

REPORT NUMBER 225-GTL-06-004

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

**MITSUBISHI MOTORS NORTH AMERICA, INC.  
2006 MITSUBISHI ECLIPSE, PASSENGER CAR  
NHTSA NO. C65602**

**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  
400 SEVENTH STREET, SW  
ROOM 6111 (NVS-220)  
WASHINGTON, D.C. 20590**

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Approval Date: 10/12/06

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Acceptance Date: 10/12/06

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Appendix B – Manufacturer’s Data not included (Manufacturer requested confidentiality)

## SECTION 1

### PURPOSE OF COMPLIANCE TEST

#### 1.0 PURPOSE OF COMPLIANCE TEST

A 2006 Mitsubishi Eclipse 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 Mitsubishi Eclipse Passenger Car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 4A3AK24F06E036305

B. NHTSA No.: C65602

C. Manufacturer: MITSUBISHI MOTORS NORTH AMERICA, INC.

D. Manufacture Date: OCT. 2005

#### 1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 225 testing during the time period July 24 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 Mitsubishi Eclipse 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 Mitsubishi Eclipse Passenger Car.



DATA SHEET 1  
SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY: 2006 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; TEST DATE: JULY 24 – SEPTEMBER 25, 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	<u>  X  </u>	<u>      </u>
DSP b	<u>  X  </u>	<u>      </u>
DSP c	<u>  N/A  </u>	<u>  N/A  </u>

**C. LOCATION OF TETHER ANCHORAGES**

	PASS	FAIL
DSP a	<u>  X  </u>	<u>      </u>
DSP b	<u>  X  </u>	<u>      </u>
DSP c	<u>  N/A  </u>	<u>  N/A  </u>

**D. LOWER ANCHORAGE DIMENSIONS**

	PASS	FAIL
DSP a	<u>  X  </u>	<u>      </u>
DSP b	<u>  X  </u>	<u>      </u>
DSP c	<u>  N/A  </u>	<u>  N/A  </u>

DATA SHEET 1 CONTINUED  
SUMMARY OF RESULTS

**E. CONSPICUITY AND MARKING OF LOWER ANCHORAGES**

	PASS	FAIL
DSP a	<u>  X  </u>	<u>      </u>
DSP b	<u>  X  </u>	<u>      </u>
DSP c	<u>  N/A  </u>	<u>  N/A  </u>

**F. STRENGTH OF TETHER ANCHORAGES**

	PASS	FAIL
DSP a	<u>  X  </u>	<u>      </u>
DSP b	<u>  N/A  </u>	<u>  N/A  </u>
DSP c	<u>  N/A  </u>	<u>  N/A  </u>

**G. STRENGTH OF LOWER ANCHORAGES (Forward Force)**

	PASS	FAIL
DSP a	<u>  N/A  </u>	<u>  N/A  </u>
DSP b	<u>  X  </u>	<u>      </u>
DSP c	<u>  N/A  </u>	<u>  N/A  </u>

**H. STRENGTH OF LOWER ANCHORAGE (Lateral Force)**

	PASS	FAIL
DSP a	<u>  N/A  </u>	<u>  N/A  </u>
DSP b	<u>  N/A  </u>	<u>  N/A  </u>
DSP c	<u>  N/A  </u>	<u>  N/A  </u>

**I. OWNER'S MANUAL**

PASS	FAIL
<u>  X  </u>	<u>      </u>

REMARKS: DSP a = Left Rear Outboard, DSP b = 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 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; TEST DATE: JULY 24, 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: 2  
Number of required CRAS (lower anchorages only, for convertibles/school buses): 2  
Number of required tether anchorages (can be additional CRAS): 2  
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 an 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))

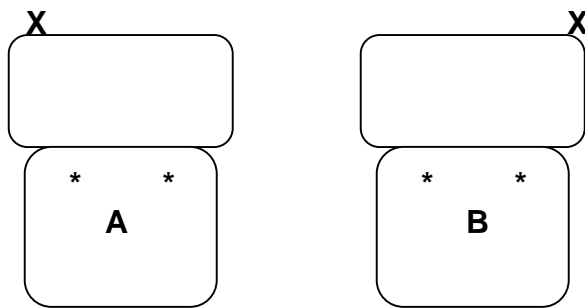
Number of provided tether anchorages (can be additional CRAS) indicate if a built-in child restraint is counted as a tether anchorage (NOTE: a built-in child restraint can only be counted toward either the required number of CRAS or tether anchorages, not both):           2          

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?           N/A            
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:           07/24/06          

APPROVED BY:           D. MESSICK



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: 07/24/06

APPROVED BY: D. MESSICK

DATA SHEET 3A  
LOCATION OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; TEST DATE: JULY 10, 2006  
TEST LABORATORY: GENERAL TESTING LABORATORIES  
OBSERVERS: GRANT FARRAND, JIMMY LATANE

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

Detailed description of the location of the tether anchorage:  
Located on floor in right rear corner of vehicle 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? NO

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 RIGHT SIDE (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: 07/24/06

APPROVED BY: D. MESSICK



DATA SHEET 4  
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2006 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; TEST DATE: JULY 24, 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: 6.07 mm  
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.07 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): 27 mm  
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length of the straight portion of the bar (inboard lower anchorage): 26 mm  
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length between the anchor bar supports (outboard lower anchorage): 35 mm  
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 34 mm  
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 7.9°  
Angle = 15°±10° = PASS Angle ≠15°±10° = FAIL (S9.2.1)

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

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

Distance between point Z on the CRF and the front surface of outboard anchor bar: 10 mm  
Distance ≤70mm = PASS Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 10 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: 140 mm  
Distance  $\geq$  120mm = PASS      Distance  $<$  120mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 140 mm  
Distance  $\geq$  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: 07/24/06

APPROVED BY: D. MESSICK

DATA SHEET 4A  
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2006 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; TEST DATE: JULY 10, 2006  
TEST LABORATORY: GENERAL TESTING LABORATORIES  
OBSERVERS: GRANT FARRAND, JIMMY LATANE

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

Outboard Lower Anchorage bar diameter: 6.07 mm  
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.07 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): 26 mm  
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length of the straight portion of the bar (inboard lower anchorage): 26 mm  
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length between the anchor bar supports (outboard lower anchorage): 33 mm  
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 33 mm  
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 8.0°  
Angle = 15°±10° = PASS Angle ≠15°±10° = FAIL (S9.2.1)

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

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

Distance between point Z on the CRF and the front surface of outboard anchor bar: 10 mm  
Distance ≤70mm = PASS Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 10 mm  
Distance ≤70mm = PASS Distance > 70mm = FAIL

DATA SHEET 4A CONTINUED

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

Distance between SgRP and the front surface of outboard anchor bar: 140 mm  
Distance  $\geq$  120mm = PASS      Distance < 120mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 140 mm  
Distance  $\geq$  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: 07/24/06

APPROVED BY: D. MESSICK

DATA SHEET 5  
CONSPICUITY AND MARKING OF LOWER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; 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 B)

MARKING (Circles)

Diameter of the circle: 15  
Diameter  $\geq 13\text{mm}$  = PASS      Diameter  $< 13\text{mm}$  = 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: 70  
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  $\leq 25\text{mm}$  = PASS      Distance  $> 25\text{mm}$  = FAIL (S9.5(a)(3))

CONSPICUITY (No Circles)

Is the anchor bar or guide visible when viewed from a point  $30^\circ$  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 B)

---

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: 07/24/06

APPROVED BY: D. MESSICK

DATA SHEET 6  
STRENGTH OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2006 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; TEST DATE: SEPTEMBER 26, 2006  
TEST LABORATORY: GENERAL TESTING LABORATORIES  
OBSERVERS: GRANT FARRAND, JIMMY LATANE  
TEST NO: 5642

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

SFAD: 2

Seat Back Angle: 25° 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: N/A (SFAD 1 only)

Tether strap tension: 56 N

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

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 52 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 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; TEST DATE: SEPTEMBER 26, 2006  
TEST LABORATORY: GENERAL TESTING LABORATORIES  
OBSERVERS: GRANT FARRAND, JIMMY LATANE  
TEST NO: 5643

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

Seat Back Angle: 25° FIXED

Location of seat back angle measurement: 2D Template

Head Restraint Position: N/A

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

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

Force application rate: 575 N/S

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

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

Displacement, H1 (at 500 N): 0.0

Displacement, H2 (at maximum load): 43.4 mm

Displacement of Point X: 43.4 mm (H2-H1)  
Displacement > 175 mm = FAIL (S9.4.1(a))

Tested simultaneously with another DSP? NO

Distance between adjacent DSP's: 570 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 MITSUBISHI ECLIPSE PASSENGER CAR  
VEH. NHTSA NO: C65602; VIN: 4A3AK24F06E036305  
VEH. BUILD DATE: OCT. 2005; 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 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.1  
LEFT SIDE VIEW OF VEHICLE





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.2  
RIGHT SIDE VIEW OF VEHICLE





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.3  
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.4  
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE



MADE IN U.S.A. DATE OCT. 2005  
MFD BY MITSUBISHI MOTORS NORTH AMERICA, INC.

GVWR 4068 LBS GAWR 2249 LBS GAWR 1841 LBS  
1845 KG FR. 1020 KG RR. 835 KG

THIS VEHICLE CONFORMS TO ALL APPLICABLE  
FEDERAL MOTOR VEHICLE SAFETY, BUMPER, AND  
THEFT PREVENTION STANDARDS IN EFFECT ON  
THE DATE OF MANUFACTURE SHOWN ABOVE.

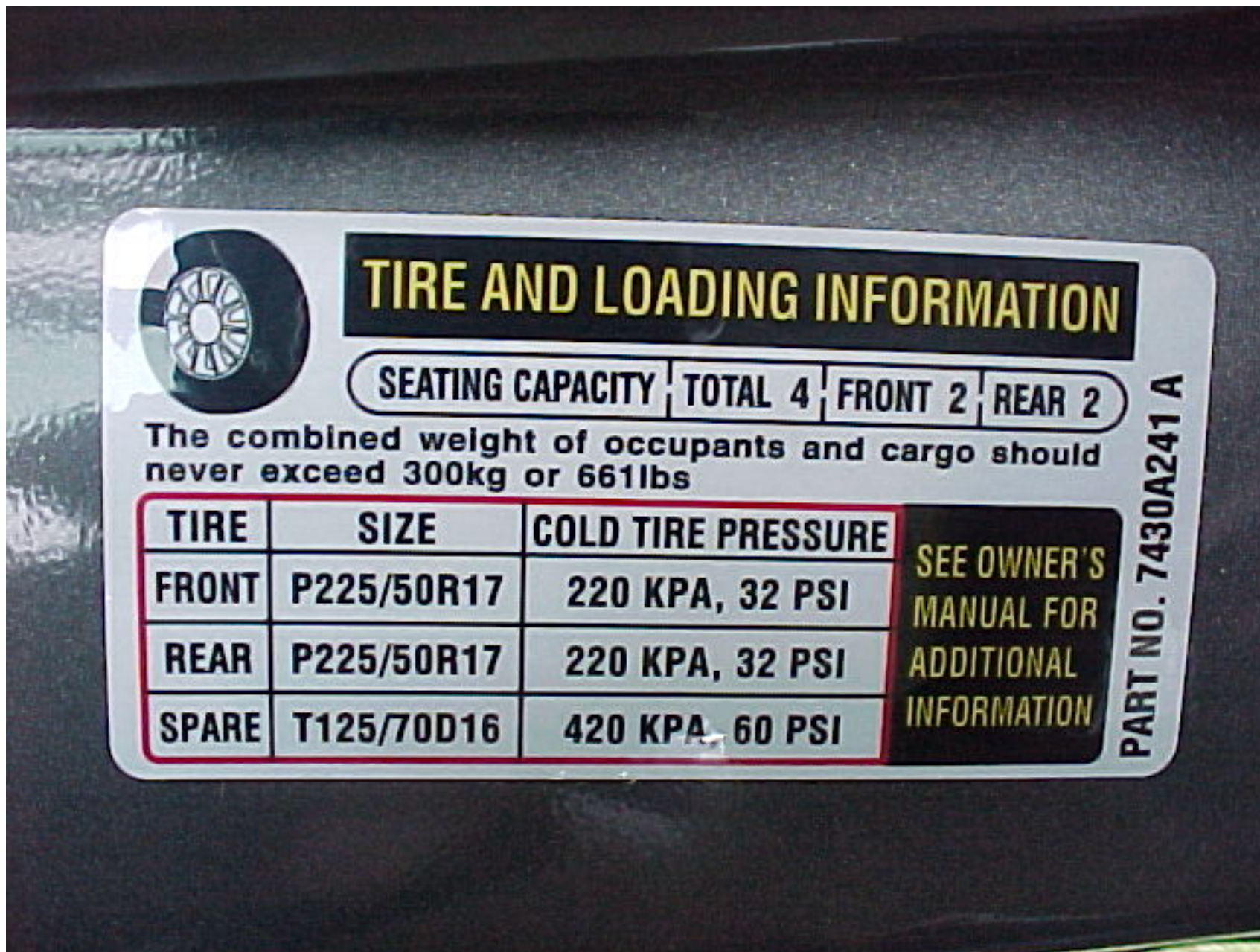
4 A 3 A K 2 4 F 0 6 E 0 3 6 3 0 5



MDH 102514

VEHICLE TYPE: PASSENGER CAR MU900296





2006 MITSUBISHI ECLIPSE  
 NHTSA NO. C65602  
 FMVSS NO. 225

FIGURE 5.6  
 VEHICLE TIRE INFORMATION LABEL



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

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





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

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



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.9  
ROW 2, RIGHT SIDE, LOWER ANCHORS,  
PRE-TEST



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.10  
ROW 2, RIGHT SIDE, TOP TETHER ANCHOR,  
PRE-TEST





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.11  
OVERALL VIEW OF ROW 2 SEATING POSITIONS,  
PRE-TEST



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.12  
ROW 2, LEFT SIDE WITH CRF





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.13  
ROW 2, LEFT SIDE WITH 2-D TEMPLATE





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.14  
ROW 2, LEFT SIDE TOP TETHER ROUTING



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.15  
ROW 2, RIGHT SIDE WITH CRF





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.16  
ROW 2, RIGHT SIDE WITH 2-D TEMPLATE



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.17  
ROW 2, RIGHT SIDE TOP TETHER ROUTING





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.18  
ROW 2, RIGHT SIDE INBOARD CRF MEASUREMENT



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.19  
ROW 2, RIGHT SIDE OUTBOARD CRF MEASUREMENT



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.20  
ROW 2, LEFT SIDE, INBOARD CRF MEASUREMENT

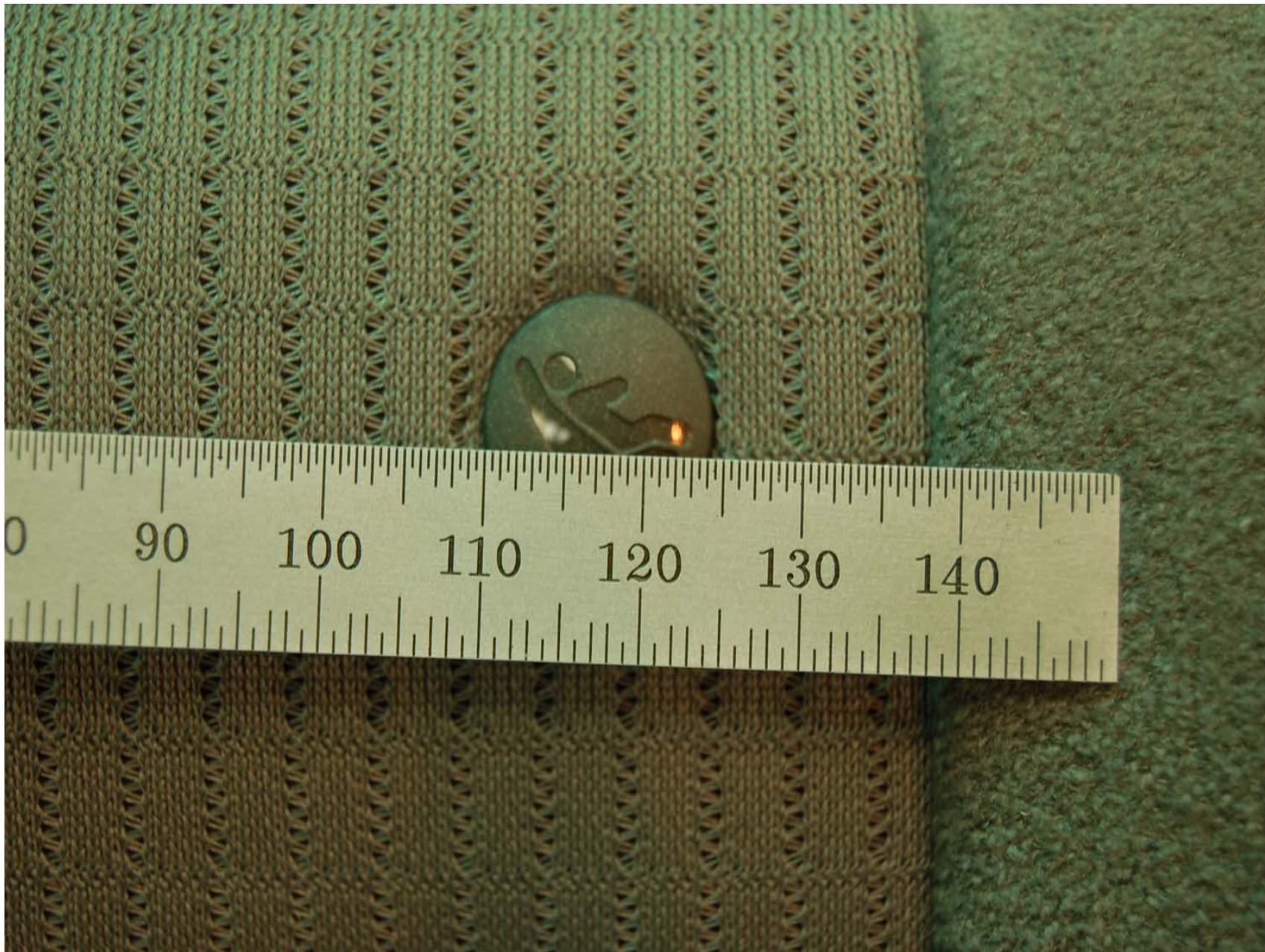




2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.21  
ROW 2, LEFT SIDE, OUTBOARD CRF MEASUREMENT





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.22  
SYMBOL MEASUREMENT



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.23  
ROW 2, LEFT SIDE CRF PITCH MEASUREMENT





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.24  
ROW 2, RIGHT SIDE CRF PITCH MEASUREMENT



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.25  
ROW 2, LEFT SIDE OUTBOARD SRP MEASUREMENT





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.26  
ROW 2, LEFT SIDE INBOARD SRP MEASUREMENT





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.27  
ROW 2, RIGHT SIDE OUTBOARD SRP MEASUREMENT





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.28  
ROW 2, RIGHT SIDE INBOARD SRP MEASUREMENT





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.29  
¾ LEFT FRONT VIEW OF VEHICLE IN TEST RIG





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.30  
¾ RIGHT REAR VIEW OF VEHICLE IN TEST RIG





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.31  
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

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





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.33  
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

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



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.35  
POST TEST ROW 2, LEFT SIDE WITH SFAD 2





2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

FIGURE 5.36  
PRE-TEST ROW 2, RIGHT SIDE WITH SFAD 2



2006 MITSUBISHI ECLIPSE  
NHTSA NO. C65602  
FMVSS NO. 225

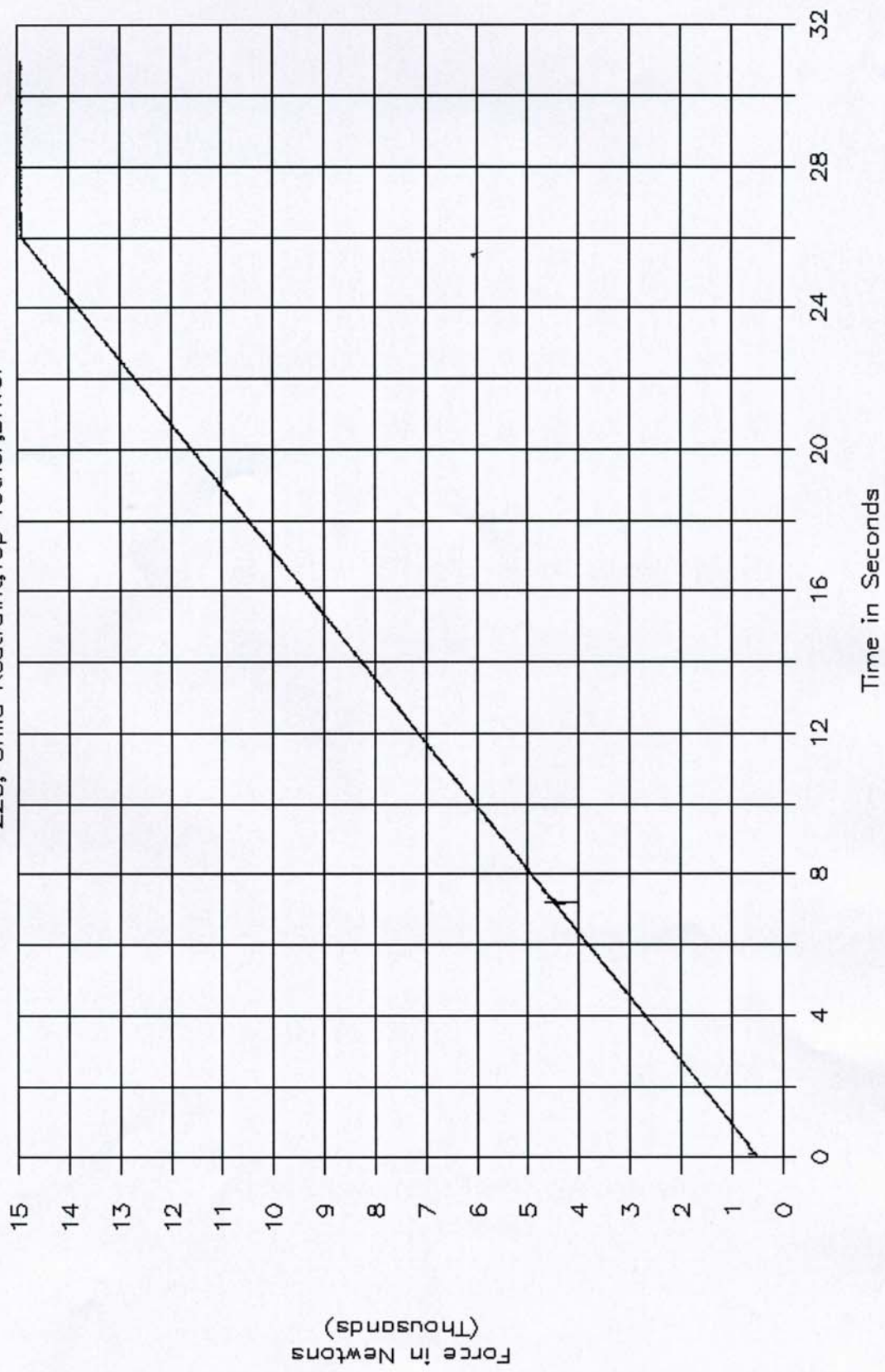
FIGURE 5.37  
POST TEST ROW 2, RIGHT SIDE WITH SFAD 2



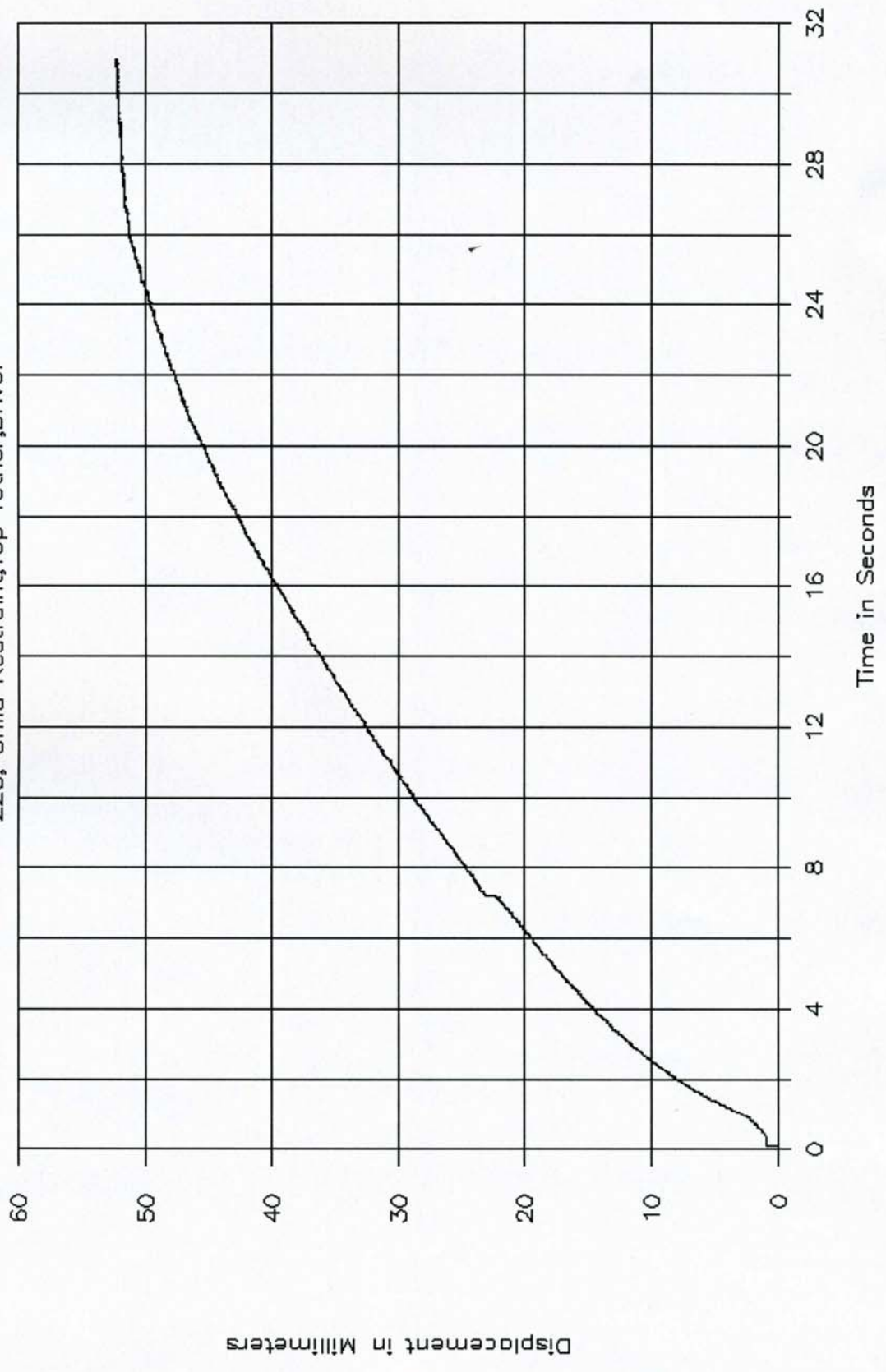
SECTION 6  
PLOTS

GTL 5642, NHTSA C65602

225, Child Restraint, Top Tether, Driver



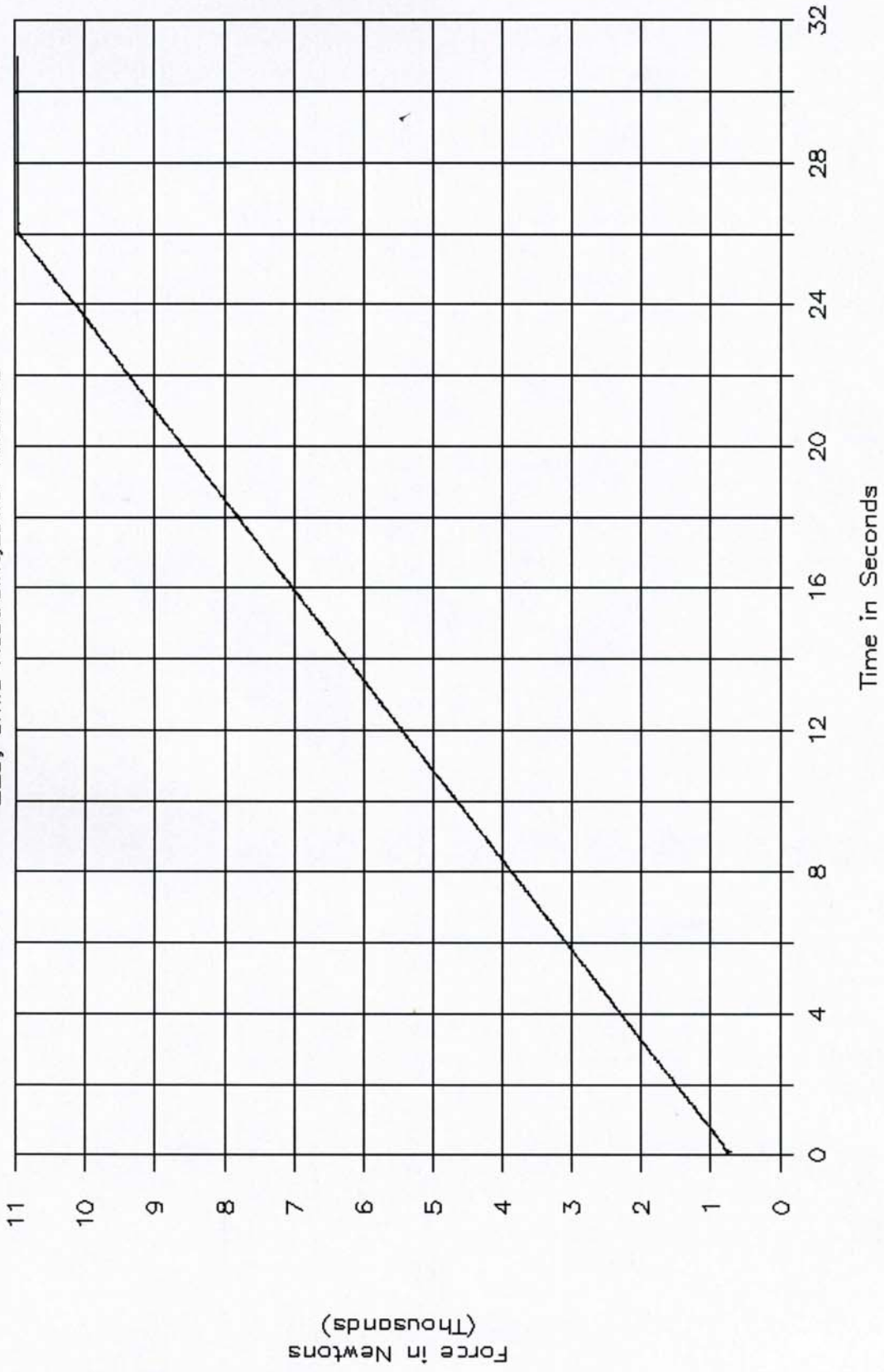
GTL 5642, NHTSA C65602  
225, Child Restraint, Top Tether, Driver





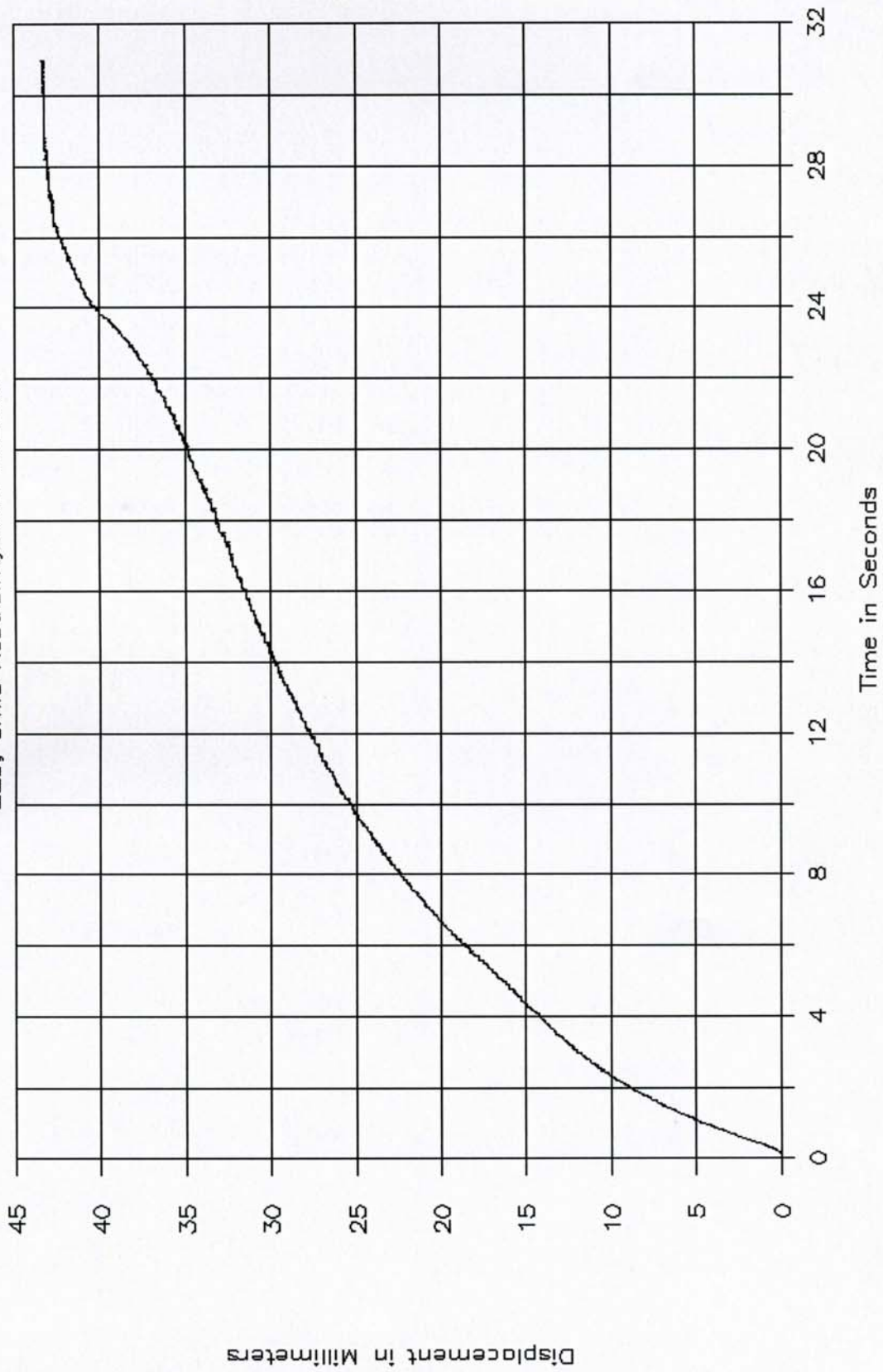
GTL 5643, NHTSA C65602

225, Child Restraint, Lower Anchors



GTL 5643, NHTSA C65602

225, Child Restraint, Lower Anchors



APPENDIX A  
OWNER'S MANUAL CHILD RESTRAINT INFORMATION



## Seat and restraint systems

### SRS warning light

N00408700049  
This warning light tells you if there is a problem involving the SRS air bags and the pre-tensioner seat belts. Refer to “SRS warning light” on page 2-47.

### Force limiter system

N00408900070  
In the event of an accident, the seat belt force limiter system will help reduce the force applied to the driver and front seat passenger.

### Child restraints

N00407100411  
When transporting infants or small children in your vehicle, an appropriate child restraint system must always be used. This is required by law in the U.S. and Canada.

Child restraints specifically designed for infants and small children are offered by several manufacturers. Choose only a child restraint system with a label certifying that it complies with Federal Motor Vehicle Safety Standard 213 (FMVSS 213) or Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations (RCSR). Look for the manufacturer’s statement of compliance on the box and child restraint itself.

The child restraint system should be appropriate for your child’s weight and height, and should properly fit your vehicle’s seat.

For detail information, refer to the instruction manual accompanying the child restraint system.

### Guidelines for child restraint system selection

All children should be properly restrained in a restraint device that offers the maximum protection for their size and age. Be sure to check local, state, or provincial requirements for child size and age that may vary from the recommendations listed below.

- Children less than 1 year old and children less than 20 pounds (9 kg) **MUST** ride in a rear-facing child safety seat that **MUST ONLY** be used in the rear seat.
- Children older than 1 year of age and who weigh less than 40 pounds (18 kg) or who are less than 40 inches (100 cm) tall must be in a forward-facing restraint used only in the rear seat.
- Children who weigh more than 40 pounds (18 kg) or who are more than 40 inches (100 cm) tall, regardless of age, should use a suitable child seat or a booster seat in the rear seat until the vehicle's lap/shoulder belt fits them properly.

### **▲ WARNING**

- **All children must be seated in the rear seat, and properly restrained. Accident statistics show that children of all sizes and ages are safer when properly restrained in the rear seat, rather than in the front seat.**

### **▲ WARNING**

- Any child who is too large to use a child restraint should ride in the rear seat and wear the lap and shoulder belt properly. The shoulder belt must be positioned over the shoulder and across the chest, not across their neck, and with the lap belt positioned low on the child's hips, not across their stomach. If necessary, a booster seat should be used to help achieve a proper seat belt fit. Follow the booster seat manufacturer's instructions. Only use a booster seat that is certified as complying with Federal Motor Vehicle Safety Standards or Motor Vehicle Restraint Systems and Booster Cushions Safety Regulations.

**WARNING**

- Never hold an infant or child in your arms or on your lap when riding in this vehicle, even when you are wearing your seat belt. Never place any part of the seat belt you are wearing around an infant or child. Failure to follow these simple instructions creates a risk of serious injury or death to your child in the event of an accident or sudden stop.

2



**WARNING**

- Your vehicle is also equipped with a front passenger air bag. Never put REAR-FACING CHILD RESTRAINTS or INFANT RESTRAINTS in the front passenger seat. This places the infant too close to the passenger air bag. During deployment of the air bag, the infant can be seriously injured or killed. Rear-facing child restraints or infant restraints must only be used in the rear seat.





## **▲ WARNING**

- FRONT-FACING CHILD RESTRAINTS should always be used in the rear seat whenever possible. If one must be used in the front passenger seat, move the seat to the most rearward position and make sure the child stays in the child restraint, properly restrained. Failure to follow these instructions could result in serious injury or death to the child.



AA0017127

## **▲ WARNING**

- It is important to use an approved rear-facing infant restraint until the infant is one year old (unless the infant outgrows the seat sooner). This allows the infant's neck and spine to develop enough to support the weight of their head in the event of an accident.
- When installing a child restraint system, follow the instructions provided by the manufacturer and follow the directions in this manual. Failure to do so can result in serious injury or death to your child in an accident or sudden stop.
- After installation, push and pull the child restraint system back and forth, and side to side, to see that it is firmly secured. If the child restraint system is not installed securely, it may cause injury to the child or other occupants in the event of an accident or sudden stop.
- When not in use, keep your child restraint system secured with the seat belt, or remove it from the vehicle, in order to prevent it from being thrown around inside the vehicle during an accident.

## Seat and restraint systems

### NOTE

● Before purchasing a child restraint system, try installing it in the rear seat to make sure there is a good fit. Because of the location of the seat belt buckles and the shape of the seat cushion, it may be difficult to securely install some manufacturer's child restraint systems.

If the child restraint system can be pulled forward or to either side easily on the seat cushion after the seat belt has been tightened, choose another manufacturer's child restraint system.

Depending on the seating position in the vehicle and the child restraint system that you have, the child restraint can be attached using one of the following two methods:

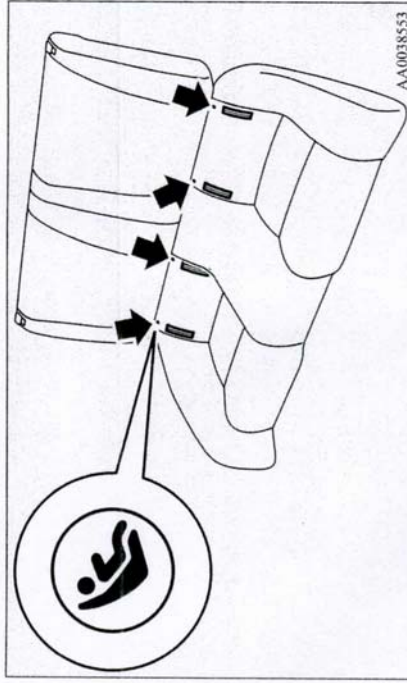
- To the lower anchorage in the rear seat **ONLY** if the child restraint is compatible with the LATCH system (See page 2-28).
- To the seat belt (See page 2-32).

## Installing a child restraint system using the LATCH (Lower Anchors and Tethers for children) system

N100418800043

### Lower anchor locations

The seating positions in the rear seat of your vehicle are equipped with lower anchors for attaching child restraint systems compatible with the LATCH system.

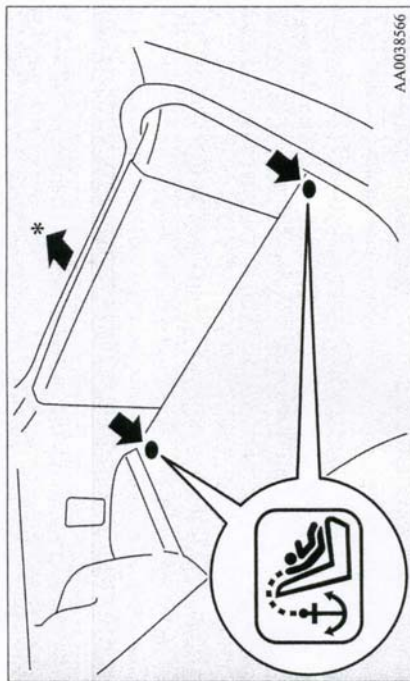


### NOTE

- The symbols on the seatback show the location of the lower anchor points.

### Tether anchor locations

NO0418900044  
Your vehicle has 2 attachment points on the floor of the cargo area. These are for securing a child restraint system tether strap to each of the 2 rear seating positions in your vehicle.



\*- Rear of the vehicle

### Examples of child restraint systems compatible with the LATCH system

NO0419000042



- A: Rear-facing child restraint
  - B: Forward-facing child restraint
  - C: Child restraint system lower anchor connectors
  - D: Tether strap
- (These are only examples.)

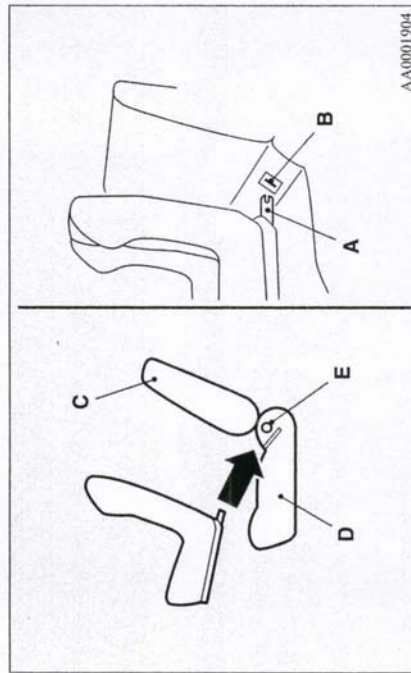


## Seat and restraint systems

### Using the LATCH system

N00419100043

1. Push the anchor connectors on the child restraint system (A) into the slits (B) in accordance with the instructions provided by the child restraint system manufacturer. Remember, the lower anchors (E) provided with your vehicle are designed to secure suitable child restraint systems compatible with the LATCH system in the rear seat only.



- A: Connector
- B: Slit
- C: Vehicle seatback
- D: Vehicle seat cushion
- E: Lower anchor

2-30

### NOTE

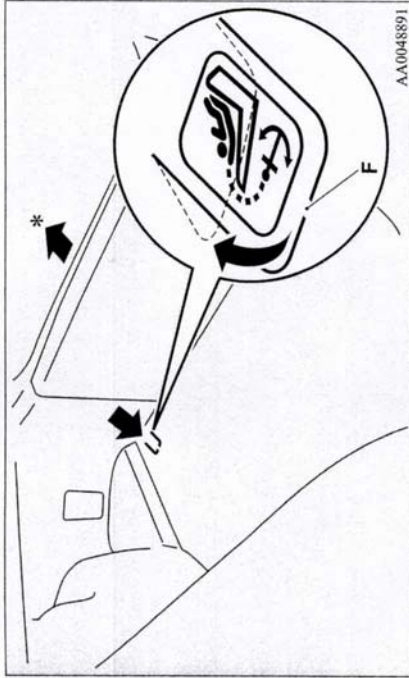
- In order to secure a child restraint systems compatible with the LATCH system, use the lower anchor points in the rear seat. It is not necessary to use the vehicle's seat belt.

### ⚠ WARNING

- If there is any foreign material in or around the lower anchors, remove it before installing the child restraint system. Also, make sure the seat belt is away from, not looped through or otherwise interfering with, the child restraint system. If foreign matter is not removed and/or the seat belt interferes with the child restraint system, the child restraint system will not be secured properly, could detach and move forward in the event of sudden braking or an accident, and could result in injury to the child or other vehicle occupants.
- When the vehicle is moving, do not adjust the seat where the child restraint system is installed.

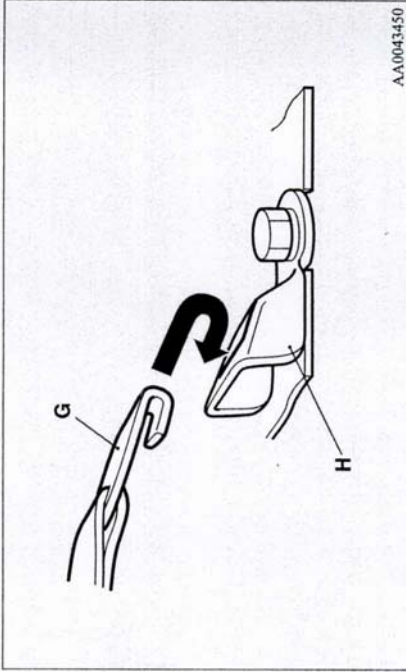
Seat and restraint systems

2. Open the rear hatch. Remove the rear shelf panel. Refer to "Rear shelf panel" on page 3-120.
3. Cut out the notch (F) in the cargo floor carpet by hand, then lift the carpet.



\* - Rear of the vehicle

4. Latch the tether strap hook (G) of the child restraint system to the tether anchor (H) and tighten the tether strap so it is securely fastened.



NOTE

- When using a child restraint system that requires a tether strap, the rear shelf panel cannot be installed.

## Seat and restraint systems

5. Push and pull the child restraint system in all directions to be sure it is firmly secured.

### **WARNING**

- Child restraint tether anchors are designed only to withstand loads from correctly fitted child restraint systems. Under no circumstances are they to be used for adult seat belts, or harnesses, or for attaching other items or equipment to the vehicle.

### **WARNING**

- When you install a child restraint system using the seat belt, always make sure the retractor has been switched to the ALR child restraint installation function. The ALR function will keep the child restraint system tightly secured to the seat. Failure to convert the retractor to the ALR function may allow the child restraint system to move forward during sudden braking or an accident, resulting in serious injury or death to the child or other occupants.

### **Installing a child restraint system using the seat belt (With emergency/automatic locking mechanism)**

NO0407300266

With the exception of the driver, the seat belt in all other seating positions can be converted from normal Emergency Locking Retractor (ELR) mode to Automatic Locking Retractor (ALR) mode. This means that when you pull the seat belt fully out of the retractor, the retractor will switch to its ALR child restraint installation function. Always use the ALR child restraint installation function when you install a child restraint system using the seat belt.

Children 12 years old and under should always be restrained in the rear seat, whenever possible, although the front passenger seat belt can also be converted to ALR mode.

2-32



**Installation:**

1. Place the child restraint system in a rear seating position.
2. Route the seat belt through the child restraint system according to the instructions provided by the child restraint manufacturer. Then insert the seat belt latch plate into the buckle. Make sure you hear a "click" when you insert the latch plate into the buckle.



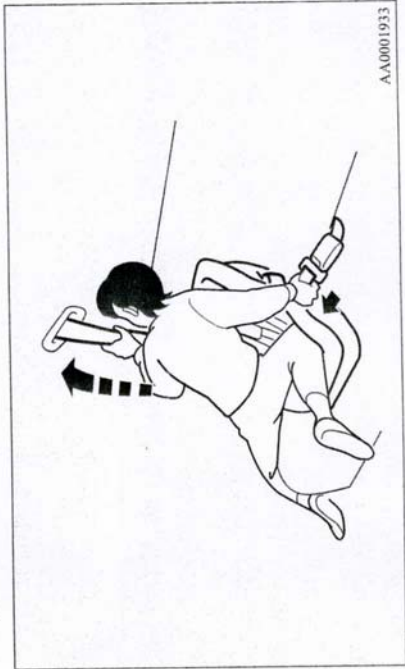
3. To activate the ALR child restraint installation function, slowly pull the shoulder part of the belt all the way out of the retractor until it stops. Then let the belt feed back into the retractor.



4. After the belt has retracted, tug on it. If the belt is in the ALR function, you will not be able to pull it out. If the webbing can be pulled out from retractor, the ALR function has not been activated and you will need to repeat steps 3 and 4.

### Seat and restraint systems

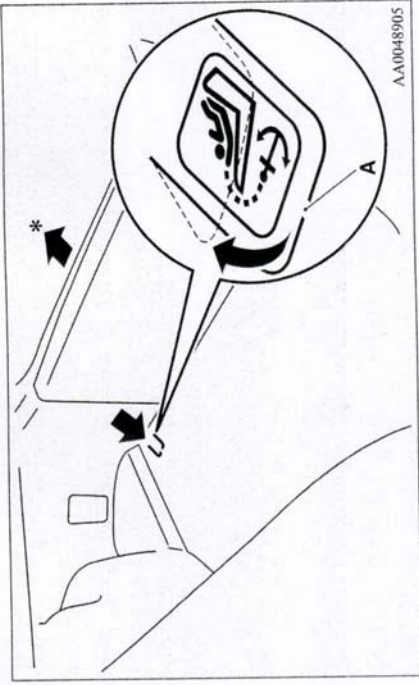
5. After confirming that the belt is locked, grab the shoulder part of the belt near the buckle and pull up to remove any slack from the lap part of the belt allowing the slack to feed into the retractor. Remember, if the lap belt portion is not tight, the child restraint system will not be secure. It may help to put your weight on the child restraint system and/or push on its seatback while pulling up on the belt (see illustration).



If your child restraint system requires the use of a tether strap, fasten the tether strap in accordance with the following procedures.

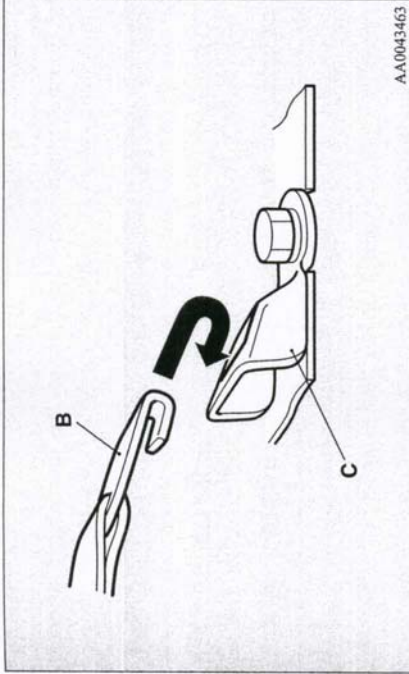
6. Open the rear hatch. Remove the rear shelf panel. Refer to "Rear shelf panel" on page 3-120.

7. Cut out the notch (A) in the cargo floor carpet by hand, then lift the carpet.



\* - Rear of the vehicle

8. Latch the tether strap hook (B) of the child restraint system to the tether anchor (C) and tighten the tether strap so it is securely fastened.



**NOTE**

● When using a child restraint system that requires a tether strap, the rear shelf panel cannot be installed.

**⚠ WARNING**

● Child restraint tether anchors are designed only to withstand loads from correctly fitted child restraint systems. Under no circumstances are they to be used for adult seat belts, or harnesses, or for attaching other items or equipment to the vehicle.

**2**

9. Before putting your child in the restraint, push and pull the restraint in all directions to be sure it is firmly secured. Do this before each use. If the child restraint system is not firmly secure, repeat steps 1 through 8.

10. To remove a child restraint system from the vehicle and deactivate the ALR mode, remove the child from the restraint. Unlatch the buckle. Then remove the belt from the restraint and let the belt fully retract.



APPENDIX B  
MANUFACTURER'S DATA

(NOTE: MANUFACTURER'S DATA NOT INCLUDED, MANUFACTURER REQUESTED CONFIDENTIALITY)