REPORT NUMBER 225-GTL-06-003

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 225 CHILD RESTRAINT ANCHORAGE SYSTEMS LOWER AND TETHER ANCHORAGES

HYUNDAI MOTOR CO.
2006 HYUNDAI SONATA, PASSENGER CAR
NHTSA NO. C60501

GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443

OCTOBER 13, 2006

FINAL REPORT

PREPARED FOR

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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Technical Report Documentation Page

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16. Abstract Compliance tests were conducted on the subject, 2006 Hyundai Sonata Passenger Car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-225-01 for the determination of FMVSS 225 compliance. Test failures identified were as follows: NONE		
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SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2006 Hyundai Sonata Passenger Car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 225 testing to determine if the vehicle was in compliance with the requirements of the standard. The purpose of this standard is to establish requirements for child restraint anchorage systems to ensure their proper location and strength for the effective securing of child restraints, to reduce the likelihood of the anchorage systems' failure and to increase the likelihood that child restraints are properly secured and thus more fully achieve their potential effectiveness in motor vehicles.

1.1 The test vehicle was a 2006 Hyundai Sonata Passenger Car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: KMHET46C96A109867

B. NHTSA No.: C60501

C. Manufacturer: HYUNDAI MOTOR CO.

D. Manufacture Date: JUN/21/05

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 225 testing during the time period July 10 through September 26, 2006.

SECTION 2

COMPLIANCE TEST RESULTS

2.0 TEST RESULTS

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedures, TP-225-01 dated 11 April 2005.

Based on the test performed, the 2006 Hyundai Sonata Passenger Car appeared to meet the requirements of FMVSS 225 testing.

SECTION 3

COMPLIANCE TEST DATA

3.0 TEST DATA

The following data sheets document the results of testing on the 2006 Hyundai Sonata Passenger Car.

DATA SHEET 1
SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE:JUN/21/05; TEST DATE: JULY 10 – SEPTEMBER 26, 2006
TEST LABORATORY:GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

A. VISUAL INSPECTION OF TEST VEHICLE

Upon receipt for completeness, function, and discrepancies or damage which might influence the testing.

RESULTS: OK FOR TEST

B. REQUIREMENTS FOR CHILD RESTRAINT SYSTEMS AND TETHER ANCHORAGES

	PASS	FAIL
DSP a	X	
DSP b	X	
DSP c	X	

C. LOCATION OF TETHER ANCHORAGES

	PASS	FAIL
DSP a	X	
DSP b	X	
DSP c	X	

D. LOWER ANCHORAGE DIMENSIONS

	PASS	FAIL
DSP a	X	
DSP b	N/A	N/A
DSP c	X	

DATA SHEET 1 CONTINUED
SUMMARY OF RESULTS

E. CONSPICUITY AND MARKING OF LOWER ANCHORAGES

	PASS	FAIL
DSP a	X	
DSP b	N/A	N/A
DSP c	X	

F. STRENGTH OF TETHER ANCHORAGES

	PASS	FAIL
DSP a	X	
DSP b	X	
DSP c	N/A	N/A

G. STRENGTH OF LOWER ANCHORAGES (Forward Force)

	PASS	FAIL
DSP a	N/A	N/A
DSP b	N/A	N/A
DSP c	X	

H. STRENGTH OF LOWER ANCHORAGE (Lateral Force)

	PASS	FAIL
DSP a	N/A	N/A
DSP b	N/A	N/A
DSP c	X	

I. OWNER'S MANUAL

PASS	FAIL
X	

REMARKS: DSP a = Left Rear Outboard, DSP b = Center, DSP c = Right Rear Outboard

RECORDED BY: G. Farrand DATE: 09/26/06

APPROVED BY: D. Messick

DATA SHEET 2
REQUIREMENTS FOR CHILD RESTRAINT ANCHORAGE SYSTEMS
AND TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: JULY 10, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

Number of rows of seats: 2
Number of rear, forward-facing designated seating positions: 3
Number of required CRAS (lower anchorages only, for convertibles/school buses): 2
Number of required tether anchorages (can be additional CRAS): 3
Is the vehicle a convertible? NO
Is the vehicle a school bus? NO

Does the vehicle have a CRAS (lower anchorage only, for convertibles/school buses) installed at a front passenger seating position? NO

If NO, skip to next question.
If YES, does the vehicle have rear designated seating positions? _____
If NO, does the vehicle have an air bag on-off switch or a special exemption for no passenger air bag?
If NO = FAIL If YES = PASS
If Yes, does the vehicle meet the requirements of S4.5.4.1 (b) of S208 and have and air bag on-off switch or a special exemption for no passenger air bag?____
Record the distance between the front and rear seat back:_____
If Distance <720 mm and vehicle has an air bag on-off switch or special exemption = PASS
If Distance ≥ 720 mm or no air bag on-off switch or no special exemption = FAIL

Does the vehicle have rear designated seating position(s) where the lower bars of a CRAS are prevented from being located because of transmission and/or suspension component interference?
NO
If NO, skip to next question.
If YES, does the vehicle have a tether anchorage at a front passenger seating position?
YES = PASS NO = FAIL (S5(e))

Number of provided CRAS (lower anchorage only, for convertibles/school buses), indicate if a built-in child restraint is counted as a CRAS: 2

Is the number of provided CRAS (lower anchorages only, for convertible/school buses) greater than or equal to the number of required CRAS (lower anchorages only, for convertibles/school buses)?
YES
YES = PASS NO = FAIL (S4.4(a) or (b) or (c))

DATA SHEET 2 CONTINUED

If the vehicle has 3 or more rows of seats is a CRAS (lower anchorage only for convertibles/school buses) provided in the second row: N/A

YES = PASS NO = FAIL (S4.4(a)(1))

Number of provided tether anchorages (can be additional CRAS) indicate if a built-in child restraint is counted a s tether anchorage (NOTE: a built-in child restraint can only be counted toward either the required number of CRAS or tether anchorages, not both): 3

Is the number of provided tether anchorages greater than or equal to the number of required tether anchorages? YES

YES = PASS NO = FAIL (S4.4 (a) or (b) or (c))

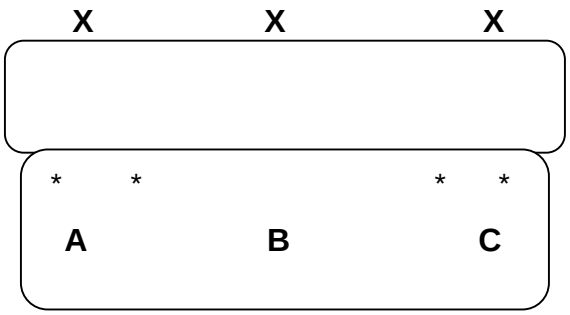
If the vehicle has 3 or more rear dsps and a non-outboard dsp, is a tether anchorage or CRAS provided at a non-outboard dsp? YES

YES = PASS NO = FAIL (S4.4 (a)(2))

Are all tether and lower anchorages available for use at all times when the seat is configured for passenger use? YES

YES = PASS NO = FAIL (S4.6 (b))

Provide a diagram showing the location of lower anchorages and/or tether anchorages.



X = Top Tether
***** = Lower Anchors

RECORDED BY: G. FARRAND DATE: 07/10/06

APPROVED BY: D. MESSICK

DATA SHEET 3
LOCATION OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: JULY 10, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

Detailed description of the location of the tether anchorage:
Located on shelf behind seat back.

Based on visual inspection, is the tether anchorage within the shaded zone? YES
If YES = PASS, skip to next section
If NO, After constructing the shaded zone, is the tether anchorage within the shaded zone?

If YES = PASS, skip to next section
If NO, Is it possible to locate a tether anchorage within the shaded zone without removing a seating component?
If YES = FAIL (S6.2.1)
If NO, Is a tether routing device provided?
If YES = PASS
IF NO = FAIL (S6.2.1.2)

Is the tether anchorage recessed? YES
If NO, skip to next question
If YES, is it outside of the tether strap wraparound area? YES
YES = PASS NO = FAIL (S6.2.1)

Does the tether anchorage permit attachment of a tether hook? YES
YES = PASS NO = FAIL (S6.1(a))

Is the tether anchorage accessible without the need for any tools other than a screwdriver or coin?
YES
YES = PASS NO = FAIL (S6.1(b))

After the tether anchorage is accessed, is it ready for use without the need for tools? YES
YES = PASS NO = FAIL (S6.1(c)

Is the tether anchorage sealed to prevent the entry of exhaust fumes into the passenger compartment? YES
YES = PASS NO = FAIL (S6.1(d))

If the DSP has a tether routing device, is it flexible or rigid? N/A

DATA SHEET 3 CONTINUED

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

If the DSP has a flexible tether routing device, after installing SFAD2 record the tether strap tension:
N/A (Must be 60 N ± 5 N)

If the DSP has a flexible tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 65mm = PASS Less than 65mm = FAIL

If the DSP has a rigid tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 100mm = PASS Less than 100mm = FAIL

COMMENTS:

RECORDED BY: G. FARRAND DATE: 07/10/06

APPROVED BY: D. MESSICK

DATA SHEET 3A
LOCATION OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: JULY 10, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 CENTER POSITION (DSP B)

Detailed description of the location of the tether anchorage:
Located on shelf behind seat back.

Based on visual inspection, is the tether anchorage within the shaded zone? YES
If YES = PASS, skip to next section
If NO, After constructing the shaded zone, is the tether anchorage within the shaded zone?

If YES = PASS, skip to next section
If NO, Is it possible to locate a tether anchorage within the shaded zone without removing a seating component?
If YES = FAIL (S6.2.1)
If NO, Is a tether routing device provided?
If YES = PASS
IF NO = FAIL (S6.2.1.2)

Is the tether anchorage recessed? YES
If NO, skip to next question
If YES, is it outside of the tether strap wraparound area? YES
YES = PASS NO = FAIL (S6.2.1)

Does the tether anchorage permit attachment of a tether hook? YES
YES = PASS NO = FAIL (S6.1(a))

Is the tether anchorage accessible without the need for any tools other than a screwdriver or coin?
YES
YES = PASS NO = FAIL (S6.1(b))

After the tether anchorage is accessed, is it ready for use without the need for tools? YES
YES = PASS NO = FAIL (S6.1(c)

Is the tether anchorage sealed to prevent the entry of exhaust fumes into the passenger compartment? YES
YES = PASS NO = FAIL (S6.1(d))

If the DSP has a tether routing device, is it flexible or rigid? N/A

DATA SHEET 3A CONTINUED

DESIGNATED SEATING POSITION: ROW 2 CENTER POSITION (DSP B)

If the DSP has a flexible tether routing device, after installing SFAD2 record the tether strap tension:
N/A (Must be 60 N ± 5 N)

If the DSP has a flexible tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 65mm = PASS Less than 65mm = FAIL

If the DSP has a rigid tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 100mm = PASS Less than 100mm = FAIL

COMMENTS:

RECORDED BY: G. FARRAND DATE: 07/10/06

APPROVED BY: D. MESSICK

DATA SHEET 3B
LOCATION OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE:JUN/21/05; TEST DATE: JULY 10, 2006
TEST LABORATORY:GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE (DSP C)

Detailed description of the location of the tether anchorage:
Located on shelf behind seat back.

Based on visual inspection, is the tether anchorage within the shaded zone? YES
If YES = PASS, skip to next section
If NO, After constructing the shaded zone, is the tether anchorage within the shaded zone?

If YES = PASS, skip to next section
If NO, Is it possible to locate a tether anchorage within the shaded zone without removing a seating component?
If YES = FAIL (S6.2.1)
If NO, Is a tether routing device provided?
If YES = PASS
IF NO = FAIL (S6.2.1.2)

Is the tether anchorage recessed? YES
If NO, skip to next question
If YES, is it outside of the tether strap wraparound area? YES
YES = PASS NO = FAIL (S6.2.1)

Does the tether anchorage permit attachment of a tether hook? YES
YES = PASS NO = FAIL (S6.1(a))

Is the tether anchorage accessible without the need for any tools other than a screwdriver or coin?
YES
YES = PASS NO = FAIL (S6.1(b))

After the tether anchorage is accessed, is it ready for use without the need for tools? YES
YES = PASS NO = FAIL (S6.1(c)

Is the tether anchorage sealed to prevent the entry of exhaust fumes into the passenger compartment? YES
YES = PASS NO = FAIL (S6.1(d))

If the DSP has a tether routing device, is it flexible or rigid? N/A

DATA SHEET 3B CONTINUED

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE DSP C)

If the DSP has a flexible tether routing device, after installing SFAD2 record the tether strap tension:
N/A (Must be 60 N ± 5 N)

If the DSP has a flexible tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 65mm = PASS Less than 65mm = FAIL

If the DSP has a rigid tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 100mm = PASS Less than 100mm = FAIL

COMMENTS:

RECORDED BY: G. FARRAND DATE: 07/10/06

APPROVED BY: D. MESSICK

DATA SHEET 4
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: JULY 10, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

Outboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1mm = PASS Other size = FAIL (S9.1.1(a))

Are the bars straight, horizontal and transverse? YES
YES = PASS NO = FAIL

Length of the straight portion of the bar (outboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length of the straight portion of the bar (inboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length between the anchor bar supports (outboard lower anchorage): 36 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 36 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 10.4º
Angle = 15º±10º = PASS Angle≠15º±10º = FAIL (S9.2.1)

CRF Roll angle: 0.0
Angle = 0º±5º = PASS Angle≠0º±5º = FAIL (S9.2.1)

CRF Yaw angle: 0.0
Angle = 0º±10º = PASS Angle≠0º±10º = FAIL (S9.2.1)

Distance between point Z on the CRF and the front surface of outboard anchor bar: 34 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 34 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL

DATA SHEET 4 CONTINUED

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

Distance between SgRP and the front surface of outboard anchor bar: 155 mm
Distance ≥ 120mm = PASS Distance < 120mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 156 mm
Distance ≥ 120mm = PASS Distance < 120mm = FAIL

Based on visual observation, would a 100 N load cause the anchor bar to deform more than 5 mm?
NO

If NO = PASS
If YES = FAIL (S9.1.1(g)), Provide further description of the attachment of the anchor bar:

COMMENTS:

RECORDED BY: G. FARRAND DATE: 07/10/06

APPROVED BY: D. MESSICK

DATA SHEET 4A
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: JULY 10, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE (DSP C)

Outboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1mm = PASS Other size = FAIL (S9.1.1(a))

Are the bars straight, horizontal and transverse? YES
YES = PASS NO = FAIL

Length of the straight portion of the bar (outboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length of the straight portion of the bar (inboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length between the anchor bar supports (outboard lower anchorage): 36 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 36 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 10.5º
Angle = 15º±10º = PASS Angle≠15º±10º = FAIL (S9.2.1)

CRF Roll angle: 0.0
Angle = 0º±5º = PASS Angle≠0º±5º = FAIL (S9.2.1)

CRF Yaw angle: 0.0
Angle = 0º±10º = PASS Angle≠0º±10º = FAIL (S9.2.1)

Distance between point Z on the CRF and the front surface of outboard anchor bar: 35 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 35 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL

DATA SHEET 4A CONTINUED

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE (DSP C)

Distance between SgRP and the front surface of outboard anchor bar: 168 mm
Distance ≥ 120mm = PASS Distance < 120mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 162 mm
Distance ≥ 120mm = PASS Distance < 120mm = FAIL

Based on visual observation, would a 100 N load cause the anchor bar to deform more than 5 mm?
NO

If NO = PASS
If YES = FAIL (S9.1.1(g)), Provide further description of the attachment of the anchor bar:

COMMENTS:

RECORDED BY: G. FARRAND DATE: 07/10/06

APPROVED BY: D. MESSICK

DATA SHEET 5
CONSPICUITY AND MARKING OF LOWER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: JULY 10, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A), AND ROW 2 RIGHT SIDE (DSP C)

MARKING (Circles)

Diameter of the circle: 15
Diameter ≥13mm = PASS Diameter <13mm = FAIL (S9.5(a)(1))

Does the circle have words, symbols or pictograms? YES Symbol
NO skip to next question
YES, are the meaning of the words, symbols or pictograms explained in the owner's manual? YES
YES = PASS NO = FAIL (S9.5(a)(2))

Where is the circle located? Seat back or seat Cushion: Seat Back

For circles on seat backs, vertical distance from the center of the circle to the center of the anchor bar: 65
Distance between 50&100mm = PASS Other Distance=FAIL (S9.5(a)(3))

For circles on seat cushions, horizontal distance from the center of the circle to the center of the bar: N/A
Distance between 75&125mm= PASS Other Distance=FAIL (S9.5(a)(3))

Lateral distance from the center of the circle to the center of the anchor bar: 0
Distance≤25mm = PASS Distance >25mm = FAIL (S9.5(a)(3))

CONSPICUITY (No Circles)

Is the anchor bar or guide visible when viewed from a point 30º above the horizontal in a vertical longitudinal plane bisecting the anchor bar or guide? N/A
YES = PASS NO = FAIL (S9.5(b))

If there is a guide, is it permanently attached? N/A
YES = PASS NO = FAIL (S9.5(b))

DATA SHEET 5 CONTINUED

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A), AND ROW 2 RIGHT SIDE (DSP C)

Is there a cap or cover over the anchor bar? N/A

If YES, Is the cap or cover marked with words, symbols or pictograms? _____

If NO = FAIL (S9.5(b))

If YES, is the meaning of the words, symbols or pictograms explained in the owner's manual?

YES = PASS NO = FAIL (S9.5(b))

If NO, there are no requirements for having a cover. N/A

RECORDED BY: G. FARRAND DATE: 07/10/06

APPROVED BY: D. MESSICK

DATA SHEET 6
STRENGTH OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: SEPTEMBER 26, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 5639

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

SFAD: 2

Seat Back Angle: 27º FIXED

Location of seat back angle measurement: 2D Template

Head Restraint Position: UP

D-ring Position: N/A

Force at Point X (lower front crossmember for SFAD2) while securing belts and tether: 135 N

Lap belt tension: N/A (SFAD 1 only)

Tether strap tension: 55 N

Angle (measured above the horizontal at 500 N): 10º

Separation of tether anchorage at 500 N: NO
NO = PASS YES = FAIL (S6.3.1)

Force application rate: 575 N/S

Time to reach maximum force (24-30 s): 26 sec.

Maximum force (14,950 N ± 50 N): 14,950 N

Tested simultaneously with another DSP? NO

COMMENTS: Displacement at maximum load 40 mm.

RECORDED BY: G. FARRAND DATE: 09/26/06

APPROVED BY: D. MESSICK

DATA SHEET 6A
STRENGTH OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: SEPTEMBER 26, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 5640

DESIGNATED SEATING POSITION: ROW 2 CENTER (DSP B)

SFAD: 1

Seat Back Angle: 21º FIXED

Location of seat back angle measurement: 2D Template

Head Restraint Position: N/A

D-ring Position: N/A

Force at Point X (lower front crossmember for SFAD2) while securing belts and tether: 135 N

Lap belt tension: 55 N (SFAD 1 only)

Tether strap tension: 55 N

Angle (measured above the horizontal at 500 N): 10º

Separation of tether anchorage at 500 N: NO
NO = PASS YES = FAIL (S6.3.1)

Force application rate: 575 N/S

Time to reach maximum force (24-30 s): 26 sec.

Maximum force (14,950 N ± 50 N): 14,950 N

Tested simultaneously with another DSP? NO

COMMENTS: Displacement at maximum load 114 mm.

RECORDED BY: G. FARRAND DATE: 09/26/06

APPROVED BY: D. MESSICK

DATA SHEET 7
STRENGTH OF LOWER ANCHORAGES (Forward Force)

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: SEPTEMBER 26, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 5641

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE (DSP C)

Seat Back Angle: 27º FIXED

Location of seat back angle measurement: 2D Template

Head Restraint Position: UP

Force at lower front crossmember for SFAD2 while tightening rearward extensions: 135 N

Angle (measured above the horizontal at 500 N): 10º

Force application rate: 421 N/S

Time to reach maximum force (24-30 s): 26 sec.

Maximum force (10,950 N ± 50 N): 10,969 N

Displacement, H1 (at 500 N): 0.0

Displacement, H2 (at maximum load): 41 mm

Displacement of Point X: 41 mm (H2-H1)
Displacement > 175 mm = FAIL (S9.4.1(a))

Tested simultaneously with another DSP? NO

Distance between adjacent DSP's: 355 mm

COMMENTS:

RECORDED BY: G. FARRAND DATE: 09/26/06

APPROVED BY: D. MESSICK

DATA SHEET 8
OWNER'S MANUAL

VEH. MOD YR/MAKE/MODEL/BODY: 2006 HYUNDAI SONATA PASSENGER CAR
VEH. NHTSA NO: C60501; VIN: KMHET46C96A109867
VEH. BUILD DATE: JUN/21/05; TEST DATE: SEPTEMBER 26, 2006
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

Description of which DSP's are equipped with tether anchorages and child restraint anchorage systems: YES

PASS X FAIL

Step-by-step instructions for properly attaching a child restraint system's tether strap to the tether anchorage. Diagrams are required. YES

PASS X FAIL

Description of how to properly use the tether anchorage and lower anchor bars: YES

PASS X FAIL

If the lower anchor bars are marked with a circle, an explanation of what the circle indicates as well as any words or pictograms: YES

PASS X FAIL

COMMENTS:

RECORDED BY: G. FARRAND DATE: 09/26/06

APPROVED BY: D. MESSICK

SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
COMPUTER	AT&T	486DX266	BEFORE USE	BEFORE USE
LOAD CELL	INTERFACE	215709	09/06	09/07
LINEAR TRANSDUCER	SERVO SYSTEMS	20	BEFORE USE	BEFORE USE
SEAT BELT LOAD CELL	TRANSDUCER	135	BEFORE USE	BEFORE USE
SEAT BELT LOAD CELL	TRANSDUCER	137	BEFORE USE	BEFORE USE
LEVEL	STANLEY	42-449	02/06	02/07
FORCE GAUGE	CHATILLON	8761	BEFORE USE	BEFORE USE
CALIPER	N/A	Q9322365	BEFORE USE	BEFORE USE
CRF	MEASUREMENT FIXTURE	GTL CRF	BEFORE USE	BEFORE USE
SFAD 1	FORCE APPLICATION DEVICE	GTL SFAD 1	BEFORE USE	BEFORE USE
SFAD 2	FORCE APPLICATION DEVICE	GTL SFAD 2	BEFORE USE	BEFORE USE

SECTION 5
PHOTOGRAPHS

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

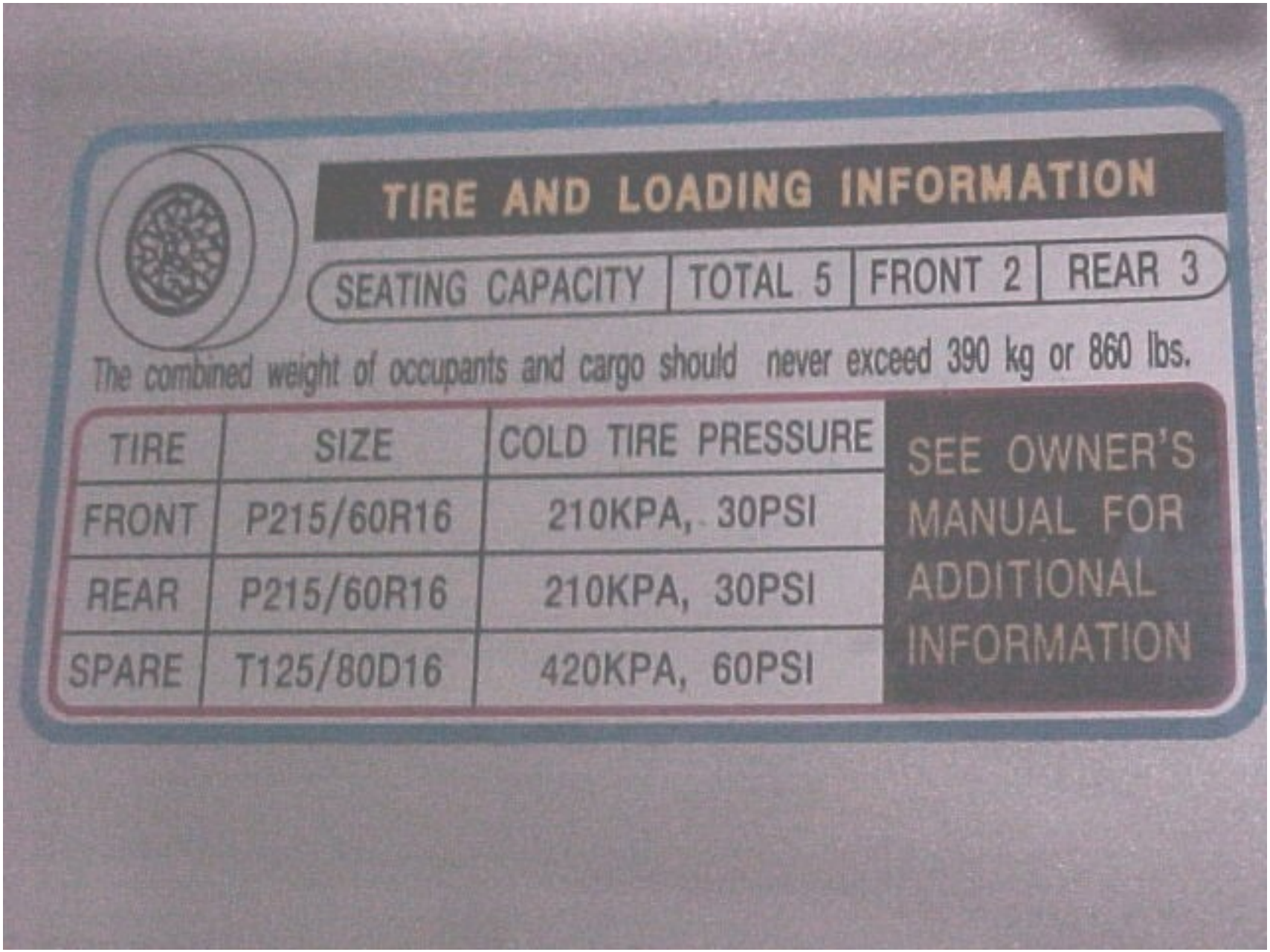
FIGURE 5.3
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.5
VEHICLE CERTIFICATION LABEL

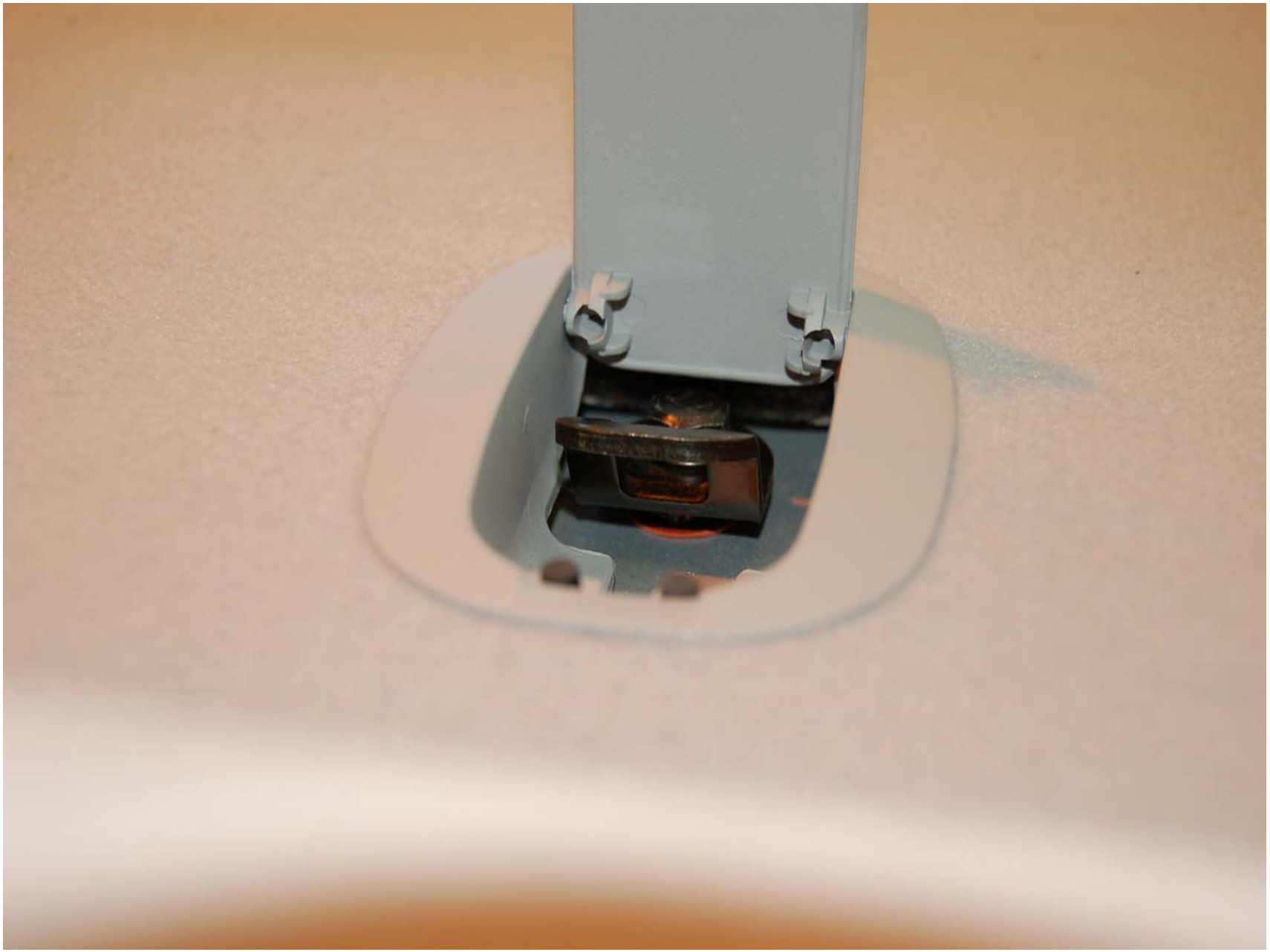


2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.6
VEHICLE TIRE INFORMATION LABEL

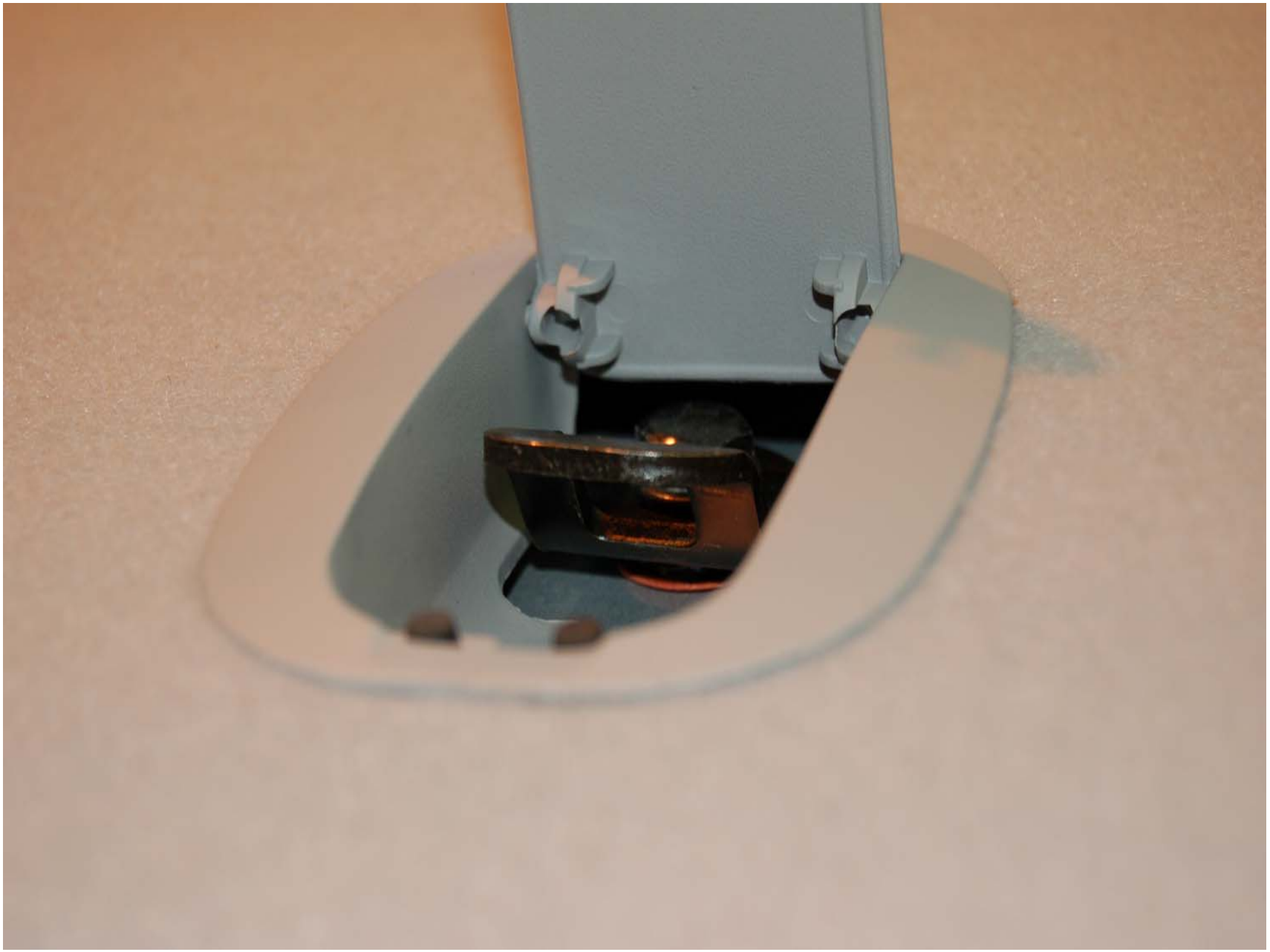
2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.7
ROW 2, LEFT SIDE, LOWER ANCHORS, PRE-TEST



2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.8
ROW 2, LEFT SIDE, TOP TETHER ANCHOR,
PRE-TEST

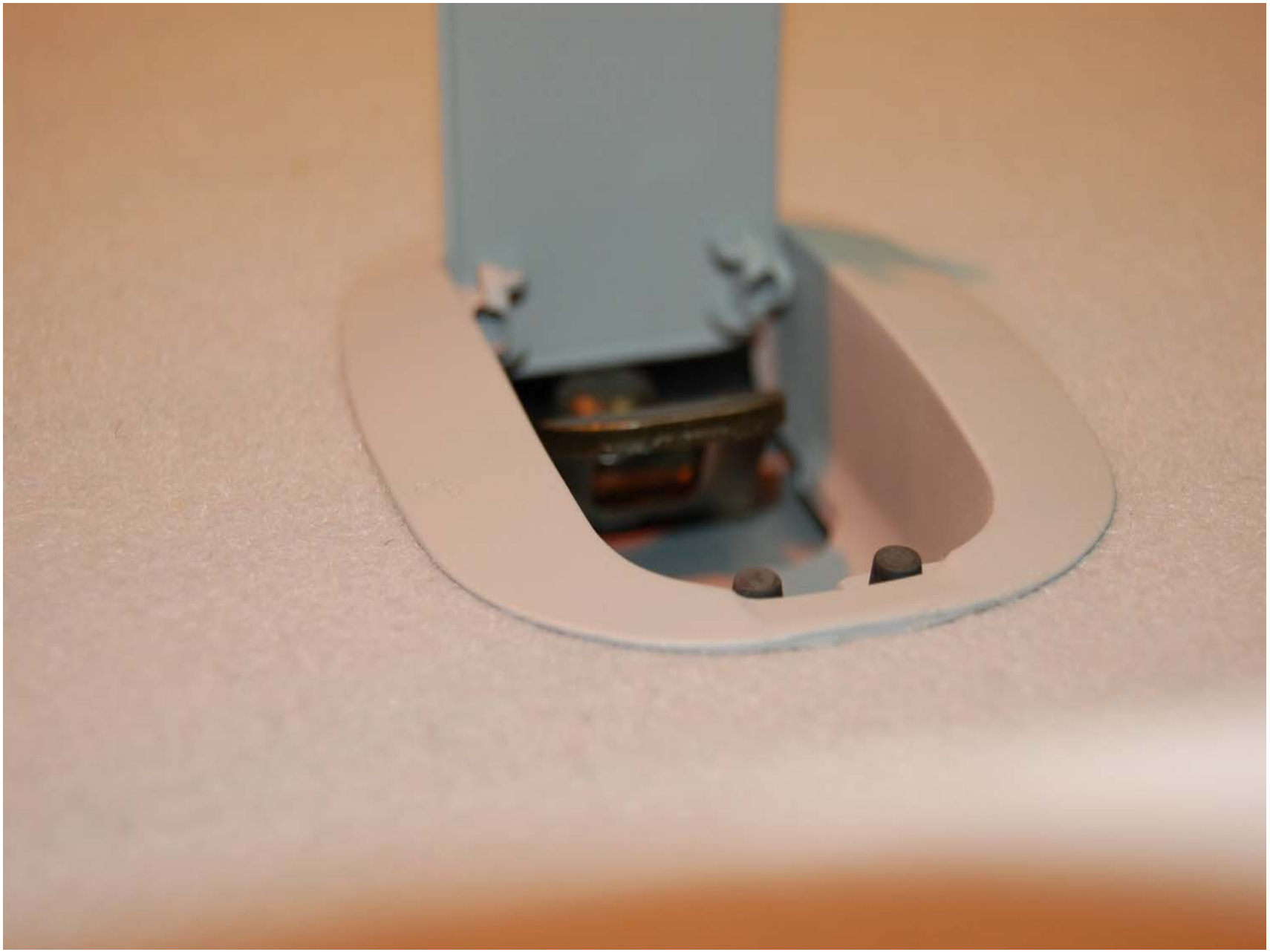


2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.9
ROW 2, CENTER, TOP TETHER ANCHOR,
PRE-TEST

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.10
ROW 2, RIGHT SIDE, LOWER ANCHORS,
PRE-TEST



2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.11
ROW 2, RIGHT SIDE, TOP TETHER ANCHOR,
PRE-TEST

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

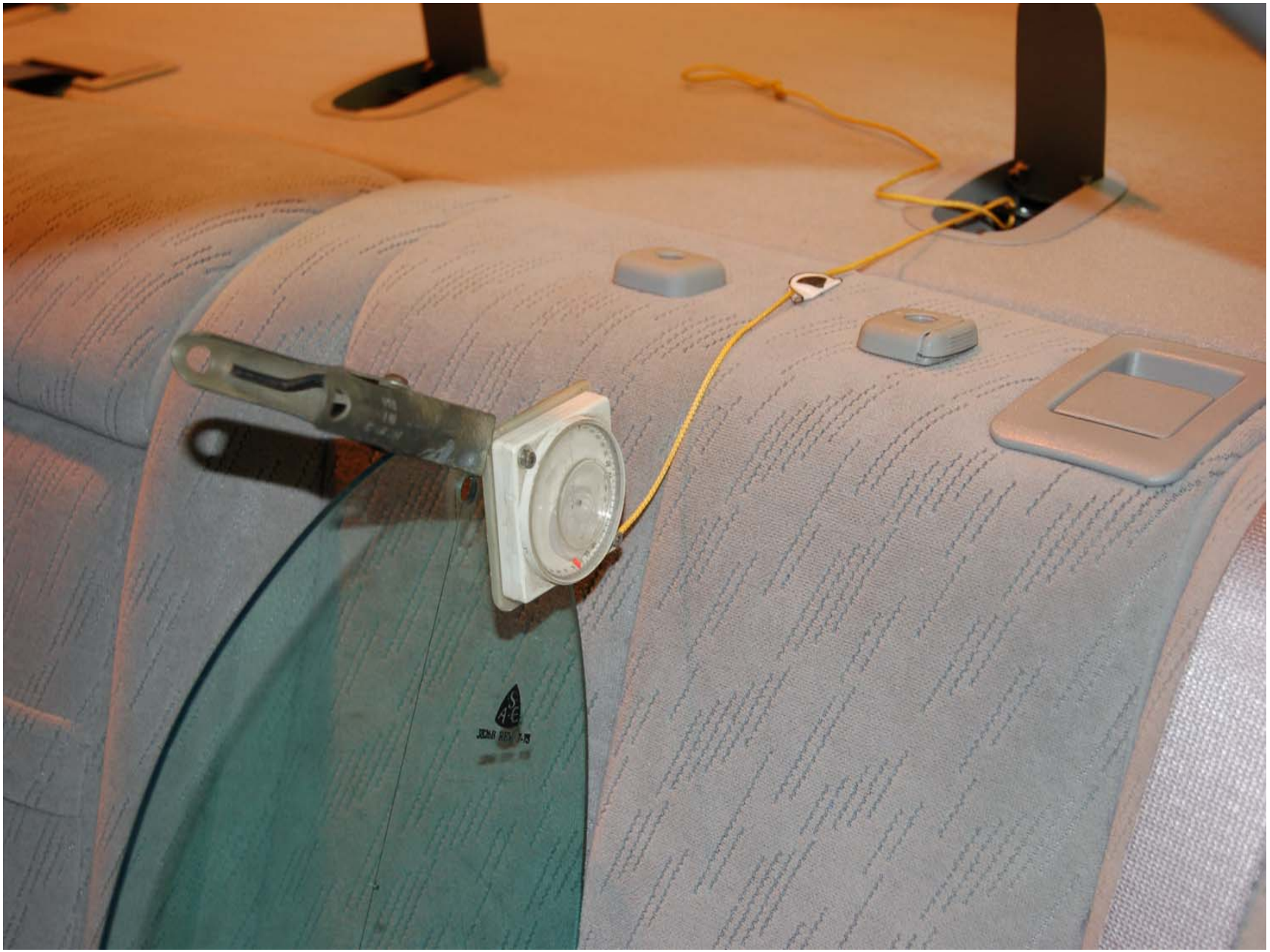
FIGURE 5.12
OVERALL VIEW OF ROW 2 SEATING POSITIONS,
PRE-TEST

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.13
ROW 2, LEFT SIDE WITH CRF

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.14
ROW 2, LEFT SIDE WITH 2-D TEMPLATE



2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

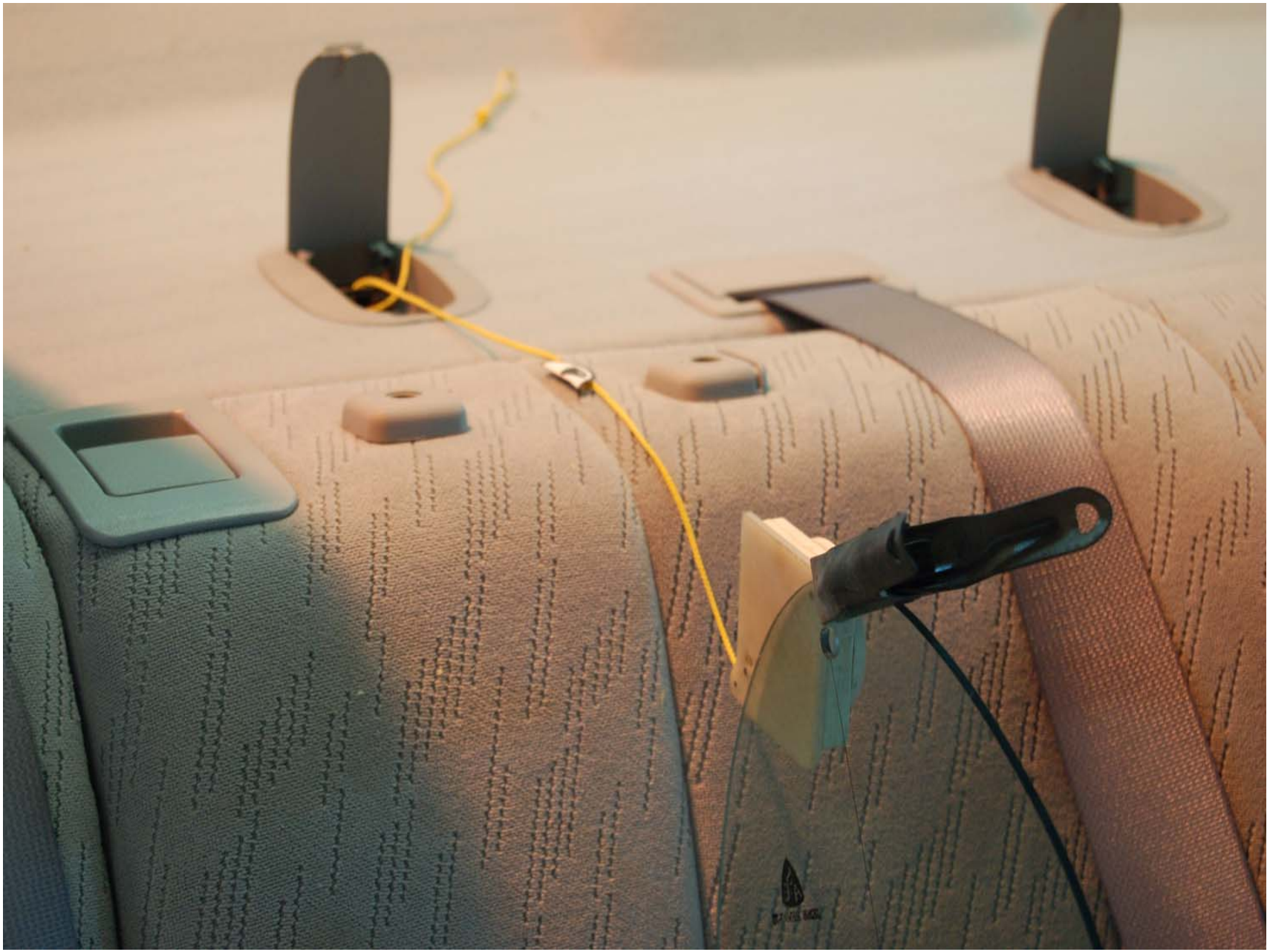
FIGURE 5.15
ROW 2, LEFT SIDE TOP TETHER ROUTING

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.16
ROW 2, RIGHT SIDE WITH CRF

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.17
ROW 2, RIGHT SIDE WITH 2-D TEMPLATE



2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.18
ROW 2, RIGHT SIDE TOP TETHER ROUTING

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.19
ROW 2, RIGHT SIDE INBOARD CRF MEASUREMENT

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.20
ROW 2, RIGHT SIDE OUTBOARD CRF MEASUREMENT

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

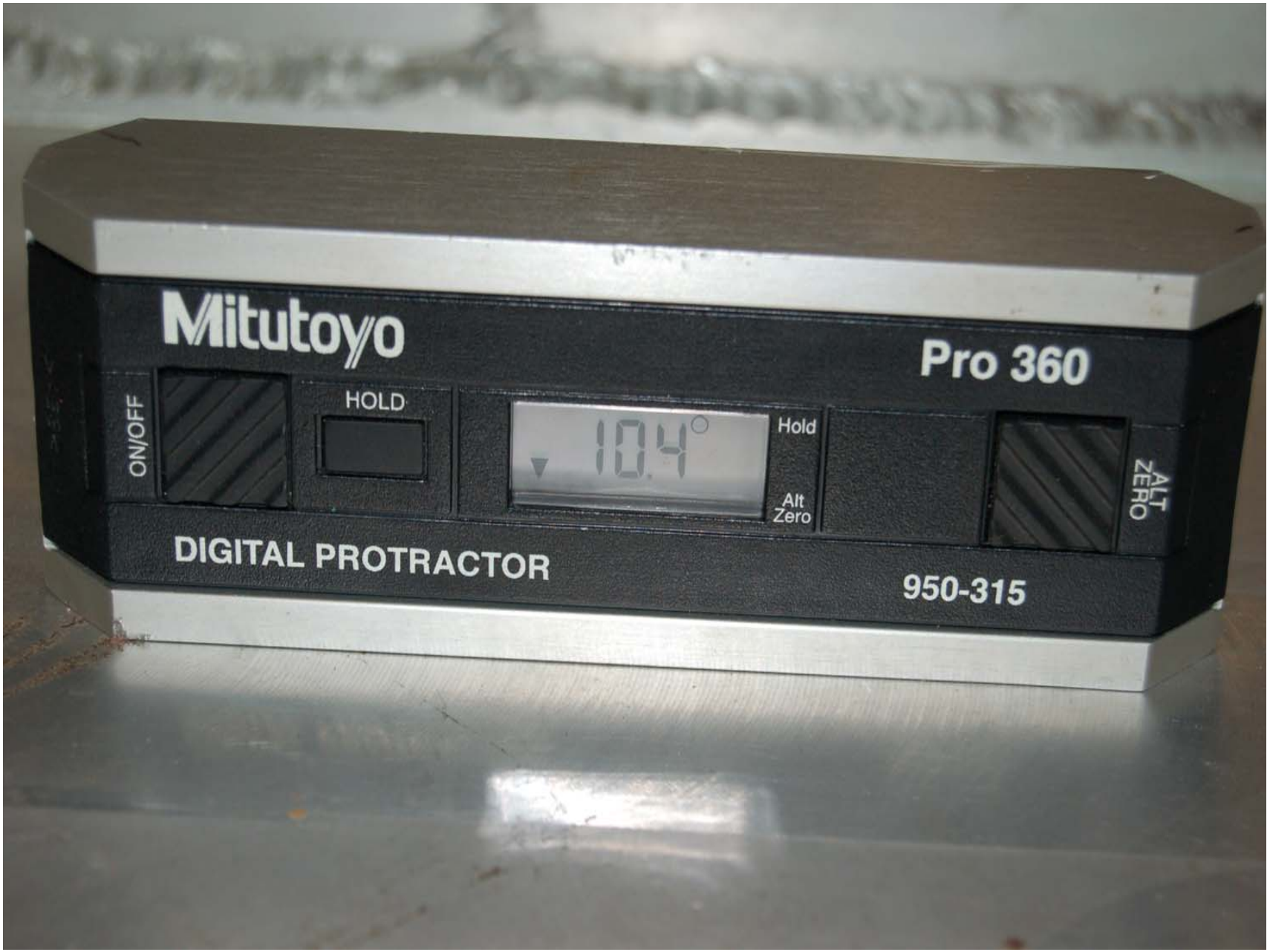
FIGURE 5.21
ROW 2, LEFT SIDE, INBOARD CRF MEASUREMENT

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.22
ROW 2, LEFT SIDE, OUTBOARD CRF MEASUREMENT

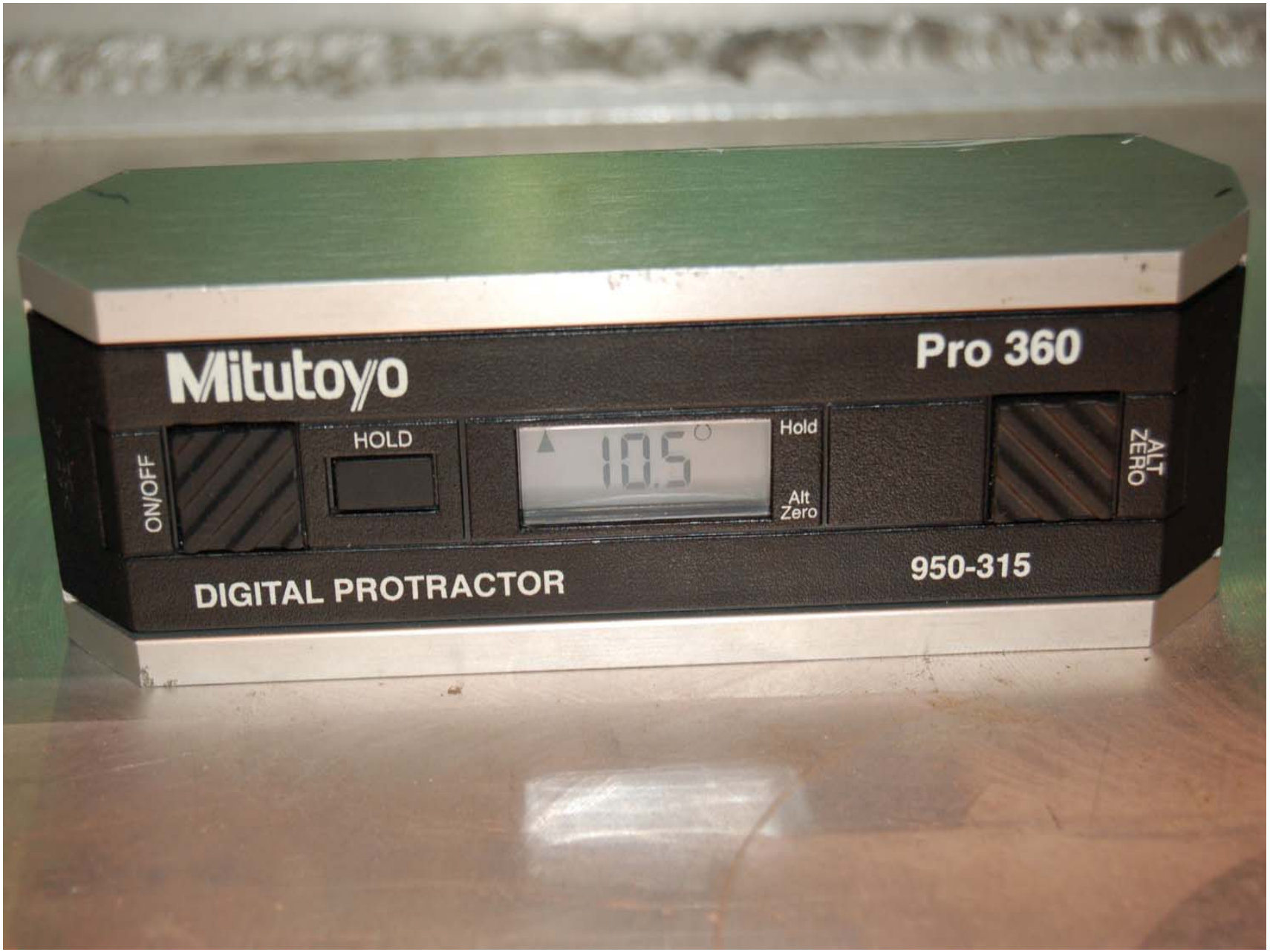
2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.23
SYMBOL MEASUREMENT



2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.24
ROW 2, LEFT SIDE CRF PITCH MEASUREMENT



2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

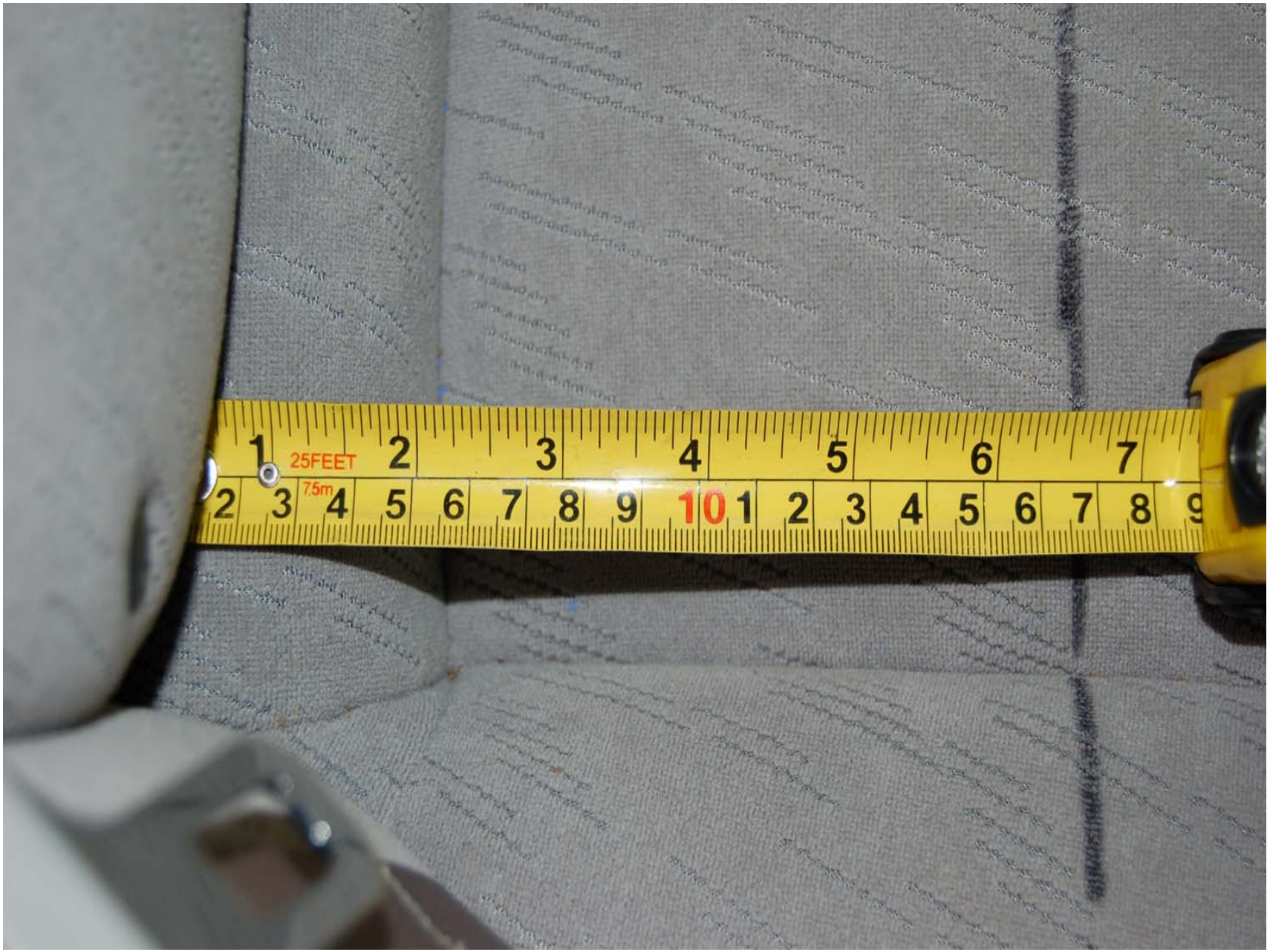
FIGURE 5.25
ROW 2, RIGHT SIDE CRF PITCH MEASUREMENT

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.26
ROW 2, LEFT SIDE OUTBOARD SRP MEASUREMENT

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.27
ROW 2, LEFT SIDE INBOARD SRP MEASUREMENT



2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.28
ROW 2, RIGHT SIDE OUTBOARD SRP MEASUREMENT

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.29
ROW 2, RIGHT SIDE INBOARD SRP MEASUREMENT

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.30
¾ LEFT REAR VIEW OF VEHICLE IN TEST RIG

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.31
¾ RIGHT FRONT VIEW OF VEHICLE IN TEST RIG

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.32
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.33
POST TEST ROW 2, LEFT SIDE WITH SFAD 2

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.34
POST TEST ROW 2, LEFT SIDE WITH SFAD 2

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.35
PRE-TEST ROW 2, RIGHT SIDE WITH SFAD 2

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.36
POST TEST ROW 2, RIGHT SIDE WITH SFAD 2

2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.37
PRE-TEST ROW 2, CENTER POSITION WITH SFAD 1

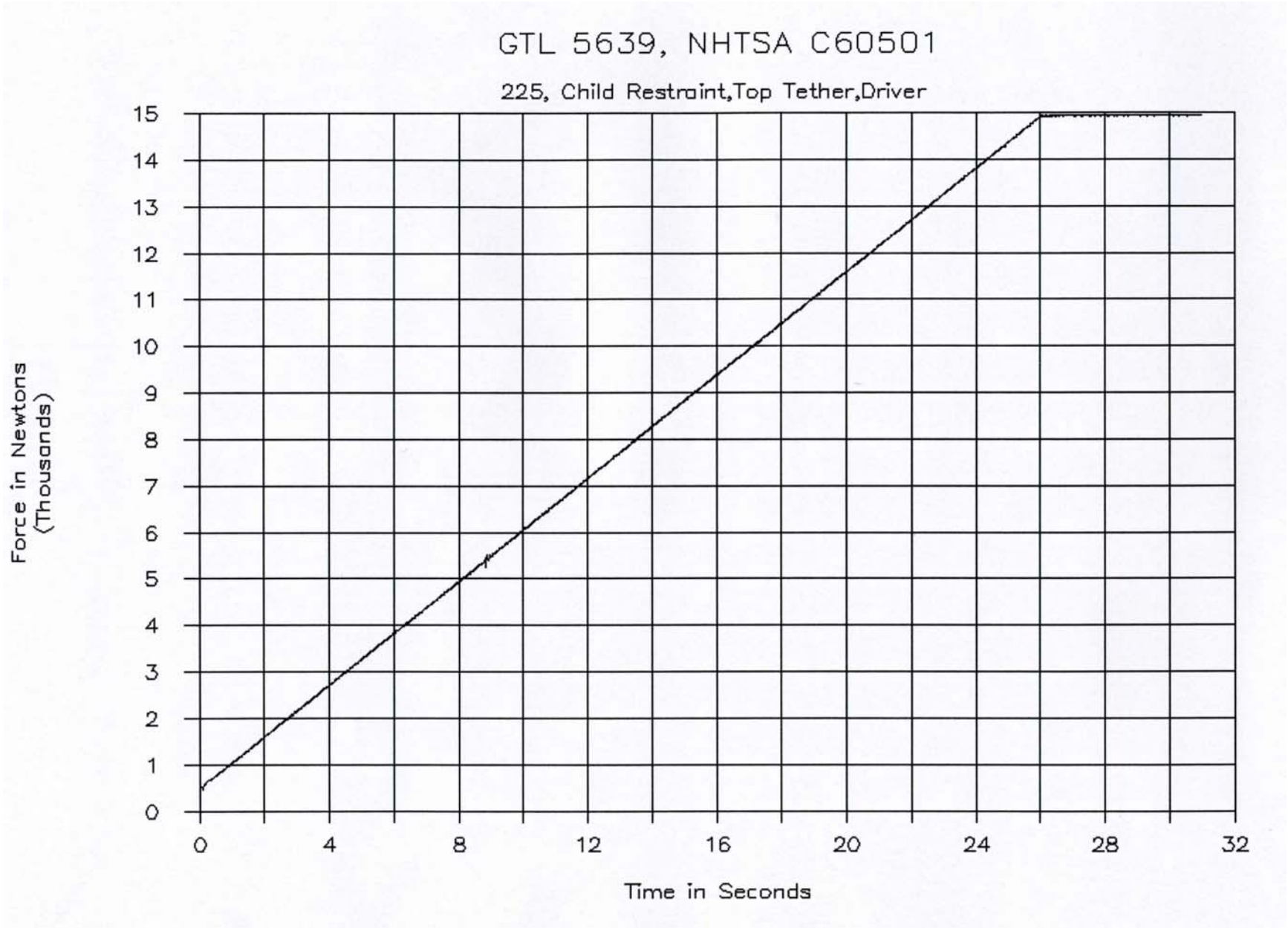
2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

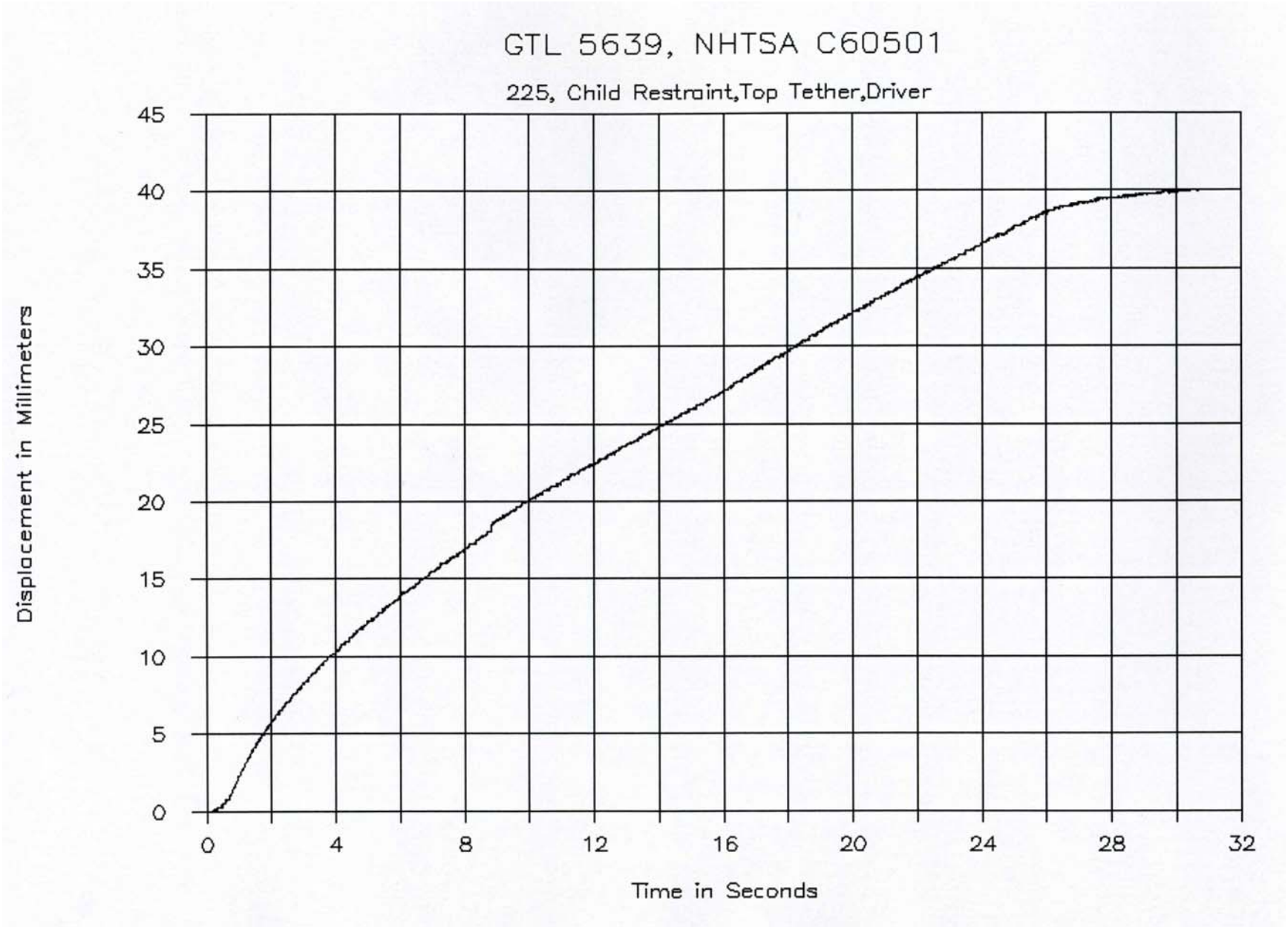
FIGURE 5.38
POST TEST ROW 2, CENTER POSITION WITH SFAD 1

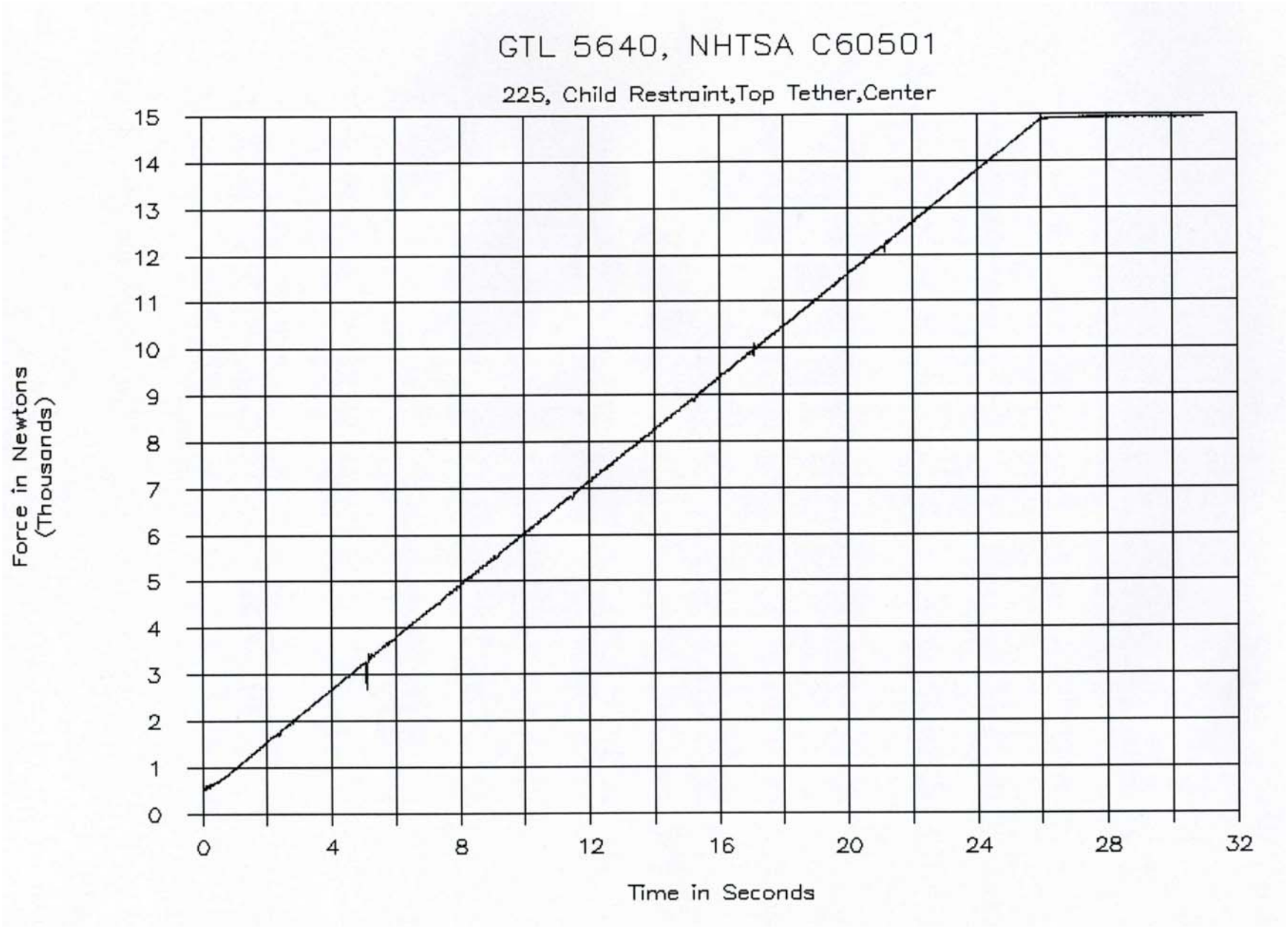
2006 HYUNDAI SONATA
NHTSA NO. C60501
FMVSS NO. 225

FIGURE 5.39
POST TEST ROW 2, CENTER POSITION WITH SFAD 1

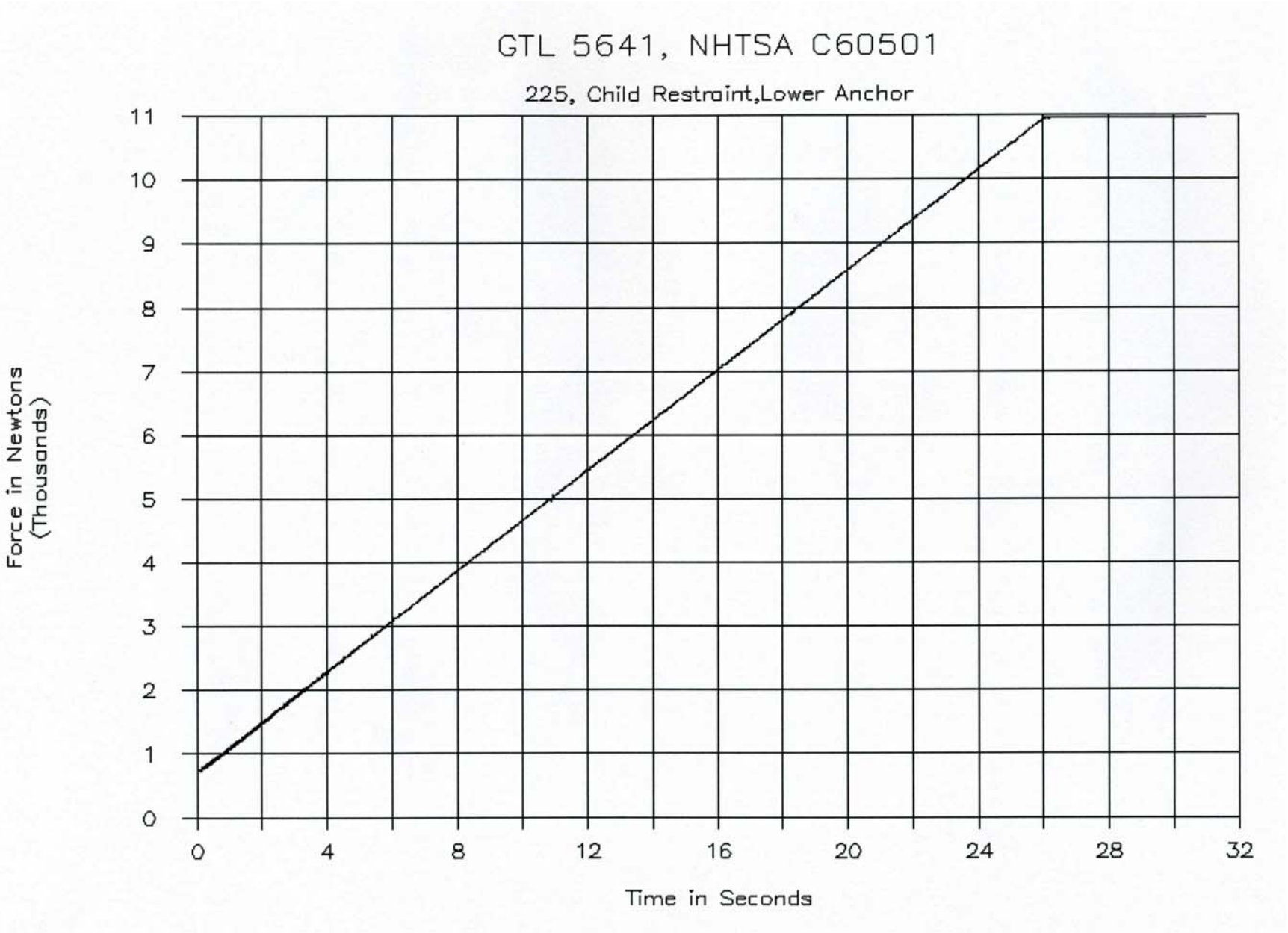
SECTION 6
PLOTS

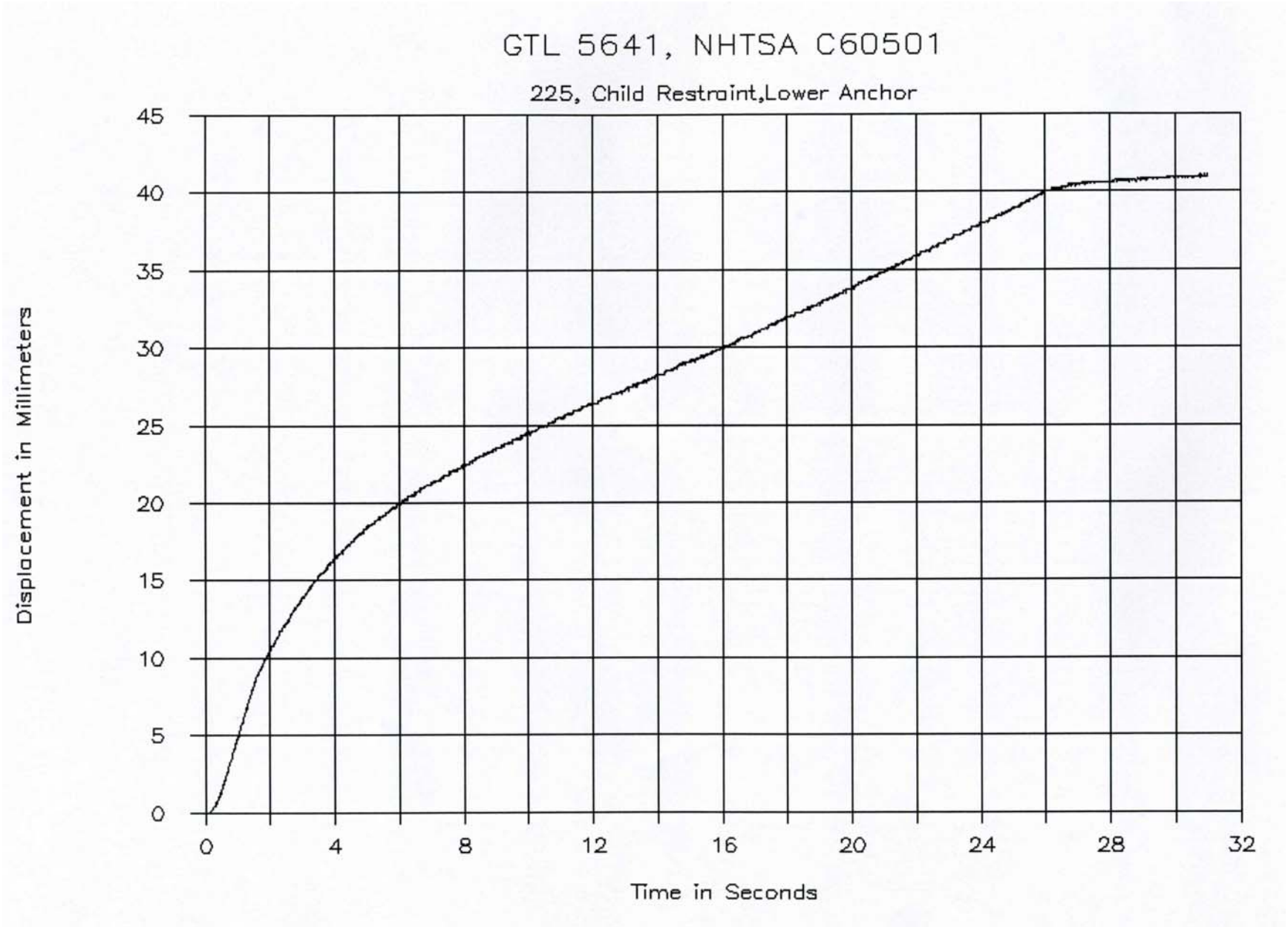

GTL 5639, NHTSA C60501
225, Child Restraint,Top Tether,Driver
Force in Newtons
(Thousands)
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
0
4
8
12
16
20
24
28
32
Time in Seconds


GTL 5639, NHTSA C60501
225, Child Restraint,Top Tether,Driver
Displacement in Millimeters
45
40
35
30
25
20
15
10
5
0
0
4
8
12
16
20
24
28
32
Time in Seconds


GTL 5640, NHTSA C60501
225, Child Restraint,Top Tether,Center
Force in Newtons
(Thousands)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
0
4
8
12
16
20
24
28
32
Time in Seconds


GTL 5640, NHTSA C60501
225, Child Restraint,Top Tether,Center
Displacement in Millimeters
120
110
100
90
80
70
60
50
40
30
20
10
0
0
4
8
12
16
20
24
28
32
Time in Seconds


GTL 5641, NHTSA C60501
225, Child Restraint,Lower Anchor
Force in Newtons
(Thousands)
11
10
9
8
7
6
5
4
3
2
1
0
0
4
8
12
16
20
24
28
32
Time in Seconds


GTL 5641, NHTSA C60501
225, Child Restraint,Lower Anchor
Displacement in Millimeters
45
40
35
30
25
20
15
10
5
0
0
4
8
12
16
20
24
28
32
Time in Seconds

APPENDIX A
OWNER'S MANUAL CHILD RESTRAINT INFORMATION

B220C02A-GAT

To Release the Seat Belt

When you want to release the seat belt, press the button in the locking buckle.

WARNING:

When fastening the outboard seat belts or the center seat belt, make sure they are inserted into the correct buckles to obtain maximum protection from the seat belt system and assure proper operation.

B230A03Y-AAT

Children riding in the car should sit in the rear seat and must always be properly restrained to minimize the risk of injury in an accident, sudden stop or sudden maneuver. According to accident statistics provided by the National Highway Traffic Safety Administration (NHTSA), children are safer when properly restrained in the rear seats than in the front seat. Larger children not in a child restraint should use one of the seat belts provided.

All 50 states have child restraint laws. You should be aware of the specific requirements in your state. Child and/or infant safety seats must be properly placed and installed in the rear seat. You must use a commercially available child restraint system that meets the requirements of the Federal Motor Vehicle Safety Standards (FMVSS).

Children could be injured or killed in a crash if their restraints are not properly secured. For small children and babies, a child seat or infant seat must be used. Before buying a particular child restraint system, make sure it fits your car seat and seat belts, and fits your child. Follow all the instructions provided by the manufacturer when installing the child restraint system.

WARNING:

- **A child restraint system must be placed in the rear seat. Never install a child or infant seat on the front passenger's seat. Should an accident occur and cause the passenger side airbag to deploy, it could severely injure or kill an infant or child seated in an infant or child seat. Thus only use a child restraint in the rear seat of your vehicle.**
- **A safety belt or child restraint system can become very hot if it is left in a closed vehicle on a sunny day, even if the outside temperature does not feel hot. Be sure to check the seat cover and buckles before placing a child there.**
- **When the child restraint system is not in use, store it in the trunk or fasten it with a safety belt so that it will not be thrown forward in the case of a sudden stop or an accident.**
- **Children who are too large to be in a child restraint should sit in the rear seat and be restrained with the available lap/shoulder belts. Never allow children to ride in the front passenger seat.**

WARNING:

- **Always make sure that the shoulder belt portion of the lap/shoulder belt is positioned midway over the shoulder and never across the neck or behind the back. Moving the child closer toward the seat belt buckle may help provide a good shoulder belt fit. The lap belt portion of the lap/shoulder belt must always be positioned as low as possible on the child's hips, and as snug as possible.**
- **If the seat belt will not properly fit the child, Hyundai recommends the use of an approved booster seat in the rear seat in order to raise the child's seating height so that the seat belt will properly fit the child.**
  Before purchasing a booster seat, make sure that it meets applicable Federal Motor Vehicle Safety Standards (FMVSS) and that it is satisfactory for use with this vehicle.
- **Never allow a child to stand up or kneel on the seat.**
- **Never use an infant carrier or a child safety seat that "hooks" over a seatback; it may not provide adequate security in an accident.**

WARNING:

- **Never allow a child to be held in a person's arms while they are in a moving vehicle, as this could result in serious injury to the child in the event of an accident or a sudden stop. Holding a child in a moving vehicle does not provide the child with any means of protection during an accident, even if the person holding the child is wearing a seat belt.**

B230B01NF-AAT

Using a Child Restraint System

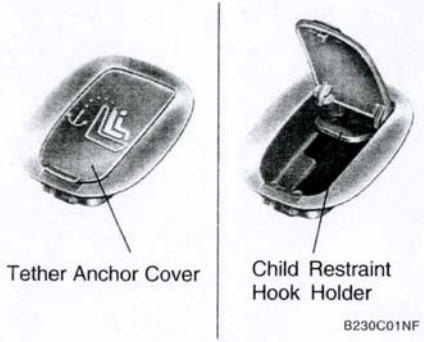
For small children and babies, the use of a child seat or infant seat is required. This child seat or infant seat should be of appropriate size for the child and should be installed in accordance with the manufacturer's instructions. It is further required that the seat be placed in the vehicle's rear seat. Your vehicle is provided with three child restraint hook holders for installing the child seat or infant seat.

B230C04A-AAT

Installing a Child Restraint Seat with the "Tether Anchorage" System

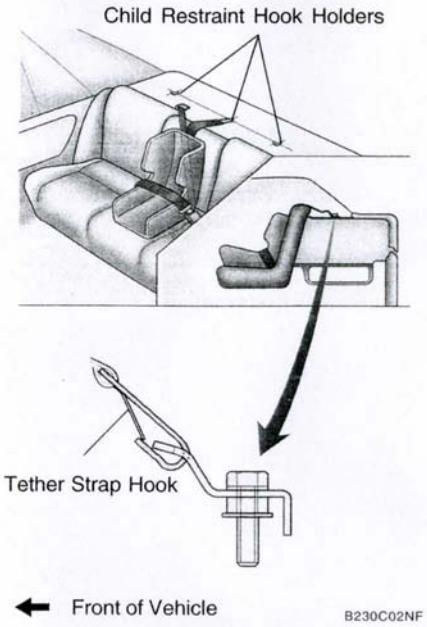
Three child restraint hook holders are located on the rear seat package tray.

To install the child restraint seat



1. Open the tether anchor cover on the rear seat package tray.

Rear seat package tray



2. Route the child restraint seat tether strap over the seatback.

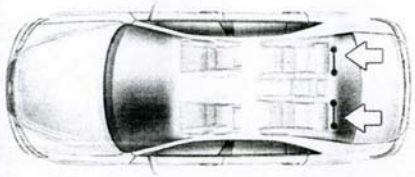
For vehicles with adjustable headrests, route the tether strap under the headrest and between the headrest posts, otherwise route the tether strap over the top of the seatback.

3. Connect the tether strap hook to the child restraint hook holder and tighten to secure the seat.

WARNING:
Do not mount more than one child restraint to a single tether or to a child restraint lower anchorage point. The improper increased load may cause the anchorage points or tether anchor to break, causing serious injury or death.

B230D03E-AAT

Securing the Child Restraint Seat with the "ISOFIX" system



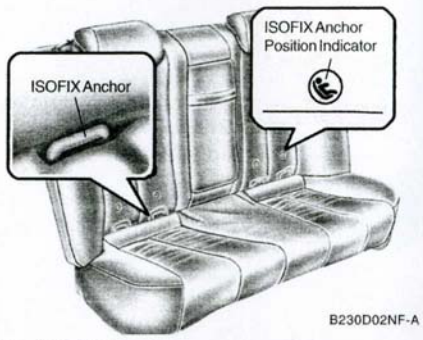
B230D01NF

Some child seat manufacturers make safety seats that are labeled as ISOFIX or ISOFIX-compatible child seats. These seats include two rigid or webbing mounted attachments that connect to two ISOFIX anchors at specific seating positions in your vehicle. This type of child seat eliminates the need to use seat belts to attach the child seat for forward-facing child seats.

ISOFIX anchors have been provided in your vehicle. The ISOFIX anchors are located in the left and right outboard rear seating positions. Their locations are shown in the illustration. There is no ISOFIX anchor provided for the center rear seating position.

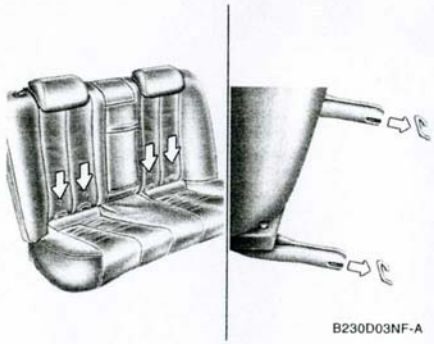
WARNING:

- **Do not install a child restraint seat at the center of the rear seat using the vehicle's ISOFIX anchors. The ISOFIX anchors are only provided for the left and right outboard rear seating positions. Do not misuse the ISOFIX anchors by attempting to attach a child safety seat in the middle of the rear seat position to the ISOFIX anchors. In a crash, the child seat ISOFIX attachments may not be strong enough to secure the child restraint seat properly in the center of the rear seat and may break, causing serious injury or death.**
- **Do not mount more than one child restraint to a single tether or to a child restraint lower anchorage point. The improper increased load may cause the anchorage points or tether anchor to break, causing serious injury or death.**
- **Attach the ISOFIX or ISOFIX-compatible child seat only to the appropriate locations shown.**
- **Always follow the installation and use instructions provided by the manufacturer of the child restraint.**



B230D02NF-A

The ISOFIX anchors are located between the seatback and the seat cushion of the rear seat left and right outboard seating positions.



B230D03NF-A

Follow the child seat manufacturer's instructions to properly install safety seats with ISOFIX or ISOFIX-compatible attachments.

Once you have installed the ISOFIX child restraint seat, assure that the seat is properly attached to the ISOFIX and tether anchors. Also, test the safety seat before you place the child in it. Tilt the seat from side to side. Also try to tug the seat forward. Check to see if the anchors hold the seat in place.

WARNING:

If the child restraint seat is not anchored properly, the risk of a child being seriously injured or killed in a collision greatly increases.

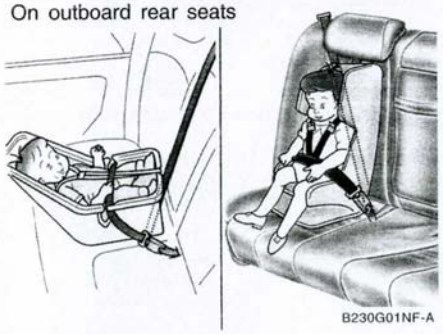
B230G03Y-AAT

Installation on Rear Seats

On rear seat center position

B235G02NF-A

On outboard rear seats



B230G01NF-A

To install a child restraint system in the rear seats, extend the shoulder/lap belt entirely from its retractor until a "click" is felt. This will engage the seat belt retractor automatic locking feature, which allows the seat belt to retract but not extend. Install the child restraint system, buckle the seat belt and allow the seat belt to take up any slack. Make sure that the lap portion of the belt is tight around the child restraint system and the shoulder portion of the belt is positioned so that it cannot interfere with the child's head or neck. Also, double check to be sure that the retractor has engaged the Automatic Locking feature by trying to extend webbing out of the retractor. If the retractor is in the Automatic Locking mode, the belt will be locked. After installation of the child restraint system, try to move it in all directions to be sure the child restraint system is securely installed. If you need to tighten the belt, pull more webbing toward the retractor. When you unbuckle the seat belt and allow it to retract, the retractor will automatically revert back to its normal seated passenger Emergency Locking usage condition.

NOTE:

- Before installing the child restraint system in any seating position, read the instructions supplied by the child restraint system manufacturer.
- If the seat belt does not operate as described, have the system checked immediately by your authorized Hyundai dealer.

WARNING:

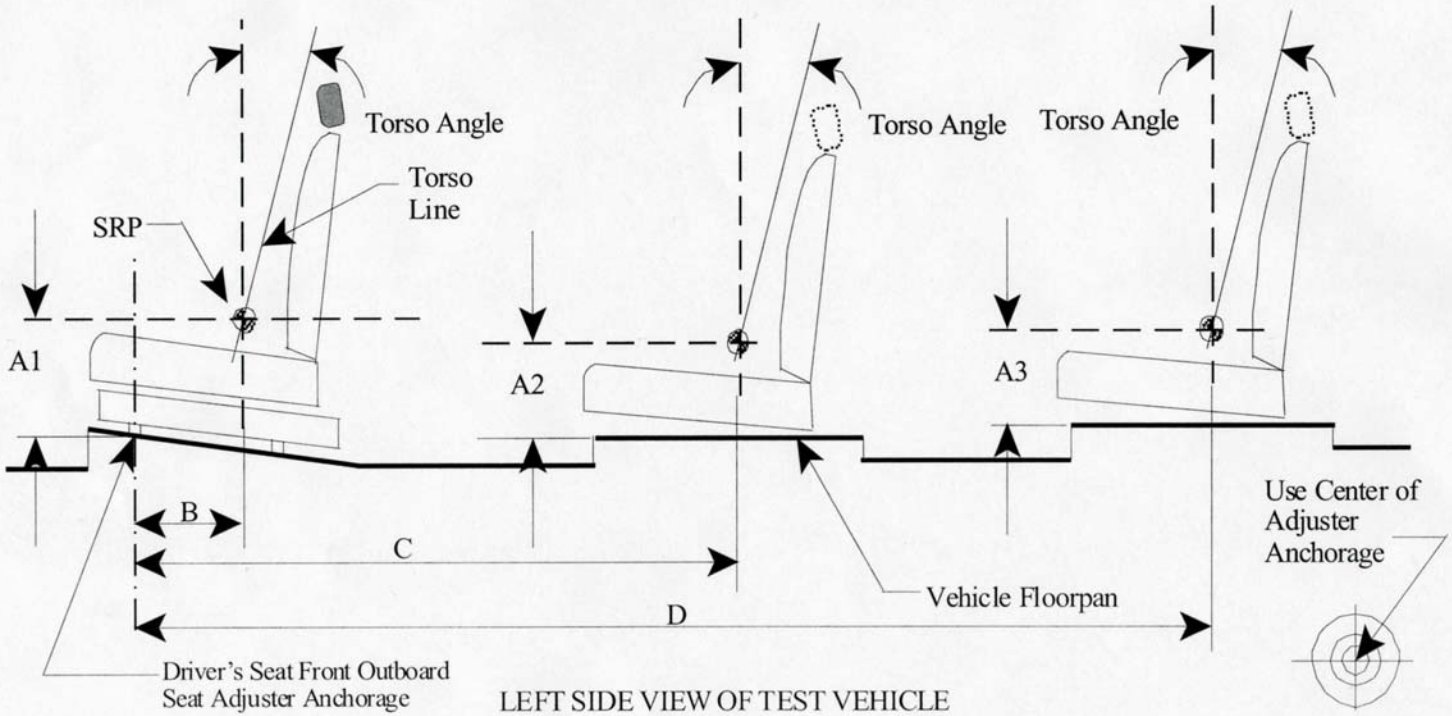
- **If the retractor is not in the Automatic Locking mode, the child restraint system can move when your vehicle turns or stops abruptly.**
- **Do not install any child restraint system in the front passenger seat. Should an accident occur and cause the passenger side airbag to deploy, it could severely injure or kill an infant or child seated in an infant or child seat. Therefore, only use a child restraint system in the rear seat of your vehicle.**

APPENDIX B
MANUFACTURER'S DATA

SEAT REFERENCE POINT (SRP) AND TORSO ANGLE DATA FOR FMVSS 225

(All dimensions in mm[1])

Model Year: 2006 ; Make: Hyundai ; Model: NF ; Body Style: SEDAN
Seat Style: Front row: Bucket ; Second row: Split folding ; Third row: N/A



LEFT SIDE VIEW OF TEST VEHICLE

Table 1. Seating Positions[1] and Torso Angles

		Left (Driver Side)	Center (if any)	Right
A1		(Driver)192	N/A	(Front Passenger)192
A2		105	135	105
A3		N/A	N/A	N/A
B		342	N/A	342
C		1199	1169	1199
D		N/A	N/A	N/A
Torso Angle (degree)	Front Row	25°	N/A	25°
	Second Row	27°	21°	27°
	Third Row	N/A	N/A	N/A

Note: 1. All dimensions are in mm. If not, provide the unit used.

SEATING REFERENCE POINT
FOR FMVSS 225
(All dimensions in mm)

Model Year: 2006 ; Make: Hyundai ; Model: NF ; Body Style: SEDAN
Seat Style: Front row: Bucket ; Second row: Split folding ; Third row: N/A

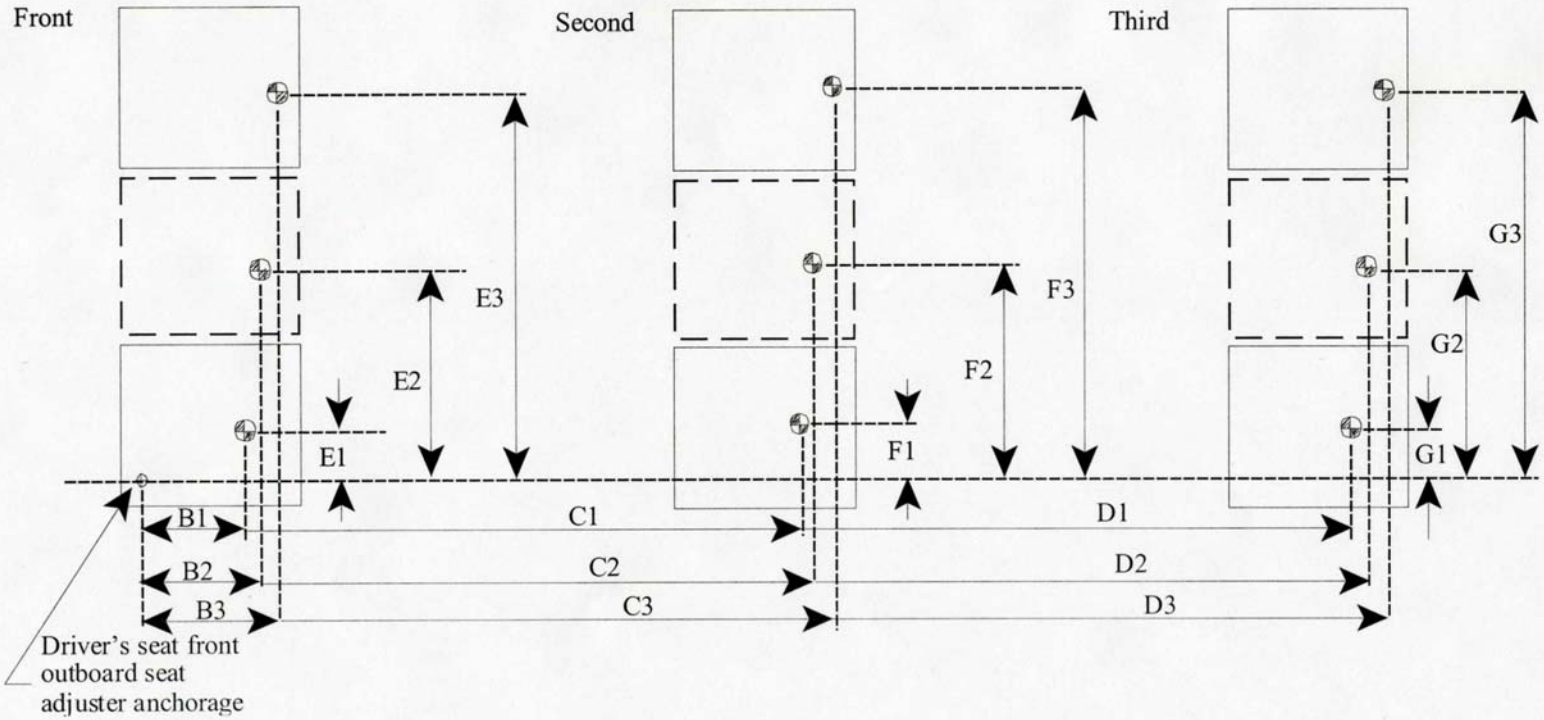


Table 2. Seating Reference Point and Tether Anchorage Locations

Seating Reference Point (SRP)		Distance from Driver's front outboard seat adjuster anchorage[1]
Front Row	B1	342
	E1	244
	B2	N/A
	E2	N/A
	B3	342
	E3	984
Second Row	C1	857
	F1	269
	C2	N/A
	F2	614
	C3	857
	F3	959
Third Row	D1	N/A
	G1	N/A
	D2	N/A
	G2	N/A
	D3	N/A
	G3	N/A

Note: 1. Use the center of anchorage.

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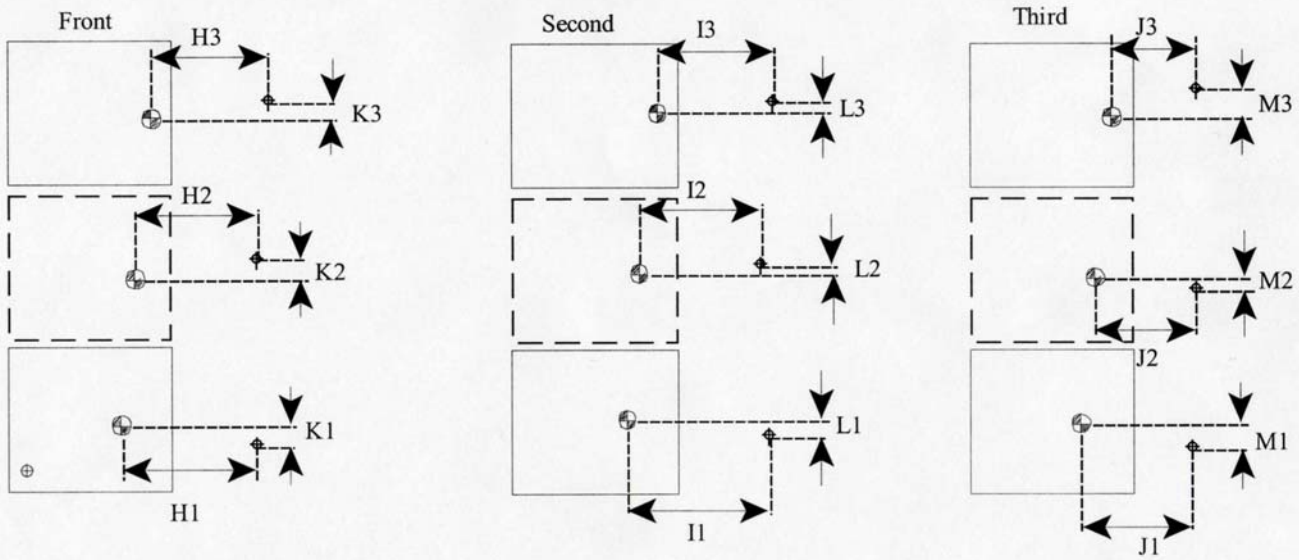
TETHER ANCHORAGE LOCATIONS FOR FMVSS 225
(All dimensions in mm)

Model Year: 2006 ; Make: Hyundai ; Model: NF ; Body Style: SEDAN
Seat Style: Front row: Bucket ; Second row: Split folding ; Third row: N/A



⊕: SRP
⊕: Tether anchorage

Note: 1. The location shall be measured at the center of the bar.

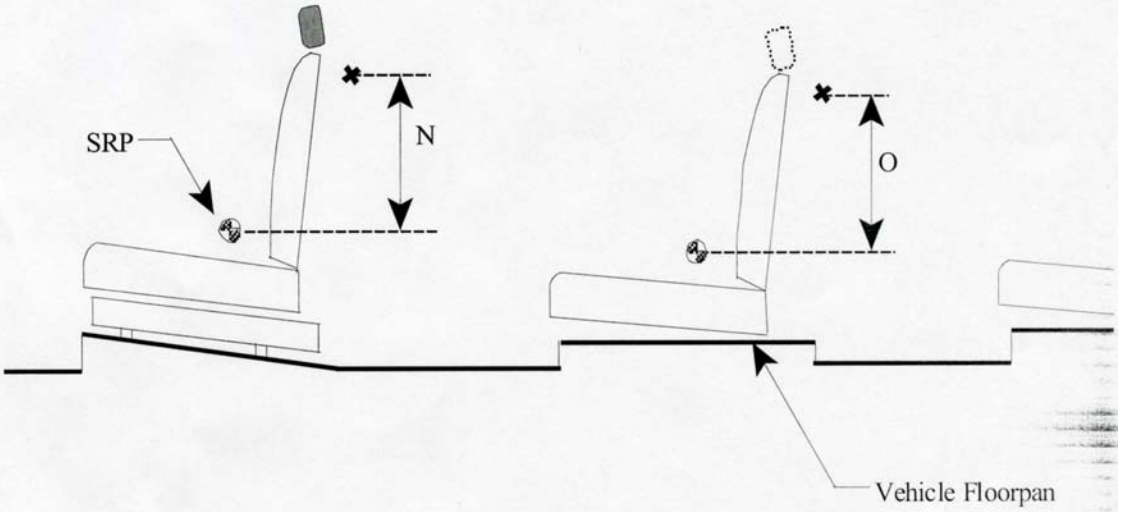
Table 3. Seating Reference Point and Tether Anchorage Locations

Seating Reference Point (SRP)	Distance from SRP	
Front Row	H1	N/A
	K1	N/A
	H2	N/A
	K2	N/A
	H3	N/A
	K3	N/A
Second Row	I1	594.7
	L1	0
	I2	624.7
	L2	0
	I3	594.7
	L3	0
Third Row	J1	N/A
	M1	N/A
	J2	N/A
	M2	N/A
	J3	N/A
	M3	N/A

Note: 1. Use the center of anchorage.

TETHER ANCHORAGE LOCATIONS - VERTICAL
FOR FMVSS 225
(All dimensions in mm)

Model Year: 2006 ; Make: Hyundai ; Model: NF ; Body Style: SEDAN
Seat Style: Front row: Bucket ; Second row: Split folding ; Third row: N/A



LEFT SIDE VIEW OF TEST VEHICLE

Table 4. Vertical Dimension For The Tether Anchorage

Seating Row	Vertical Distance from Seating Reference Point	
Front Row	N1 (Driver)	N/A
	N2 (Center)	N/A
	N3 (Right)	N/A
Second Row	O1 (Left)	493.98
	O2 (Center)	468.98
	O3 (Right)	493.98
Third Row	P1 (Left)	N/A
	P2 (Center)	N/A
	P3 (Right)	N/A

Note: 1. All dimensions are in mm. If not, provide the unit used.

For each vehicle, provide the following information:

1. **How many designated seating positions exist in the vehicle?**
   ☞ 5

2. **How many designated seating positions are equipped with lower anchorages and tether anchorages? Specify which position(s).**
   ☞ LOWER ANCHORAGE : 2 (RR SIDE)
   TETHER ANCHORAGE : 3 (RR SIDE,CTR)

3. **How many designated seating positions are equipped with tether anchorages? Specify which position(s).**
   ☞ 3

4. **Lower Anchorage Marking and Conspicuity:** Whether the anchorages are certified to S9.5(a) or S9.5(b) of FMVSS 225.
   ☞ S9.5(a)