose the roadway that best describes the case vehicle's location at the point of first impact. If the case vehicle was making a turn and the sides of the car were parallel with the sides of the new roadway, the vehicle had completed the turn and is considered to have been on the new roadway. If the vehicle had not yet completed the turn, the original road should be coded.

Neither parking lanes nor bicycle lanes are counted as traffic lanes unless they have been designated as turning lanes at an intersection. They are, however, considered to be on the roadway. A two-lane, two-way street is not differentiated from a two-lane, one-way street. Painted medians are considered as dividers only if they exceed one car length in width (about 16 feet). Botts Dots also do not constitute a median for the purposes of this question. Physical barriers, such as islands, rumble strips, etc., constitute medians if they parallel the traffic way.

OTHER ROAD TOTAL TRAFFIC LANES (1.1.24)

The codes for the previous question are also used here for the intersecting roadway in accidents that occur at intersections. Driveways are coded only if involved; any other intersecting roadway is always coded. Code (9) is used when the collision did not occur at an intersection.

ROAD SURFACE AND PRECIPITATION (1.1.25-32)

Roads with a coefficient of friction less than .55 should be coded as "slippery."

SPEED LIMIT (2.1.33)

Speed limit refers to the legal speed limit for the traffic way on which the case vehicle was traveling. It also applies to posted advisory speeds on curves and ramps, and to unposted "prima facie" limits.

ROAD DEFECTS (2.1.34)

This question should be coded "yes" only if the road defect

was causative or in some way invclved in the accident. If more than one road defect was involved, the editor should code the most contributory.

New codes have been added to describe types of road defects. Code (3) should be used for potholes, buckling, and other types of road disrepair. Raised or sunken sewers should be coded (4) and raised or sunken railroad grade crossings are coded (5). These can be used when the defect caused the driver to lose control or if he "bottomed-out" as he was crossing. Code (6) should be used if the road is higher than the shoulder and this drop caused the driver to lose control.

Design deficiencies such as incorrect or inadequate banking, road configuration, and inadequate signing should not be coded here. The presence of construction equipment and barriers is also not documented. These should be noted as Hazardous Road Conditions in the CPIR supplement (37.93.59-60).

CROSSWIND (2.1.36)

Tailwinds and headwinds do not count as crosswinds. Wind velocities of 0-5 mph are considered calm or "none" (1), 6-14 mph are considered "light" (2), and 15 mph and greater are considered "strong" (3).

TIME OF DAY (2.1.37)

This should be checked with Time of Collision from page 1 of the CPIR.

VISIBILITY LIMITATION/OBSTRUCTION (2.1.38-39)

These questions are to be applied to the accident as a whole, whether or not they are applicable to the case vehicle, and they should be coded the same on all CPIR's for the same accident. If the factor definitely or probably existed and was involved in causing the accident or increasing the severity, it should be coded.

"Cloudy-dark" (2) includes a low, heavy cloud cover. It should only be coded if it was a causative or severity-increasing factor. "Rain" (8) and "snow" (9) should be coded when precipitation was heavy enough to cause a visibility problem.

"Vehicle in transport" (8) is defined as any motor vehicle in a traffic way, whether it was moving or not. A non-moving vehicle in a legal parking area with a driver and with the engine running is considered a "parked vehicle" (9) for this item. A bus at a bus stop is considered in transport.

MECHANICAL MALFUNCTION (page 2)

POSSIBLE MECHANICAL MALFUNCTION (2.1.40-41)

A malfunction should be coded here only if a mechanical dysfunction of a part of the <u>case</u> vehicle probably occurred and played a causal or severity-increasing role in the accident. It should not be coded if it occurred as a result of an impact. Number of Items Involved does not ask for alleged malfunctions. If an allegation is made that there was a malfunction, but the investigators did not find evidence of it, a zero (0) should be entered in column 40 and a "yes" (1) in column 41. Blow-outs are considered malfunctions, but low tire pressure and bald tires are not.

"Not applicable" (3) is never a valid code in columns 42-48.

COLLISION CONFIGURATION (page 4)

VEHICLE TO OBJECT (4.1.42)

Vehicle to Object is coded "yes" (1) only when the object contacted produced damage to the vehicle or injury to an occupant. Pedestrians, but not other vehicles, are considered objects. A rollover with only ground (04) contact, is coded "no" (2). Other objects, including embankments (09), which were hit during the rollover, are coded "yes" (1).

ROLLOVER (4.1.43)

Rollover is defined as any vehicle rotation of 90 degrees or more, about any true horizontal axis. Rollover can occur at any time during the collision sequence and is coded independently of other configuration questions. If a trailer, attached to the case vehicle, rolled over but the vehicle itself did not, the Rollover item should be coded "no" (2).

RAN OFF THE ROADWAY (4.1.44)

Ran off the Roadway is coded "yes" (1) if the first impact occurred outside the boundaries of the roadway or with an off-road object. If a curb was contacted, with damage or an associated injury, before the vehicle left the roadway, this question is coded "no" (2). If the vehicle left the roadway and only negligible damage was done by the curb, then "yes" (1) should be coded. A two-vehicle collision where the case vehicle subsequently ran off the road and hit a tree is not a "Ran off the Roadway" collision.

VEHICLE TO VEHICLE (4.1.45)

The response chosen should be indicative of the first injury- or damage-producing collision between the case vehicle and any other vehicle, irrespective of any other contact with

objects or rollover.

Codes (1), (2), (3), and (6) are self-explanatory. A "sideswipe" (5), which takes precedence over other configurations, is a collision where either end or either side of one of the vehicles was contacted in a sweeping manner. "Sideswipe" records the type of damage rather than the relative orientation of the two vehicles. An "L-type intersection" (4) is coded when the front or rear of one vehicle contacted either side of the other vehicle primarily at one end of that side, with little or no direct contact to the middle or opposite end of that side. A "T-type intersection" (8) collison means that the front or rear of one vehicle contacted the middle portion of either side of the other vehicle, with little or no damage to either end of that side. The "other" (7) code is used for vehicle-to-vehicle collisions that do not fit any of the other categories, such as side-to-side impacts which were not sideswipes, rear-to-rear configurations, and collisions in which one of the vehicles did not have all four wheels on the ground at impact.

VEHICLE TO STOPPED/MOVING VEHICLE (4.1.46-47)

Vehicle to Stopped Vehicle and Vehicle to Moving Vehicle are not mutually exclusive when the case vehicle contacted more than one other vehicle or one other vehicle more than once.

OTHER CONFIGURATION (4.1.48)

The other category is used to indicate accidents that are not really Vehicle to Object, Vehicle to Vehicle, or Rollover. It should not be used for pedestrian accidents; they are recorded as Vehicle to Object. Codes (5) to (9) should be used whenever possible, and details should be written in the margin.

Code (5), "non-collision only," should be used for injury-producing accidents with no vehicle (collision) damage. It includes jackknife accidents without damage, occupants falling out of cars, etc. It also includes fire-only accidents, but these are processed only if the investigating team has filled out a CPIP. Fires should <u>not</u> be coded here if there was also a collision.

If a part of one vehicle struck another vehicle, but the vehicles did not contact each other directly, use code (6), "vehicle-part to vehicle." Vehicle parts include passengers, loads, disengaging tires, slide-in campers (pickups), and towed cars, but not trailers. If the vehicle part was at rest at the time of impact, code Vehicle to Object, not Other. With "vehicle-part to vehicle" configuration, code Vehicles Involved as (2), Vehicle to Vehicle "no" (2), Vehicle to Object "no" (2), and leave the Other Vehicle page blank, unless the Object code (DAS) is less than 60 (or there are more than two vehicles involved). However, the other vehicle can be most responsible.

Code (7), "vehicle to other vehicle's trailer," is used

when the case vehicle struck or was struck by another vehicle's trailer, whether attached or unattached, moving or stationary. It is used for private trailers and campers only; truck trailers and semis are considered part of the vehicle. When this code is used, there must always be an Other Vehicle page, even if the trailer was stopped or unattached. The Other Vehicle page and speeds should describe the trailer, unless the case vehicle was the one towing the trailer (i.e., a vehicle's own trailer cannot be the other vehicle), or the primary damage to the case vehicle was caused by a vehicle other than the trailer. For the collision configuration, an attached trailer and its towing vehicle are coded as one vehicle involved.

"Self-induced" (8) is coded when a vehicle was damaged by a part of itself (e.g., trailer, load, camper), no matter when during the accident sequence it occurred. Jackknife accidents with damage are coded (8).

If one vehicle hit an object which then hit another vehicle, code (9), "vehicle to object to vehicle," should be used. Two vehicles were involved, and Vehicle to Object should be coded "yes" (1), but Vehicle to Vehicle should be coded "no" (2), and the Other Vehicle page and speeds are not applicable.

VEHICLES INVOLVED (4.1.49)

This question includes all the vehicles <u>contacted</u> in the accident, regardless of whether or not the case vehicle contacted them. Non-contact vehicles that "caused the accident," e.g., were involved as visual obstructions, should not be counted as vehicles involved.

OBJECTS CONTACTED (4.1.50-57)

Objects Contacted should be coded in the order of contact during the collision, and should include only damage- or injury-producing contacts to the case vehicle. If more than four objects were contacted, the editor should choose the four most significant ones. All unused responses should be coded "none" (02). If the case vehicle contacted another vehicle more than once, then the other vehicle should be coded more than once.

Curbs should not be included unless they produced significant damage or an injury. Code (04), "ground," should only be used if the case vehicle rolled over or struck the ground after having been airborne. Code (29) should be used if the vehicle contacted its own or another vehicle's trailer (except the trailer of a tractor-trailer truck). Vans and travelalls should be coded (20) and motor homes (24). The "other" code should not be used unless none of the existing codes adequately describe the object in question.

DRIVER IMPAIRMENT/VIOLATION (page 4)

CASE VEHICLE DRIVER'S ABILITY TO DRIVE IMPAIRED BY (4.1.58-61)

If the editor believes that a factor existed and was definitely or probably involved in causing or increasing the severity of the accident, it should be coded. A consistency check should be made with related questions on the CPIR and occupant supplements, although the conditions do not have to be considered impairments to be coded there. "Drinking involved" (03) includes unknown amounts and amounts insufficient to be considered drunk by local legal standards but enough to be a possible causal factor. Insignificant quantities, such as a glass of wine with dinner three hours before the accident, should not be included. The "drunk" (04) category is defined by local legal standards. Usually this requires a BAC reading. "Medication" (11) includes both prescription and over-the-counter items. The "narcotics" (12) code includes all illegal drugs, even marijuana, which is technically not a narcotic.

Inattention is often mentioned in the matrix and not entered here; but it should be coded. Speed and overreaction are not impairments and should not be coded here, but recklessness and lack of training might be considered impairments.

TRAFFIC VIOLATION/LEGAL ACTION (4.1.62-63)

A violation should be coded, even if a ticket was not issued. The editor should not determine whether or not a violation occurred, but should code them as documented by the investigator or police officer. A non-moving violation which has no relevance to the collision should not be coded. Legal action is coded only if a citation is issued or if litigation is pending.

TYPE OF LOSS (4.1.64-65)

Personal Injury is coded "yes" (1) if anyone in the accident sustained any injury. The Property Damage question is now being used as the CPIR update number; therefore, this question may be coded (9).

VEHICLE SPEEDS (page 5)

VEHICLE SPEEDS (5.1.66-77)

The editor should always code the speed at <u>first</u> impact, even if only minor damage occurred. For non-collision accidents, the speed at the time of the first injury-producing event should be coded. The other vehicle speeds must be coded for the same "other vehicle" that is documented on the Other Vehicle page (6). Code (888) is used for the other vehicle speeds in single-vehicle accidents. Ranges of speeds cannot be coded, so an average should be entered. This question is coded

according to the field investigator's judgement, and the editors should make corrections only if there is a clerical error.

OTHER VEHICLE (page 6)

Only one Other Vehicle page may be computer processed, even if several other vehicles were involved. The vehicle which caused the most damage to the case vehicle should be chosen. In multiple-vehicle collisions, an Other Vehicle page should be completed for each CPIR. For single-vehicle accidents, this page should be left blank.

Since the Case Vehicle page (card 3) contains all of the questions found on the Other Vehicle page (card 2), only the case vehicle responses will be discussed.

CASE VEHICLE (page 7)

VEHICLE IDENTIFICATION NUMBER (7.3.12-24)

The VIN is the model and production number of the vehicle. GM, Chrysler, and AMC VIN's have thirteen characters, with the exception of Cadillac, which had only ten before 1971. Ford Motor Company vehicles have eleven-digit VIN's; the first and last F's should be eliminated and the last two spaces left blank. Volkswagen VIN's now have ten characters; before 1977 they had nine. If part of the VIN is not available, the editor should enter 9's in the field until it is the proper length. If the entire VIN is missing or unknown, the field should be left blank. The production number portion of the VIN (usually the last six digits) should always be replaced with 9's. The VIN Summary in the Reference Information section contains an outline of VIN formats and contents.

MAKE/MODEL CODE (7.3.25-29)

This code is used to identify the make (country, corporation, division) and model of the vehicle. See the Make/Model Codes section of the Reference Information (Section 5). If any part of the Make/Model Code is unknown, it should be denoted by zeros. Code (20) is used for an unknown automobile body. Note that a vehicle's model code is the same as that used for Objects Contacted on the DAS form. Vehicles with a small van-type front and a pickup cargo box are coded (11).

There are three types of truck "campers." The "truck with canopy/shell camper," (16) or (17), has a pickup-style cargo box with a thin shell cover, which is generally used to protect the cargo. It is no taller than the truck cab and may have small windows, in effect making the pickup into a station wagon. The "truck with slide-in camper," (22) or (23), has a cargo box with a camper that has its own floor and sides. Generally this is tall enough to stand it up in and it frequently projects over the sides and cab top. The "chassis-mounted camper" (31) is

generally mounted on a "chassis-cab," i.e., a truck with a camper instead of a pickup cargo box.

MODEL YEAR (7.3.30-31)

The model year should coincide with the year indicated by the VIN. The "unknown" code is (99), not (00).

SHIPPING WEIGHT OF VEHICLE (3.3.32-35)

The shipping weight is defined as the weight of the vehicle as built to production parts list, plus engine oil, coolant to capacity, and three gallons of gasoline, less optional equipment. If the investigator has added weight to account for optional equipment, do not make changes. For most cars and trucks, the shipping weight can be found in the Red Book*. The "unknown" code is (0000). Code (9999) should be used for weights over 10,000 pounds.

ODOMETER READING (7.3.36-40)

If the odometer was disconnected or broken before the collision, the reading should not be entered and the damage should be noted. Often the mileage can be read from a slide of the odometer or instrument panel. Code (00000) is used for "unknown."

BODY STYLE (7.3.41)

A car with any type of upper B-pillar, however thin, is defined for these purposes as a coupe or sedan. A hardtop has no physical upper B-pillar whatsoever. Note that some cars called "hardtops" or "pillared hardtops" by the manufacturer are, by this definition, sedans or coupes. Corvettes without removable hardtops, and (1970-1976) Firebirds and Camaros are considered "coupes" (2), with no C-pillars. Pickup cars (e.g., Ranchero, El Camino) are coded as "station wagons" (5).

Pillars can be made of fiberglass. Pillar and door damage should be coded consistently with Body Style.

Cars with soft or removable hard shells are coded as "convertibles" (6). A removable hardtop is one that can be removed without tools. Removable solid roof sections that were bolted on at the factory are considered standard roofs. Cars with sun roofs should also be coded as standard cars. The type of convertible or sun roof should be coded in column 53, Top Position at Time of Collision.

Only passenger cars with model codes (01)-(10) and (17)-

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*Red Book, National Reports, Inc., Chicago, Illinois. Canadian: National Automotive Publishers, Ltd., Toronto, Ontario. (Published eight times yearly.)

(2^) should be given body style codes of (0)-(6). Small vans (11) are the only vehicles that should be coded (7). Pickup trucks and carryalls should be coded (8). Utiliity vehicles (14), should be coded "other" (9), even if equipped with removable soft or hard-shell tops.

BODY STRUCTURE (7.3.42)

The Body Structure charts in the Reference Information Section give the type of structure for most U.S. and some foreign cars. Most pickup trucks are coded (1) "body and frame." Small vans may be either body and frame or unitized. Body mounts exist on both integral-stub and body and frame structures and should be coded accordingly on pages 13 and 15.

Code (4) has been changed to "body and platform frame" (e.g., Volkswagon bug) and code (9) has been added for "other."

NUMBER OF CYLINDERS (7.3.43)

For rotary engines, "single rotor" (1) or "double rotor" (2) should be coded.

HIGH PERFORMANCE OR AIR BAG EQUIPPED (7.3.44)

If the horsepower of the engine and the weight of the car are known, a ratio of weight to horsepower can be used to determine high performance, with 10.5 as the dividing line. A "high performance" coding should not be based solely on the car's "fast" image or fancy facade. Codes (4)-(6) should be used for air bag-equipped cars.

NUMBER OF OCCUPANTS (7.3.45-46)

This item refers to the total number of persons being transported by the case vehicle at the time of the accident. A driver standing beside his vehicle is not considered an occupant. This number does include passengers in the rear cargo area of a pickup truck. The number of occupants coded here must match the number of occupant sections in the CPIR and the number of occupant supplements.

VEHICLE LOADING (7.3.47)

Passenger cars are fully loaded with all designated seating positions occupied plus 200 pounds of cargo. For pickup trucks, panel trucks, sport vans, etc., the gross vehicle weight is used.

EQUIPMENT OPTIONS (7.3.48-52)

Equipment options include transmission, steering, and brakes. Anti-slip differential and positraction are not included as brake anti-lock devices. As of January 1, 1976, most passenger cars will be equipped with front-disc brakes.

TOP POSITION AT TIME OF COLLISION (7.3.53)

All cars except those with removable soft or hard-shell tops and sun roofs are coded "not applicable" (3). A soft top is a cloth-type roof and a hard shell is made of metal or fiberglass. A sun roof has a pillared structure, side rails, and headers when open. Cars with soft or hard-shell tops should be coded as convertibles in column 41 (Body Style).

CASE VEHICLE REPAIR OR REPLACEMENT COST (7.3.54-57)

Replacement costs for totalled vehicles can be found under "Retail Value" in the Red Book for the appropriate date of accident and geographic region. The "unknown" code is (9999). Damage over $10,000 is coded (9998).

CASE VEHICLE DAMAGE INDEX (7.3.58-71)

The CDC (Collision Deformation Classification) given by the investigator is coded here. It should not be changed by the editor (even if it is invalid) unless it is inconsistent with the CDC's given in the narrative. If no CDC is coded and one cannot be found in the narrative, or if there is no secondary CDC, the editor should use (99-0000-0). A discussion of CDC's can be found in the Damage Analysis Supplement section.

EXTERIOR DAMAGE (page 8)

SHEET METAL DAMAGE (8.4.12-17)

This item represents direct (contact) damage only, and the area of damage should correspond, one to one, with the first letter of the CDC's. In cases where more than two CDC's exist, the first letter of those subsequent CDC's should also be represented as a positive response in the correct car region. Indirect damage such as buckling should not be coded. Coding of this question should correspond to inches of crush on the last page of the CPIR supplement.

Roof damage is restricted to downward crush, and includes hood and trunk lid damage. Undercarriage damage should be coded as "other." Fiberglass damage should also be coded.

SHEET METAL CRUSH (8.4.18-29)

The crush should always correspond, one to one, with Sheet Metal Damage. However, Inches of Crush are filled in by the investigator and should never be changed by the editor unless a clerical error has been made. The measurement should be made from the original exterior contour of the vehicle to the farthest point of contact.

WHEELS AND TIRES (page 10)

WHEELS ORIGINAL EQUIPMENT TYPE (10.4.30-32)

"Mag" wheels never come as original equipment on U.S. manufactured vehicles, and should not be confused with fake hub cap versions. Damaged rims should be looked for if the car struck the curb. Tire damage is not to be included.

TIRES (10.4.33-40)

Tire profile can sometimes be checked if the tire size model numbers have been included. Numbers containing "50," "60," and "70" (e.g., E70-14) indicate "wide oval" (5) tires, and those with "78" (G78-15) indicate "regular" (4) tires.

FRONT EXTERIOR (page 11)

HOOD LATCHES (11.4.41-43)

Hoods include front trunk covers, as on the VW. For vans without hoods all questions about hoods should be coded (3), "not applicable."

These questions ask if the hood latch is inoperable, and do not include sheet metal deformation that prevents opening of the hood. The latch cannot be both jammed and released. If there are two latches and the first released but the safety catch jammed, the latches should be coded as jammed but not released.

HOOD HINGES (11.4.44-47)

If there is no damage, there can be no separation and both are coded "no" (2).

HOOD REMAINED ON VEHICLE (11.4.48)

If the hood latch(es) had released and both hinges had separated completely, but the hood remained in place due to sheet metal deformation, the hood is considered to have remained on the vehicle.

REAR EDGE OF HOOD (11.4.49-51)

If the rear edge of the hood moved above it's normal pre-crash position, it is considered elevated. If the rear edge of the hood hit any part of the windshield at any time during the collision, even if it pulled away again, Contacted Windshield should be coded "yes" (1). This contact may not necessarily have been damage producing. If there was no contact, Penetrated Windshield should be coded (3). If the hood tore or caused a break in the interlayer, the hood is considered to have penetrated the windshield. If the hood actually penetrated into the passenger compartment, External Object Intrusion on page 20 should be coded "yes." Contact and penetration may be coded

even if there was no elevation.

OPTIONAL HOOD (11.3.52)

Any non-standard structural change in the hood is considered an optional hood. It may be a factory- or non-factory-installed model. Non-standard hood scoops qualify, whether functional or not. Painted racing stripes and blacked-out hoods do not qualify as optional hoods.

ENGINE OR TRANSMISSION MOUNT SEPARATION (11.4.53)

This refers to all mounts and includes complete or partial separation and cracking. Codes (4) and (5) can be used for "partial" and "complete" separation.

STEERING COLUMN FLEXIBLE COUPLING (11.4.54-56)

A steering column flexible coupling is a flexible rubberized coupling, not a pot joint. All GM cars, beginning with 1967 models, with steering column energy absorbing devices, are also equipped with flexible couplings. If the car is not equipped, the Separated and Other Damage questions become "not applicable" (3). The Other Damage question asks only about other damage to the coupling itself.

ENGINE COMPARTMENT TELESCOPING UNIT (11.4.57-60)

To insure proper coding of this question, type and original length should be checked in Section 5, Telescoping Unit. This is especially true in the case where the hood was jammed and the investigator had difficulty determining the type or presence of a telescoping unit.

If the type or presence of a telescoping unit is unknown, (0) and (099) should be used. Two new codes, "extended" (777), and "compressed, unknown amount" (998), have been added. If the difference in length is known, it should be rounded off and recorded in tenths of an inch. Differences of six-tenths of an inch or less should be coded as (000).

If there is a double U-joint or flexible cable serving the function of a telescoping unit, it should be coded (8) and columns 58-60 should be coded (888), since a length change for this type of device is not applicable. All cars equipped with a Ford Mini Column Energy Absorbing device should be coded (8), (888).

All General Motors air bag cars have "type 6" telescoping units, except Cadillacs, which have none. Original dimensions are unknown, but the "H" measurement should be used. As a general rule, all General Motors cars with the gear box in front of the axle have telescoping units, and those with the gear box behind the axle have none.

FIRE (page 12)

FIRE (12.5.12-14)

If a fire started in any vehicle involved, the first question should be coded "yes." The Extent of Fire and Fire Origin questions apply to the case vehicle only; thus, fires that did damage to a vehicle other than the case vehicle should be coded as "not applicable" (3). To distinguish between a major and a minor fire, the following guidelines should be used: major fires will probably require fire department services, and minor fires may burn themselves out or be easily extinguished.

The Fire Origin question is self-explanatory. In cases where the fire began in the other vehicle, "other" (8) should be used and "other vehicle" written in.

Fire damage is <u>not</u> coded throughout the CPIR form; only impact damage is. If impact damage cannot be determined due to fire damage, it should be coded "unknown."

LEFT EXTERIOR (pages 12,13)

LEFT PILLARS NOT DAMAGED (12.5.15)

If the left pillars were not damaged or separated and the left roof side rail was not damaged or buckled, a (1) should be placed in column 15. The remainder of CPIR page 12 should be completely filled in. If there was damage, this column should be left blank.

LEFT PILLARS (12.5.16-31)

If the pillar is not damaged, there can be no separation, and the proper coding is "no" (2) for both Damaged and Separated. Codes (4) and (5) should be used whenever possible to differentiate partial and complete separation. A crack in the pillar is coded as partial separation. A break in the sheet metal is not pillar separation. If there is no pillar, both damage and separation are coded "not applicable" (3). Many newer cars may not have actual lower C-pillars, but if there is an upper C-pillar, damage and separation of the lower C- <u>area</u> should also be coded. Fiberglass pillars should be coded if they are original equipment. A roll bar should be coded as an upper B- or C-pillar, depending on its placement.

Pillar coding should be consistent with Body Style (7.3.41). Hardtops have lower A-, B-, and C-pillars, and upper A- and C-pillars. Two- and four-door sedans have both upper and lower A-, B-, and C-pillars. Lower D-pillars should not be coded for sedans. Sedans with four pillars (e.g., VW Dasher) and cars with opera windows may have two C-pillars. The worst damage to either C-pillar should be coded.

Station wagons have upper and lower A-, B-, C-, and D-

pillars. Two-door wagons with only three pillars (e.g., Vega) have A-, B-, and D-pillars. Any vehicle with a tailgate has lower D-pillars. If there is no tailgate, a good way to determine whether a car should be coded as a hatchback sedan (no D-pillars) or a small station wagon is: if the rear-most pillar is at an angle such that it looks like the C-pillar of a sedan, it should be coded as a hatchback sedan; if the last pillar is close to a vertical angle, it should be coded as a station wagon. Gremlins and Pinto runabouts have A-, B-, and C-pillars; Vega wagons have A-, B-, and D-pillars; and Pinto wagons have A-, B-, C-, and D-pillars.

Soft-top convertibles have lower A-, B-, and C-pillars and upper A-pillars only, unless there is a roll bar installed, in which case it would have an upper B-pillar. The pillar arrangement for cars with removable hardtops depends on the particular car. Some removable tops take out just the top and side rails, leaving the backlight header and rear pillars (e.g., Porsche 911). Others, such as Corvette and 1976 Cutlass, have removable panels which also leave the pillars. If the hardtop was not removed, side rails, headers, and all appropriate pillars are coded.

Vans have upper and lower A-, B-, C-, and D-pillars on both sides, whether or not a rear door is present. Pickup trucks have upper and lower A- and B-pillars as well as lower D-pillars. Crew cabs and club cabs also have C-pillars.

Jeeps and carryalls must be coded the way they are built. They usually have either A-, B-, and D-, or A-, B-, C-, and D-pillars. Kaiser Jeeps (AMC) have a "bathtub" design and have no pillars rearward of the A-pillars, unless there is a tailgate, which gives it lower D-pillars. If the jeep has a fold-down windshield in the down position, there are no upper A-pillars.

LEFT ROOF SIDE RAIL (12.5.32-33)

If the roof rail is buckled, it must also be considered damaged, so this question should be coded (1,1). Convertibles (soft or hard top) with the top in place have side rails. Cars with sun roofs always have side rails, regardless of the top position.

LEFT BODY MOUNT SEPARATION (13.5.34)

Vehicles with body and frame or integral-stub structures have body mounts. Unitized vehicles do not, so this item is coded "not applicable" (3). Coding of this question should be consistent with Body Structure (7.3.42). Partial separation of the body mount is coded "yes" (1).

LEFT DOOR HINGES/LATCHES NOT DAMAGED (13.5.35)

If the door hinges and latches were not damaged, the doors did not open or jam during the collision, and continuity of the side structure was maintained, a (1) should be placed in column

35. Otherwise, the editor should leave this column blank. The remainder of page 13 should always be completed.

DOOR LATCHES (13.5.36-39)

Door latches can be damaged without being released and vice versa. Released means totally released from the catch. Code (1), "Released, yes," should be used if the latching pillar rotated, causing the striker post to disconnect from the latch without any apparent damage to either. The editor should use code (2), "no release," if the latch held but the surrounding metal had torn away. If there is no door, it should be coded (3,3), "not applicable." Canvas snap-on doors (e.g., Jeeps) do not have latches or hinges.

DOOR HINGES (13.5.40-43)

If the hinges have separated, they are damaged.

CONTINUITY OF SIDE STRUCTURE MAINTAINED (13.5.44)

This question should be looked at from an occupant ejection standpoint. If there was a large enough rent in the vehicle so that all or part of the occupant (even just a hand) could protrude through the side of the vehicle, continuity was not maintained. This could be due to pillar damage or separation, the door opening, the door or window frame being pulled away from the car, or external object intrusion through the side panel. Open or damaged windows are not included here. Continuity was not maintained if there was complete separation of passenger compartment pillars, or if the door opened at any time during the accident sequence.

DOORS OPENED DURING THE COLLISION (13.5.45-46)

If the doors opened at any time during the collision, it is coded "yes" (1), even if it closed or became jammed later in the sequence.

DOORS JAMMED CLOSED (13.5.47-48)

If the door could not be opened except with the use of tools or with great difficulty, it was jammed closed. If the door opened partially, it should not be coded as "jammed." Also, if it opened but would not close again, it is not considered jammed.

REAR EXTERIOR (pages 13,14)

FUEL TANK AND LINES (13.5.49-55)

If there was complete disengagement of the fuel tank, there must have been fuel leakage. Fuel tank neck deformation is documented as Tank Deformation. If there were no leaks, questions on location of leaks should be coded "not applicable"

(3). Damage to auxiliary fuel tanks should be included.

TRAILER HITCH INSTALLED (13.5.56)

The "temporary bumper" (3) trailer hitch is a clamp-on unit as featured at many trailer-rental companies. It can be installed and removed in a few minutes. The "bumper" (4) type is a ball fixed directly to a bumper, as on some pickup trucks. The "frame" (5) type is permanently attached (welded, bolted) to the bumper and frame. "Load-distributing" (6) type hitches have load-distributing mechanisms such as sway bars. They frequently can be identified by the square part sticking out below the bumper. The "ring and pintle" (7) type has a horizontal ring that drops over an upright pivotal member. A "fifth-wheel hitch" (8) is used on tractor/semi-trailer combinations. "Other" types include anything else, such as clevis and pin. Drawings of some trailer hitches can be found in Section 5, Trailer Hitches.

TRAILER BEING TOWED (13.5.57)

If there was no hitch on the vehicle, this question should be coded "not applicable" (3).

TAILGATE PERFORMANCE (14.5.58-70)

This section should be filled in for station wagons, vans with rear doors, pickups, most utility vehicles, hatchbacks (i.e., all other cars with rear deck lids that open up into the passenger compartment). This section should be filled in with (3)'s for all other vehicles.

The questions on latches and hinges for tailgates are coded the same as those for doors. Only the appropriate hinges for each vehicle should be coded. For all positions where no hinges are present, the editor should use code (3). If the vehicle is equipped with a two-way tailgate, three sets of hinges should be coded. The tailgate may be jammed in any position, jammed meaning that tools or excessive force are needed to move the tailgate.

GM "Clamshell" tailgate tracks are considered hinges, and can be damaged and separated. However, there are no latches, so columns 58 and 59 would be coded "not applicable" (3), and column 69 coded (6).

TRUNK LID PERFORMANCE (14.6.12-18)

The trunk lid is always in the back of the car, and may open into either a trunk or an engine compartment (e.g., VW). The VW van has both a trunk lid and a tailgate. These questions are coded the same as those for tailgates. If no trunk is present, the editor should code this section "not applicable" (3's).

LUGGAGE AREA/CARGO AREA (14.6.19-21)

This area is defined as a completely partitioned area where luggage or cargo is carried. It may be in the front and/or rear of the vehicle. If it is in the front, the firewall is part of the trunk-passenger compartment partition. If a vehicle has two luggage areas, Damage should be coded if either is damaged. The rear of a station wagon is considered part of the passenger compartment unless it has a partitioned cargo well. Hatchbacks also do not usually have partitioned luggage areas, so columns 19 and 21 should be coded (3), "not applicable." The rear seat backrest is not a partition! The rear box of a pickup truck is considered a cargo area. Spare Tire Separation should be coded (3), "not applicable," if there was no spare tire.

BACKLIGHT HEADER (14.6.22)

Soft top convertibles do not have backlight headers; removable hardtops may, even if removed. If there is no backlight, there can be no header. When there is no header, the "not applicable" (3) code should be used.

RIGHT EXTERIOR (page 15)

Right Exterior is coded in the same manner as left Exterior, pages 12 and 13.

WINDSHIELD HEADER (15.6.42)

All vehicles have windshield headers, with the exception of jeeps with the windshield folded down.

STEERING WHEEL (pages 16,17)

STEERING WHEEL TYPE (16.6.58-59)

The Steering Wheel Type is presently used for GM cars only (see Section 5, Steering Wheel Types). All others should be coded (99).

STEERING WHEEL RIM/SPOKES/RINGS/SHROUD (16.6.60-66)

Minor steering wheel damage, such as nicks, cracks, etc., should be coded (4).

Occupant Contact includes both probable contact and non-injury producing contact. Since the driver usually holds the steering wheel rim, contact should not be coded if the driver braced against the wheel, whether or not injury resulted. Contact should always be coded if the driver struck the wheel.

Damage and contact to the driver air bag cover should be coded in columns 65 and 66. If the air bag deployed as designed, the air bag cover is not necessarily damaged.

STEERING WHEEL ENERGY ABSORBING DEVICE (16.6.67-76)

There are very few cars equipped with this device. If the vehicle is not equipped with a steering wheel energy absorbing device (EAD), column 67 should be coded (2) and columns 68-76 should be filled in with (8)'s. (See Steering Wheel EA Device in Section 5 for cars that are equipped and original dimensions).

STEERING WHEEL POSITION (17.7.12)

This question is left to the investigator's discretion, should never be changed by the editor, and should be coded (09) if unknown.

STEERING WHEEL PAD/DRIVER AIRBAG DEPLOYMENT (17.7.14-15)

Column 14 should only be coded for load-distributing pads. Very few cars have these; they are listed in Section 5. Codes (4)-(9) are used for cars equipped with driver air bags.

Damage to load-distributing pads should be coded in column 15. For air bag cars, this column is used to code occupant contact to the driver air bag. If there was no deployment, contact should be coded (3), "not applicable."

STEERING FEATURES (17.7.16-21)

The Tilt, Telescoping, and Swing-Away Features are determined by the investigator.

COLUMN MOVEMENT (17.7.22-25)

The "A" dimension should be coded "unknown" (999,0) if the backlight, backlight header, or roof is damaged or buckled, the steering column is broken loose, or the vehicle has no backlight header. There is a tolerance of one inch on these measurements. Direction of Movement (column 25) is sometimes <u>erroneously</u> coded (0) for "no movement" and (9) for "unknown." "A" dimension measurements are no longer required for MVMA-sponsored cases.

STEERING COLUMN ENERGY ABSORBING DEVICE (19.7.26-29)

The type and original length of the steering column energy absorbing device should be checked in Section 5. All GM air bag cars are equipped with a step-ball column (6) with an original length of 7.06 inches. For cars equipped with a Ford mini-column EAD (8), a consistency check should be made with the telescoping unit (11.4.57). Two new codes, "extended" (777) and "compressed, unknown amount" (998) have been added.

SHEAR CAPSULE SEPARATION (19.7.30-32)

There are no shear capsules unless there is a steering column energy absorbing device. However, some cars with energy absorbing devices do not have shear capsules. Most cars equipped with Ford mini-columns do not have shear capsules. However, all 1971 and some 1972 Pintos <u>do</u> have shear capsules.

All GM cars (1967-) with steering column energy absorbing devices do have shear capsules. If there are no shear capsules, this question is coded "not applicable" (888). The editor should use (999) for "unknown" and the new code (998) for "separation, unknown amount." There is no tolerance for this measurement, so any amount of separation should be recorded. If the amount of shear capsule separation was different on each side, the maximum should be coded.

COLUMN VERTICAL ROTATION (19.7.33-34)

The original angle can be checked in Section 5. This code is a two-digit non-decimal number that can be either positive or negative. However, the plus or minus is not coded. The tolerance for this measurement is one degree. "Rotated-unknown amount" (98) should be used when applicable.

PASSENGER COMPARTMENT-GENERAL INFORMATION (page 20)

REDUCED IN SIZE (20.7.35)

The passenger compartment is considered reduced in size when the internal boundary of the passenger compartment moved inward due to direct or indirect damage. Inward deformation of the floorpan and firewall implies Passenger Compartment Reduced in Size. The rear area of a station wagon is considered part of the passenger compartment.

EXTERNAL OBJECT INTRUSION (20.7.36)

There is External Object Intrusion when the internal boundary of the passenger compartment was moved inward due to direct damage, i.e., an external object went inside the original internal boundary line. This object may be part of the car (e.g., hood or engine). This question includes, but is not limited to, penetration. It also includes intrusion from ground contact on a rollover.

INTERNAL LOOSE OBJECT (20.7.37)

All internal loose objects are coded, even if they were not involved. They could have caused injury. Seat cushions and backrests can become internal loose objects if they do not remain in position as part of the seat.

VERTICAL ROTATION OF INSTRUMENT PANEL (20.7.38)

This item refers to rotation in a vertical plane about a horizontal axis. Buckling is not included. If vertical rotation occurred, all three sections of the instrument panel should be coded as damaged (page 21, CPIR).

FIREWALL/FLOORPAN DEFORMATION (20.7.39)

The firewall is the partition between the engine

compartment and passenger compartment. In cars where the firewall and cowl are not the same (e.g., VW and some vans) the editor should code damage to the firewall. The floorpan includes the toepan. Firewall and floorpan inward deformation always mean that the passenger compartment was reduced in size.

WINDSHIELD (20.7.41-45)

If the windshield was broken, it must have also been cracked. If it was neither cracked nor broken, the correct coding is (2,2). When the windshield was not contacted by any occupant (including probable contact), the editor should code Cracked or Broken by Occupant Contact "not applicable" (3). If the windshield was cracked or broken by occupant loading of the air bag, proper coding is (2,3) for columns 43 and 44. Bond Separation refers to complete or partial separation of the windshield from its mount.

WINDSHIELD CODE (20.7.46-47)

Illustrations of some windshield codes can be found in Section 5. The most important distinguishing feature is the DOT model code number. When the model number cannot be identified, the partial codes should be used. If none of the glazing monogram is identifiable, the (YY) code is used, even if the make of the car is known.

PASSENGER COMPARTMENT, FRONT INTERIOR (pages 21,22)

Occupant Contact includes probable contact and non-injury-producing contact. If there were no occupants, the editor should fill in the questions about damage, but should code all questions about Occupant Contact "not applicable" (3). Fire and water damage should not be coded. These rules apply to all parts of the CPIR and supplements. Occupant contacts are often marked with tape on the slides.

INSTRUMENT PANEL (21.7.48-75)

If any listed item was not a part of the original equipment of the car, damage and contact should be coded "not applicable"(3). All non-original or add-on equipment should be listed as Other. Knee restraints should be coded as Lower Panel. Glove Compartment Area refers to the area, not the glove compartment itself, and is coded independently of other instrument panel questions. Therefore, both Glove Compartment Area and Midpanel would often be coded (1), "yes," from one contact. Damage and contact to the passenger air bag deployment door should be coded in these two places. If it deployed as designed, it should not be coded as damaged (unless other damage occurred). The Parking Brake Release question includes those mounted between the seats. Air conditioning outlets are usually on the front or top of the instrument panel; heater ducts are usually underneath. A package shelf that is an integral part of the instrument panel should be coded as Lower Panel, not Other.

Other is also used for the passenger air bag. Codes (4)-(9) should be used in column 74 for cars equipped with a passenger air bag; this takes precedence over other entries in this column. Column 75 is used to code occupant contact to the air bag. If there was no deployment, there could be no contact to the air bag, so this column should be coded "not applicable" (3).

OTHER INTERIOR ITEMS (22.8.12-34)

The rear view mirror should be coded as damaged if it was knocked off. Console (columns 26-28) refers to anything on the floor or hump between the front seats (not the hump itself) on which the occupant could receive an injury. The rubber boot on a floor-mounted manual transmission selector lever should not be included, but a mini-console (e.g., Mustang II) should be. Engine covers in small vans are coded as consoles.

PASSENGER COMPARTMENT-SEATS/WINDOWS (pages 23,24)

TYPE OF FRONT SEAT (23.8.35-36)

Seat types should be coded according to their basic style. The presence of a center armrest is not a factor in determining seat type. Some pickup trucks have bench seats with folding backs.

DELUXE ACCESSORIES (23.8.37)

Deluxe Accessories include any accessories on the back of the front seat such as ash trays, map pockets, etc. "Reclining seat backs" (4) takes precedence over "deluxe accessories" (1).

TYPE OF SEAT ADJUSTERS/ADJUSTMENT (23.8.38-39)

In the case of divided seats, the seat adjuster questions apply to the driver's side only. Two-way seats move forward and back. Four-way seats move forward, back, up, and down. Six-way seats can also be rotated about a horizontal axis. Code (8) should be entered in column 39 for a GM swivel seat.

ADJUSTER DAMAGE/SEAT SEPARATION (23.8.40-43)

If there is more than one type of damage to the adjusters, they should be ranked according to severity (i.e., the highest number should be coded first). It is not necessary to code the same type of damage twice in columns 41 and 42.

An adjuster that is deformed, jammed, or released, should be coded (5). "Separated" (6) means that the seat has totally disengaged and has free vertical movement. Location of Separation should be coded "not applicable" (3) if there is no separation. If "separated" (6) is included as a type of damage, then (3) should not be used for Location of Separation. If the type of adjuster damage is unknown, but it is known that no

separation occurred, a (3) may be used in column 43.

POSITION OF SEAT (23.8.44-45)

Position of Adjustable Seat should also be coded for rigid seats. It can be determined by comparing it to the positions of the driver's seat. "Not applicable" (3) is used only when no seat was present.

DAMAGE TO FRONT SEAT (23.8.46-48)

If the seat back has rotated, it is damaged. Rotation also should be coded on page 24. Contacted by Rear Seat Occupants should be coded (3), "not applicable," if there were no rear seat occupants.

HEAD RESTRAINTS (23.8.51-56)

Columns 52 and 53 are coded "not applicable" (3) for integral head restraints and column 56 is (6). These questions should be coded for the driver's side only. If the head restraints were removed prior to the collision, then columns 53-56 are "not applicable" (3).

FRONT SEAT BACK LOCKS (24.8.57-60)

This section should be coded "not applicable" (3,3,3,3) if the seat backs are non-folding. It should only be coded (2,3,2,3) if there are folding seats without locks (GM cars before 1967 and other cars before 1968). A consistency check should be made with the Folding Backs question on the previous page. Swivel seats do not have seat back locks and should also be coded (3,3,3,3).

SEAT BACK ROTATION (24.8.61-64)

This question is not restricted to rear impacts and the measurements should always be taken. "Rotated-unknown amount" (98) should be used if there was obvious rotation and original dimensions are not available or if there is no way of determining the original position of a reclining seat back. (99) should be used if there was no seat; (88) is not a valid code. The tolerance for this measurement is two degrees. Original angles can be found in Section 5.

TYPE OF REAR SEAT (24.8.65)

This question refers to folding seat backs on rear seats, as in station wagons and hatchbacks. Some pickups have second seats which usually fold down.

REAR SEAT DAMAGE (24.8.12-19)

These questions should all be coded "not applicable" (3) if there was no rear seat. Rear Seat Back Locks should be coded (3,3,3,3) for non-folding seats. If the seat was folded down at

the time of collision, columns 17 and 19 should be coded (3), "not applicable."

THIRD SEAT (24.9.20-22)

Some station wagons and vans are equipped with three seats. If the vehicle was not equipped, Damaged should be coded (3), "not applicable."

BACKLIGHT/BACKLIGHT HEADER (24.9.23-26)

A zip-out window is a backlight and can be damaged and contacted, but cars with zip-out rear windows (e.g., soft shell convertibles) do not have backlight headers. Therefore, damage and contact (columns 25 and 26) should be coded "not applicable" (3). Some hard shell convertibles with the top removed may not have backlight headers either. Rollbars are not considered backlight headers, no matter where they are situated.

WINDOWS CLOSED AT TIME OF COLLISICN (24.9.27-33)

The glass area must have been completely (100%) closed to be coded "yes" (1). Any degree of opening is coded "no" (2). Backlights alsc are coded "yes" (1) if they were closed, not (3)! "Not applicable" (3) is used only if there is no window.

PASSENGER COMPARTMENT-SIDE INTERIOR (pages 25,26)

LEFT AND RIGHT SIDE INTERIOR (25.9.34-59 and 26.10.12-37)

The same rules apply here as for front interior. Occupant Contact should not be coded as "not applicable" (3) in the rear seat area just because there are no rear seat occupants.

If the vehicle is not equipped with any of the listed items, they should be coded (3), "not applicable." Hardware on push-out windows should be coded. Glass should be coded (3) for plastic windows (e.g., jeeps). If there is a rear seat, there must be a rear door area. If there is no rear seat in a passenger car, these four questions should be coded "not applicable" (3). Damage or contact to the interior pillars refers to the pillar area and includes both upper and lower. If the occupant did not contact the window but was injured by "shattered" or "flying" glass, contact should be coded "no" (2). Restraint system contacts should be listed and coded as Other if they caused injury.

ROOF INTERIOR (26.10.38-41)

Convertibles with the top on have roof rails, headlining, and a roof structure. Roof Structure and Headlining should be coded (3) "not applicable" if the top was down or removed. On Corvettes and 1976 Cutlasses with roof panels removed, the remaining roof strip should be coded as Other. Some pickup trucks and vans do not have a headlining.

OCCUPANT INFORMATION (pages 28 and 29)

OCCUPANT NUMBER (28.11.12-13)

Occupants should be numbered sequentially, rather than according to seat position, beginning with (01). Occupant forms should be completed for all vehicle occupants. The number of occupant pages should correspond to the number of occupants on page 7, columns 45-46.

SEAT LOCATION/POSITION (29.11.14-15)

The occupant's position should be coded even if he was not actually on a seat. An occupant whose legs or head were in a different position than the one in which he was sitting should be coded according to the location of his buttocks. A new code (3), "external to passenger compartment," has been added to each of these questions for passengers riding outside of the car (e.g., in pickup cargo bed or on hood or trunk of car).

POSTURE (28.11.16)

This question should be coded consistently with Posture (30C.80.15-16) on the Occupant Supplement. The same number should be coded here as in Cclumn 15 on the supplement. Kneeling should be coded as "sitting in abnormal position." "Cargo Area" should be coded as "floor."

AGE (28.11.17-20)

The occupant's age is coded in months or years; the the other response should be left blank. Children over 23 months should be coded in years.

WEIGHT/HEIGHT/SEX (28.11.21-26)

A check for consistency between the narrative and CPIR should be made. Height should be coded in inches. Large animals should be considered occupants only if the investigating team has filled out occupant pages for them.

RESTRAINT SYSTEM (28.11.27-34)

Lap Belt Equipped is answered "yes" (1) only if there was a restraint available for that seat position and the occupant was sitting on the seat or in a child restraint. If he was in any other posture (e.g., lying or sitting on a lap) and not wearing a lap belt, Equipped is answered "no" (2). If any portion of the lap belt was removed to prevent usage, it is coded (2) "not equipped."

Restraints Worn (columns 28-29 or 32-33) should be coded (3), "not applicable," if the vehicle was not equipped for that position. If a lap belt was used to secure a child restraint, the editor should code it as worn. If a restraint was not worn, it could not have been worn correctly or snuggly, so columns 29

and 33 should be coded "not applicable." The Inertia Reel and Locking Retractor questions should only be coded (3), "not applicable," if the restraints were not equipped.

Codes (4-9) should be used for Columns 31 and 32 on Upper Torso Restraints for front seat occupants in air bag cars.

RESTRAINT SYSTEM USEAGE CODE (28.11.35-36)

Restraint Usage Code is coded (00), "not used," unless restraints were worn by the occupant. The first digit refers to lap belt usage, and the second digit refers to upper torso restraint usage. Either digit is coded (8) if the restraint used was of an unknown type. (See Section 5, Restraint System: Usage Codes.)

TYPE OF TORSO RESTRAINT USED (28.11.37)

If no upper restraints (including air bags) were used, the Type of System Used is "not applicable" (3). Use of two-point systems (lap belt only) should be coded (3), "not applicable." Volkswagen passive restraint systems, which consist of an upper torso restraint and a knee restraint (no lap belt) should be coded as "other" (6). For cars with air bag deployments, codes (7)-(9) should be used for front seat occupants only.

CHILD RESTRAINT CODE (28.11.38-39)

See Restraint Systems: Child Restraints in Section 5 for codes. Code (99) should be used for "unknown" or "none." A child restraint should be coded even if used improperly. These columns should always be filled in.

EJECTION (28.11.42-43)

Partial ejection (4) should be coded if any part of the occupant's body (even a hand) went outside the boundary of the vehicle. Occupants who had jumped or were pushed from vehicles are coded as ejected. Passengers thrown from an open cargo area should be coded as ejected with (9) "roof or open convertible" coded as the area of ejection.

TREATMENT/MORTALITY (28.11.44)

The Treatment/Mortality codes are self-explanatory. "First Aid" (1) is coded if the occupant received any on-scene medical attention or if he was taken to a hospital, examined and released. An examination to determine injury or injury extent is considered first aid even if there was no treatment. If the occupant sought medical attention from his own doctor, even up to several days later, "first aid" (1) is coded. In a fatal accident, if the occupant was obviously dead before being brought to the hospital and pronounced DOA (dead on arrival) the code for "dead at scene" (4) should be used.

OVERALL SEVERITY OF INJURIES (28.11.45-46)

The Overall Severity of Injuries should reflect the injuries coded in the matrix. This item should never be coded with a value lower than the highest AIS in column 22; it can be higher. If an occupant died of something other than a direct injury (e.g., asphyxiation) then the Overall Severity code should be as high as the worst injury (other than asphyxiation). The editor should code the fatality in the Treatment/Mortality question above. The Abbreviated Injury Scale - 1976, Overall AIS (OAIS) guidelines*, should be followed. The highest possible OAIS is (6).c

OCCUPANT INJURY DETAIL MATRIX (30.12-26.12-31)

The Matrix provides a means of detailing the injuries of an occupant in a vehicle by body region, type of injury, and areas of contact that may have caused the injury. Horizontal rows correspond to Body Region, and each is represented by an IBM card.

OCCUPANT NUMBER (30.12-26.12-13)

It is important to enter the occupant number (previously coded at the top of page 28) under the vertical column with that heading. This number must consist of two digits and is entered next to the heading for a Body Region if that region was injured. If there is no injury to that region, no occupant number should be entered.

BODY REGION CONTACT AREAS (30.12-26.14-21)

On the surface, it may seem that the various body regions need not be explained; however, since there is some overlap between some of the regions, it may be helpful to list the body parts that are and some that are not included in each region.

Body Region	Included	Not Included
Internal Organs		
	Heart	Testicles - Penis
	Lungs	Brain
	Kidneys	
	Liver	
	Pancreas	
	Spleen	
	Ovaries	
	Aorta	
	Gall Bladder	
	Bladder	
	Stomach	
Brain	Brain	Spinal Cord

The Abbreviated Injury Scale (1976 Revision), Joint Committee of AAAM, SAE, and AMA, 1976, pages 9-10.

	Meninges	Eyes
	Pituitary	
	Medulla Oblongata	
	Pons	
	Optic Nerve	
Face	Nose	Ears
	Chin	Scalp (not Facial)
	Jaw (manidible,maxilla)	
	Forehead	
	Below Scalp Line	
	Eyes	
	Teeth	
	Tongue	
	Internal Mouth	
	External Mouth	
	Sinuses	
	Zygomatic Arch	
Head	Cranium	Vertebra
	Scalp	Zygomatic Arch
	Ears	Teeth
		Forehead
		Jaw
		Nose
		Mouth
		Eyes
		Brain
Neck (Cervical Region)		
	Cervical Vertebra	Lower Chin
	Cervical Spinal Column	
	Larynx	
	Trachea	
	Esophagus	
Shoulder Girdle		
	Clavicle	Spinal Column
	Scapula	First Rib
Right Upper Limb		
	Right Hand	
	Right Wrist	
	Right Arm (upper)	
	Right Forearm	
Left Upper Limb		
	Left Hand	
	Left Wrist	
	Left Arm (upper)	
	Left Forearm	
Chest Upper Back (thorax)		
	First - Eleventh Rib	Lungs
	Thoracic Vertebra	Heart
	Thoracic Spinal Cord	
		Aorta

	Thorax (without Content)	Pleura
	Sternum	
Lower Back Lumbar Region		
	Lumbar Vertebra	Kidneys
	Lumbar Spinal Cord	
	Lower Back	
	Regio Lumbalis	
Abdomen	Peritoneum	Kidneys
	Intestine	Liver
	Diaphragm	Spleen
		Pancreas
		Stomach
Pelvic Girdle	Pelvis	Ovaries
	Testicles - Penis	Intestine
	Sacrum	
Right Lower Limb		
	Right Thigh	
	Right Calf	
	Right Shin	
	Right Foot	
	Right Ankle	
Left Lower Limb		
	Left Thigh	
	Left Calf	
	Left Shin	
	Left Foot	
	Left Ankle	

The Body Region designated "whole body" is used when it becomes too difficult to single out the individual injuries. This category is most often used with burn victims or when the injured person has contusions and abrasions literally all over his body. The cut-off point for using the "whole body" region is around 50%. The "whole body" region should not be used as a summary for all injuries and contact areas, nor should other body regions repeat what has been entered under "whole body". This region may be used to code possible injury to an occupant if the body region is unknown. For example, if an occupant left the scene but is reported to have had injuries (body region and extent unknown), a (9) may be coded in the Whole Body row in the Overall Injury to Body Region, column 22.

AREA(S) OF POSSIBLE CONTACT (31.12-26.14-21)

[For recent changes, see the question labeled Contact Areas (30D.81-95.12-13) in the OS Interpretations.]

Contact Codes are entered in the four vertical columns just to the right of the Body Regions. Two-digit codes are entered in the appropriate boxes to identify possible injury-causing objects and areas. These codes are defined on page 30A of the

CPIR and in Section 5 under Occupant Contact Areas. If only one contact code is noted, it should be placed in the first position (columns 14-15). If two contact codes are noted, then they should be placed in the first and second columns (14-15 and 16-17). This is done for up to four contact codes. No more than four contact codes can be used. No specific meaning is attached to the particular columns or to the order in which contacts are coded.

If a body region was not injured, the editor should not include contact codes or an AIS of (0) for that region.

INJURY SEVERITY CODES (30.12-26.22-31)

The last portion of the matrix consists of the vertical columns under the general instruction "Enter Severity Codes." These columns represent types of injuries and entries are made under them in the horizontal row that corresponds to the body region in which the injury occurred. The single-digit entry is based on the rated severity of the injury given in the 1976 revision of the AIS coding scheme. The code for unknown injury as well as unknown severity is (9). The unused boxes should not be filled in with dashes, but should be left blank.

The overall injury to body region (column 22) should be equal to the highest AIS in that row.

SECTION 3.3

OCCUPANT SUPPLEMENT

CASE I.D. NUMBER (30.80.2-9)

This should be the same as the report number on the CPIR (1.1.2-9).

OCCUPANT NUMBER (30C.80.12-13)

The occupants should be given the same numbers here as in the CPIR (28.11.12-13). Occupants must be numbered sequentially beginning with (01). If there were no occupants in the case vehicle, occupant supplements should not be completed.

ROLE OF INDIVIDUAL (30C.80.14)

Only one "motor vehicle driver" (1) should be coded for each vehicle. Since this supplement is used only for vehicle occupants, "not applicable, no occupant" (3) has been deleted.

POSTURE (30C.80.15-16)

This is an expanded list from the CPIR (28.11.16). The CPIR posture question should be coded using the first digit of the posture question on the occupant supplement. Two new codes have been added: (47), "standing - external to passenger compartment," and (87), "lying or sitting - external to passenger compartment." "Other" (98) should be used for unusual postures, such as a child sitting on the armrest of a door. Code (13) has been deleted, so "sitting or lying on station wagon cargo floor or folded seatback" should always be coded (85).

NON-IMPACT MEDICAL (30C.80.17)

This is the same question as in the CPIR supplement (34.92.58), except it is specific to each occupant and it includes pregnancy.

OCCUPANT ALCOHOL INVOLVEMENT (30C.80.18-22)

The Occupant Blood Alcohol level for the driver should be the same as that coded in the CPIR supplement (35.92.60-62). "No test, but charged (DWI)" (5) takes precedence over codes (2)-(4) in column 18.

SEAT BELT BUZZER/INTERLOCK (30C.80.23-25)

Some 1972 and all 1973 passenger cars have non-cycled buzzers. (Information on these model years can be found in Section 5 under Restraint System: Warning System). All 1974 models have ignition interlocks. Most 1975 cars have non-cycled buzzers; those built before February 25, 1975 may have interlocks, and some may not have either. 1976 cars must have

non-cycled buzzers. Most cars with factory-installed air bags are an exception and do not have any warning system, but 1972 Mercury air bag cars do have interlocks. Pickup trucks and utility vehicles do not usually have warning systems. (However, 1976 Kaiser vehicles have buzzers.) If the vehicle was equipped with a warning system (either buzzer or interlock) and the occupant was not wearing restraints, column 24 should always be coded "not operational" (2-9) even if the method of defeat is unknown.

PASSIVE RESTRAINT SYSTEM (30C.80.26-27)

These two questions will be answered (2,3) for most vehicles. Air bags and other types of passive restraints should be coded here for front seat occupants. A new code (5) has been added for "knee and upper torso restraints," such as the new Volkswagon passive system.

RESTRAINT SYSTEM MALFUNCTION OR SEPARATION (30C.80.28)

If no restraints were installed for that position, "not applicable" (3) should be coded. This should be checked with the CPIR occupant page. It is possible that a malfunction or separation occurred even if the restraints were not worn.

INVESTIGATOR JUDGEMENT OF RESTRAINT SYSTEM EFFECTIVENESS (30C.80.29)

A statement about the effectiveness will usually be found in the Recommendations/Conclusions Matrix of the case report. Only the investigators' opinion should be coded here; the editors should not code their own. This question is not limited to lap and shoulder restraints; it includes air bags and other types of passive restraints.

If there is a starred (positive) statement, "Seat belts were used," in the matrix, then "reduced injury severity" (1) should be coded. If the team states in the matrix that "Seat belts were not worn," the code (2), "could have reduced severity if worn," should be used. If a general statement is made which covers all occupants involved, then each occupant should receive that response.

If no opinion is given, or the team is not sure whether or not restraints would have helped, "no opinion" (3) should be used. "Unknown" (9) should not be used unless no information is available regarding restraint usage. If usage is known but no opinion is given, "no opinion" should be coded.

This question refers to the investigators' judgement of the <u>potential</u> for injury reduction. Therefore, it is possible for the question to be coded (2), "could have reduced severity if worn," even if the occupant was uninjured (AIS-0). Injury severity can be reduced within the same AIS level, so if seat belts eliminated some potential injuries, "reduced injury severity" should be coded.

Code (2) may also be interpreted as "could have reduced severity if worn correctly," and should be used for the case of an occupant wearing a belt incorrectly, if his injuries would have been reduced if it had been worn correctly. However, "did increase overall severity" (6) should be used if a person received fatal injuries from a seat belt worn incorrectly.

TREATMENT/MORTALITY (30D.80.30-31)

This is an expanded list of Treatment/Mortality codes from the CPIR form (29.11.44). The appropriate code should be chosen and checked with the CPIR question. (Note: In general they are one greater than the corresponding CPIR code value.)

This question is not restricted to treatment immediately post-crash. For example, if an occupant went to a doctor several days after the accident, "treated at hospital/clinic but not admitted" (02) should be used. If an occupant was examined at a hospital or clinic or in a doctor's office post-crash and was found to be uninjured, Treatment/Mortality is still coded (02).

EMS CONTRIBUTORY TO SEVERITY (30D.80.32)

This should be coded "yes" (1) only if the severity of injuries was increased because of incompetancy of emergency medical service crews (ambulance, emergency room workers, etc.). Lack of treatment and incorrect diagnosis and treatment are included. "Exemplary service" (4) should be used only when the EMS crew went beyond their usual responsibility. "Not applicable" (3) is not valid for this question.

AUTOPSY PERFORMED (30D.80.33)

If an autopsy was performed, this should be coded "yes" (1) whether or not the report is included in the case. If the occupant was not killed, "not applicable" (3) should be coded.

OVERALL POLICE INJURY SEVERITY (30D.80.34)

This should be taken directly from the police report. If a coding system other than "KABC" is used, the code that best expresses the meaning of the original police code should be chosen. Florida police use the following codes: (0) none, (1) fatal, (2) incapacitating injury, (3) non-incapacitating injury, (4) possible injury.

"Reported as injured, no KABC code" (5) should be used if the police report indicates that the occupant was injured, but has no system to distinguish different levels of injury. If no police report is included, "unknown" (9) should be used.

SECTION 3.4

CPIR SUPPLEMENT

This supplement contains questions not coded in the CPIR, primarily concerning administrative and pre-crash data. Pages 31, 32, and 38 are for HSRI editor use only, and should not be coded by field teams.

REPORT NUMBER (31.90.2-9)

The report number is the same as that found on page 1 of the CPIR.

REPORTING DATA (page 31)

DATES (31.90.12-23)

The date of field investigation is usually found in the top right block on page 1 of the CPIR. The date submitted or published is usually found on the front or title page of the case report (except most Canadian cases, which have the date of accident on the title page and no date of publication). Code (99) should be used for unknown parts of the dates (e.g., 01 99 76).

TEAM CASE NUMBER (31.90.24-34)

The team's version of its case number should be written here (see Section 5, Team Prefix and Case Numbers, for models), with no dashes. All cases by the same team in a sequence should follow a common format. If the Ann Arbor (AA) and University of Michigan (UM) teams have both investigated the same vehicle in the same accident, it should be noted here.

HSRI CPIR EDITOR (31.90.35)

This indicates who first edited the case.

NUMBER OF CASE VEHICLES REPORTED (31.90.36)

This question refers to the number of <u>case</u> vehicle CPIR forms completed for computer processing. If there is more than one, the other vehicle CPIR number should be entered in columns 67-74.

ORIGINAL VEHICLE REPORT FORM (31.90.37)

The original form prepared by the team should be indicated here. Vehicles not on current-revision forms should be transferred if they are CPIR vehicles to be processed.

MATRIX CELL (31.90.38-46)

The number to be coded in columns 38-46 is the sum of all positive and negative statements in each cell of the

Recommendations/Conclusions Matrix in the case. The spaces should be filled with zeros for MVMA-sponsored teams.

DOT HS/PB NUMBER (31.90.47-66)

These numbers are found on the top right of the cover page of the published MDAI reports, or in box number 1 of the standard government title page. Some old cases have PB numbers; most recent cases have HS numbers. They are used to order copies of published MDAI cases from the National Technical Information Service. MVMA-sponsored cases do not have either number. Either or both of these fields may be left blank if the case does not have such a number.

OTHER VEHICLE CPIR REPORT NUMBER (31.90.67-74)

This number links all case vehicles in the same accident. If there are three case vehicles in the accident, the editor should link 1 to 2, 2 to 3, and 3 to 1. (If other vehicles in the same accident were only investigated by another team, they should still be linked here). For single-vehicle accidents and multi-vehicle accidents with only one case vehicle, these columns are left blank.

DATE EDITED (31.90.75-80)

This is the date that CPIR editing began.

SUPPORTING DATA (page 32)

All of the following questions refer to information included in the team report. All responses (except for photographs) will be coded (0,1,2,3).

PSYCHOLOGICAL REVIEW (32.91.13)

This question refers to a <u>detailed</u> evaluation of the case vehicle driver's mental condition prior to the collision, often done by a psychlogist. It is coded "not applicable" (3) only when there was no case-vehicle driver.

ANY PERSONAL INTERVIEWS (32.91.13)

This refers to any witness' (including driver's) account of the accident or interviews with friends or relatives of the drivers involved. Any indication that an interview by the investigators did take place should be coded "yes" (1). The "not applicable" (3) code should not be used.

KATZ ADJUSTMENT SCALE (32.91.14)

This is a quantitative personality chart which is not usually found in case reports, except Maryland's.

MICHIGAN ALCOHOLISM SCREENING TEST (32.91.15)

This test is used by some teams to determine an individual's potential for alcoholism, and is seldom included.

DRIVER'S LICENSE RECORD (32.91.16)

For this question to receive a positive response, the team must include the driver's license record issued by the Secretary of State or the team's researched number of driver-involved accidents and violations. Driving record information obtained from interviews should not be coded here, but it can be entered in columns 29-31, card 92.

MEDICAL EXAMINER'S AUTOPSY (32.91.17)

This item refers to the medical examiner's descriptive autopsy report on a case accident fatality. It includes pedestrians and occupants of all vehicles involved. If there were no fatalities in the accident, it should be coded "not applicable" (3).

AFIP MEDICOLEGAL AUTOPSY (32.91.18)

This is the Air Force autopsy computer form that is often included in conjunction with the Medical Examiner's report. Again, if there are no fatalities, it should be coded "not applicable" (3).

TOXICOLOGICAL/ALCOHOL TEST (32.91.19)

For a positive response, the results of any toxicological test given to the case vehicle driver to determine alcohol consumption must be included. The results should be filled in on page 35 of the CPIR supplement and page 30C of the occupant supplement.

INJURY CAUSATION ANALYSIS (32.91.20)

This refers to an extensive medical record of collision-caused injuries to any occupant in the case vehicle. It must be more than just a listing of injuries; the listing must include related body contacts. (An autopsy report constitutes an injury causation analysis, as does a completed occupant Injury Detail Matrix in the CPIR or occupant supplement.) If there were no injuries to any occupant of the case vehicle, "not applicable" (3) should be coded.

INJURY SUMMARY/DIAGRAM (32.91.21)

This item is coded "yes" (1) if a listing of accident-related injuries or the CPIR occupant injury diagram is included. If there were no injuries to case vehicle occupants, "not applicable" (3) should be coded.

X-RAYS (32.91.22)

This question should be coded "yes" if X-rays were taken. It will be noted in the case report or occupant diagram (on slides for Calspan cases). If there is a precise description of fractures, this question should be coded "yes" (1). If there is no indication of X-rays, but bones were broken, it should be coded "unknown" (0). "Not applicable" (3) should not be used.

MEDICAL HISTORY (32.91.23)

The team must include background information or detailed medical documentation explaining the case vehicle driver's mental or physical limitations. A statement that there were "no abnormalities" does not constitute a medical history.

MAP LOCATION (32.91.24)

A general area map (e.g., city, county) with the accident site indicated must be included. This map must be more than an accident diagram.

COLLISION DIAGRAM/SKETCH (32.91.25)

This refers to the collision diagram showing configurations, objects contacted, and vehicle trajectories before and after contacts.

SITE ACCIDENT HISTORY (32.91.26)

This question should be coded "yes" (1), if a summary of the number and/or types of previous accidents at the case accident location is given. It is usually found under environmental conditions.

NARRATIVE DESCRIPTION (32.91.27)

This is the investigating team's accident description, including the vehicle's pre-crash, at-crash, and post-crash movements. Most case reports include this.

POLICE REPORT (32.91.28)

The case must include a county, city, or state police report on the case accident. It may be a standardized form or a separate police officer's report.

WHO ESTIMATED SPEEDS (32.91.29-30)

The person who estimated the case vehicle speeds entered on page 5 of the CPIR should be identified by a code here.

NHTSA VEHICLE CONDITION AND MAINTENANCE REPORT (32.91.31)

This refers to an enumerative post-crash inspection of the case vehicle recorded on the VCMR form.

MECHANICAL MALFUNCTION INSPECTION (32.91.32)

A "yes" (1) code should be entered if any detailed inspection of the case vehicle was performed by the investigating team. This inspection may or may not be due to an alleged mechanical malfunction. A NHTSA Vehicle Condition and Maintenance Report implies such an inspection.

INSPECTION RECORDS (32.91.33)

A state-, city-, or country-required motor vehicle inspection form or the date of such an inspection must be included. This is usually indicated at the end of the VCMR or in the vehicle description. The "not applicable" (3) code should not be used here, even if no inspection was required.

REGISTRATION RECORDS (32.91.33)

This refers to a specific document, the State Motor Vehicle Registration record, which usually is not included.

SHEET METAL CRUSH (32.91.35-36)

If the diagram/sketch was completed by the investigator on page 9 of the CPIR, column 35 should be coded "yes" (1). If the inches of crush are recorded on page 8, excluding code (99), column 36 should be coded "yes" (1).

MEASUREMENTS TAKEN (32.91.37-40)

These columns should be coded "yes" (1) if measurements were taken, "no" (2) if the vehicle was equipped (or presence was unknown) but the measurement was not taken, and "not applicable" (3) if the vehicle was not equipped. The "not applicable" (3) code should not be used for the A-dimension, column 39.

VIN/VDI/MAKE-MODEL CODE (32.91.41-43)

These items should be coded "yes" if the team entered the codes on page 7 (Case Vehicle page) of the CPIR.

PHOTOGRAPHS (32.91.44-57)

Site/Location photographs include accident diagrams, maps, and pictures of the vehicle exterior if taken on-scene. Autopsy/Medical photos include pictures of occupants, injury diagrams, and X-rays. Photographs should be counted in only one of the four categories (Columns 48-49, 50-51, 52-53, or 54-55). Code (99) should be used for all photographs on UM cases.

VEHICLE MALFUNCTION (page 33)

CASE VEHICLE MALFUNCTION (32.92.12-26)

This question refers to items checked for mechanical malfunctions on page 2 of the CPIR. The most causative should be coded in columns 25-26.

ROUTINE MAINTENANCE (33.92.27)

For the most part, this question is left to the discretion of the investigating team. It should be coded "yes" (1) for new vehicles less than 10 months old or with less than 10,000 miles, and vehicles that had been lubricated less than 8000 miles prior to the accident. If the teams states that the vehicle was in "good mechanical condition," it should be coded "yes" (1).

DRIVER INFORMATION (page 33)

DRIVER EDUCATION (33.92.28)

Informal driver education is now coded as (1). The editor should use code (4) if the driver started, but did not complete, a driver education course.

NUMBER OF VIOLATIONS/COLLISIONS/SUSPENSIONS (33.92.29-31)

These data should be taken from the case vehicle driver's record, driver interview (if considered reliable by the team), and case text. License, insurance, or registration violations should be included, but non-moving violations should not.

ORIGIN/DESTINATION (33.92.32-33)

If the driver's trip included several stops, the editor should code the last stop before the collision as the origin and the next planned stop as the destination. The code for "cocktail lounge/bar/wet party" (6) takes precedence over other codes.

ROUTE/AREA FAMILIARITY/ROUTE USAGE (33.92.34-36)

The driver's familiarity with the road and area where the accident occurred is determined by the investigating team. "Frequently" should be coded as "weekly" (2). If the driver lives in the area, column 35 should be coded "yes" (1).

TIME (33.92.37-48)

A twenty-four hour clock is used for all questions involving time. Midnight should be coded (00 00), not (24 00).

PSYCHOLOGICAL/PHYSICLOGICAL FACTORS (page 34)

All questions except Non -Impact Medical should be answered for the case driver only. A consistency check should be made with page 4 of the CPIR, although <u>all</u> psychological and physiological factors should be coded here, whether or not they were considered impairments.

STRESS THAT DAY (34.92.49)

This question is intended to indicate emotional stress which may have precipitated the accident. Distractions just prior to the collision should not be included.

MARITAL STATUS/OCCUPATION (34.92.50-52)

The case driver's occupation should be classified according to the list given in Section 5.

PERMANENT PHYSIOLOGICAL CONDITION (34.92.53)

Any permanent physiological condition that could limit the driver's ability to handle the case vehicle or increase the severity of injuries received should be indicated, whether it did or not. A person wearing corrective lenses or a hearing aid does not have a vision or hearing restriction. If more than one condition exists, the most contributory should be coded.

TRANSIENT PHYSIOLOGICAL CONDITION (34.92.54-57)

Here the editor should indicate any transitory physiological condition that may have contributed directly or indirectly to the driver's ability to maintain control of his vehicle. Seizures are coded as "blackouts" (03).

NON-IMPACT MEDICAL CONDITION (34.92.58)

A non-impact medical condition of any case vehicle occupant should be coded here. It should be consistent with the occupant supplement (except pregnancy). Any physiological condition that may have contributed to the accident or increased injury severity must be coded here, including heart attacks, drowning, and injuries sustained while exiting the vehicle, etc. Pregnancy should be coded as a transient physiological condition, and not coded here. If a non-impact medical condition existed for more than one occupant of the case vehicle, the editor should code the most contributory, then most severe.

PHARMACOLOGICAL AGENTS NOTED/BAC (35.92.59-62)

Any drug or medication should be coded, whether or not it was a causal factor. If more than one drug was noted, the editor should code the one that was most causative. When alcohol and another drug were present, the drug should be coded in column 59, but the blood alcohol level should be recorded in columns 60-62 because drinking is coded in several other places. Drugs and alcohol should also be coded on page 34, columns 54-57.

If no test was given but drinking was suspected, code (999) belongs in columns 60-62. The editor should never guess the blood alcohol level.

CRASH/POST-CRASH FACTORS (page 35)

CASE VEHICLE, FINAL LOCATION (35.92.65)

The final-rest position of the case vehicle should be coded here. If any part of the vehicle remained on the roadway, the "in traffic way" (1) code should be used. Driveways and parking lots should be coded as "other" (9).

CASE VEHICLE, FINAL ATTITUDE (35.92.66-67)

The final attitude of the case vehicle (o'clock position) should be coded with a clock in the vertical plane as the point of reference. For example, if the final-rest position was on the roof, (06) would be coded. Intermediate o'clock positions may also be used.

POST ACCIDENT FACTORS (35.92.68-71)

These questions apply to the accident as a whole; if any of the services were used for any vehicle or occupant involved, they should be coded. "Not applicable" should never be used for these four questions.

Fire control is coded "yes" only when there was a fire. Preventive measures, such as hosing roads, should not be coded.

If tools were used to gain access to the occupants for removal from the vehicle, or if a backboard was used, extrication should be indicated.

Ambulance should only be coded if one was actually used to transport occupants to the hospital, not just because one was available. This item should also be coded if occupants were transported to the hospital by police vehicle or by rescue squad. Towing should be coded whenever it was used.

LOCATION OF FIRST HARMFUL EVENT (page 36)

GENERAL LOCALITY (36.92.12)

Indicate the general locality of the accident site. The "urban-rural" (3) code is used to cover the "grey" areas that are neither urban nor rural. If the accident occurred on a limited access expressway, use code (1) regardless of whether the expressway was in an urban or rural area.

PARTICULAR LOCATION (36.93.13-14)

This question asks for the location of the first harmful event in the <u>accident</u>, which may not have involved the case vehicle. Choose the <u>most specific</u> code that accurately describes that location.

Code (05) "off road" is used only when the vehicle(s) involved in the first harmful event have <u>all four</u> wheels off the

road at that time. It does not necessarily correspond to Ran off Roadway on page 4.

Code (06) includes intersections with private and public driveways, railroad tracks, etc., and should be coded if another road (except a ramp) was coded on page 1 of the CPIR. The other road does not have to be involved to code "intersection." An intersection extends beyond the point where the roads actually cross. A car is considered to be in the intersection area until it has completed its turn (i.e., is parallel to the new roadway).

The code (07), "expressway" should only be used when the General Locality is "expressway" (1) and when none of the other Particular Location codes, (05) or (08-10) apply.

Codes (08), "interchange, main lanes," and (09), "interchange, other lanes (ramps)," are used only for expressways when (05), "off road," and (10), "bridge," do not apply. The interchange area is defined by a boundary not more than 100 feet from a ramp terminal (e.g., the end of the gore or the curb return, where the ramp and main lanes join). "Interchange, other lanes (ramps)" (09) includes all interchange ramps and the areas where exit and entrance ramps meet the main lanes. "Interchange, main lanes" (08) covers main lanes within the boundaries of an interchange, including the areas where main lanes from two expressways merge.

Code (10), "bridges, tunnels, viaducts," takes precedence over all other Particular Locations, and includes overpass bridges.

RESPONSIBILITY (36.93.15-39)

The editor should rank the vehicles involved in the order of their responsibility for causing the accident. Report numbers from page 31 should be used. Pedestrians, bicyclists, pedestrian conveyances, and large animals (objects 70-73) may be considered vehicles for responsibility questions. They should be coded (88-88888-8). If responsibility cannot be determined, all related questions (column 44-58) must also be coded "unknown," unless the response would be the same for either vehicle.

TOTAL ENERGY AVAILABLE (36.93.40-43)

The total energy of the single impact having the greatest kinetic energy should be recorded. Often this is the energy of the first impact. This question should be coded the same for all case vehicles in the accident.

Each vehicle's energy is calculated by using its weight and impact speed. (See Energy Table in Section 5.) It is not necessary to interpolate; the editor should merely use the nearest weight and speed. For a vehicle-to-vehicle collision, the values from each vehicle are <u>added</u> to derive the total

energy.

PRE-CRASH MOVEMENT OF MOST RESPONSIBLE VEHICLE
(pages 36 & 37)

The following questions (columns 44-58) are to be answered for the most responsible vehicle, and should be coded the same on all CPIR supplements for the same accident.

PRE-CRASH BASIC MOVEMENT (36.93.44)

This question refers to the most responsible vehicle's movements immediately preceding the crash. The general movement is coded, rather than the specific action taken before the impending collision. Codes (3)-(8) take precedence over (1) and (2). Code (9), "unknown," is used for pedestrians.

CHARACTER OF MOVEMENT (36.93.45-46)

This item refers to the specific movement just prior to the first damage- or injury-producing event. An avoidance maneuver should not be coded here unless it led to the collision. A new code (15) has been added for "straight backward." The "unknown" (99) code should be used for pedestrians.

PRIMARY FACTOR RESPONSIBLE (36.93.47)

All driver errors, whether aware or unaware, should be coded (2). Ambience should be used only when conditions are so bad or so sudden that the driver could not compensate. It should not be coded every time the road is slippery.

PRIMARY ERROR (37.93.48-51)

The specific action primarily responsible for the accident should be coded here. When there is more than one error, the most significant should be coded first. The "other" (16) code should be used if a pedestrian was most responsible.

"Diverted attention" (02) includes inattention. "Speeding" (09) can also be interpreted as "too fast for conditions." "Signs, signals disobeyed" (12) may be coded if the driver failed to yield the right-of-way from a stop sign or signal, even if he stopped first. A "turning error" (07) refers to an improper turn, and this code should not be used just because the driver was turning when the accident occurred.

DRIVER ATTENTION/COMPLEXITY (37.93.52-53)

These questions have been eliminated and are pre-coded (9).

AVOIDANCE MANEUVERS (37.93.54.55)

Driver actions taken in an attempt to avoid an impending collision are coded here, even if the avoidance maneuver caused the collision. The "unknown" (9) code should be used for

pedestrians.

VEHICLE COMBINATION (37.93.56-57)

Vans, carryalls, and pickups are coded as (4), "truck," for this question. Pedestrians should be coded as "other" (8).

MOVEMENT OF SECOND MOST RESPONSIBLE VEHICLE (37.93.58)

This question should be approached from a very general point of view; it is similar to the Pre-Crash Basic Movement. Curve-following should be coded as (1) "straight ahead." The "unknown" (9) code should be used for pedestrians.

HAZARDOUS ROAD CONDITION (37.93.59-60)

Any hazardous conditions which might have been contributory to the accident are coded here. If more than one hazardous condition existed, they should be ranked in the order of significance. The "obstacle on road" (6) code should be used for disabled cars, animals darting into the roadway, etc. Vehicles acting as visibility obstructions should be coded in the CPIR but not here. If the team documents the accident site as a high-risk location, the editor should use code (8), "other." Poor signing and design defects should also be coded "other."

HSRI ANALYSIS, page 38

This page should not be filled in by the field investigating team. It represents the HSRI editor's estimation of the collision impact speeds, CDC's, and sheet metal crush. This is in no way an attempt to second-guess the investigators, but is an attempt to unbiasedly present the accident damage with some degree of consistency.

The Other Vehicle on this page is the one which caused the most damage to the case vehicle. For collisions involving more than two vehicles, it is the one on the Other Vehicle page in the CPIR. It is also the vehicle with the concurrent damage to the case vehicle's primary CDC on the Damage Analysis Supplement (or secondary if the primary damage was caused by an object). However, the other vehicle's primary CDC is coded here; this is not necessarily the CDC concurrent to the case vehicle's primary CDC. The CDC's coded here should be consistent with those on the Damage Analysis Supplement.

The speed at each vehicle's first impact should be coded on this page; they may not be for the same impact for both vehicles. The average of a range should be coded. The speeds coded here should be consistent with those on page 5 of the CPIR.

SECTION 3.5

DAMAGE ANALYSIS SUPPLEMENT (DAS)

The Damage Analysis Supplement was designed to give a more complete view of the damage incurred by the case vehicle. New information and data already in the CPIR have been restructured to specifically relate case vehicle damage to concurrent damage to the other vehicle, inches of crush, crash events, and impact speeds. A chronological ordering of case vehicle maneuvers and crash events that best describes the accident is included to identify the circumstances producing the damage. Information concerning performance of the side structure of the case vehicle is also coded here for analysis of direct damage to the side structure of vehicles with and without door beams.

REPORT NUMBER (39.45.2-9)

The report number on page one of the CPIR (1.1.2-9) should be used for the correct case vehicle.

PRIMARY CDC - CASE VEHICLE (39.45.12-18)

The CDC (Collision Deformation Classification, called VDI or Vehicle Damage Index in CPIR form) consists of seven characters which describe the direction, location, size of area, and extent of deformation. It is an indicator of direct damage (contact deformation) only, and should not be used to represent indirect or induced damage.

The Collision Deformation Classification is an SAE Recommended Practice referenced as Technical Report J224a in the 1975 SAE Handbook (pp.1355-1359). Excerpts are included in these interpretations, followed by a specific SAE-J224a section reference in square brackets, e.g.,

> The classification system consists of seven characters, three numeric and four alphameric, arranged in a specific order. Each character describes specific deformation detail concerning the direction, location, the size of the area, and extent, which combined together form a descriptive composite of the damaged vehicle. The individual character positions are referred to by column number for identification and compatibility with conventional computer system data storage. [J224a,1.]

When the vehicle has damage from more than one impact, the primary CDC should be chosen using the following criteria (in order of importance):

1) The impact which caused the greatest intrusion into the passenger compartment.

2) The impact that caused the most severe injuries.

3) The impact that did the most damage to the vehicle exterior.

The primary CDC is not necessarily that with the largest extent code or the one resulting from the first event!

Usually, separate CDC's should be used to describe the damage from separate impacts. No attempt should be made to lump all damage into one CDC. Generally, one CDC should be used for any one continuous contact, unless two distinct damage patterns resulted (e.g., front corner impact followed by a 90° rotation and sideswipe door damage).

DIRECTION - The first two columns of the CDC represent the "o'clock" direction of principal force at impact.

> The principal force is the force that caused the crush and sheet metal displacement on the damaged vehicle. The direction of the principal force is determined by the resultant of forces acting on the vehicle at the point of application. The direction of the principal force is designated by reference to hour sectors on a conventional clock face positioned over the point of application.
>
> The clock face is assumed to be in a plane referenced to the horizontal plane of the car. "Twelve o'clock" characterizes a frontal directed force applied at the area of vehicle deformation. Other examples of clock positions, such as 3, 6, and 9 o'clock, refer to forces directed from the right, rear, and left respectively. The code classifications are the hour numerals from 01 to 12 [J224a, 2.1]

The accident configuration, and the speeds and weights of the vehicles involved should be taken into consideration.

"The entry of 00 indicates that the impact is not horizontal, as in a rollover."[J224a, 2.1] Also included are impacts up into the undercarriage and impacts from an object falling on top of the vehicle. The DAS editor should use a (01)-(12) clock direction when the vehicle has hit an object or vehicle while sliding on its roof or side, but (00) when it has rolled <u>onto</u> an object or vehicle. A force vector of 45° or more from the horizontal plane of the vehicle may be considered as a "non-horizontal" impact and a clock direction of (00) should be coded.

A code (99) indicates an unknown clock direction or "not applicable." Zero (0) should be used for "unknown" in any other column (4-7) of the CDC. If the entire CDC is unknown or not applicable (i.e., no damage), (99-0000-0) should be coded.

GENERAL AREA - Column 3 represents the point of contact and general location of the damage.

> This character of a classification expression broadly defines which projected area of the vehicle contains the deformation. Angle impacts at 45 deg. to the front or rear corner may be difficult to classify. These impacts should be classified as "F" or "B" if the deformation area at the front or rear of the vehicle exceeds the deformation area at the side; "L" or ("R") should be used if the deformation area at the side is larger. Similar consideration should be given to top versus side deformation in rollover; if the deformation area on the top is greater than on the side, use "T." If the side deformation is greater, use "L" (or "R"). [J224a, 2.2]

Use of the above rule for 45° corner impacts should be restricted to those impacts that are exactly 45 degrees, so that the projected area of first contact cannot be determined and the resultant force vector is exactly between, for example, (01) and (02) o'clock. Whenever possible, the area of initial contact should be used to determine the first letter of the CDC; it may not coincide with the major area of damage. When, on corner impacts, it is not clear which area was contacted first, the clock direction should be used to resolve the general area code. For a sideswipe collision in which the vehicle contacted another vehicle at the front corner and slid all the way down the side, an (F) should be coded in column 3, even though most of the damage was on the side.

Top (T) should be used for downward direct damage. In a similar manner, undercarriage (U) should be used in column 3 when the impact was upward (e.g., a car landed on a tree stump after being airborne). If the front bumper or valence panel contacted an object and the vehicle continued over it causing undercarriage damage (continuous contact), an (F) should be coded.

SPECIFIC HORIZONTAL LOCATION - Column 4 designates the specific horizontal location of damage.

> The plan view of the vehicle illustrates the horizontal areas to be used in locating the deformation. Variations in vehicles require that some special definitions be given as guidelines for the classification code "P." "P" is defined as follows:
> (a) Passenger cars - from the windshield to the rear of the rear most seat.
> (b) Station wagons - from the windshield to the rear of the second seat.
> (c) Vans - from the front - seat backrest to the center of the rear wheel.
> (d) Pickups - from the windshield to the rear of the cab.

"F" and "B" are side deformation areas forward and rearward of "P," respectively. Column 4 has meaning only in connection with column 3; that is, it is a suffix of column 3 rather than being independent of it.

The classifications "R," "C," and "L" should not be used for vehicles with top deformation ("T" in column 3). [J224a,2.3]

Likewise, if (U) has been coded in column 3, the codes (R), (L), and (C) should not be used in column 4. Also, the codes (Y) and (Z) should be used for (F + P), and (B + P), and not for (L + C) or (R + C).

SPECIFIC VERTICAL LOCATION - Column 5 classifies the vertical aspect of the damage. For horizontal impacts, (X) should be coded if the damage was below the frame and (on frontal impacts) the bumper was not contacted. (L) should be used if only the lower part of the bumper had contact damage, (E) if there was direct damage to the full height of the bumper and the sheet metal above, and (M) when the bumper was essentially overridden and the frame was not significantly contacted. On unitized-body cars, the division between (M) and (L) for side impacts is along the door sill line. (G), (H), or (A) should be used for "top" damage, (T) in column 3, depending on extent of damage to passenger compartment roof. Likewise, (X), (L), (E), or (A) should be used for "undercarriage" damage, (U) in column 3, depending on the extent of upward damage.

DAMAGE DISTRIBUTION - The general type of damage distribution is coded in column 6.

The six valid classification codes are:

W	Wide impact area
N	Narrow impact area
S	Sideswipe
O	Rollover (includes rolling onto side)
A	Overhanging structure
E	Corner

"W" and "N" are used to distinguish between large and small areas of deformation which do not fall into one of the other four categories. If an area is less than 16 in (410 mm) wide or less than 6 in (150 mm) high, "N" is the appropriate classification. For small rectangular or circular areas of deformation, if the perimeter is less than the perimeter of a 16 in (410 mm) square, use the "N"; otherwise, use "W." [J224a,2.5]

(W) or (N) should be used only when none of the other classifications apply. The code (S) represents damage resulting from either pure sideswipe or contact with an object or vehicle at the corner with subsequent sideswipe. For corner contacts,

(S) is restricted to principally sheet metal damage (usually about four inches wide or less). For pure sideswipes (not involving, for example, a front corner) into a vehicle's side, there is no restriction on extent of damage into the side of the vehicle. (S) should be coded only for swiping action (i.e., 12 o'clock) and not for side damage that is primarily penetration. For corner impacts, five to sixteen inches wide (F) should be used.

The code (O) should be used for any damage resulting from rollover only. (O) should be coded for any damage incurred while rolling, but (N) or (W) is used for other damage while not on all four wheels, such as an impact while sliding. The use of (O) dictates an o'clock of (00).

"'A' is used to classify impacts where part of the vehicle deformation resulted from an overhanging structure. An example of this is underriding the rear of some large trucks." [J224a,2.5] Other examples of overhanging structures are some loading docks and highway signs. A simple override of the bumper is not an (A).

DEFORMATION EXTENT - The deformation extent scheme is recorded in column 7 as follows. The extent of residual deformation is classified using a nine-zone extent system which is depicted in Figs. 4-7 of SAE J224a, and on the inside back cover of the Annotated CPIR.

> Extent zones are applied to front, rear, side, top, or undercarriage deformation and should be selected so that they are compatible with the principal damage selection in column three.
>
> In order to achieve uniformity, the deformation extent guide has been established in relation to specific points on the vehicle.
>
> If the passenger compartment is involved in "top" damage, then the extent number should reflect the extent of damage to the passenger compartment. This is true even if the hood or deck lid are involved. [J224a,2.6]

No extent zones are given in J224a for undercarriage damage, but the following guidelines should be used: zone (1) for any damage located completely below the plane of the floorpan, and zones (2)-(9) as equal-distance zones between the plane of the floorpan and the top of the roof. If the passenger compartment was involved, undercarriage damage zones should reflect the extent of damage to the passenger compartment only.

> If the distance from the rearmost point of the vehicle to the top of the rear window is greater than the distance from the top of the rear window to the front door latch pillar (start of zone 9), then use the "passenger car" deformation rear extent zone guide

for classifying rear deformation. Other vehicles are classified using the rear extent guide for station wagons and vans. [J224a,2.6]

If no damage resulted from contact to an energy-absorbing bumper, no CDC is recorded, even if there are scuff marks or resultant injury. If there was deformation to the bumper only, an extent code of (1) should be coded.

CONCURRENT DAMAGE-OTHER VEHICLE (39.45.19-25)

This is the damage to the other vehicle which is related to the primary CDC of the case vehicle (i.e., resulting from the same impact). It is not necessarily the primary CDC of the other vehicle. If there was no other vehicle involved in this impact, (99-0000-0) should be entered for the concurrent damage.

INCHES CRUSH (39.45.30-33)

The inches of direct deformation that correspond to the first letter of the primary CDC should be coded. For the case vehicle, it will usually correspond to the inches of crush recorded for the damaged area on page 38 of the CPIR.

Crush should be measured from the original boundary to the farthest point of penetration. It does not necessarily correspond to the extent code, which represents the farthest point of contact from the plane of the first letter of the CDC (column 3), and relates it to specific points on the vehicle. For example, if there is one inch of crush to the grill but the bumper was not contacted (or crushed), (01) should be coded for Inches Crush but the extent code may be (2).

CONFIGURATION (39.45.34)

The type of vehicle-to-vehicle configuration associated with the primary CDC should be coded. The code values are identical to those on page 4 of the CPIR; thus the same definitions apply. They are:

(1) Yes, Configuration Unknown
(2) No
(3) Head-on
(4) Intersection, type L
(5) Side-swipe
(6) Rear Impact
(7) Other:
(8) Intersection, type T
(9) Unknown

"No" (2) should be coded when no other vehicle was involved, and when there is no CDC (i.e., no secondary damage). Crash events involving no collision, self-induced damage, vehicle-part to vehicle, or vehicle to object to vehicle should be coded "no" (2). Configurations for events involving another vehicle's trailer should be coded by considering the trailer as part of the other vehicle; e.g., if a car with a trailer had

stopped short and was struck in the rear of the trailer, use "rear impact" (6).

CRASH EVENT NUMBER (39.45.35)

The crash event numbers on the back of this supplement (40.46.35-54) should be coded to associate the primary CDC with the event that caused the damage. The same crash event cannot be used for both the primary and secondary CDC's. Zero (0) is used for no event (no CDC). When it is unknown which event caused the primary damage, (9) should be entered.

SPEED AT IMPACT (39.45.36-45)

The speeds recorded should be those directly related to the specific impact which caused the primary damage to the case vehicle. If a range of speeds is given by the team, the average should be coded, with the deviation coded as a (±) value. If a definite impact speed was given, (± 99) should be used. When no other vehicle was involved, all 8's should be coded for the other vehicle's impact speed.

SECONDARY DEFORMATION (39.45.50-71 and 39.46.12-27)

These questions are the same as those for primary deformation, except that they are applied to the secondary deformation classification. If there was no secondary damage, the DAS editor should code CDC's (99-0000-0), Inches Crush (00), Configuration (2), Crash Event Number (0), and Speed at Impact (888±88).

TERTIARY DEFORMATION (39.46.28-34)

A third CDC should be entered here if applicable.

SEQUENCE OF CRASH EVENTS (40.46.35-54)

This listing of crash events and concurrent vehicles or objects contacted should describe the accident for the case vehicle. It begins with the first damage- or injury-producing event. Subsequent events should include other contacts, whether damage-producing or not, and vehicle maneuvers. If there were more than five events in the accident, the most important, in terms of damage and injury, should be coded.

The sequence of events is coded in pairs--the event and the corresponding object or vehicle contacted. The codes to be used here can be found under Crash Events and Vehicles/Objects Contacted on pages 41 and 42 of the Editing Manual. The vehicle codes are the same as the last two digits of the make/model codes. The code (99) should be used for "no event" and "no object or vehicle contacted" and (00) is used for "unknown." A concluding event (or 54) should be included whenever there are enough spaces. No other events may be entered after the concluding event. The accident ends when all vehicles and objects come to rest; any subsequent impacts are considered a

separate collision.

To describe crash events, the DAS editor should use one number from the left-hand column coupled with one from the right-hand side. For Vehicle-to-Vehicle collisions, code (1-) should be used if they were both moving, (2-) if the case vehicle was stopped, and (3-) if the other vehicle was stopped. The second number describes the direction the vehicles were moving, relative to each other, at the time of impact. "Direction" refers to the direction of motion of the vehicle's center of gravity, not the direction in which the front end is pointing. The vehicle model codes (01-57) should be entered for Vehicles Contacted.

On-Roadway Object Collisions (4-) are those in which the point of impact occurred within the boundaries of the roadway. The road extends to, and includes, the curb. (5-) should be used for Off-Roadway Collisions. Lanes blocked off for construction are considered off-road. (4-) and (5-) identify the point of contact, not the location of the vehicle. Object codes (70-98) should be used with crash events beginning with (4) and (5), and some Miscellaneous Events (8-). Special purpose vehicles (60-67) are considered to be motor vehicles when in transport under their own power, but are objects otherwise. Damage- or injury-producing events and vehicles/objects contacted which are coded here should be consistent with page 4 of the CPIR.

A vehicle or object contacted should never be coded with Ran Off/Re-enter Roadway events (7-) or Concluding Events (9-); (99) should be used. (7-) events should never begin the collision sequence, because the first event coded must be the first damage- or injury-producing event.

"Ground" (89) should not be used unless the vehicle rolled over or struck the ground after having been airborne. It is not necessary to code rollover for each contact with the ground; once is sufficient, unless both the primary and secondary CDC's are from the rollover. Curb contacts producing only minor wheel damage and no injury are usually not coded.

As a general rule, trees, poles, and sign posts with a diameter of four inches or more are coded (77) and those less than four inches are coded (85). Electric buses powered by overhead wires but not running on tracks should be coded (43).

BEAM PRESENT (40.46.55)

Since January 1, 1973, most passenger cars have been equipped with side door reinforcement beams. Earlier models should be checked in the Reference Information. Most light trucks and utility vehicles are not equipped with side door beams. If the vehicle has no doors (e.g., jeep, dune buggy), the DAS editor should use code (3) and leave the rest of the section blank.

FRONT OR REAR DOOR DIRECT DAMAGE (40.46.56-67)

All CDC's describing direct damage to the doors should be coded here, including front damage that extends back to the door. If two CDC's represent damage to the same door, the one with the most damage to the door should be coded. If no direct damage occurred to any of the vehicle's doors, columns 56-59 should be coded "no direct damage" (2), and the rest of the page should be left blank. For two-door vehicles, the rear doors should be coded "not applicable" (3).

MAXIMUM INCHES CRUSH (40.46.60-67)

If there was direct damage to any of the doors, the maximum inches of crush to each door (as measured from the side) should be coded. If this measurement is not given, it may be ascertainable from the vehicle damage sketch (CPIR, page 9). (99) should be used for "unknown" and (00) is used for "no crush or no door."

BEAM INVOLVEMENT (40.46.68-71)

If a beam was present, the best description of its involvement should be coded. "Complete separation" (9) should be used if the beam was completely separated at either end. "Not applicable" (3) should be coded if no door or no beam was present.

SECTION 3.6

ACRS SUPPLEMENT

The ACRS supplement should be completed for all case vehicles equipped with an air cushion restraint system if: a) the air bag deployed, b) injury was moderate or more (AIS 2 to 6), or c) an in-depth study was done on the case. In cases involving either inadvertent or non-collision deployments (such as explosions), there may not have been an impact or crash. In such cases, questions concerning the impact should be coded "not applicable." Questions are referred to here by name, followed by card and columnn numbers.

VEHICLE SECTION

FORM VERSION (12.1)

Teams should leave this column blank; editors should enter (1).

REPORT NUMBER (12.2-9)

Teams should leave the field blank; editors should use CPIR report number (1.1.29).

DEPLOYMENT (12.12-17)

The same list of crash event codes should be used for columns 12,14, and 16. The first crash event is defined as the first damage- or injury-producing event. Secondary High Level Deployment (column 13) should be interpreted as "Did a high level deployment occur in a crash event subsequent to a low level deployment?" If the car was equipped with only single-level systems, column 13 should be coded "not applicable" (3).

CRASH RECORDER (12.18-19)

If installed, the crash recorder is always located under the passenger side of the the front seat. Column 18 should never be coded "not applicable."

HISTORY (12.20-22)

This information can be obtained from interviews or vehicle data.

ACRS SYSTEM COMPONENTS (12.23-29)

This item refers to electrical components only. If column 23 is coded "yes" (1), then a positive response must be coded in at least one place in columns 24-27.

WINDSHIELD (12.30-31)

"Struck by foreign object" (3) includes parts of the car,

such as the hood or rear view mirror, and internal loose objects. If there was more than one cause of windshield damage, the most significant should be coded.

FRONT BUMPER E. A. UNITS (12.32-33)

The final position of the energy absorbing units should be indicated; this is not necessarily the maximum compression. "Not applicable" (5) should be used when the vehicle had no EA units.

FRONT BUMPER CONDITION (12.34-37)

Indicate the degree of damage to each part of the front bumper. Center at Sensor (column 35) refers to the specific point of sensor attachment; if there was no sensor, "not applicable" (6) should be coded. "Not applicable" (6) should be used when there was no crash.

CARGO (12.38-52)

Occupant weights should not be included. If cargo was distributed in more than one location in the vehicle, enter as Other (columns 50-52) and describe in detail. Cargo carried outside the car (e.g., on roof) should also be classified as Other. Cargo in trailers should not be included.

SYSTEM MAINTENANCE (12.53-71)

Evidence of service can be a record or statement made at interviews, etc. If a "no" (2) is coded in column 53, the rest of this page (columns 54-71) should be coded "none" and "not applicable." If any type of service was performed, columns 54,55, or 56 should be coded (1,2, or 9) and columns 57,62 or 67 should be coded (1,2,3, or 9).

RESTRAINT SECTION

PASSIVE SYSTEM (13.12-13)

The type(s) of passive restraint system(s) present in the vehicle at the time of the accident should be indicated. Fords have no factory-installed driver ACRS.

PRE-IMPACT CONDITION OF RESTRAINT SYSTEMS (13.14-19)

The condition of the active restraints and ACRS warning light prior to the crash should be coded.

RESTRAINT SYSTEM MALFUNCTION (13.20-24)

"Not applicable" (3) should be used in columns 20-22 only if the vehicle was not equipped with an Active System. "Not applicable" (3) can be used in columns 23-24 if the passive system could not deploy (e.g., had been deactivated or not repaired after a previous deployment).

SYSTEM DEPLOYMENT (13.25-26)

The driver bags on all GM cars and the passenger bags on Ford cars are designed as single-level systems.

BAG CONDITION AFTER DEPLOYMENT (13.27-30)

If "cushion intact" (1) or "not applicable" (8) was coded in columns 27 and 28, columns 29 and 30 should be coded "not applicable" (3). "Bag cut by object after accident" (4) should be coded in columns 27-28 if the bag was cut to facilitate removal of the occupants.

AIR BAG PERFORMANCE FACTORS (13.31-32)

"Yes" (1) should be coded if there were any significant air bag performance factors that cannot be coded elsewhere on this form, and an explanation should be written in the margin.

DRIVER CONTROL (13.33)

If the case vehicle was an empty parked car or if there was no driver in the driver's seat at the time of the accident, "no driver" (0) should be coded and the editor should follow the directions on that page (S-7). (Note: This question was in the Driver Section in earlier form versions.)

OCCUPANT SECTION

Occupant sections should be completed for the driver and all front- and rear-seat passengers. The same guidelines should be used for driver and passenger sections.

OCCUPANT NUMBER (14.12-13)

Occupants must be numbered in the same manner here as in the CPIR.

DRIVER/PASSENGER ACTIONS (14.14-18)

If Bracing (column 14) has been coded "yes" (1), and a combination of items was involved in column 16, the most significant should be coded (i.e., caused injury). Bracing (column 14) and Rotation (column 17) are coded "not applicable" (3) only for cases with no impact or crash. If column 14 is coded "none" (2) or "not applicable" (3), code columns 15 and 16 should be coded (5) and (7), "not applicable." Likewise, the code (0) is used in column 18 if column 17 is (2) or (3).

CONTACT WITH INTERIOR COMPONENTS (14.19-25)

As in the CPIR, probable contacts should be coded "yes." If there was no knee restraint, as in the Ford system, code "not applicable" (3) should be entered in column 20 and "none" (0) in columns 21 and 22. Column 24 includes contact with the steering

wheel, knee restraint pad, and driver air bag. Rebound Injury may have occurred with or without associated occupant contact points.

CONTACT WITH AIR BAG (14.26-29)

The location of initial contact with each air bag should be indicated. If two simultaneous contacts occurred to one air bag, "other" (98) should be used. If the passenger air bag deployed but was not contacted by the driver (or vice versa), "deployed but no contact" (97) should be coded. The code (99) should be used if either contact or location of contact is "unknown." "Not applicable" (00) should be coded only if the air bag did not deploy or the vehicle was not equipped.

PHYSICAL DATA (14.30-38)

Sunglasses should be considered eyeglasses for column 30. If no eyeglasses or corrective lenses were worn, columns 31-34 should be coded "not applicable" (3). Column 34 may be coded "not applicable" (3) if glasses were not worn or the air bag did not deploy. Physical impairments coded in column 37 for drivers should be consistent with Permanent Physiological Conditions in the CPIR supplement (34.92.53).

FORFIGN OBJECTS (14.39-40)

The editor should indicate whether the driver or passenger was holding any foreign object and if it caused injury. If column 39 is coded "no" (2), column 40 should be coded "not applicable" (3).

JEWELRY (14.44-48)

Rings should be coded as Arm Jewelry. If a "no" (2) is coded in column 41, columns 42-48 should be coded "not applicable" (3). If no jewelry was worn or there was no deployment, use code (3) in column 48.

FAMILIARITY AND COMMENTS (14.49-54)

This information should be obtained from interviews. Include a brief synopsis of the driver's or passenger's comments. If the occupant noticed and commented about any smoke, code "yes" (1) in column 51, even if he or she did not think the amount was unusual. If the occupant did not notice any smoke, the following two items should be coded "not applicable."

SECTION FOUR

APPLICATION OF THE OCCUPANT INJURY CLASSIFICATION (OIC)

INTRODUCTION

The Occupant Injury Classification (OIC) is a scheme for classifying individual occupant injuries in a manner that permits correlation of injury sources (contact areas) and specific injuries. The OIC (Figure 1) follows an approach similar to the SAE J224a Collision Deformation Classification[1] (CDC, formerly VDI). Four letters are used to encode Body Region, Aspect, Lesion, and Body System/Organ, followed by a numeric Abbreviated Injury Scale (AIS) code.

The injuries are coded from a causation point of view. Injuries are recorded for each unique point of injury-producing energy transfer. Provision is made for recording primary and associated OICs for each energy transfer. Provision is also made for encoding four occupant contact points, in order of likelihood. This application of the Occupant Injury Classification then can be used to link specific injuries to their causes in an easy and flexible manner.

The concept and rationale of the Occupant Injury Classification scheme has been presented elsewhere.[2] [3] This section is organized as follows:

1. Definition of OIC Facts
2. Overall OIC Application Procedure
3. Example
4. OIC Injury Scale Dictionary

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[1] Collision Deformation Classification , SAE J224a, Recommended Practice, Society of Automotive Engineers, New York, 1972.

[2] Marsh, J.C., "Existing Traffic Accident Injury Causation Data Recording Methods and the Proposal of an Occupant Injury Classification Scheme," Proceedings of the Sixteenth Conference of the American Association for Automotive Engineers , New York, pp 44-61, October 19-21, 1972.

[3] Marsh, J.C., An Occupant Injury Classification Procedure Incorporating the Abbreviated Injury Scale , presented to the NATO Committee on the Challenges of Modern Society, Road Safety Pilot Study, Accident Investigation Final Workshop, Brussels, Belgium, June 28-29, 1973.

OCCUPANT INJURY CLASSIFICATION (OIC)

1 BODY REGION

- H Head-Skull
- F Face
- N Neck
- S Shoulder
- X Upper Extremities
- A Arm (Upper)
- E Elbow
- R Forearm
- W Wrist-Hand
- C Chest
- M Abdomen
- B Back
- P Pelvic-Hip
- Y Lower Extremities
- T Thigh
- K Knee
- L Leg (Lower)
- Q Ankle-Foot
- O Whole Body
- U Unknown

2 ASPECT

- R Right
- L Left
- B Bilateral
- C Central
- A Anterior/Front
- P Posterior/Back
- S Superior/Upper
- I Inferior/Lower
- W Whole Region
- U Unknown

3 LESION

- L Laceration
- C Contusion
- A Abrasion
- F Fracture
- P Pain
- K Concussion
- H Hemorrhage
- V Avulsion
- R Rupture
- S Sprain
- D Dislocation
- N Crushing
- M Amputation
- B Burn
- X Asphyxia
- O Other
- U Unknown

4 SYSTEM/ORGAN

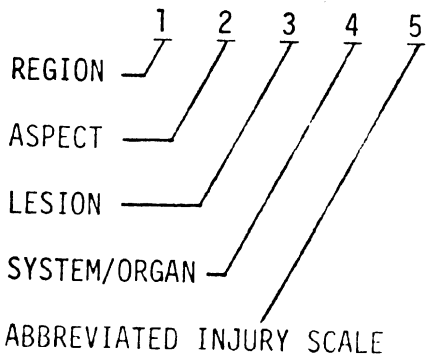
- S Skeletal
- V Vertebrae
- J Joints
- D Digestive
- L Liver
- N Nervous System
- B Brain
- C Spinal Cord
- E Eyes, Ears

Cardiovascular

- A Arteries
- H Heart
- Q Spleen
- G Urogenital
- K Kidneys
- R Respiratory
- P Pulmonary, Lungs
- M Muscles
- I Integumentary
- W All systems in region
- U Unknown

5 AIS

- 0 None
- 1 Minor
- 2 Moderate
- 3 Severe
- 4 Serious
- 5 Critical
- 6 Maximum
- 9 Unknown



DEFINITION OF OCCUPANT INJURY CLASSIFICATION FACETS

The Occupant Injury Classification is a scheme for recording specific occupant injuries in much the same manner as the Collision Deformation Classification (CDC), SAE J224a records vehicle damage. It is not a classification of overall occupant injury, but a scheme for recording each individual injury an occupant sustains. A series of independently defined classification facets are combined as a sequence of letters to describe an injury in terms of Body Region, Aspect, Lesion/Diagnosis and Body System/Organ. As with the CDC (or VDI) a numerical severity code terminates the OIC. The four main facets or dimensions of the OIC were developed directly from the GM-CPIR and NATO-CARF Occupant Injury Detail page. Instead of recording AIS codes in a large table, the OIC records the "position in the table" along several dimensions. It is analogous to the difference between storing a map of the U.S.A. with a few points plotted vs. simply storing the latitude and longitude of the few points. Figure 1 displays the OIC single letter codes.

In practice the accident investigator records one Occupant Injury Classification for each significant injury he decides to document. The areas of contact related to each OIC are also coded in order to record a complete picture of injury causation. A simple example preceeds a more detailed OIC discussion.

To demonstrate the OIC, three facial injuries are coded as follows:

1. Documented Injuries

   (a) Laceration of left eye from contact with windshield, AIS-2.
   (b) Multiple facial contusions from impact with upper instrument panel, AIS-1.
   (c) Minor lip laceration from teeth during upper instrument panel contact, AIS-1.

2. Occupant Injury Classification

Contact Areas	Occupant Injury Classification Region: Aspect: Lesion: System/Organ	AIS
(a) Windshield	Face: Left: Laceration: Nervous System-Eye	2
(b) Upper Panel	Face: Whole Region: Contusion: Integumentary	1
(c) Other Upper Panel	Face: Inferior: Laceration: Digestive System	1

3. Coded CICs

	Contact Areas	OIC
(a)	12	FLLE-2
(b)	54	FWCI-1
(c)	38,54	FILD-1

Several observations can be made from this example. Distinct contact areas are recorded for each facial injury while the previous schemes did not relate contacts to injuries in the same body region. Secondly, the four letters provide more injury location detail than the previous coding scheme. The four letters also prove to be fairly simple to record, read and remember. A more detailed explanation of each facet of the OIC will help clarify its potential application. This will be followed by a procedure for recording the OIC and specific procedures for coding each body region. A dictionary of specific injuries is included at the end of this section.

BODY REGIONS - Body Regions (Figure 2) are defined as subsets of the body's surface. The regions are based on the NATO Collision Analysis Report Form with its extended list of thirty-two body regions. Many of the NATO categories are organs, such as liver and spleen, and are not body regions. A separate OIC facet or coding dimension is provided for Body System/Organ (discussed later) while the following OIC Body Regions are similar to the NATC-CARF. One significant difference occurs in the hip region. Only the pelvic bones, sacrum, coccyx, joint, posterior muscles and tissue covering these are included in the hip region (P). Internal organs in the pelvic structure are included in the abdomen region (M).

OIC Body Region Codes

H Head (Skull, Scalp, Ears)
F Face (Forehead, Nose, Eyes, Mouth)
N Neck (Cervical Spine, C1-C7)
S Shoulder (Clavicle, Scapula, Joint)
X Upper Extremities (Whole Arm)
A Arm (Upper)
E Elbow
R Forearm
W Wrist-Hand (Fingers)
B Back (Thoraco-Lumbar Spine, T1-T12, L1-L5)
C Chest (Anterior and Posterior Ribs)
M Abdomen (Diaphragm and Below)
P Pelvis-Hip
Y Lower Extremities (Whole Leg)
T Thigh (Femur)
K Knee
L Leg (Below Knee)
Q Ankle-Foot (Toes)
O Whole Body
U Unknown, Unclassifiable

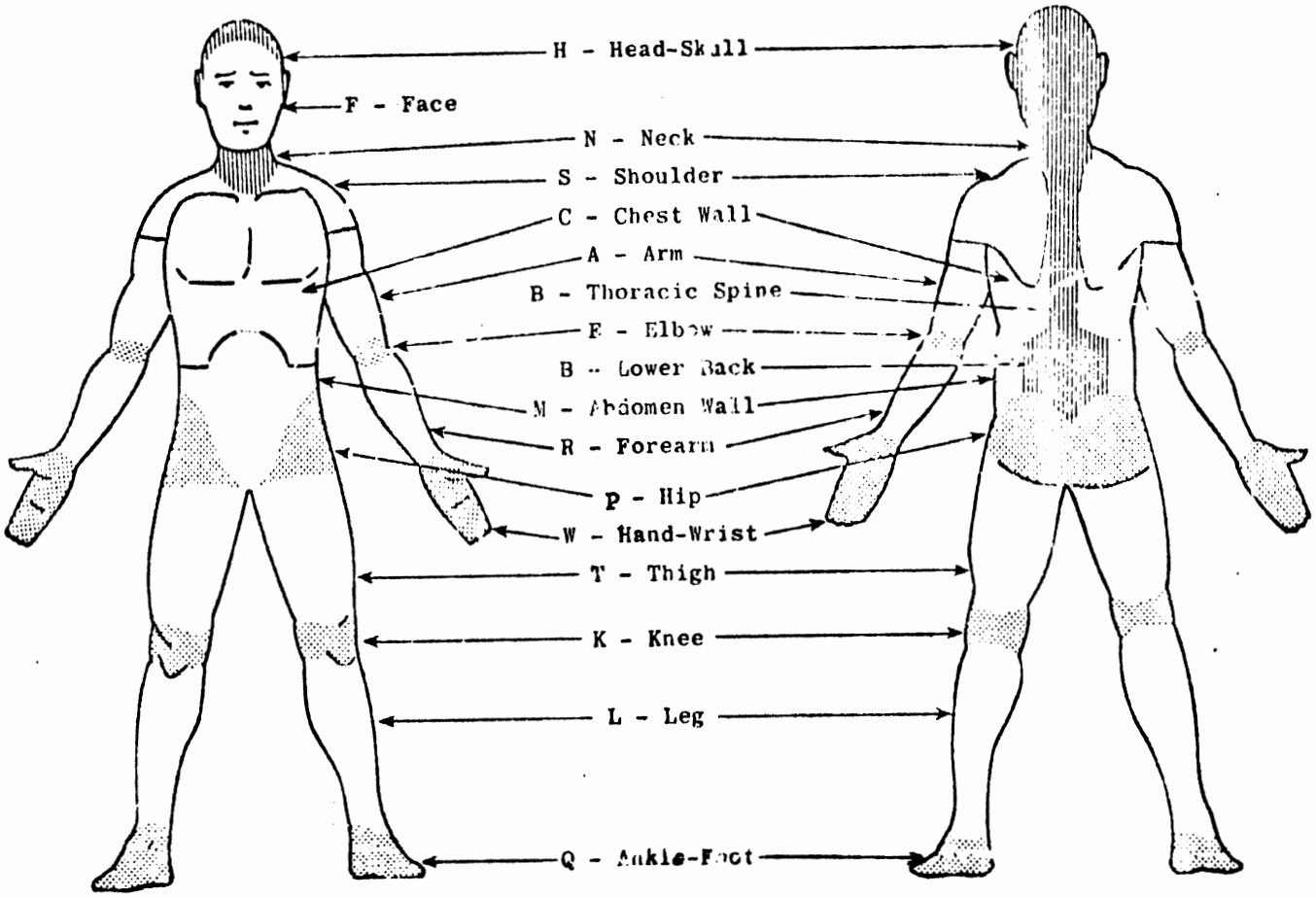


FIGURE 2. OIC BODY REGIONS

ASPECT - The Aspect codes provide a fairly specific means of locating an injury in a body region e.g., (NP); Neck Posterior. The coding of the arms and legs depends on the use of (R) and (L) for distinguishing which extremity region was injured. The code (B) for bilateral is used to describe an injury that is best characterized as happening to both sides of a body region. Examples include (CB) for bilateral rib fractures in the chest, and (KB) for contusions to both knees on the steering column. As discussed in the last section, only certain Aspect codes are permitted for each Body Region in order to ensure consistent coding.

OIC Aspect Codes

R Right
L Left
B Bilateral
C Central
A Anterior/Ventral/Front
P Posterior/Dorsal/Back
S Superior/Cranial/Upper
I Inferior/Caudal/Lower
W Whole Region
U Unknown, Unclassifiable

The aspect code is the second letter of the OIC. It is a refinement of the first letter, i.e., a suffix to the body region. Therefore, it has meaning only in relationship to the body region to which it is applied. It cannot be used independent of the first letter for coding or analysis. Note that while the combination of Body Region and Aspect codes do not precisely pinpoint injury location they do provide - in compact form - considerably more resolution than the earlier formats.

DIAGNOSIS OF LESION - The diagnosis of injury or lesion categories are basically the ones provided for in the expanded CARF injury detail page. The one significant addition is "asphyxia". While fairly rare, no provision exists currently for encoding this information when it occurs.

OIC Lesion Codes

L Laceration (Open Wound, Penetration, Perforation, Incision, Cutting)
C Contusion (Bruise, Hematoma, Ecchymosis)
A Abrasion (Superficial, Scratch, Blister, Excoriation, Road Burns from Ejection)
F Fracture
P Pain
K Concussion
H Hemorrhage
V Avulsion (Tearing away from, Extrusion)
R Rupture (Herniation)
S Sprain (to Vertebra, Joint, or Ligament)
D Dislocation
N Crushing (Pulpefaction, Flail Chest/Limb)
M Amputation (Transection of Limb, Decapitation)
B Burn
X Asphyxia (Suffocation, Anoxia, Obstruction)
O Other (e.g. Strained Muscle, Pneumothorax)
U Unknown

This facet is primarily intended to code diagnostic information concerning pathological changes and not the signs and symptoms. Pain is the one exception, as it is useful for encoding those painful but vague abnormalities that are not specifically diagnosed.

Pathological changes due to impact take precedence over the consequences of the lesions. Two exceptions exist: asphyxia and hemorrhage, because of their potential for critical or fatal consequences. Through either mechanism a minor laceration, for instance, could result in fatal consequences. Hemorrhage should be used conservatively, i.e., when the consequences of the subsequent hemorrhage are significant. This situation occurs most frequently as a consequence of internal organ trauma.

BODY SYSTEMS/ORGANS - The fourth and final letter of the Occupant Injury Classification is the specific Body System or Organ affected. Rather than list all the organs, the categories were based upon the major body systems. The combination of body system and body region categories work together to define specific tissue areas. For example, FILD-1, the Face, Inferior, and Digestive system combine to infer "Mouth". Similarly CRFS-2 (Chest Right Fracture Skeletal) indicates a simple rib fracture on the right side.

OIC System/Organ

S Skeletal, Bones
V Vertebrae
J Joints, Articulations, Ligaments
D Digestive
L Liver
N Nervous System
B Brain
C Spinal Cord
E Eyes, Ears
Cardiovascular (Use A, H or Q)
A Arteries, Veins
H Heart
Q Spleen
G Urogenital
K Kidneys
R Respiratory
P Pulmonary, Lungs
M Muscles
I Integumentary (e.g. Skin, Hair)
W All Systems in Region
U Unknown, Unclassified

The specific organs of greatest interest are indicated in the NATO-CARF occupant injury detail page: lungs, heart, liver, spleen and kidneys. These along with the vertebrae, joints, spinal cord, arteries, veins, eyes and ears have been provided with specific codes. The W for all systems in region is used with amputation, massive crushing and incineration injuries.

ABBREVIATED INJURY SCALE - The Occupant Injury Classification is terminated with the Abbreviated Injury Scale (AIS-76)[1] severity code in the same manner that the vehicle Collision Deformation Classification ends with a numeric extent code. The AIS has received wide acceptance and application. It provides a scaling of tissue damage that is consistent with the intent of the OIC. The AIS is not used here to encode overall occupant injury severity. Note that the AIS-76 no longer codes "fatal within 24 hours" as (6) or "fatal after 24 hours" as (5). The fact of "fatality" is coded under Mortality on the Occupant Supplement (30D.80.30-31).

Abbreviated Injury Scale

0 No Injury
1 Minor
2 Moderate
3 Severe (Not Life-Threatening)
4 Serious (Life-Threatening)
5 Critical (Survival Uncertain)
6 Maximum (currently untreatable)
9 Severity Unknown or Unclassifiable

OVERALL OIC APPLICATION PROCEDURE

The format for recording injuries is displayed in the Example Case. For each injury, 4 contact areas can be recorded (col. 14-21) in likelihood order beginning with the most probable contact area. Use the expanded list of nearly 90 contact area codes (See Section 5: Occupant Contact Areas). For each traumatic vehicle contact sustained by the occupant, 3 OICs can be recorded. The first OIC (col. 22-26) is for primary trauma and the other OICs (col. 27-36) are for optional associated traumas (defined later). Only those lines (cards) with encoded data are keypunched. Each occupant is coded on a separate form so that the injury card numbers (col. 10-11) start over for each new occupant number (col. 12-13). The computer will then format this information into one logical record per injury so analysis can be conducted on an injury-by-injury basis.

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[1] The Abbreviated Injury Scale (1976 Revision), Joint Committee of AAAM, SAE, and AMA, 53 pages. 1976.

With a proper coding format, the OIC facilitates the description of many specific types of tissue damage and permits the recording of injury causation or injury sources on an injury-by-injury basis. The critical problem, then, is defining what an "injury" is. What level of detail should be recorded? An operational definition of an "injury" is needed to provide boundaries of the level of detail to be encoded. This is accomplished by default in the CPIR and CARF forms; an injury is defined as one box in the occupant injury detail table. For example, only one laceration per body region is permitted.

On the OIC coding form an injury is considered as all the significant pathological changes to a body region caused by an occupant contact with the vehicle or other object. Each line of the form operationally defines a single injury. Up to 3 OICs may be used on one line. The OICs describe the injury location, nature, and extent. Up to four contact codes can describe the injury's source. In order to link injuries with injury sources (contact areas), traumas to a body region due to different contacts are always coded as separate injuries i.e., on separate lines. A driver sustaining two facial lacerations, one from the steering wheel and one from the windshield, would have two OICs, on two lines of the form, each with its associated contact code.

One injury is usually located in a single body region. Thus all OIC's on one line usually have the same body region code. But an injury could overlap into two or more body regions having different codes. For example, a passenger striking the right A pillar might dislocate his shoulder and bruise his upper arm. The injury would consist of two OICs (SRDJ-3 and ARCI-1) on the same line. When multiple lesions (e.g., lacerations, contusions, burns) occur to the extremities the X and Y codes permit a more concise injury description.

If two distinct lesions from one contact have the same body region and aspect codes they should be considered as one injury and coded on the same line. If, on occasion, one body region sustains more than three OICs or pathological changes from one contact with a contact area, code only the most significant OICs, i.e., those with AIS greater than 1. If there are still more than three OICs with AIS greater than one, split the OICs by common or adjacent aspect codes onto two lines. This procedure permits one to use the body region and aspect codes in combination in order to more specifically define the distinct regions of the body injuried.

The recording of several traumas in a single body area that resulted from one contact presents some problems. Is the rib fracture and pneumothorax caused by steering column contact one injury or two injuries? From an injury causation point of view only unique points of injury producing energy transfer should be recorded, but this approach might limit the recording of some significant traumatic conditions resulting from the dissipation of energy.

Campbell's Traumatic Tissue Damage Record[1] is in part "based upon the recognition that as the energy passes through various layers or structures it may leave some evidence of its effect in the tissue. Damage may therefore be described and assessed for all of the major tissues through which the force passes at whatever level they occur". To keep the number of details to be coded to a manageable level, he further suggests "that only the damage at greatest depth in the body needed to be described in any one particular injury".

This conceptualization of injury is the approach suggested for recording trauma with one exception: the injury classifier is permitted three OICs for each force application or contact point (Figure 3). Three uses of the primary and associated OICs have been defined.

1. TWO LESIONS FROM ONE CONTACT - When there are several different lesions in one location resulting from contact with one vehicle area, three OICs can be recorded. The first OIC would be the diagnosis of damage at the deepest level or the most important deepest structure. The other OICs can be used to describe other associated traumatic conditions. Using the earlier example, if the fractured rib punctured the pleural cavity the pneumothorax would receive the primary OIC and the rib fracture an associated OIC. Because contusions and abrasions frequently occur together (i.e., in one area of a body region from one vehicle contact area), they are most conveniently recorded on one line with contusions as the first OIC and abrasions as the second OIC.

2. INDIRECT OR INDUCED INJURY - The concept of "induced injury"[2] indirect injury is revealed by the following example: A passenger strikes his forehead on the windshield and sustains a bump on the head. Obviously, the bump on the head is related to the window. But, in addition, the passenger has a pain in the neck. Though no specific car component was struck, this would be an injury induced from windshield impact. It is analogous to induced damage to a car in areas not in the impact area. In the instance of a dislocated hip which resulted when the knee struck the instrument panel, instrument panel would be coded as the injury producing contact. Or, when the knee and foot are jammed against the instrument panel and floor, respectively, during impact, and a fractured tibia occurs from resulting flexion, both the floor and the instrument panel would be coded as injury-producing contacts for the fracture.

While one could consider all injury except skin injury to be "induced from transmitted forces", the interpretation made in the OIC is that indirect injuries are injuries to one body

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[1] E.O'F. Campbell, "Traumatic Tissue Damage Record". Traffic Injury Research Foundation, Ottawa (Canada), no date.

[2] Private correspondence from Professor Donald F. Huelke, University of Michigan, Medical School, to Mr. Wilton D. Nelson, Safety Research and Development, General Motors Proving Ground, June 16, 1972.

region caused by a blow or contact in some other body region. In other words, indirect injuries occur when traumatic energy is transmitted through one body region to another body region. The vehicle area(s) directly struck by the other body region should be coded as the contact area(s) for the indirect injury. Indirect or induced injuries are coded as associated OICs.

3. CONSEQUENCES - The critical and fatal consequences of primary trauma can be coded as associated injuries to qualify the primary injury but may no longer be assigned a higher AIS. For example, a severe wrist laceration involving an artery and resulting in fatal hemorrhaging would be coded: WRLA-3, WRHA-3. Since the 1976 redefinition of AIS-6, the hemorrhaging can not be given a 6 to indicate the fatality.

Death due to asphyxiation is not coded in the AIS-1976 revision because a clear distinction has now been made between an injury and the result of that injury. In order to keep a record of injuries resulting in asphyxiation, use an AIS of (9), (e.g., NAXR-9).

VALID OIC CODE COMBINATIONS

While the valid combinations of OIC letters and injury severity codes are generally self-defined, the chart in Figure 3 displays most of the valid combinations. The chart provides assistance in data recording and will be used by the computer to aid in editing recorded OICs.

FIGURE 3A. VALID BODY REGION: ASPECT CODE COMBINATIONS

BODY REGION		ASPECTS
H	HEAD	R,L,B,P,S,I,W
F	FACE	R,L,B,C,S,I,W
N	NECK	R,L,B,A,P,W
S	SHOULDER	R,L,B
X,A,E,R,W	UPPER EXTREMITIES	R,L,B
Y,T,K,L,Q	LOWER EXTREMITIES	R,L,B
C	CHEST	R,L,B,C,W
M	ABDOMEN	R,L,B,C,S,I,W
B	BACK	S,C,I,W
P	PELVIC-HIP	R,L,A,P,W
O	WHOLE BODY	R,L,A,P,S,I,W

ASPECT CODES	
R	RIGHT
L	LEFT
B	BILATERAL
C	CENTRAL
A	ANTERIOR
P	POSTERIOR
S	SUPERIOR
I	INFERIOR
W	WHOLE REGION
U	UNKNOWN

FIGURE 3B. VALID SYSTEM/ORGAN: LESION: ASPECT: REGION COMBINATIONS

	SYSTEM/ORGAN:	LESION:	ASPECT:	BODY REGION*
S	SKELETAL	C,F,N,O	*	ALL, EXCEPT M
(S)	TEETH	F,V,O	I	F
V	VERTEBRAE	C,F,S,D,N,O	*	N,B,P
J	JOINTS	C,F,S,D,N,O	*	F,P,S,W,E,Q,K
(J)	LIGAMENTS	L,C,S,O		S,W,E,Q,K
D	DIGESTIVE	L,C,A,H,V,R,B,O	*	F,N,M,C
L	LIVER	L,C,A,F,H,V,R,B,O	R,S	M
N	NERVOUS SYSTEM	L,C,V,B,O	*	ALL, EXCEPT H
B	BRAIN	L,C,K,H,V,R,B,O	*	H
C	SPINAL CORD	L,C,P,H,V,R,B,O	*	H,N,B,P
E	EARS	L,C,A,H,V,R,D,B,O	R,L,B	H
	EYES	L,C,A,H,V,R,B,O	R,L,B	F
	CARDIOVASCULAR			
A	ARTERIES, VEINS	L,H,V,R,B,O	*	ANY REGION
H	HEART	L,C,H,R,B,O	C	C
Q	SPLEEN	L,C,F,H,R,B,O	L	M
G	UROGENITAL	L,C,A,H,V,B,O	I	M
K	KIDNEYS	L,C,A,F,H,R,V,B,O	R,L,B	M
(G)	BLADDER	L,C,A,R,B,O	I	M
R	RESPIRATORY			
(R)	DIAPHRAGM	L,C,F,V,R,O	S	M
(R)	NOSE	L,C,A,F,H,V,B,X,O	C	F
(R)	TRACHEA	L,C,A,F,V,D,B,X,O	A	N
(R)	WINDPIPE	L,C,F,R,B,X,O	C	C
P	LUNGS	L,C,H,V,R,B,O	R,L,B	C
M	MUSCLES	L,C,P,V,R,B,O	*	ANY REGION
I	SKIN	L,C,A,V,B,O	*	ANY REGION
W	ALL SYSTEMS IN REGION	N,M,B,O		N,S,X,A,E,R,W,Y,T,K,L,Q
		N,B,O	*	H,C,M,O
		B,O		F,B,P

U - UNKNOWN IS VALID IN ANY POSITION IN ANY COMBINATION.

* - SEE FIGURE 3A FOR VALID ASPECT CODES IN EACH BODY REGION.

EXAMPLE

The following is a list of 21 specific lesions in an example case. Each lesion is translated into a specific OIC and coded on the example form as 11 injuries (11 cards, numbered 81 through 91). For example the two head lesions are coded as one injury that resulted from a single blow to the basal skull from contact with the Other Vehicle and Roof Structure. Similarly the rib fracture, lacerated lung, and associated hemothorax are recorded on one line (card 86) as they are the result of a single blow to a specific body region.

Lesions	Possible Contact Areas	OIC
Basal skull fracture	Other Vehicle (penetrated case vehicle) Roof Structure	HIFS-4
Brain stem laceration	Other Vehicle Roof Structure	HILB-6
Avulsion, left ear	Left Side Window Other Vehicle	HLVE-2
Comminuted fracture of mandible	Steering Wheel Other Vehicle	FIFS-3
Gaping forehead laceration	Left Side Window	FSLI-2
Black eye (left)	Left side window	FLCE-1
Avulsion of teeth	Steering Wheel Other Vehicle	FIVS-1
Severe lip laceration	Steering Wheel Other Vehicle	FILD-2
Open fracture, left clavicle	Left door Other Vehicle	SLFS-3
Contusion, left shoulder area	Left door Other Vehicle	SLCI-1
Multiple left rib fractures	Left door Other vehicle	CLFS-3
Deep laceration, left lung	Left Door Other vehicle	CLLP-5
Left hemothorax	Left door Other vehicle	CLHP-3
Laceration of liver	Left door Other vehicle	MRLL-5

Hemoperitoneum	Left door Other vehicle	MRHL-3
Comminuted fracture, pubic ramus	Left door Other vehicle	PAFS-3
Fracture of right arm radius and ulna	Transmission lever on conscle Unknown	RRFS-3
Contusions, both lower legs	Lower dash	LBCI-1
Multiple contusions, abrasions and lacerations over left side of body	Other vehicle Left door	OLLI-1 OLCI-1 OLAI-1

	CARD NUMBER	OCCUPANT NO.	Place contacts in order of probability (horizontally). Start with most probable in col. 14-15. FOUR AREA(S) OF POSSIBLE CONTACT			
1-6	10-11	12-13	14-15	16-17	18-19	20-21
DUPLICATE FROM PRECEDING CARD	81	01	61	25		
	82	01	22	61		
	83	01	65	61		
	84	01	22			
	85	01	20	61		
	86	01	20	61		
	87	01	20	61		
	88	01	20	61		
	89	01	44	00		
	90	01	56			
	91	01	61	20		
	92					
	93					
	94					
	95					

PRIMARY OIC				
BODY REGION	ASPECT	LESION	SYSTEM/ORGAN	SEVERITY
22	23	24	25	26
H	I	L	B	6
H	L	V	E	2
F	I	F	S	3
F	S	L	I	2
S	L	F	S	3
C	L	L	P	5
M	R	L	L	5
P	A	F	S	3
R	R	F	S	3
L	B	C	I	1
Ø	L	L	I	1

ASSOCIATED OIC'S				
BODY REGION	ASPECT	LESION	SYSTEM/ORGAN	SEVERITY
27	28	29	30	31
H	I	F	S	4
F	I	L	D	2
F	L	C	E	1
S	L	C	I	1
C	L	H	P	3
M	R	H	L	3
Ø	L	C	I	1

BODY REGION	ASPECT	LESION	SYSTEM/ORGAN	SEVERITY
32	33	34	35	36
F	I	V	S	1
C	L	F	S	3
Ø	L	A	I	1

OIC - INJURY SCALE DICTIONARY

To insure more consistency in coding OIC's and to ease the task for field investigators, a detailed OIC Injury Scale Dictionary is included. The structure and contents are identical to "The Abbreviated Injury Scale (AIS), 1976 Revision," Apendix E Injury Scale Dictionary, except for the addition of a few injuries noted by an asterisk. The same format was used with the addition of a four letter OIC suffix to the original AIS codes for each injury. In some instances a second OIC has been added as an associated OIC.

Description of Body Regions

Dictionary Sections	OIC Regions
General	Any body region: external or surface
	C Whole Body
	U Unknown, Unclassifiable Body Region
Head	H Head (skull, scalp, ears)
	F Face (forehead, nose, eyes, mouth)
Neck	N Neck (cervical spine C1-C7, throat)
Chest	C Chest (ribs, thoracic organs)
	BS Back Superior (thoracic spine T1-T12)
Abdomen	M Abdomen (abdominal, pelvic contents)
	BI Back Inferior (lumbar spine L1-L5)
Pelvis	P Pelvis (bony structures)
Extremities	S Shoulder, (clavicle, scapula)
	X Upper Extremities (whole arm)
	A Arm (upper)
	E Elbow
	R Forearm
	W Wrist-Hand-Digits
	Y Lower Extremities (whole leg)
	T Thigh (femur)
	K Knee
	L Leg (below knee)
	Q Ankle-Foot-Digits

Severity Codes

0	No injury
1	Minor
2	Moderate
3	Severe (not life-threatening)
4	Serious (life-threatening)
5	Critical (survival uncertain)
6	Maximum (currently untreatable)
9	Unknown

GENERAL--EXTERNAL (Any Body Region)

OIC-AIS	INJURY DESCRIPTION
	Abrasion
#_AI-2	major
#_AI-1	superficial
	Burns
#_BI-1	all 1° (up to 100% body surface)
#_BI-1	small 2° (1%-10% body surface)
#_BI-2	2° or 3° (11%-20% body surface)
#_BI-3	2° or 3° (21%-30% body surface)
#_BI-4	2° or 3° (31%-50% body surface)
#_BI-5	2° or 3° (51%-90% body surface)
#_BI-6	2° or 3° (more than 90% body surface, including incineration)
#_PM-1	Complaint of regional or overall ache, joint stiffness, or muscle tenderness
	Contusion
#_CI-2	major
#_CI-1	superficial
	Laceration
#_LI-2	deep and/or extensive (into subcutaneous tissue)
#_LN-3	major nerves and/or
#_LA-3	vessel involvemant
#_LI-1	superficial
U'UUU-1	Minor Injury with unspecified details
UUUU-9	Injury with no details

'#_' - Any body region and aspect codes valid for that region.

HEAD

OIC Body Region: H-Head (skull, scalp, ears, brain)

Valid Aspect Codes:

R,L,B	Right, Left, Bilateral (ears)
S	Superior (top of head)
I	Inferior (base of skull)
P	Posterior (back of head)
W	Whole Region
U	Unknown

OIC Body Region: F-Face (forehead, nose, eyes, mouth)

Valid Aspect Codes:

R,L,B	Right, Left, Bilateral (eyes, cheekbones)
C	Central (nose and area round)
S	Superior (forehead)
I	Inferior (mouth, chin, lower jaw)
W	Whole Region
U	Unknown

System/Organ coding unique to Head and Face Region:

H__B	Brain
H._E	Ear
F._E	Eye
FI_D	Mouth (tongue)
FC_R	Nose
FI_S	Teeth

OIC-AIS	INJURY DESCRIPTION
	Brain stem [see Medulla]
F.LF-1	Canaliculus (tear duct) laceration
	Cerebellar (posterior fossa) lesion, with hematoma
HPCB-4	extradural
HPCB-5	intracerebellar or subdural
H_KB-2	Cerebral concussion with or without undisplaced skull fracture, unconsciousness less than 15 minutes, no other neurological signs (+1 AIS if involving displaced or depressed skull fracture)

'_' - Any code valid for region may be used.

'.' - Aspect codes L, R, or B may be used.

H_KB-3 Cerebral concussion with or without skull fracture, unconsciousness more than 15 minutes, no other neurological signs

Cerebral concussion and contusion, with or without skull fracture

H_KB-4 <12 hrs. unconsciousness, with other neurological signs

H_KB-5 >12 hrs. unconsciousness, including intracerebral hemorrhage with other severe neurological signs

H_KB-5 >24 hrs. unconsciousness, and other neurological signs

F.VE-1 Choroid (eye) rupture

Conjunctiva

F.AE-1 abrasion

F.CE-1 contusion

F.LE-1 laceration

Cornea

F.AE-1 abrasion

F.CE-1 contusion

F.LE-1 laceration

H.MW-6 Decapitation, partial or complete

H.OE-1 Ear canal injury

Ethmoid fracture, involving

FCFR-3 dural tear & cerebrospinal fluid leak

FCFR-2 hemorrhage

FCFR-2 nasolacrimal or nasofrontal duct

F.VE-3 Eye avulsion

Face (soft tissue)

F_AI-1 abrasion

F_CI-1 contusion

laceration

F_LI-2 deep and/or extensive

F_LN-3 nerve involvement

F_LA-3 vessel involvement

F_LI-4 severe hemorrhage

F_LI-1 superficial

FSFS-2 Frontal bone fracture (+1 AIS for open and/or displaced)

H_KB-1 Head injury with headache, dizziness; dazed; no loss of consciousness; no other neurological signs

H.OE-1 Inner ear injury with deafness or vertigo (+1 if both)

F.LE-1 Iris laceration

	Lid
F.AE-1	abrasion
F.VE-2	avulsion
F.CE-1	contusion
F.LE-1	laceration
	Mandible fracture (+1 AIS for open and/or displaced)
FIFS-2	body
FIFS-1	ramus
FIFS-2	subcondylar
FIDJ-2	temporo-mandibular joint dislocation
FIFS-2	Maxilla fracture (+1 AIS for open and/or displaced)
	Medulla (brain stem)
HICB-5	contusion
HINB-6	crush
HILB-6	laceration
FCFR-1	Nose fracture (+1 AIS for open and/or displaced)
FCHR-1*	Nose hemmorhage (bloody nose)*
F.VN-3	Optic nerve avulsion
F.FS-3	Orbit fracture (+1 AIS for open and/or displaced)
H.DJ-2	Ossicular chain (ear bone) dislocation
	Pinna (outer ear)
H.AE-1	abrasion
H.VE-2	avulsion
H.CE-1	contusion
H.LE-1	laceration
F.LR-1	Retina laceration
F.LR-2	with detachment
	Scalp
H_AI-1	abrasion
H_CI-1	contusion
	laceration
H_LI-2	deep and/or extensive
H_LI-1	superficial
	Sclera (eye)
F.LE-2	laceration
F.RE-2	rupture
	Skull fracture
H_FS-2	closed, undisplaced; no loss of consciousness

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* - Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

H_FS-4 displaced or depressed,
H_LB-4 with cerebral laceration, severe neurological signs or sinus/areterial injury with clot
HWNW-6 massively crushed

Sphenoid fracture
F.FS-3* no fluid or hemorrhage involvement*
F.FS-4 involving cerebrospinal fluid
F.FS-4,F.HA-4 involving hemorrhage

Teeth
FIVS-1 avulsion
FIOS-1 dislocation (loose)
FIFS-1 fracture

Tongue
laceration
FILD-2 deep and/or extensive
FILD-1 superficial

Temporal bone fracture, involving
H.FS-2 deafness (+1 AIS for open and/or displaced)
H.FS-5,H.HB-5 hemorrhage (+1 AIS for open and/or displaced)
H.FS-3 vertigo (+1 AIS for open and/or displaced)

H.RE-2 Tympanic membrane (ear drum) rupture

Uvea (eye)
F.AE-1 abrasion
F.CE-1 contusion

F.LE-1 Vitreous laceration

F.FS-2 Zygoma fracture

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* - Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

NECK

OIC Body Region: N-Neck

Valid Aspect Codes:

R,L,B	Right, Left, Bilateral
A	Anterior (front, trachea, esophagus)
P	Posterior (back, cervical spine C1-C7)
W	Whole Region
U	Unknown

System/Organ Coding unique to Neck Region:

NA-R Esophagus, Larynx, Pharynx, Trachea

OIC-AIS	INJURY DESCRIPTION
	Cervical spine
NPOM-1	acute strain
NPCC-2	contused cord
NPNV-6	crush (C-3 or above)
NPFV-6,NP.C-6	fracture (C-3 or above) with cord damage
NPDV-6,NP.C-6	dislocation (C-3 or above) with cord damage
NPFV-3	fracture (C-4 or below) (+2 AIS if involving cord damage)
NPDV-3	dislocation (C-4 or below) (+2 AIS if involving cord damage)
NPPM-1	injury complaint with no fracture or dislocation ("whiplash")
NPLC-6	laceration (C-3 or above)
NPFV-3	transverse or spinous process fracture
NWMW-6*	Decapitation (at neck), partial or complete*
	Esophagus
NAVR-5	avulsion
NACR-2	contusion
NALR-5	laceration
NAOR-4	obstruction
	Larynx
NAVR-5	avulsion
NAFR-4	fracture
NALR-4	laceration
	obstruction
NAOR-2	moderate respiratory difficulty
NAOR-5	serious respiratory diffiiulty

'.' - Lesion codes L, C, or N may be used.
* - Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

	Pharynx
NACR-1	contusion (+1 for hematoma involvement)
NALR-1	laceration (+1 for hemorrhage involvement)
NAOR-5	obstruction
NALR-1	puncture
	Throat (soft tissue)
NAAI-1	abrasion
NACI-1	contusion
	laceration
NALI-2	deep and/or extensive
NALN-3	nerve involvement
NALA-3	vessel involvement
NALA-4,NAHA-4	severe hemorrhage
NALI-1	superficial
	Trachea
NAVR-5	avulsion
NANR-3	crush

CHEST

OIC Body Region: C-Chest

Valid Aspect Codes:

R,L,B	Right, Left, Bilateral
C	Center (external front, mediastinum, esophagus)
W	Whole Region
U	Unknown

OIC Body Region and Aspect:

BS Back Superior (thoracic spine T1-T12)

Note: Anterior and Posterior aspects are invalid for Chest Region.

System/Organ coding unique to Chest Region:

CC_B	Bronchial
CC_H	Heart
C._P	Lung

OIC-AIS	INJURY DESCRIPTION
CCLA-5	Aorta Laceration
CCRR-5 CCLR-5	Bronchial (trachial) perforation,rupture laceration
CWNW-6	Chest, crushed (massive)
	Chest wall (soft tissue)
C_AI-1	abrasion
	contusion
C_CI-2	major
C_CI-1	superficial
	laceration
C_LI-2	deep and/or extensive
C_LI-1	superficial
C_LI-4	perforation, puncture
CCLA-5	Coronary artery laceration
	Heart
CCCH-3	contusion

'_' - Any code valid for region may be used.

'.' - Aspect codes L, R, or B may be used.

CCLH-5	laceration, perforation, puncture
CCLH-5 CCRH-5	Intracardiac (valve, septum) puncture, rupture
	Lung
C.CP-3	contusion
	laceration
C.LP-5	deep and/or extensive
C.LP-4	superficial
	Myocardium
CCCH-4	contusion (+1 if severe)
CCLH-5	laceration (+1 for multiple chamber involvement)
CCRH-5	Rupture (+1 for multiple chamber involvement)
	Pericardium
CCCH-3	contusion
	laceration
CCLH-5	deep and/or extensive
CCLH-4	superficial
C.LA-5	Pulmonary artery laceration
C.LA-5	Pulmonary vein laceration
C.FS-2	Rib fracture
C.FS-2*	cracked ribs*
C.FS-4	flail chest involvement
C.FS-2	single rib (+1 AIS for open and/or displaced)
C.FS-3	two or more ribs (+1 AIS for open and/or displaced)
	Sternoclavicular joint
S.DJ-3	dislocation
S.LJ-3	laceration through synovia (into joint)
CCFS-2	Sternum fracture (+1 AIS for open and/or displaced)
CCLA-5 CCRA-5	Superior/inferior vena cavae laceration, puncture, rupture
	Thoracic cavity injury involving unilateral
CCHH-4	hemomediastinum (+1 AIS if bilateral)
C.HP-3	hemothorax (+1 AIS if bilateral)
CCOH-4	pneumomediastinum (+1 AIS if bilateral)
C.OP-3	pneumothorax (+1 AIS if bilateral)
	Thoracic spine
BSOM-1	acute strain
BSLC-5	cord transection

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* - Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

BSCC-2*	cord contusion*
BSFV-3	fracture (lamina, body, pedicle, facet) with or without dislccaticn, with
BSFV-5	cord transection
BSFV-4	nerve root damage
BSFV-2	minor compression fracture T1-T12 (<20% loss in height of anterior vertebral body)
BSFV-2	transverse or spinous process

BSMW-6 Torso transection

* - Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

ABDOMEN

OIC Body Region: M-Abdomen (abdominal and pelvic contents)

Valid Aspect Codes:

R	Right (whole liver, or right lobe only)
L	Left (spleen)
B	Bilateral
C	Central (umbilical area)
S	Superior (left lobe of liver, diaphragm, stomach)
I	Inferior (bladder)
W	Whole Region
U	Unknown

OIC Body Region and Aspect:

BI	Back Inferior (lumbar spine L1-L5)

System/Organ coding unique to Abdomen Region:

MI_G	Bladder
MI_D	Bowel (large and small)
MS_R	Diaphragm
M._K	Kidney
MS_L	Liver-left lobe
MR_L	Liver-right lobe or whole
ML_Q	Spleen
MS_D	Stomach

OIC-AIS	INJURY DESCRIPTION
	Abdominal wall (soft tissue)
M_AI-1	abrasion
	avulsion
M_VI-3	extensive
M_VI-2	superficial
M_CI-1	contusion
	laceration or perforation, no organ involvement
M_LI-2	deep and/or extensive
M_LI-1	superficial
M_RM-3	rupture
	Biliary tract
	laceration, perforation
MILD-5	deep and/or extensive
MILD-4	superficial

'_' - Any code valid for region may be used.

'.' - Aspect codes L, R, or B may be used.

MIRD-5		rupture
	Bladder (urinary)	
MICG-3		contusion
MIRG-3		rupture (+1 for intraperitoneal)
	Colon (large bowel)	
		laceration, perforation
MILD-5		deep and/or extensive
MILD-4		superficial
MIRD-5		rupture
MSRR-3	Diaphragm rupture	
	Duodenum	
		laceration, perforation
MSLD-5		deep and/or extensive
MSLD-4		superficial
MSRD-5		rupture
M_LA-5	Intra-abdominal major vessel laceration	
	Jejunum/ileum (small bowel)	
		laceration, perforation
MILD-5		deep and/or extensive
MILD-4		superficial
MIRD-5		rupture
	Kidney(includes adrenal glands)	
M.VK-5		avulsion
M.CK-3		contusion, with or without hematuria
		laceration, perforation
M.LK-5		deep and/or extensive
M.LK-4		superficial
M.RK-5		rupture
	Liver(includes gall bladdar)	
		laceration, perforation
MRLL-5*		deep and/or extensive
MRLL-4*		superficial
MRRL-5*		rupture
MRRL-4**		fracture**
	Lumbar spine	
BIOM-1		acute strain
BICC-2*		cord contusion*

'.' = Aspect codes L, R, or B may be used.

*Left lobe of liver only is coded under S (superior).
Right lobe or whole liver is coded under R (right).

** Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

BILC-5	cord transection
BIFV-3	fracture (lamina, body, pedicle, facet) with or without dislocation, with
BIFV-5	cord transection
BIFV-4	nerve root damage
BIFV-2	minor compression fracture L1-L5 (<20% loss in height of anterior vertebral body)
BIFV-2	transverse or spinous process
	Mesentary
	laceration, perforation (+1 if vascular involvement)
MILD-4	deep and/or extensive with vascular involvement
MILD-3	superficial
MIRD-4	rupture
M.VG-4	Ovary avulsion
	Pancreas
MSCD-3	contusion
	laceration, perforation
MSLD-5	deep and/or extensive with or without duodenum involvement
MSLD-4	superficial
MSRD-5	rupture
	Penis
MIVG-4	avulsion
MICG-1	contusion
	laceration, perforation, rupture
MILG-4	deep and/or extensive
MILG-3	superficial
	Perineum
MIAI-1	abrasion
MIVI-3	avulsion
MICI-1	contusion
	laceration, perforation
MILI-3	deep and/or extensive
MILI-1	superficial
	Peritoneum
	laceration, perforation
M_LD-5	deep and/or extensive
M_LD-4	superficial
M_RD-5	rupture
M_HD-3*	hemoperitoneum* (code specific system/organ rather than 'D' when known)

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* - Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

	Rectum
	laceration, perforation
MILD-5	deep and/or extensive
MILD-4	superficial over entire rectal wall or extra-peritoneal
MIRD-5	rupture
MWHA-3	Retroperitoneum injury involving hemorrhage
	Scrotum
MIVG-3	avulsion
MICG-1	contusion
	laceration
MILG-2	deep and/or extensive
MILG-1	superficial
MLRQ-4	Spleen rupture
	Stomach
	laceration, perforation
MSLD-4	deep and/or extensive
MSLD-3	superficial
MSRD-4	rupture
MIVG-4	Testes avulsion
M_MW-6	Torso transection
MIVG-3	Ureter avulsion
	Urethra
MIVG-4	avulsion
MICG-3	contusion
	laceration
MILG-4	deep and/or extensive
MILG-3	superficial
MIVG-4	Uterus avulsion
MIOG-4*	sponteneous abcrtion*
	Vagina
MIAG-1	abrasion
MICG-2	contusion
	laceration, perforation
MILG-3	deep and/or extensive
MILG-1	superficial
	Vulva
MIAG-1	abrasion
MICG-1	contusion
	laceration, perforation
MILG-3	deep and/or extensive
MILG-1	superficial

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* - Not in the 1976 AAAM-SAE-AMA AIS Dictionary and not reviewed by the Joint Committee on Injury Scaling.

PELVIS

OIC Body Region: P-Pelvis (bony structure)

Valid Aspect Codes:

R,L	Right, Left (pelvic joint)
A	Anterior (superior and inferior pubic rami)
P	Posterior (skin, posterior muscles, sacrum, coccyx)
W	Whole Region
U	Unknown

OIC-AIS	INJURY DESCRIPTION
P_FS-2	Bony pelvic fracture, with or without dislocation of:
P.FS-2	acetabulum (+1 AIS for open and/or displaced)
PPFS-2	coccyx (+1 AIS for open and/or displaced)
P.FS-2	ilium (+1 AIS for open and/or displaced)
P.FS-2	ischium (+1 AIS for open and/or displaced)
PAFS-2	pubic ramus (+1 AIS for multiple) (+1 AIS for open and/or displaced)
PPFS-2	sacrum (+1 AIS for open and/or displaced)
P.DJ-3	Hip dislocation with or without fracture of femoral head or acetabulum
	Sacro-iliac
PPFS-3	fracture
PPDJ-3	dislocation
PAOS-3	Symphysis pubis separation

'_' - Any aspect code valid for region may be used.

'.' - Aspect codes L, R, or B may be used.

EXTREMITIES

OIC Body Regions:

S	Shoulder, (Clavicle, scapula)
X	Upper Extremities (whole arm)
A	Arm (upper)
E	Elbow
R	Forearm
W	Wrist-Hand-Digits
Y	Lower Extremities (whole leg)
T	Thigh (femur)
K	Knee
L	Leg (below knee)
Q	Ankle-Foot-Digits
U	Unknown

Valid Aspect Codes:

R,L	Right, Left
B	Bilateral (use instead of W, Whole Region)

Note: A,P,S, and I are invalid aspects in Extremities

OIC-AIS	INJURY DESCRIPTION
	Acromioclavicular joint
S.DJ-2	dislocation
S.LJ-2	laceration through synovia (into joint)
Q	Ankle [see Tarsus]
	Arm-Forearm-Hand
#.AI-1	abrasion
#.AW-4	amputation (above or below elbow)
#.CI-1	contusion
#.NW-4	crush
	fracture [see specific bone]
#.FS-4	multiple long bone in same extremity
	laceration
#.LI-2	deep and/or extensive
#.LN-3	major nerve involvement
#.LA-3	major vessel involvement
#.LI-1	superficial
A.RM-2	Biceps rupture
	Carpus (wrist)
W.CI-1	contusion with or without swelling
W.DJ-3	dislocation
W.FJ-2	fracture (+1 AIS for open, displaced and/or

'.' - Aspect codes L, R, or B may be used.

'#' - A, F, W, or X (no X for amputation)

comminuted)
W.LJ-3 laceration through synovia (into joint)
W.SJ-2 sprain

S.FS-2 Clavicle fracture (+1 AIS for open, displaced and/or comminuted)

Digit (finger or toe)
□.MS-2 amputation
□.NS-2 crush
□.DJ-1 dislocation
□.FJ-1 fracture, with or without dislocation
□.SJ-1 sprain

Elbow
E.CI-1 contusion with or without swelling
E.DJ-3 dislocation
E.FJ-2 fracture (+1 AIS for open, displaced and/or comminuted)
E.LJ-3 laceration through synovia (into joint)
E.SJ-2 sprain

Femoral fracture (+1 AIS for open, displaced and/or comminuted)
T.FS-2 condylar
T.FS-2 head
T.FS-2 neck
T.FS-2 shaft (+1 AIS for sciatic nerve involvement)
T.FS-2 supracondylar

Fibula fracture (+1 AIS for open, displaced and/or comminuted)
L.FS-2 head
L.FS-2 malleolus
L.FS-2 shaft

W Finger [see Digit]

Q Foot [see Thigh-Leg-Foot; Metatarsus]

R Forearm [see Arm-Forearm-Hand]

Hand [see Arm-Forearm-Hand]

A.FS-2 Humerus fracture (+1 for radial nerve damage) (+1 AIS for open, displaced and/or comminuted)

Knee
K.CJ-1 contusion, with or without swelling
K.LJ-3 laceration through synovia (into joint)
K.SJ-2 sprain

'□' - Use W(finger) or Q(toe)

Leg [see Thigh-Leg-Foot]

_.SJ-3 Ligament tears (major joint, i.e., hip, knee, ankle, subtalar, mid-tarsal)

Q.FS-2 Malleolus fracture [see also Tibia and Fibular] (+1 AIS for open, displaced and/or comminuted)

Metacarpus (hand)

W.DJ-2 dislocation
W.FS-2 fracture (+1 AIS for open, displaced and/or comminuted)
W.LJ-2 laceration through synovia (into joint)
W.SJ-1 sprain

Metatarsus (foot)

Q.DJ-2 dislocation
Q.FS-2 fracture (+1 AIS for open, displaced and/or comminuted)
Q.LJ-2 laceration through synovia (into joint)
Q.SJ-2 sprain

Patella

K.DJ-3 dislocation
K.FJ-2 fracture (+1 AIS for open, displaced and/or comminuted)

R.FS-2 Radius fracture (+1 AIS for open, displaced and/or comminuted)

S.FS-2 Scapula fracture

Shoulder (glenohumeral joint)

S.CI-1 contusion, with or without swelling
S.DJ-3 dislocation
S.LJ-3 laceration through synovia (into joint)
S.SJ-2 sprain

Tarsus (ankle)

Q.CI-1 contusion, with or without swelling
Q.DJ-3 dislocation
Q.FJ-2 fracture (+1 AIS for open, displaced and/or comminuted)
Q.LJ-3 laceration through synovia (into joint)
Q.SJ-2 sprain

_.RM-3 Tendon rupture

Thigh-Leg-Foot

#.AI-1 abrasion

'_' - All extremities

'#' - I, L, Q, or Y (no Y for amputation)

#.MW-4 amputation (above or below knee)
#.CI-1 contusion
#.NS-4 crush
fracture [see specific bone]
#.LI-2 multiple long bone in same extremity (+1 AIS for open, displaced and/or comminuted)
laceration
#.LI-2 deep and/or extensive
#.LN-3, #.LA-3 major nerves and/or vessels involvement
#.LI-1 superficial

Tibia fracture (+1 AIS for open, displaced and/or comminuted)
L.FS-2 malleolus
L.FS-2 plateau
L.FS-2 shaft

Q Toe [see Digit]

R.FS-2 Ulna fracture (+1 AIS for open, displaced and/or comminuted)

W Wrist [see Carpus]