FORM – FMVSS 214
Rev. 2/17/16

VEHICLE INFORMATION / TEST SPECIFICATIONS

FMVSS No. 214 MDB & Pole Tests

Vehicle Model Year and Make: _____
Vehicle Model and Body Style: _____

1. SEAT FORE-AFT POSITION, CUSHION ANGLE, AND HEIGHT

Provide instructions for positioning manual and power seats for the placement of the Part 572, Subpart U, ES-2re 50th percentile male dummy and Part 572, Subpart V, SID IIs 5th percentile female dummy in the driver and front outboard passenger seats in accordance with S8.3.1 and S10.3.2.3, respectively.

Additionally, provide instructions for positioning manual and power seats for the placement of the Part 572, Subpart V, SID IIs 5th percentile female dummy in the second row, rear outboard passenger seats in accordance with S8.3.3.

1.1 Driver's Seat

1.1A Seat Fore-Aft Positioning

Manual Seat Track Adjuster	
Total number of detents:	
50th percentile male, ES-2re:	
5th percentile female, SID IIs:	

***** For manual seat track adjustments, test detent is measured from foremost detent, which is defined as 0.*

Power Seat Track Adjuster	
Complete range of travel (mm):	
distance from the foremost position (50th percentile male, ES-2re):	
distance from the foremost position (5th percentile female, SID IIs):	

1.1B Seat Cushion Angle

If the seat cushion angle is adjustable while maintaining the test fore-aft seat track position, describe the angle used during certification testing and how to measure it. Include any reference points and photographs.

Dummy	*Angle Used*	*Additional Description*
50th percentile male, ES-2re:		
5th percentile female, SID IIs:		

1.1C Seat Cushion Height

If the seat and/or seat cushion height is adjustable at the test fore-aft seat track position and can be adjusted so that the seat cushion angle can be at the angle used in the certification test, describe the height used during certification testing and how to measure it. Include any reference points and photographs.

Dummy	*Height Used*	*Additional Description*
50th percentile male, ES-2re:		
5th percentile female, SID IIs:		

1.1D Provide any other instructions for positioning the driver's seat at the required test position(s):

_____

_____

1.2 Front Outboard Passenger Seat

1.2A Seat Fore-Aft Positioning

Manual Seat Track Adjuster	
Total number of detents:	
50th percentile male, ES-2re:	
5th percentile female, SID IIs:	

***** *For manual seat track adjustments, test detent is measured from foremost detent, which is defined as 0.*

Power Seat Track Adjuster	
Complete range of travel (mm):	
distance from the foremost position (50th percentile male, ES-2re):	
distance from the foremost position (5th percentile female, SID IIs):	

1.2B Seat Cushion Angle

If the seat cushion angle is adjustable while maintaining the test fore-aft seat track position, describe the angle used during certification testing and how to measure it. Include any reference points and photographs.

Dummy	*Angle°*	*Additional Description*
50th percentile male, ES-2re:		
5th percentile female, SID IIs:		

1.2C Seat Cushion Height

If the seat and/or seat cushion height is adjustable at the test fore-aft seat track position and can be adjusted so that the seat cushion angle can be at the angle used in the certification test, describe the height used during certification testing and how to measure it. Include any reference points and photographs.

Dummy	*Height*	*Additional Description*
50th percentile male, ES-2re:		
5th percentile female, SID IIs:		

1.2D Provide any other instructions for positioning the driver's seat at the required test position(s):

_____

_____

1.3 Rear Seats – Second Row (5th percentile female, SID IIs in MDB impact Test)
NOTE: If left and right second row outboard seats are not identical, separately, provide the information requested below for both seats.

1.3A Seat Fore-Aft Positioning

Manual Seat Track Adjuster	
Total number of detents:	
5th percentile female, SID IIs:	

***** *For manual seat track adjustments, test detent is measured from foremost detent, which is defined as 0.*

Power Seat Track Adjuster	
Complete range of travel (mm):	
distance from the foremost position (5th percentile female, SID IIs):	

1.3B Seat Cushion Angle

If the seat cushion angle is adjustable while maintaining the test fore-aft seat track position, describe the angle used during certification testing and how to measure it. Include any reference points and photographs.

Dummy	*Angle°*	*Additional Description*
5th percentile female, SID IIs:		

1.3C Seat Cushion Height

If the seat and/or seat cushion height is adjustable at the test fore-aft seat track position and can be adjusted so that the seat cushion angle can be at the angle used in the certification test, describe the height used during certification testing and how to measure it. Include any reference points and photographs.

Dummy	*Height*	*Additional Description*
5th percentile female, SID IIs:		

1.3D Provide any other instructions for positioning the driver's seat at the required test position(s):

_____

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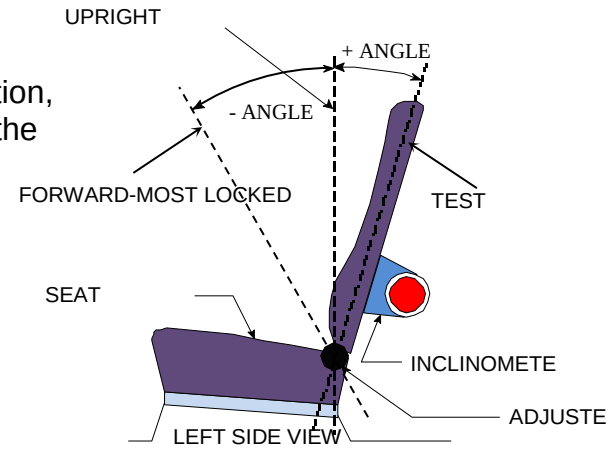
2. SEAT BACK ANGLE

2.1 Driver's Seat

With the seat in the test fore-aft seat track position, what is the angle of the seat back when it is in the forward-most locked position?



Dummy	Angle°
50th percentile male, ES-2re:	
5th percentile female, SID IIs:	

With the seat in the test fore-aft seat track position, what is the angle of the seat back when it is set to the **test** position? (Note: For the test with the 50th male dummy, this is the angle with the seat back set to the Nominal Design Riding Position. For the test with the 5th female dummy, this is the angle as determined by the related dummy seating procedure.)

Dummy	Angle°
50th percentile male, ES-2re:	
5th percentile female, SID IIs:	

For the 50th percentile male, is the seat back angle measured with the dummy in the seat?

☐ YES ☐ NO

Describe any references used for measuring the seat back angle, e.g., door sill. (Include photograph(s).) *If possible, include measurement from bottom front of head rest post to outboard sun visor anchor, or from bottom back of head rest post to middle of rear door striker.*

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_____

2.2 Front Outboard Passenger Seat

With the seat in the test seat track position, what is the angle of the seat back when it is in the forward-most locked position?

Dummy	Angle°
50th percentile male, ES-2re:	
5th percentile female, SID IIs:	

With the seat in the test seat track position, what is the angle of the seat back when it is set to the **test** position? (Note: For the test with the 50th male dummy, this is the angle with the seat back set to the Nominal Design Riding Position. For the test with the 5th female dummy, this is the angle as determined by the related dummy seating procedure.)

Dummy	Angle°
50th percentile male, ES-2re:	
5th percentile female, SID IIs:	

For the 50th percentile male, is the seat back angle measured with the dummy in the seat?

☐ YES ☐ NO

Describe any references used for measuring the seat back angle, e.g., door sill. (Include photograph(s).) *If possible, include measurement from bottom front of head rest post to outboard sun visor anchor, or from bottom back of head rest post to middle of rear door striker.*

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2.3 2nd Row Seats

With the seat in the mid fore-aft seat track position, what is the angle of the seat back when it is in the forward-most locked position?

2nd Row DSP	Angle°
Left Outboard Seat	
Right Outboard Seat	

With the seat in the mid fore-aft seat track position, what is the angle of the seat back when it is set to the Nominal Design Riding Position for a 5th percentile female?

2nd Row DSP	Angle°
Left Outboard Seat	
Right Outboard Seat	

Is the seat back angle measured with a dummy in the seat? ☐ YES ☐ NO

Describe any references used for measuring the seat back angle, e.g., door sill (include photographs).

_____

_____

3. ADJUSTABLE D-RING SEAT BELT ANCHORAGE POSITION

Nominal Design Position (NDP)
Please complete the following table for adjustable seat belt anchorages.

Dummy	Total Range of Travel (mm)	Dist. from Upper-most Position to NDP (mm)	Total No. of Detents (if applicable)	Detent No. of NDP*
Driver/Front Passenger – 50th Male				
Driver/Front Passenger – 5th Female				
2nd Row Rear Outboard (Left) – 5th Female				
2nd Row Rear Outboard (Right) – 5th Female				

** The detent number of the Nominal Design Position is counted with respect to the upper-most detent, which is defined as 0.*

4. SEAT BELT GUIDES

Is this vehicle equipped with a seat belt guide for any of the following seating positions?

Driver:	☐ YES	☐ NO
Right Front Passenger:	☐ YES	☐ NO
Rear Passengers:	☐ YES	☐ NO

If YES for any position, please provide instructions for use:

_____

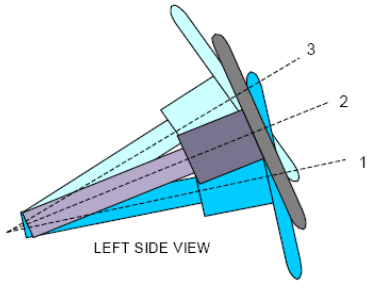
_____

_____

_____

5. STEERING COLUMN AND WHEEL ADJUSTMENTS

If the steering wheel and/or steering column adjustments are available, provide any specific procedures used to determine the geometric center of the locus the steering wheel hub describes when it is moved through its full range of driving positions.



STEERING COLUMN ASSEMBLY

Angle of the steering wheel with respect to vertical when the steering wheel hub is positioned at the geometric center of the locus it describes when it is moved through its full range of positions:	
Total number of detents:	
Test detent* when the wheel hub is positioned at the geometric center of the locus it describes when it is moved through its full range of positions:	

Specific Procedures:

_____
_____
_____
_____
_____
_____

** Test detent is taken with respect to the upper-most detent, which is defined as 0.*

6. SEATING REFERENCE POINT (SgRP)

Please give the location of the Seating Reference Point (SgRP) for the following DSPs:

DSP	Coordinates (mm)		
	X(+ forward)	Y(+ right)	Z (+ down)
Driver			
Front Passenger			
2nd Row - Right Outboard			
2nd Row - Left Outboard			

Describe any references used for measuring the SgRP (e.g., center of the front door striker). Include photograph(s).

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_____
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_____
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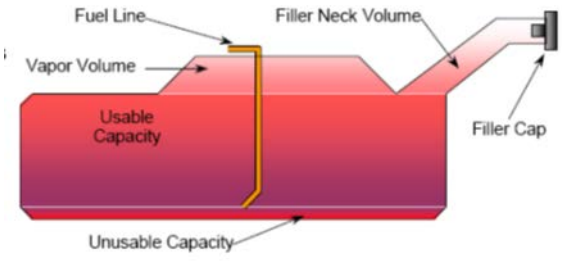
7. FUEL TANK CAPACITY DATA

"Usable capacity" of standard equipment fuel tank (gal):	
"Usable capacity" of optional equipment fuel tank (gal):	
Capacity used when certification testing to requirements of FMVSS No. 301 (gal):	



VEHICLE FUEL TANK ASSEMBLY

Operational instructions:

_____
_____
_____
_____

Suggested methods for draining:

_____
_____
_____

Is the vehicle equipped with an electric fuel pump?

☐ YES ☐ NO

If YES, does the pump normally operate when the vehicle's electrical system is activated?

☐ YES ☐ NO

If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel:

_____
_____
_____
_____
_____

Provide a drawing (or description) that shows the undercarriage view and/or location of the fuel tank.

_____
_____
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_____

8. HEIGHT ADJUSTABLE SUSPENSION

Does this vehicle have a height adjustable suspension? (Off-road modes that must be manually activated are not applicable.)

☐ YES ☐ NO

If YES, and the suspension does not automatically adjust to a default ride mode (comfort-ride, sport-ride, etc.) when the ignition is set to “on” (but, the engine is not running), please list and describe the ride mode options available on the vehicle, and discuss when and how they are activated.

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_____
_____
_____

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_____

If YES above, designate ONE ride mode to be used for frontal crash tests and provide instructions for adjusting the test vehicle to that designated ride mode.

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9. LIST OF REMOVABLE PARTS

The list below contains certain parts that may be removed from the test vehicle to achieve the proper test weight. By placing a check mark in the table below, indicate which parts should NOT be removed based on your company's certification test data that removal of the part adversely affects FMVSS 214 side impact performance.

Removable Part	Do Not Remove
Spare tire	
Audio speakers	
Interior door trim panels (non-struck side	
Windows (non-struck side)	
Outboard mirrors	
Front Headlight assembly	
Rear Tail-light assembly	
Rear bumper fascia	
Front bumper fascia	

Additionally, provide a list of parts (other than the parts listed above) that can be removed from the test vehicle to achieve test weight. Prioritize the list in order of removal preference.

No.	Removable Part
1.	
2.	
3.	
4.	
5.	
6.	
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10. SPECIAL INSTRUCTIONS

Please make note of any other special instructions that you would like NHTSA to consider or be made aware of for the tested vehicle (ex. towing setup, etc.):

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_____

11. SEAT LATCHING VERIFICATION PROCEDURE

Describe, in as much detail as possible, your best practice for ensuring the proper engagement of any *manual* seat adjustment components into their proper seat track detents. This may include, but is not limited to: a description of the functionality of the manual seat adjustment mechanisms and all possible indications of full engagement, including visual, audial, and tactile methods of ensuring said engagement with tools such as a boroscope. Photographs and/or schematics along with suggestions of physical methods for ensuring engagement are highly suggested.

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_____
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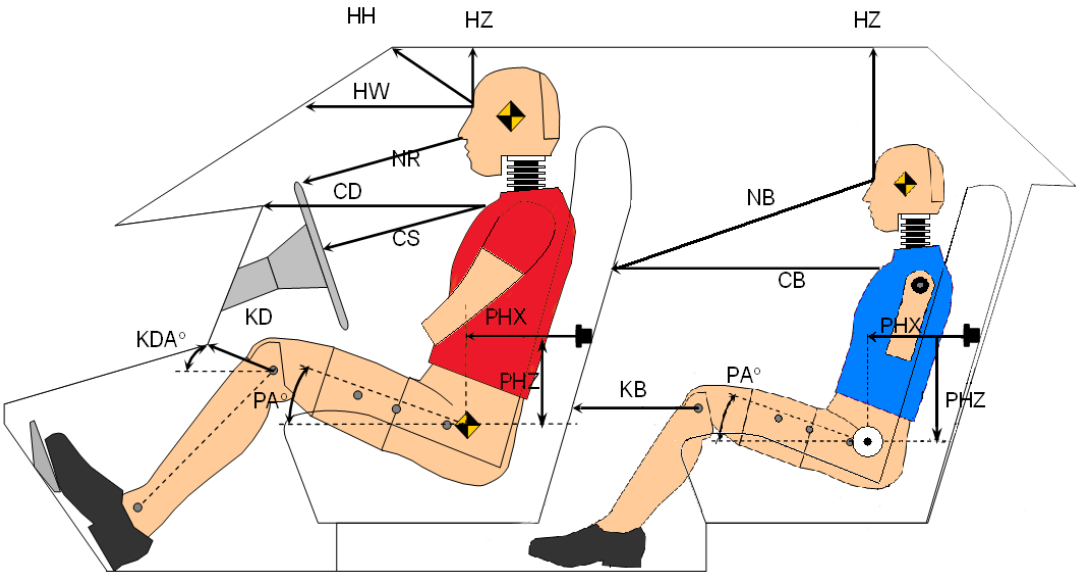
12. DUMMY MEASUREMENTS

Based on certification test data, provide the following measurements for the final positions of the 50th percentile male, ES-2re and 5th percentile female, SID IIs dummies when seated in accordance with FMVSS No. 214, S12.2 and S12.3. Provide measurements for the worst case scenario (i.e., the certification test(s) that produced test results with the lowest margin of compliance).

Longitudinal Measurements - MDB Test

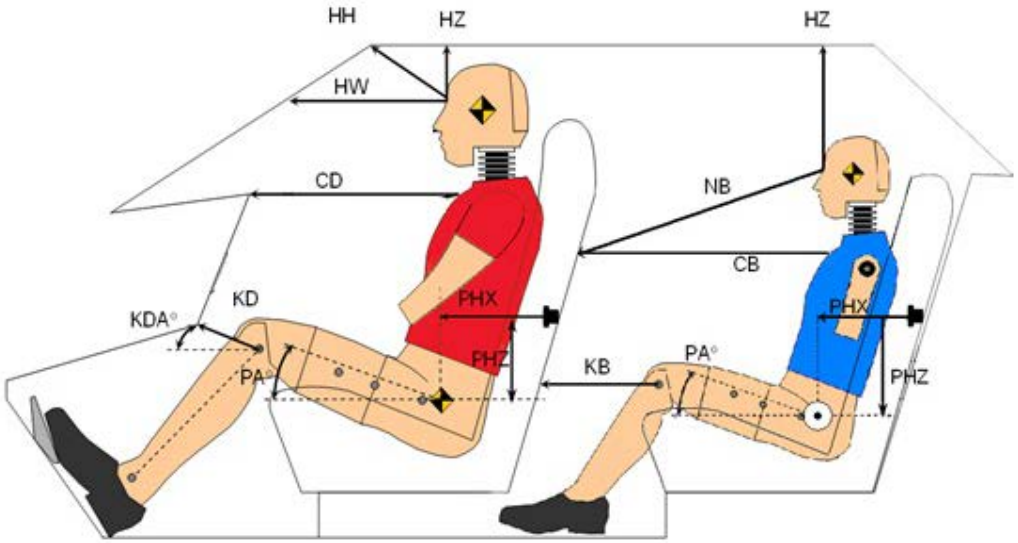
NOTE: When a level is to be used, it is to ensure that the line containing the two points described is either parallel or perpendicular to the ground. If a measurement to be made is less than 250 mm ignore the directions to use a level and approximate a level measurement. Also, when a measurement is to be taken to or from the center of a bolt on the dummy, take the measurement from the center of the bolt hole if the bolt is recessed.

Longitudinal Measurements – LEFT SIDE IMPACT



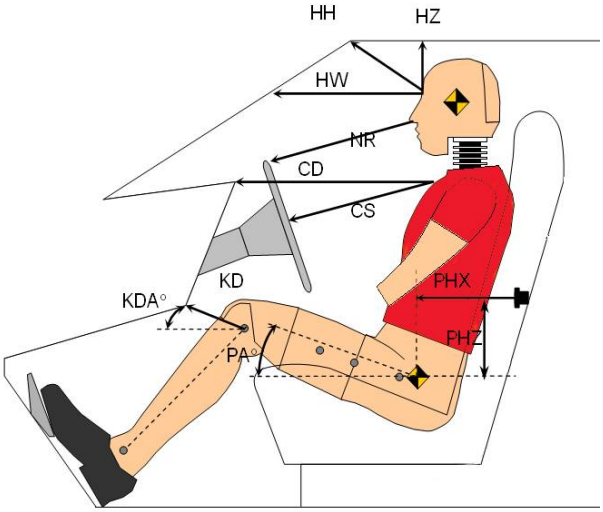
Driver Code	Rear Occupant Code	Measurement Description	ES2-re (mm)/ °	SID-IIs (mm)/ °
HH	--	Head to Header		
HW	--	Head to Windshield		
HZ	HZ	Head to Roof		
NR	NB	Nose to Rim/Seat Back		
CD	CB	Chest to Dash/Seat Back		
CS	--	Chest to Steering Wheel		
KD(L)	KB(L)	Left Knee to Dash/Seat Back		
KD(R)	KB(R)	Right Knee to Dash/Seat Back		
KDA(L)	--	Left Knee to Dash Angle		
KDA(R)	--	Right Knee to Dash Angle		
PA	PA	Pelvic Angle		
PHX	PHX	H-Point to Striker (X-Axis)		
PHZ	PHZ	H-Point to Striker (Z-Axis)		

Longitudinal Measurements – RIGHT-SIDE IMPACT



Front Passenger Code	Rear Occupant Code	Measurement Description	ES2-re (mm)/ °	SID-IIs (mm)/ °
HH	--	Head to Header		
HW	--	Head to Windshield		
HZ	HZ	Head to Roof		
CD	CB	Chest to Dash/Seat Back		
KD(L)	KB(L)	Left Knee to Dash/Seat Back		
KD(R)	KB(R)	Right Knee to Dash/Seat Back		
KDA(L)	--	Left Knee to Dash Angle		
KDA(R)	--	Right Knee to Dash Angle		
PA	PA	Pelvic Angle		
PHX	PHX	H-Point to Striker (X-Axis)		
PHZ	PHZ	H-Point to Striker (Z-Axis)		

Longitudinal Measurements – Pole Test (Left-Side Impact)



NOTE: 4-door vehicle shown. Rear dummy PHX and PHZ measurements for a 2-door vehicle would use the B-post striker as a reference point.

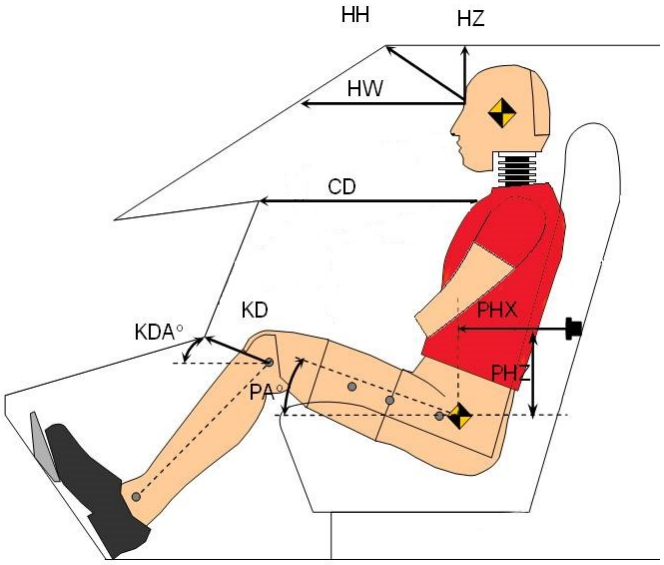
ES-2Re

Driver Code	Measurement Description	Length (mm)	Angle°
HH	Header to Header		
HW	Header to Windshield		
HZ	Head to Roof		
NR	Nose to Rim		
CD	Chest to Dash		
CS	Chest to Steering Wheel		
KDL	Left Knee to Dash		
KDR	Right Knee to Dash		
PA(X)	Pelvic Tilt Angle (X)		
PA(Y)	Pelvic Tilt Angle (Y)		
PHX	H-Point to Striker (X-Axis)		
PHZ	H-Point to Striker (Z-Axis)		

SID IIs

Driver Code	Measurement Description	Length (mm)	Angle°
HH	Header to Header		
HW	Header to Windshield		
HZ	Head to Roof		
NR	Nose to Rim		
CD	Chest to Dash		
CS	Chest to Steering Wheel		
KDL	Left Knee to Dash		
KDR	Right Knee to Dash		
PA(X)	Pelvic Tilt Angle (X)		
PA(Y)	Pelvic Tilt Angle (Y)		
PHX	H-Point to Striker (X-Axis)		
PHZ	H-Point to Striker (Z-Axis)		

Longitudinal Measurements – Pole Test (Right-Side Impact)



NOTE: 4-door vehicle shown. Rear dummy PHX and PHZ measurements for a 2-door vehicle would use the B-post striker as a reference point.

ES-2Re

Front Passenger Code	Measurement Description	Length (mm)	Angle°
HH	Header to Header		
HW	Header to Windshield		
HZ	Head to Roof		
CD	Chest to Dash		
KDL	Left Knee to Dash		
KDR	Right Knee to Dash		
PA(X)	Pelvic Tilt Angle (X)		
PA(Y)	Pelvic Tilt Angle (Y)		
PHX	H-Point to Striker (X-Axis)		
PHZ	H-Point to Striker (Z-Axis)		

SID IIs

Front Passenger Code	Measurement Description	Length (mm)	Angle°
HH	Header to Header		
HW	Header to Windshield		
HZ	Head to Roof		
CD	Chest to Dash		
KDL	Left Knee to Dash		
KDR	Right Knee to Dash		
PA(X)	Pelvic Tilt Angle (X)		
PA(Y)	Pelvic Tilt Angle (Y)		
PHX	H-Point to Striker (X-Axis)		
PHZ	H-Point to Striker (Z-Axis)		

Longitudinal Measurement Instructions

FRONT OCCUPANT

HEAD TO HEADER
Measure the distance from the point where the dummy's nose meets his forehead (between the eyes) to the furthest point forward on the header.

HEAD TO WINDSHIELD
Measure the distance from the point where the dummy's nose meets his forehead (between the eyes) in to a point on the windshield directly in front of it. Use a level or plumb-bob.

HEAD TO ROOF LINER
Measure the distance from the point where the dummy's nose meets his forehead (between the eyes) to the point on the roof liner directly above it. Use a level.

NOSE TO RIM/DASH PANEL
Measure the distance from the tip of the dummy's nose to the closest point on the top of the steering wheel rim for left-side impacts. For right-side impacts, measure the distance from the tip of the dummy's nose to the point on the dash panel.

CHEST TO DASH
Place a tape measure on the tip of the driver dummy's chin and rotate 125 mm of it downward toward the dummy to the point of contact on the transverse center of the dummy's chest. Measure the distance from this point to the closest point on the dash either between the upper part of the steering wheel between the hub and the rim, or measure to the dash placing the tape measure above the rim, whichever is a shorter measurement.

STEERING WHEEL TO CHEST
For left side impacts, measure the distance from the center of the steering wheel hub to the dummy's chest. Use a level.

LEFT AND RIGHT KNEES TO DASHBOARD
Measure the distance from the center of each knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard.

HIP POINT TO STRIKER (X)
Locate a point on the front door striker and project this point (with a level) vertically downward. Measure the distance horizontally from the pivot center of the dummy's torso and thigh to the point it intersects with the level.

HIP POINT TO STRIKER (Z)
Locate a point on the front door striker and project this point (preferably, with a level) horizontally toward the pivot center of the dummy's torso and thigh. Measure the distance vertically from the pivot center of the dummy's torso and thigh to the point it intersects with the level.

LEFT and RIGHT KNEES to DASHBOARD
Taken from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard.

KNEE (OUTBOARD) TO DASHBOARD ANGLE
Using the line representing the length measurement of the "outboard" knee (left or right) to the dashboard above, measure the angle between that line and horizontal.

PELVIC ANGLE
Measure by inserting the pelvic angle gauge into the H-point gauging hole on the dummy and taking this angle with respect to the horizontal.

REAR OCCUPANT (5th female, SID IIs)

HEAD TO ROOF LINER
Measure the distance from the point where the dummy's nose meets his forehead (between the eyes) to the point on the roof liner directly above it. Use a level.

CHEST TO BACK OF SEAT
Place a tape measure on the tip of the passenger dummy's chin and rotate 125 mm of it downward toward the dummy to the point of contact on the transverse center of the passenger dummy's chest. Then measure from this point to the closest point on the seat back directly forward of the rear outboard passenger seating position. Mark point on seat back for later NB measurement.

NOSE TO BACK OF SEAT
Measure from the tip of the passenger dummy's nose to the **same** point on the seat back located in CB measurement.

HIP POINT TO STRIKER (X)
Locate a point on the front door striker and project this point (with a level) vertically downward. Measure the distance horizontally from the pivot center of the dummy's torso and thigh to the point it intersects with the level.

HIP POINT TO STRIKER (Z)
Locate a point on the front door striker and project this point (preferably, with a level) horizontally toward the pivot center of the dummy's torso and thigh. Measure the distance vertically from the pivot center of the dummy's torso and thigh to the point it intersects with the level.

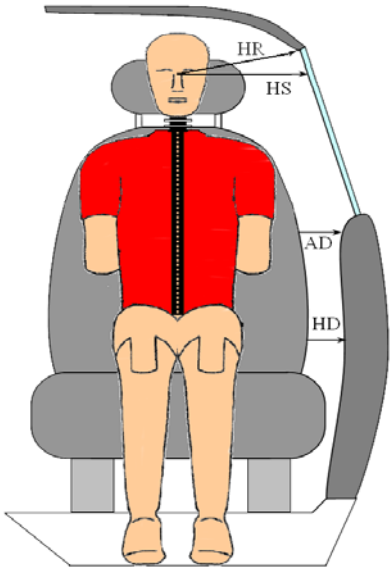
LEFT and RIGHT KNEES to SEAT BACK
Measure from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the seat back.

PELVIC ANGLE
Measure by inserting the pelvic angle gauge into the H-point gauging hole on the dummy and taking this angle with respect to the horizontal.

Lateral Measurements (MDB Test)

NOTE: If dummy measurements differ for left and right side impacts, separately, provide the information requested for both sides.

Lateral Measurements



Code	Description	Units	ES2-re	SID-IIs
HR	Head to Side Header	mm		
HS	Head to Side Window	mm		
AD	Arm to Door	mm		
HD	H-point to Door	mm		

Lateral Measurements (Pole Test) – ES2-re

Code	Description	Units	ES2-re
HR	Head to Side Header	mm	
HS	Head to Side Window	mm	
AD	Arm to Door	mm	
HD	H-point to Door	mm	

Lateral Measurements (Pole Test) – SID IIs

Code	Description	Units	SID-IIs
HR	Head to Side Header	mm	
HS	Head to Side Window	mm	
AD	Arm to Door	mm	
HD	H-point to Door	mm	

Lateral Measurement Instructions

HEAD TO SIDE HEADER
Measure the shortest distance from the point where the dummy's nose meets his forehead (between the eyes) to the side edge of the header just *above* the window frame, directly adjacent to the dummy.

HEAD TO SIDE WINDOW
Measure the distance horizontally from the point where the dummy's nose meets his forehead (between the eyes) to the outside of the side window. In order to take this measurement, roll the window down to the exact height that allows a level measurement. Use a *level.*

ARM TO DOOR
Measure the distance horizontally from the center of the outboard arm segment to the closest point on the door.

H-POINT TO DOOR
Project a point horizontally from the pivot center of the dummy's torso and thigh, outward to edge of the pelvis skin (for ES-2re) or pelvis plug (for SID IIs). Measure the distance horizontally from this point to the closest point on the door panel.