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CODING MANUAL FOR MEASUREMENT OF INTRUSION  
IN MOTOR VEHICLE ACCIDENTS

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16. Abstract  This document, along with the companion "Users Manual for Measurement of Intrusion in Motor Vehicle Accidents," provides the necessary information and instructions to accident investigators for the measurement, recording, and encoding data necessary to quantitatively describe interior intrusion.  This "Coding Manual" outlines the coding process for each of the intrusion data forms and describes the necessary code values for intrusion data elements as currently used in the April, 1978 revision of the National Crash Severity Study (NCSS).  Types of intrusion to be documented include: The Catastrophic Crash; Internal Surfaces; Door Intrusion; Seat Intrusion; and Occupant Contact with Intruded Surfaces.			
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## INTRODUCTION

This manual provides coding instructions for occupant compartment intrusion forms included in the documentation protocol for the National Crash Severity Study (NCSS).

When developing the forms and coding procedures for documenting intrusion, the general approach used in the existing National Crash Severity Study was followed as much as possible. The forms are modular. That is, separate forms are used to address subjects that may not be applicable to every case. Thus the investigator need complete only those forms which are necessary to describe and document each specific vehicle. Those items (variables) which are necessary for analysis are recorded in a manner to facilitate keypunching directly from the form. Additional card identification information which is necessary for automatic-data processing is included on each form. Where possible, the coding conventions used in other NCSS forms have been followed. For example, codes for missing data are 9 or 99 (for two digit variables), and 8 or 98 is used for "non-applicable".

A primary objective incorporated in the intrusion forms is the ability to link a description of intrusion with the cause of intrusion, and most important, with the consequence of intrusion--injury.

The "Users Manual" is referred to several times in this coding manual. The full reference for the "Users Manual" is "Users Manual for Measurement of Intrusion in Motor Vehicle Accidents," Highway Safety Research Institute, The University of Michigan, Contract No. DOT-HS-7-01805, March 1978.

## INTRUSION FORMS FORMAT

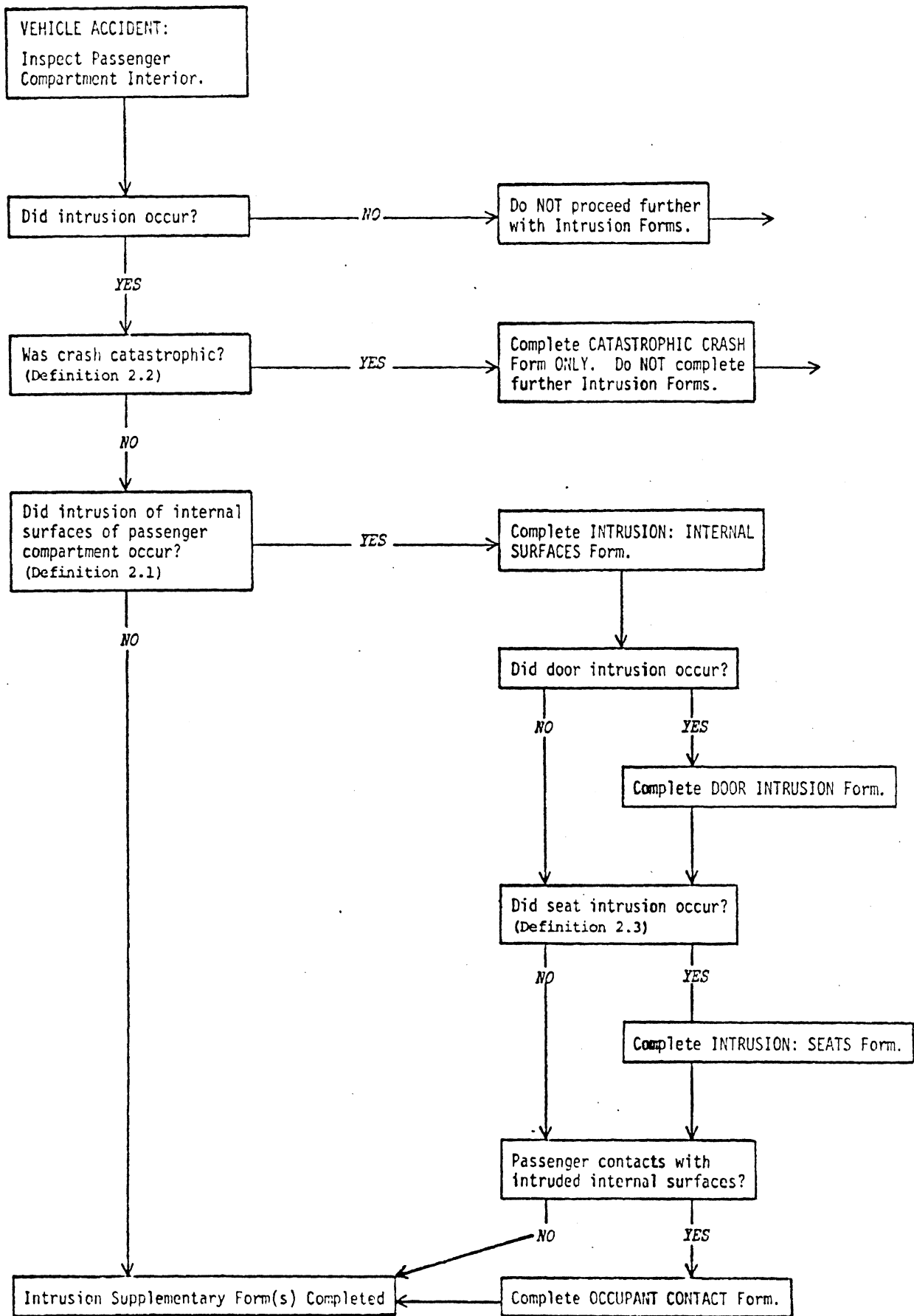
Documentation for occupant compartment intrusion includes the five forms listed below.

Intrusion Forms		
<u>Identification</u>	<u>Title</u>	<u>Number of Pages</u>
CC	Catastrophic Intrusion Form	2
IS	Internal Surfaces Intrusion Form	4
DR	Side Door Intrusion Form	3
ST	Seat Intrusion Form	2
OC	Occupant Contact Form	1

The Intrusion forms are completed only if there was intrusion as defined in the "Users Manual." If there is catastrophic intrusion, only the Catastrophic Intrusion form is completed. If there is non-catastrophic intrusion, at least the Internal Surfaces Intrusion form is completed. The (Side) Door Intrusion or Seat Intrusion form--or both--are also completed if there was intrusion by either or both of these components. The Occupant Contact form is completed if any occupant contacted an intruding surface or object, regardless of whether or not injury resulted from the contact.

The above selection of the appropriate forms for use is described diagrammatically on the next page.

The forms required to document each case must be recorded on page of the Vehicle Data form (V), SUPPLEMENTARY FORMS COMPLETED.



DECISION TREE FOR USE OF INTRUSION SUPPLEMENTARY FORMS.

## CARD IDENTIFICATION

Each intrusion form can be keypunched directly, with each response given in numeric codes with pre-assigned column numbers for each digit. With the exception of the Internal Surfaces Intrusion form, each form requires only one card. To identify the case and vehicle to which the cards apply, and which form is represented by the car, columns 1 through 13 and column 80 of each card contain card identification information. The format is the same as used throughout the new NCSS forms.\*

Case identification is provided by header information in columns 1 - 13. These columns are coded with:

<u>Column</u>	<u>Coding</u>								
1	Update Number - The update number is used when additional data are submitted for a case submitted previously. The initial form submission is coded 0. The first update is coded 1 and each subsequent update submission utilizes the next digit in sequence up to 7. Code 8 is a Case Request Listing and Code 9 indicates Case to be Deleted. Re-submission after a quality control reject is not an update.								
2	Team Number <table><tbody><tr><td>1. Calspan Corporation</td><td>4. University of Kentucky</td></tr><tr><td>2. Highway Safety Research Institute</td><td>5. University of Miami</td></tr><tr><td>3. Indiana University</td><td>6. Southwest Research Institute</td></tr><tr><td></td><td>7. Dynamic Science, Inc.</td></tr></tbody></table>	1. Calspan Corporation	4. University of Kentucky	2. Highway Safety Research Institute	5. University of Miami	3. Indiana University	6. Southwest Research Institute		7. Dynamic Science, Inc.
1. Calspan Corporation	4. University of Kentucky								
2. Highway Safety Research Institute	5. University of Miami								
3. Indiana University	6. Southwest Research Institute								
	7. Dynamic Science, Inc.								
3	Year - Insert the last digit of the year in which the accident occurred.								
4-5	Month - Insert, in numeric sequence, the month in which the accident occurred (01 = January to 12 = December).								
6-7	Day - Insert the date on which the accident occurred. (Example 12 May = 12).								
8-10	Case Sequence - Begin each month with 001 and end with the last case number collected, without any blanks. If 80 cases are collected, for example, the last case number should be 080.								

This coding is used in all forms. Thus columns 1-10 of all forms pertaining to a single case should be coded identically.

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\*The new NCSS forms are those to be used starting April 1, 1978.

11-13 Columns 11-13 contain vehicle identification on the Catastrophic Intrusion, Internal Surfaces Intrusion, Side Door Intrusion, and Seat Intrusion forms. These forms are all vehicle forms. That is, one such form--as required--is used for each applicable vehicle. Column 11 is coded with the number of the vehicle. Columns 12 and 13 are precoded with zeros.

The form for Occupant Contact with Intruded Surfaces is an occupant form, i.e., one such form is completed for each occupant that contacted an intruding surface. Column 11 on this form is also to be coded with the vehicle number. Columns 12 and 13 are to be coded with the occupant number. Assign occupants starting with the Driver as number 01. Number other occupants from left to right and front to rear.

Example for vehicle 1 with 3 occupants

Driver = 01  
Right front = 02  
Right rear = 03

This field (columns 11-13) must be coded identically to the occupant number (also columns 11-13) on the Occupant Data forms for the same occupant.

80 Column 80 designates the type of form and is precoded with:

- 3 - Catastrophic Intrusion form
- 4 - Internal Surfaces Intrusion form, card 1
- 5 - Internal Surfaces Intrusion form, card 2
- 6 - Side Door Intrusion form
- 7 - Seat Intrusion form
- 2 - Occupant Contact form



CODING INSTRUCTIONS, CATASTROPHIC INTRUSION  
FORM

CATASTROPHIC INTRUSION DATA

Column

- 1-13 See Card Identification, page 3
- 14-16 Insert codes for up to three types of damage. The appropriate codes are given on the form. If only one type applies, enter the code in the first response. Code unused responses with a zero.
- 17-24 For each occupant space, record the amount of reduction of volume using the appropriate single digit code as they are defined on the form. The occupant space numbers for the first two seats are indicated by numbers consistent with occupant seat position in the OCCUPANT DATA page of the CASE SUMMARY REPORT.

Seats behind the second seat, or internal cargo space above the floor--as in the rear of a station wagon--is included in occupant space number 34. Internal cargo space behind the seat of one-seat vehicles, as in Dodge Club Cab pickups, is also number 34. Detail listings of the applicable occupant space numbers for a variety of vehicles is listed in the table on the next page.\* The occupant space numbers do not refer to occupants, but to the space normally available to an occupant, and (in the Catastrophic Intrusion form) to internal cargo space regardless of the occupancy or use of the space.

The amount of reduction in volume--in percent of the volume available in the occupant space of undamaged vehicles--is based on the investigators judgment and not on physical measurements.

If intrusion into a particular occupant space was so great that none of the original space remains, the reduction would be 100% and would be coded 7. On the other hand, if the investigator thinks some intrusion may have occurred, but so slight that measurements would be necessary to be certain, code "no reduction" (1).

For occupant spaces that are not provided in the undamaged vehicle, e.g., numbers 21-23, 34 in standard pickups, use code value 8 (not applicable).

80 Form type - precoded with a 3.

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\*The table is identical to Table 6.2-1 of the User's Manual for Measurement of Intrusion in Motor Vehicle Accidents.

TABLE OF APPLICABLE OCCUPANT SPACE NUMBERS BY TYPE OF VEHICLE

Type of Vehicle*	Vehicle Passenger Capacity or Number of Seats	Applicable Occupant Spaces	Occupant Spaces Coded Not Applicable
1,6,11	2 passenger-not internal cargo	11,13	12,21,22,23,34
1,31,41,6,12	2 passenger w/cargo area behind seat	11,13,34	12,21,22,23
2,32	4 passenger	11,13,21,23	12,22,34
2	5 passenger	11,13,21,22,23	12,34
5,11	1 seat	11,12,13	21,22,23,34
2,13	2 seat	11,12,13,21,22,23	34
43	3 seat	11,12,13,21,22,23,34	
45,46	4 seat w/ or w/o cargo area	11,12,13,21,23,34	
5,12,21,6,33	1 seat w/ internal cargo area	11,12,13,34	21,22,23
3,22,42	2 seat w/ internal cargo area	11,12,13,21,22,23,34	
4,23,44	3 seat w/ internal cargo area	11,12,13,21,22,23,34	

\*Vehicle Types--used only in this table

- |   |                               |
|---|-------------------------------|
| 1. Sports car                                   | 23. Carryall-3 seat           |
| 2. Passenger                                    |                               |
| 3. Station wagon-2 seat                         | 31. Utility-2 passenger       |
| 4. Station wagon-3 seat                         | 32. Utility-2 seat            |
| 5. Station wagon-1 seat with other seats folded | 33. Utility-3 passenger       |
| 6. Pickup car                                   | 41. Van-2 passenger           |
|   | 42. Van-2 seat                |
| 11. Pickup truck                                | 43. Van-3 seat                |
| 12. Pickup truck w/internal cargo area          | 44. Van-3 seat w/cargo area   |
| 13. Pickup truck w/crew cab                     | 45. Van-4 seat                |
|   | 46. Van-4 seat w/cargo area   |
| 21. Carryall-1 seat w/cargo area                | 47. Van-5 seat w/o cargo area |
| 22. Carryall-2 seat w/cargo area                | 48. Van-5 seat w/cargo area   |

Definitions: Passenger capacity refers to maximum vehicle occupancy (manufacturer rating). Seat refers to a seating row capable of holding 2 or more passengers.

CODING INSTRUCTIONS, INTERNAL SURFACES INTRUSION  
FORM

This form is used only if there is intrusion of the internal surface of the passenger compartment, and consist of two computer cards.

INTERNAL SURFACES INTRUSION DATA

Column

- 1-13 See Card Identification, page 3. Identical on both Card 1 and Card 2.
- 14-15 Code the total number of occupant spaces in the vehicle. This is the number of locations the manufacturer has provided for occupancy, and available for use at the time of the crash. This is not the number of occupants actually in the vehicle. 99 = Unknown.
- 16-17 Code the total number of individual intrusions of interior side surfaces.\* All intrusions must be documented in detail by using additional lines if necessary. The total number recorded here should be the number documented.
- B Intruded Area or Exterior Object - Code the component of the car interior that intruded. A list of components and their codes are given on the form. The "Door Panel or Side Panel" code includes the panels themselves as well as any attached hardware or trim, i.e., window regulators and armrests. Note, however, that the determination of maximum intrusion is based on maximum inward movement. It would not necessarily be at the armrest just because it projects inward the furthest.

Specific codes are also given for groups of three or more components all intruding into a single occupant space. The group codes should be used when all the components in the group intrude because of a single impact, and it is apparent the resolution of injury among the grouped components is improbable.

If fewer than 12 intrusions are documented, code the next response with 98 (not applicable), and leave those following blank.

- C Occupant Space Number - Code the number of the occupant space that was intruded. The coding is described below and on the next page, and in more detail in the "Users Manual".

\*Individual intrusions are defined in "Users Manual for Measurement of Intrusion in Motor Vehicle Accidents", Section 2.7.

CODES FOR OCCUPANT SPACE NUMBER (COLUMN C)  
 (AS DETERMINED BY THE VEHICLE SEAT CONFIGURATION AT THE TIME OF THE CRASH)

OCCUPANT SPACE NUMBER IS A 2-DIGIT CODE. THE FIRST DIGIT (LEFT DIGIT) DENOTES THE SEAT ROW WITH CODE VALUES FROM 1-5. THE SECOND DIGIT (RIGHT DIGIT) DENOTES THE POSITION ON THE SEAT AND (IN SOME INSTANCES) THE WIDTH OF THE SEAT.

SECOND DIGIT CODES:

SEAT TYPE

- INDIVIDUAL SEAT (BUCKET)
- BENCH: FULL WIDTH 3 PASSENGER
- FULL WIDTH 4 PASSENGER
- PARTIAL WIDTH - LEFT
- PARTIAL WIDTH - CENTERED

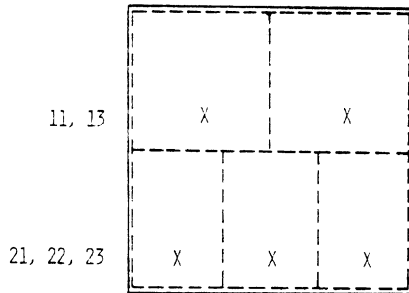
CARGO AREA - DENOTES ENTIRE WIDTH: CODE 4

CODE VALUE

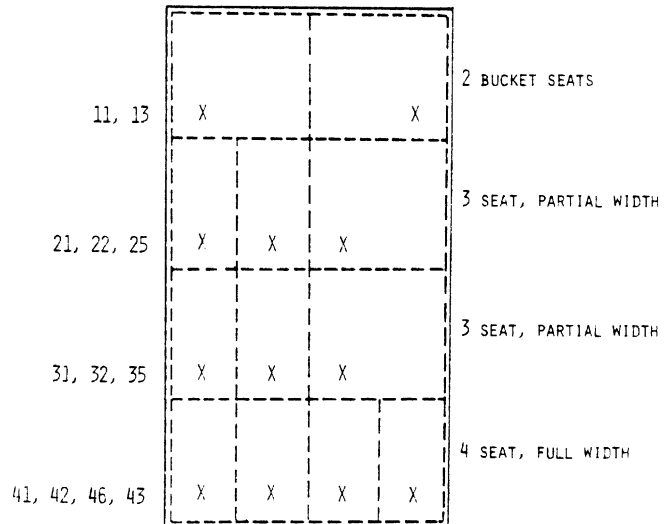
- 1=LEFT, 3=RIGHT
- 1=LEFT, 2=CENTER, 3=RIGHT
- 1=LEFT, 2=LEFT CENTER, 6=RIGHT CENTER, 3=RIGHT
- 1=LEFT, 2=CENTER, 5=RIGHT + AISLE SPACE
- 0=LEFT + SPACE, 2=CENTER, 5=RIGHT + SPACE

EXAMPLES:

PASSENGER CAR  
5 PASSENGERS



VAN  
12 PASSENGER CAPACITY



A number of vehicles, such as Jeeps, Suburbans, and some vans, have partial width seats. These seats have a space between the end of the bench and the inside side surface to serve as an aisle or to clear a wheel well. The occupant space corresponding to the seat position next to the open space is coded with either 0 or 5 in the second digit, depending on whether the open space is on the left or right end of the seat. These unique codes indicate to the analyst that the occupant spaces are not adjacent to the interior side surface, but separated from it by a substantial distance. A 4 in the second digit indicates a cargo space for the full width of the vehicle.

The occupant space number to be coded is for that space in which the intrusion occurred, and has no relation to actual occupancy.

If fewer than 12 intrusions are documented, leave the remaining responses blank.

- D Associated Impact Number - Code the number of the impact that caused the intrusion. The impact number is obtained from page 1 of the VEHICLE DATA form (V), column 54, etc. Applicable codes are 1-4 from the VEHICLE DATA form, 6=non-impact, 7=other impact, 8=not applicable, 9=unknown. The impact coded may have caused the intrusion through either direct or induced damage. Therefore the intruding component need not be part of the area of the car denoted in the CDC. In the case of seat intrusion, code the number of the impact that caused--directly or indirectly--the seat intrusion. Seat damage (and intrusion) can result from inertial forces without an external impact, e.g., from rear seat occupants moving forward into the seat backs in heavy braking just before a crash. In such an event, code Impact Number with a 6 to indicate non-impact. If fewer than 12 impacts are documented, leave the remaining responses blank.

This variable links the intrusion with the impact that caused the intrusion, and thus with the descriptors of the impact - the CDC and  $\Delta V$ .

- DD Measurement Axis - Code the alpha label of the axis used for the measurement of maximum intrusion. The intrusion is to be measured along either the X, Y, or Z axis as they are defined in Figure 5-2 of the "Users Manual". The corresponding letter (X, Y, or Z) will be given in column DD.

- D Intrusion Maximum Extent - Code the maximum extent of intrusion to the nearest inch. Intrusions of one inch or less will not be included. Definitions of intrusions and instructions for their measurement are given in the Users Manual.

If one of the grouped component codes has been used for column B, enter the maximum intrusion of the component that intruded the furthest, and write that specific component in the margin.\* Values

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\*See the Users Manual for details on the use of the grouped component codes.

of less than 10 should include the leading zero. If the intrusion was 97 inches or more, code 97.

If the maximum extent cannot be measured, code 99 (unknown). If fewer than 12 intrusions are documented, leave the remaining responses blank.

F Occupant Space Dimension - Code the original vehicle dimension to the nearest inch. This is the original dimension of the specific occupant space that was reduced by the intrusion. In the case of intrusion of the left-front door into the drivers space, it would be the horizontal distance from the original undamaged surface to the vertical plane defining the right-hand boundary of the "11" occupant space.

If original vehicle dimensions are 97 inches or over, record 97.

If original vehicle dimensions cannot be made, record 99 (unknown).

If fewer than 12 intrusions are documented, leave the remaining responses blank.

G Intrusion Extent at Contact - Code the magnitude of intrusion at the point of occupant contact to the nearest inch. Since the point of contact may not be at the point of maximum intrusion, the value coded here may be equal to or less than the maximum intrusion.

If the intrusion at the point of contact was 97 inches or more, code 97.

If the intrusion at the point of contact cannot be measured, code 99 (unknown).

If fewer than 12 intrusions are documented, leave the remaining responses blank.

If there was not occupant contact with the intruding surface, code 98 (not applicable).

H Occupant Space Dimension - Code the original dimension of the unintruded occupant space at the point of occupant contact. Note that the original dimension minus the magnitude of intrusion at point of contact gives the dimension of the remaining space available to the occupant at the point of contact.

If the original dimension was 97 inches or more, code 97.

If the original dimension cannot be measured, code 99 (unknown).

If fewer than 12 intrusions are documented, leave the remaining responses blank.

If there was no occupant contact with the intruding surface, code 98 (not applicable).

80 Form Type - Precoded with a 4 on Card 1, and a 5 on Card 2.

NOTE: Columns G and H of the Internal Surfaces form will not be key-punched. They are provided here for the convenience of investigators in the field. The data will subsequently be transferred to the appropriate Occupant Contact with Intruded Surfaces form.

CODING INSTRUCTIONS, DOOR INTRUSION

This form is used only if there was side door intrusion.

DOOR INTRUSION DATA

Column

- 1-13 See Card Identification, page 3.
- 14 If the door intrusion resulted from or was increased by damage to another vehicle component, code 1 (yes). If neither, code 2 (no).

- 15-30 If column 14 is coded "yes", use as many rows as necessary of columns 15 through 30 to describe the damage. Columns 15-16, 19-20, 23-24, 27-28 are coded with the intrusion numbers taken from the Internal Surfaces Intrusion form (column A). The intrusion number should correspond to intrusion of a side door documented on the Internal Surfaces Intrusion form.

If fewer than 4 door intrusions are documented, code the next response for intrusion number with 98 (not applicable), and leave the remaining blank.

Columns 17, 21, 25, 29 are used to specify the components whose damage increased intrusion. The list of components and their codes is given in the form. Columns 18, etc., can be used if the damage of a second component contributed to a particular door intrusion(s).

If only one damaged component contributed to a single door intrusion, code "Damaged Component #2" with 8 (not applicable). Leave responses for "Damaged Component #1" and "Damaged Component #2" blank for unused "Intrusion Number" responses.

- 31-58 Columns 31-58 are used to describe the location--in a vertical plane--of maximum external door crush. The locations are described from an outside view of the car, i.e., all dimensions are on the outside surfaces, as opposed to the measurement of intrusion which is an inside measurement recorded on the INTERNAL SURFACES INTRUSION form.

Measurements  $A_F$ ,  $A_R$ , and C are original undamaged door dimensions.

C is measured from the lower-outside edge of the door to the bottom of the window opening.  $A_F$  is measured from the front edge to the



rear edge of front door along a horizontal line through the point of maximum crush.  $A_F$  is measured similarly on the rear door. The location of maximum crush is given by  $B_F$ ,  $D_F$ ,  $B_R$ , and  $D_R$ . The horizontal B measurements are made from the point of maximum crush to the door edge adjacent to the "B" pillar. The vertical measurements are made from the point of maximum crush to the bottom edge of the door. Measurements of B and D should be made so they are equivalent to measurements to the maximum crush projected on an undamaged door.

$A_F$ ,  $B_F$ ,  $D_F$ , and C are provided for left and right front doors. Similarly,  $A_R$ ,  $B_R$ ,  $D_R$  (and C), are also provided for left and front rear doors. Thus, the form provides for documenting up to four doors. Each set of codes (i.e., for each of the four doors) is to be used only for intruding doors. If a door is present but not intruding, code the A, B, and D for that door as 97 (undamaged). If a door is not present, as on two door cars, code A, B, D with 98 (not applicable). C is coded if, and only if, it is necessary to document an intruding door, otherwise code 97.

This procedure covers doors with concentrated impacts. If the damage is distributed, a modified procedure must be used. If the crush is vertical of approximately uniform depth as occurs if a vertical pole is struck in the door, a vertical measurement for D would not be defined. In this case, code D with 77 (distributed damage). If the line of crush is horizontal as might result from a high bumper, then the B measurement is undefined and B should be coded with 77 (distributed damaged). If the line of crush is at an angle of less than 45 degrees from the vertical, code D with 77, and measure B to the mid-height of the damaged area. Conversely, for lines of crush of more than 45 degrees from the vertical, code B with 77 and D with the mid-height.

If the crushing force is indirect, hence leaving no contact mark, then measurements cannot be made to locate its center. Thus code  $B_F$ ,  $D_F$ ,  $B_R$ ,  $D_R$ =78 as needed to indicate non-direct (to the door surface) impact force.

All measurements are recorded to the nearest inch. If dimensions cannot be determined, record 99.

The large door(s) on the right rear side of a VAN (to allow access to the rear passenger compartment) are NOT coded, i.e., a van is a 2-door vehicle.

80 Form Type - Precoded with a 6.

CODING INSTRUCTIONS, SEAT INTRUSION

This form is used only if seat intrusion has occurred.

SEAT INTRUSION DATA

Column

- 1-13 See Card Identification, page 3.
- 14-18 Seat Type - Code the type of seats. The codes are given on the form, and are self-explanatory.
- 19-20 Seat Intrusion - Each intrusion of a seat (by any of its components) will be documented in this section. The documentation provided here is not sufficient to adequately describe the intrusions and its consequences, but supplements information provided in the Intrusion--Internal Surfaces form. Therefore seat intrusion must be documented in both forms.

The intrusion number from the Intrusion--Internal Surfaces form is entered here for each intruding seat to provide a link between the data in both forms.

If fewer than 6 seat intrusions occur, code the next response with 98 (not applicable) and leave the remaining responses blank.

The cause of each seat intrusion is coded using the codes in the form. If both deformation and failure occurred, the appropriate failure code (1-3) should be entered. If fewer than 6 seat intrusions are documented, leave "cause" in the remaining responses blank.

The direction of the seat movement resulting in the intrusion is coded in the last data column. If the movement was longitudinal toward the front of the vehicle, use code 1 (forward). If the movement was toward the rear of the car, use code 2 (rearward). Lateral movement is coded 3 for left and 4 for right, viewed from the perspective of a person looking toward the front of the car from inside.

Note that the direction is relative to the front of the car rather than to the direction the passengers are facing, e.g., in a rearward facing third seat in a station wagon.

Leave unused direction responses blank.

Code 9 is used for documented seat intrusions of unknown direction.

80 Form Type - Precoded with a 7.

CODING INSTRUCTIONS, OCCUPANT CONTACT WITH INTRUDED  
SURFACES

This form is to be completed if there is evidence that any occupant contacted intruded surfaces, regardless of injury.

The occupant contact form is an occupant form rather than a vehicle form. That is, one occupant contact form must be completed for each occupant who contacted an intruded surface. The form provides for documentation of the consequences of intrusion--injury--and links the consequences with the physical description of the intrusion through the Intrusion Number.

OCCUPANT CONTACT DATA

Up to six specific occupant contacts are to be described. Each contact uses one row of 8 data columns.

Column

1-10 Case Identification - See columns 1-10 of Card Identification, page 3.

11-13 Occupant Number - See instructions for columns 11-13 of Card Identification (for the Occupant Contact form).

It is important that the occupant number coded in columns 11-13 be identical to the occupant number coding on other occupant forms for the same occupant.

14-61 Information coded in these columns will link any associated injury (or lack of injury) with the intrusion(s) contacted by the occupant.

Intrusion Number - Code the number of the contacted intrusion. The number is taken from item 4, column A, of the Internal Surfaces Intrusion form. Code the first unused response with 98 (not applicable).

Associated Injury Numbers - Code the number of the injury associated with the contact. Up to two injuries may be listed for each occupant for each intrusion. The injury number to be used is that found before each OIC listed at the bottom of the OCCUPANT DATA of the CASE SUMMARY REPORT, Card 1 or 2. Injury number from 1 to 6 may be used. If the contact did not result in an injury, code zero (0). If contact is suspected but not known, code 9.

An associated injury is one which was caused by the contact, or was possibly worsened by the contact even if another object may have been the cause. The injury may be associated with more than one object.

G Intrusion Extent at Contact - Code the magnitude of intrusion at the point of contact in inches to the nearest inch. The code value for this variable should be taken from item 4, column G of the INTERNAL SURFACES INTRUSION form.

Unused responses should be left blank.

H Occupant Space Dimension - Code the original dimension of the intruded occupant space. The code value for this variable should be taken from item 4, column H of the INTERNAL SURFACES INTRUSION form.

Unused responses should be left blank.

The above coding accomodates up to six contact consequences (rows A through F) per occupant.

80 Card Type - Precoded with a 2.

