

FINAL REPORT NUMBER 225-MGA-09-007.Rev1

**SAFETY COMPLIANCE TESTING FOR FMVSS 225**  
*“Child Restraint Anchorage Systems”*

**HONDA MFG.**  
**2009 Honda Pilot**  
**NHTSA No. C95304**

**MGA RESEARCH CORPORATION**  
**446 Executive Drive**  
**Troy, Michigan 48083**



**Test Date: July 17, 2009**  
**Report Date: July 22, 2009**  
**Revision Date: September 3, 2009**

**FINAL REPORT**

Prepared For:

**U.S DEPARTMENT OF TRANSPORTATION**  
**National Highway Traffic Safety Administration**  
**Enforcement**  
**Office of Vehicle Safety Compliance (Rm W45-304)**  
**1200 New Jersey Avenue, SE**  
**Washington, DC 20590**

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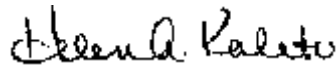


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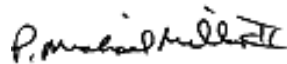
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16. Abstract A compliance test was conducted on the subject 2009 Honda Pilot, NHTSA No. C95304, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-225-01 for the determination of FMVSS 225 compliance. The test was conducted at MGA Research Corporation in Troy, Michigan on July 17, 2009. Test failures identified were as follows:  <p style="text-align: center;">NONE</p> The data recorded indicates that the 2009 Honda Pilot tested appears to meet the requirements of FMVSS 225.			
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## 1.0 PURPOSE AND PROCEDURE

### PURPOSE

The child restraint anchorage testing results presented in this report are part of the Federal Motor Vehicle Safety Standard (FMVSS) No. 225 compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No. DTNH22-06-C-00030/0007. The purpose of the testing was to determine if the subject vehicle, a 2009 Honda Pilot, NHTSA No. C95304 meets the performance requirements of FMVSS No. 225, "Child Restraint Anchorage Systems."

### PROCEDURE

This testing was conducted in accordance with NHTSA's Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure TP-225-01 (4/11/05) and MGA's Laboratory Test Procedure, MGATP225GOV (6/23/06).

The rear occupant compartment consisted of a 2<sup>nd</sup> row three-passenger 60/40 split-bench seat and a 3<sup>rd</sup> row three passenger 60/40 split bench seat. The 2<sup>nd</sup> row outboard left, center and right seating positions were equipped with a child restraint anchorage system (one tether and two lower anchorages). The 3<sup>rd</sup> row left and center seating positions were equipped with a tether anchorage and the right seating position was equipped with a child restraint anchorage system (one tether and two lower anchorages). The center-to-center spacing between the 2<sup>nd</sup> row outboard seating positions was approximately 880 mm and 710mm between the 3<sup>rd</sup> row outboard seating positions. The 2<sup>nd</sup> row left, center and right and 3<sup>rd</sup> row right seating positions were tested with the SFADII fixture and the 3<sup>rd</sup> row left and center seating positions were tested with SFADI fixture.

## 2.0 COMPLIANCE TEST AND DATA SUMMARY

### TEST SUMMARY

The testing was conducted at MGA in Troy, Michigan on July 17, 2009

Based on the test results, the 2009 Honda Pilot appears to meet the requirements of FMVSS No. 225 for this testing.

The SFADII at the 2<sup>nd</sup> row left seating position sustained a maximum force of 11,035 N and held the required load for 3 seconds and the total displacement was 95mm. The SFADII at the 2<sup>nd</sup> row right seating position sustained a maximum force of 10,990 N and held the required load for 3 seconds and the total displacement was 60 mm. The SFADII at the 2<sup>nd</sup> row center seating position sustained a maximum force of 15,116 N and held the required load for 3 seconds. The SFADI at the 3<sup>rd</sup> row left seating position sustained a maximum force of 15,073 N and held the required load for 3 seconds. The SFAD II at the 3<sup>rd</sup> row right seating position sustained a maximum force of 11,036 N and held the required load for 2 seconds and the total displacement of 79 mm. The SFADI at the 3<sup>rd</sup> row center seating position sustained a maximum force of 15,134 N and held the required load for 3 seconds.

DATA SUMMARY

Strength and displacement summary data are provided below. Data for the configuration and the location of each child restraint anchorage system are provided in Section 5.0. Photographs are found in Section 6.0 and test plots are found in Section 7.0.

Table 1. Summary Data for Strength and Displacement

MGA Test #	Fixture Type	Test Configuration	Seating Position	Max. Load (N)	Displacement (mm)
SC9266	SFADII	Forward Lower Only	2 <sup>nd</sup> Row Left	11,035*	95
		Forward w/ Top Tether	2 <sup>nd</sup> Row Center	15,116*	N/A
		Forward Lower Only	2 <sup>nd</sup> Row Right	10,990	60
SC9267	SFADII	Forward w/ Top Tether	3 <sup>rd</sup> Row Left	15,073*	N/A
		Forward Lower Only	3 <sup>rd</sup> Row Right	11,063*	79
SC9268	SFADII	Forward w/ Top Tether	3 <sup>rd</sup> Row Center	15,134*	N/A

REMARKS: \* Applied force exceeded the force specified in the test procedure.

3.0 TEST VEHICLE INFORMATION

Table 2. General Test and Vehicle Parameter Data

VEH. MOD YR/MAKE/MODEL/BODY	2009 Honda Pilot
VEH. NHTSA NO.	C95304
VIN	5FNYP48219B042447
COLOR	Beige
VEH. BUILD DATE	10/08
TEST DATE	July 17, 2009
TEST LABORATORY	MGA Research Corporation
OBSERVERS	Fern Gatilao , Brad Reaume, Kenney Godfrey

GENERAL INFORMATION:

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Honda Mfg.

Date of Manufacture: 10/08;

VIN: 5FNYP48219B042447

GVWR: 6096 lbs

GAWR FRONT: 2921 lbs

GAWR REAR: 3252 lbs



DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 32 psi REAR: 32 psi

Recommended Tire Size: P245/65R17

Recommended Cold Tire Pressure:

FRONT: 32 psi REAR: 32 psi

Size of Tire on Test Vehicle: P245/65R17

Size of Spare Tire: T165/80D17

VEHICLE CAPACITY DATA:

Type of Front Seats: Bench \_\_\_\_; Bucket X; Split Bench \_\_\_\_

Number of Occupants: Front 2; Middle 3; Rear; 3 TOTAL 8.

4.0 TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

<b>MGA Research Corporation 446 Executive Drive Troy, Michigan 48083</b>	
<b>Test Equipment Used for Testing</b>	<b>Calibration Due Date</b>
MGA Hydraulic Test Frame	N/A
Two (2) Load Cell 10,000 lb Capability	S/N 256, 602, & 667 (11/29/09)
String Potentiometer Calibrated at each use	S/N I1704802A/A1600461A
Hydraulic Pump	N/A
MGA CRF Fixture	N/A
MGA SFADI	N/A
MGA SFADII	N/A
MGA 2-Dimensional Template	N/A
Linear Scale	TPM886 (9/5/09)
MGA Data Acquisition System	N/A
Digital Calipers	MGA00688 (3/16/10)
Force Gauge	MGA00801 (1/20/10)
Inclinometer (Digital)	MGA0714 (1/28/10)

5.0 DATA

Table 3. Child Restraint Tether Anchorage Configuration

Seating Position		Permit the attachment of a tether hook	Accessible without the need for any tool other than a screwdriver or coin	Ready for use without the need for any tools	Sealed to prevent the entry of exhaust fumes
Front Row		N/A	N/A	N/A	N/A
Second Row	LH	Yes	Yes	Yes	Yes
	Ctr.	Yes	Yes	Yes	Yes
	RH	Yes	Yes	Yes	Yes
Third Row	LH	Yes	Yes	Yes	Yes
	Ctr.	Yes	Yes	Yes	Yes
	RH	Yes	Yes	Yes	Yes

Note: AS DETERMINED USING THE PROCEDURES SPECIFIED IN TP-225-01.

REMARKS: NONE.

Table 4. Child Restraint Lower Anchorage Configuration

OBSERVED LOWER ANCHORAGE CONFIGURATION	SEAT POSITION					
		FRONT ROW	SECOND ROW		THIRD ROW	
			I/B	O/B	I/B	O/B
Above anchorage, permanently marked with a circle not less than 13 mm in Dia.; and whose color contrasts with its background; and its center is not less than 50 mm and not more than 100 mm above the bar, and in the vertical longitudinal plane that passes through the center of the bar.	LH	N/A	Yes		N/A	
	Ctr		Yes		N/A	
	RH		Yes		Yes	
Each of the bars is visible, without the compression of the seat cushion or seat back, when the bar is viewed, in a vertical longitudinal plane passing through the center of the bar, along a line marking an upward 30 degree angle with a horizontal plane.	LH	N/A	No		N/A	
	Ctr		No		N/A	
	RH		No		No	
Diameter of the bar (mm)	LH	N/A	5.94	5.96	N/A	
	Ctr		5.97	5.96	N/A	
	RH		5.97	5.96	5.96	5.97
Inspect if the bars are straight, horizontal and transverse	LH	N/A	Yes		N/A	
	Ctr		Yes		N/A	
	RH		Yes		Yes	
Optional Marking: At least one anchorage bar (when deployed for use, if storable anchorages), one guidance fixture, or one seat marking is visible.	LH	N/A	N/A		N/A	
	Ctr		N/A		N/A	
	RH		N/A		N/A	
Optional Marking: If guidance fixtures are used, the fixture(s) must be installed.	LH	N/A	N/A		N/A	
	Ctr		N/A		N/A	
	RH		N/A		N/A	
Measure the distance between Point “Z” of the CRF and the front surface of the anchorage bar (mm)	LH	N/A	24		N/A	
	Ctr		47		N/A	
	RH		28		42	
Measure the distance between the SRP to the front of the anchorage bar (mm)	LH	N/A	153	153	N/A	
	Ctr		165	165	N/A	
	RH		155	155	168	168

Table 4. Child Restraint Lower Anchorage Configuration (continued)

OBSERVED LOWER ANCHORAGE CONFIGURATION	SEAT POSITION						
		FRONT ROW	SECOND ROW		THIRD ROW		
			I/B	O/B	I/B	O/B	
Inspect if the centroidal longitudinal axes are collinear within 5 degrees	LH	N/A	Yes		Yes		
	Ctr		Yes		Yes		
	RH		Yes		Yes		
Inspect if the inside surface of the bar that is straight and horizontal section of the bars, and determine they are not less than 25 mm, but not more than 60 mm in length (mm).	LH	N/A	Req't>25	35	37	N/A	
			Req't<60	40	41	N/A	
	Ctr		Req't>25	31	35	N/A	
			Req't<60	41	40	N/A	
	RH		Req't>25	33	31	31	32
			Req't<60	40	40	40	40
Inspect if the bars can be connected to, over their entire inside length by the connectors of child restraint system.	LH	N/A	Yes		N/A		
	Ctr		Yes		N/A		
	RH		Yes		Yes		
Inspect if the bars are an integral and permanent part of the vehicle.	LH	N/A	Yes		N/A		
	Ctr		Yes		N/A		
	RH		Yes		Yes		
Inspect if the bars are rigidly attached to the vehicle. If feasible, hold the bar firmly with two fingers and gently pull.	LH	N/A	Yes		N/A		
	Ctr		Yes		N/A		
	RH		Yes		Yes		

**PITCH, YAW, & ROLL INFORMATION**

SEAT POSITION	PITCH (deg)	YAW (deg)	ROLL (deg)
2 <sup>nd</sup> Row Left	9.1	N/A	0.1
2 <sup>nd</sup> Row Center	9.7	N/A	0.2
2 <sup>nd</sup> Row Right	10.2	N/A	0.3
3 <sup>rd</sup> Row Right	12.7	N/A	0.3

N/A indicates that there were no lower anchorages in the 2<sup>nd</sup> row center seating position.

Note: AS DETERMINED USING THE PROCEDURES SPECIFIED IN TP-225-01.

REMARKS: NONE

Table 5. Tether Location and Dimensional Measurements

SEAT POSITION FOR TETHER		TETHER ANCHORAGE LOCATION Located in the required zone?
Front Row		N/A
Second Row	LH	Yes
	Ctr.	Yes
	RH	Yes
Third Row	LH	Yes
	Ctr.	Yes
	RH	Yes

Note: AS DETERMINED USING THE PROCEDURES SPECIFIED IN TP-225-01.

REMARKS: NONE

Table 6. Tether Anchorage Static Loading and Displacement

SEAT POSITION	Seat, Seat Back, & Head Restraint Positions			Type of SFAD Used	Angle (deg)	Initial Location (mm)	Onset Rate (N/sec.)	Force Applied (kN)	Max. Load (N)	Final Location (mm)	Horiz. Displ. (mm)	
	Seat	Seat Back	Is There a H/R?									
Front Row		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Second Row	LH	Full Rearward	1 <sup>st</sup> Lock	Yes	II	10.4	19	389	11,000	11,035*	114	95
	Ctr.			Yes	II	10.0	N/A	537	15,000	15,116*	N/A	N/A
	RH			Yes	II	10.7	22	389	11,000	10,990	82	60
Third Row	LH	Fixed	Fixed	Yes	I	9.1	N/A	537	15,000	15,073*	N/A	N/A
	Ctr.			Yes	I	9	N/A	537	15,000	11,063*	N/A	N/A
	RH			Yes	II	8.8	22	389	11,000	15,134*	101	79

Note: AS DETERMINED USING THE PROCEDURES SPECIFIED IN TP-225-01.

REMARKS: \* Applied force exceeded the force specified in the test procedure.

## 6.0 PHOTOGRAPHS

### 6.1 Front view



6.2 Rear view





6.3 Front left view



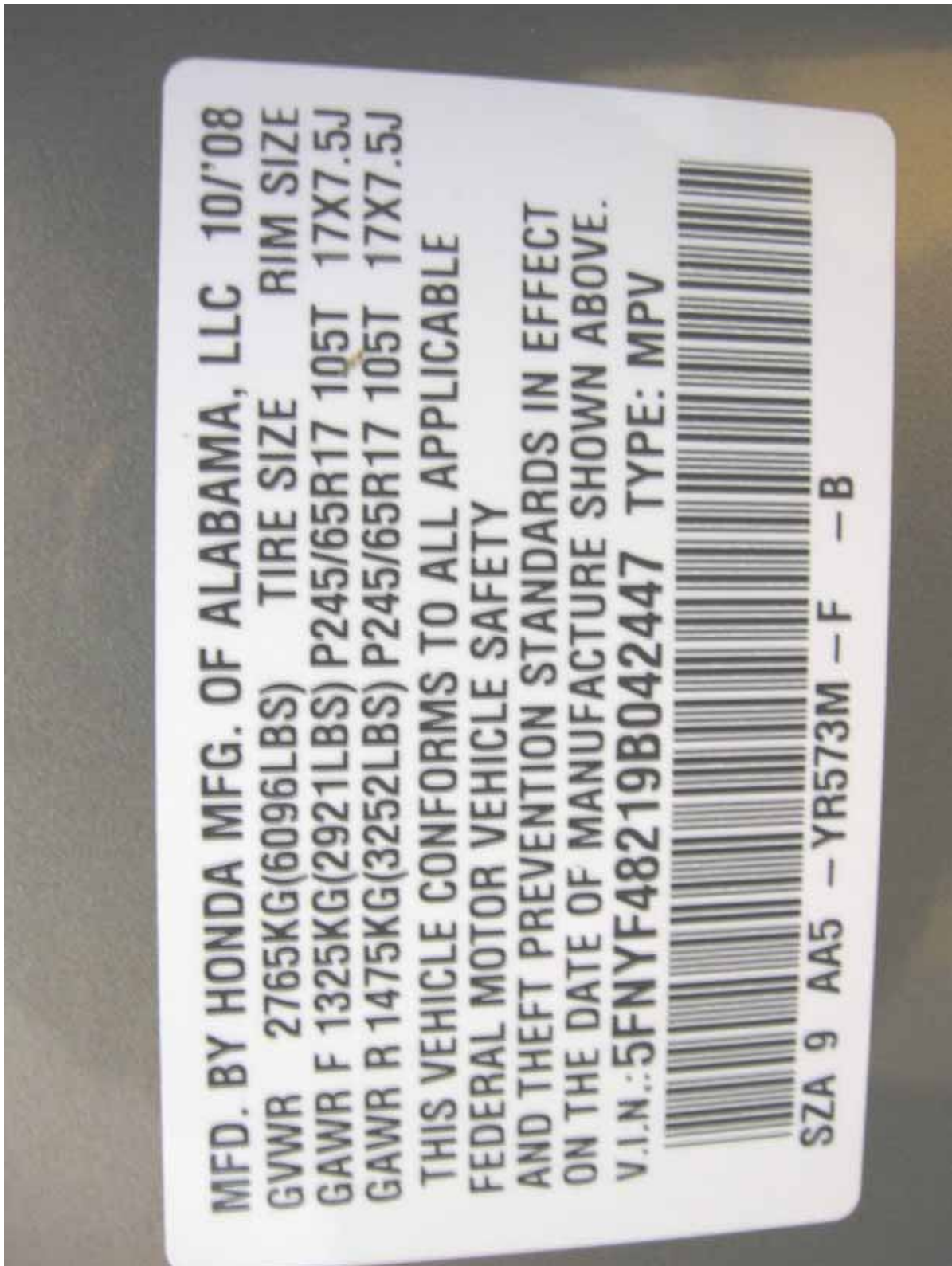
6.4 Front right view



- 6.5 Test vehicle's certification label
  - 6.5.1 Certification label photo #1



6.5.2 Certification label photo #2

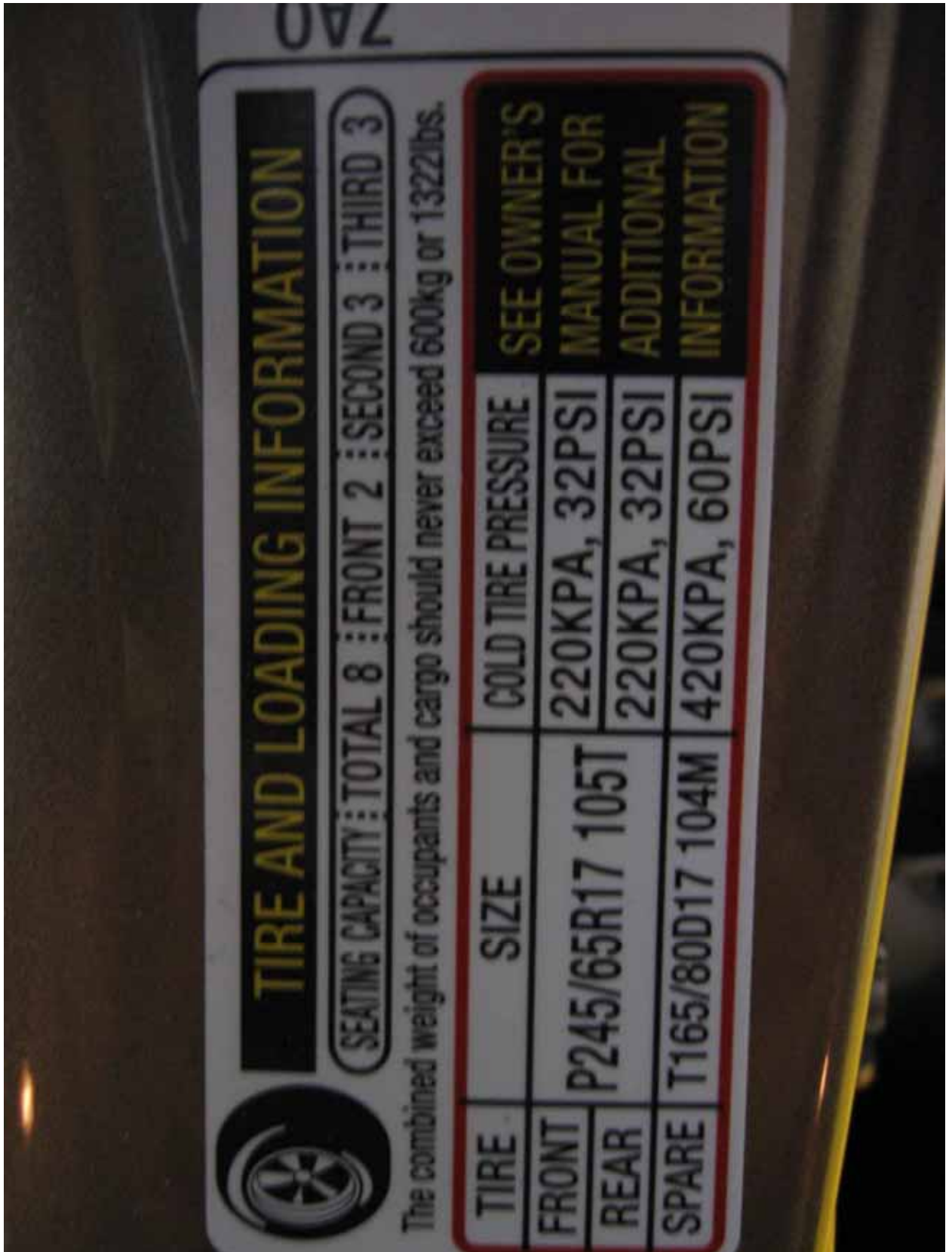




6.5.3 Tire information label photo #1



6.5.4 Tire information label photo #2

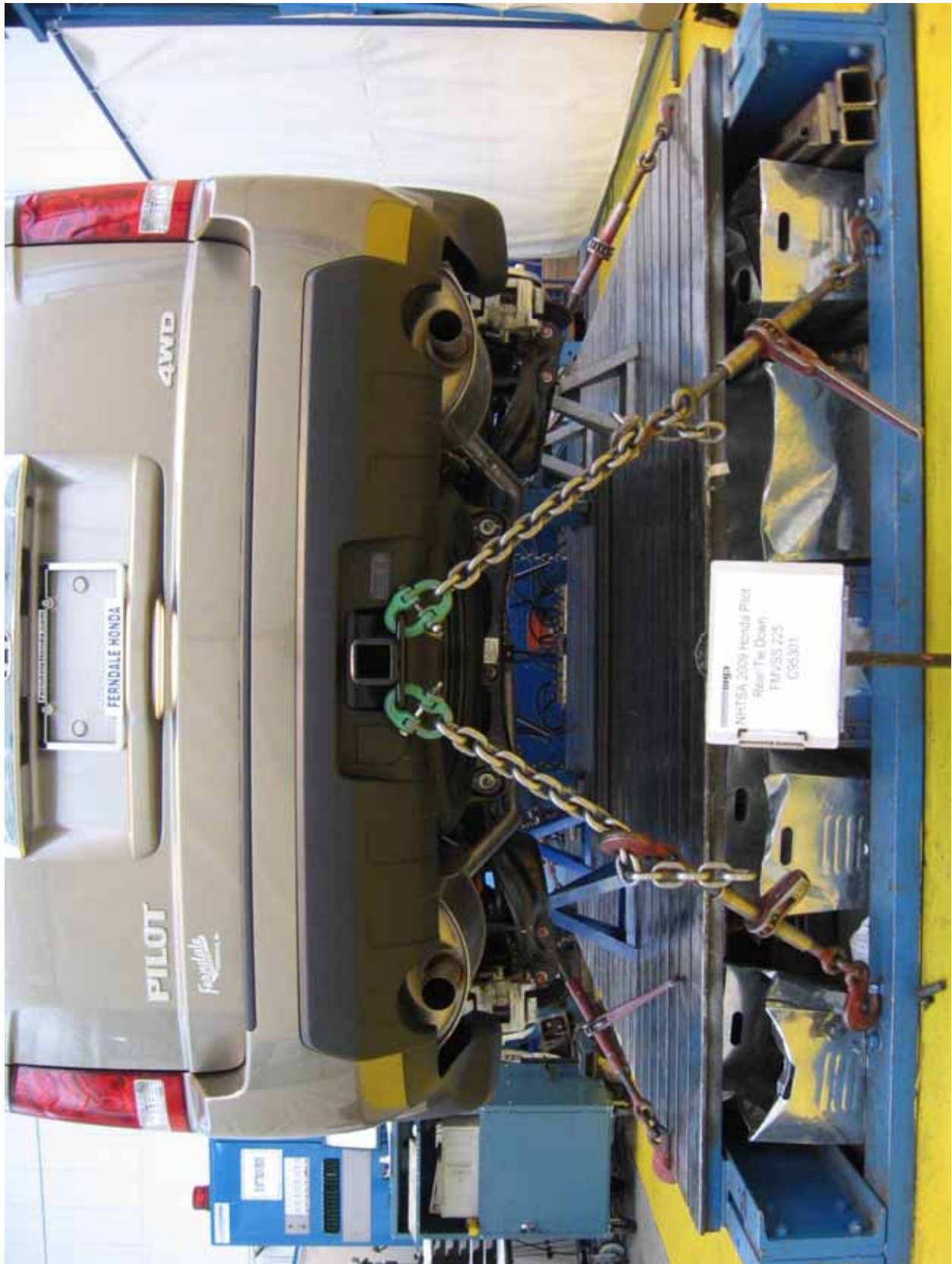


Vehicle tie down at each tie down location  
6.6.1 Front under vehicle





6.6.2 Rear under vehicle





6.6.3 Left front



6.6.4 Left rear



6.6.5 Right front





6.6.6 Right rear



- 6.7 2-dimensional template
  - 6.7.1 2<sup>nd</sup> Row LH position photo



6.7.2 2<sup>nd</sup> Row RH position photo



6.7.3 2<sup>nd</sup> Row Center position photo



6.7.4 3<sup>rd</sup> Row LH position photo

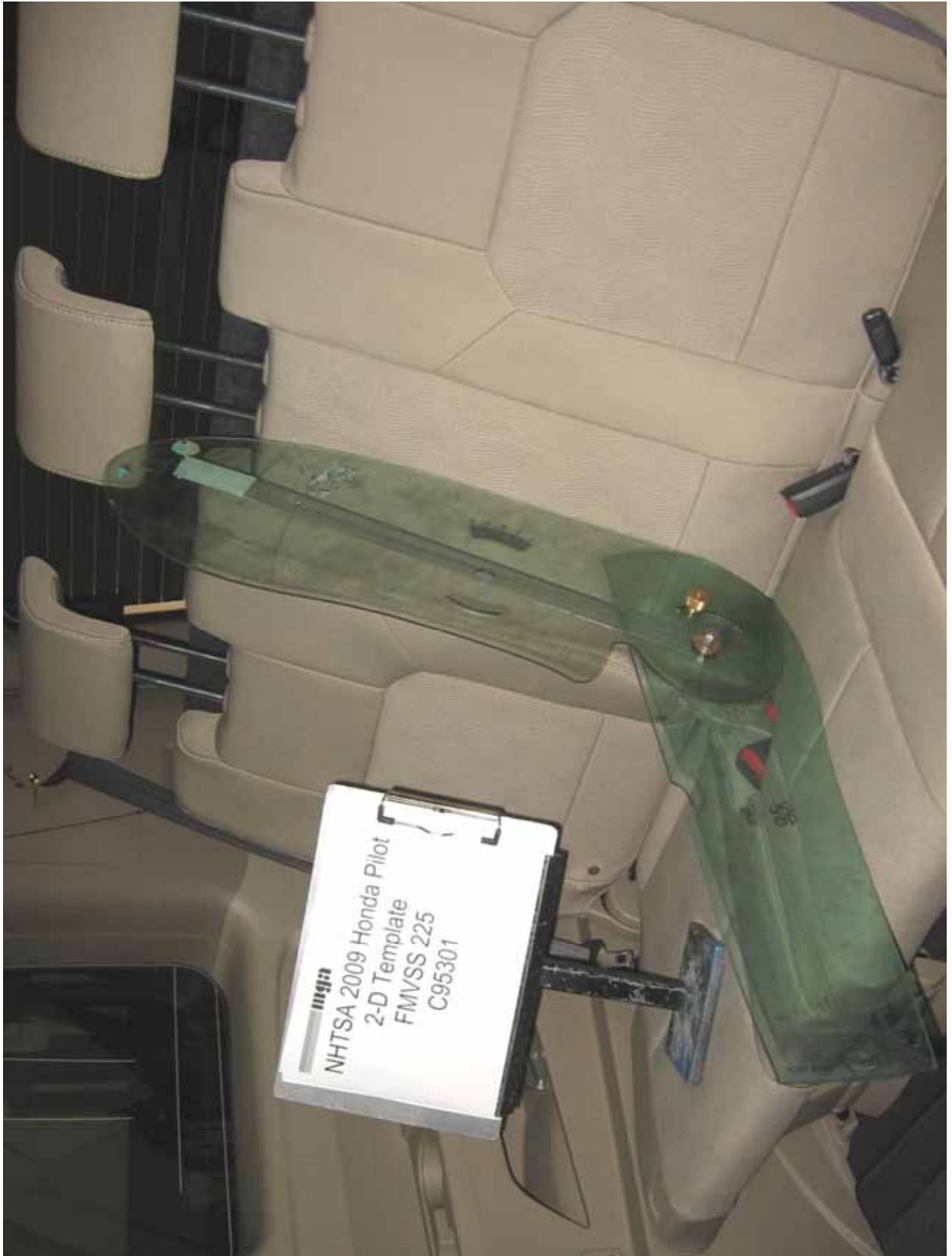




6.7.5 3<sup>rd</sup> Row RH position photo



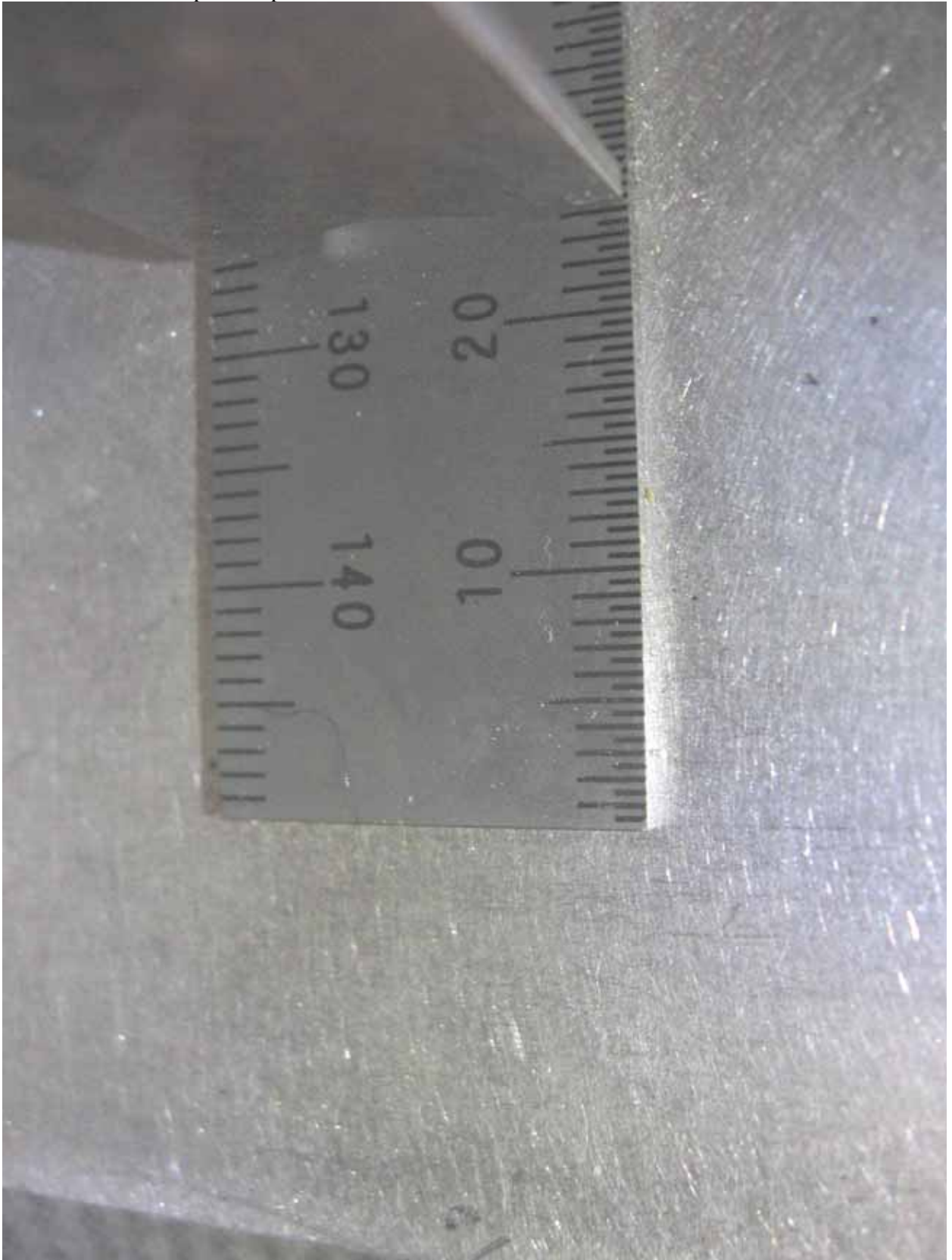
6.7.6 3<sup>rd</sup> Row Center position photo



- 6.8 CRF verification
  - 6.8.1 2<sup>nd</sup> Row LH position photo #1



6.8.2 2<sup>nd</sup> Row LH position photo #2





6.8.3 2<sup>nd</sup> Row RH position photo #1



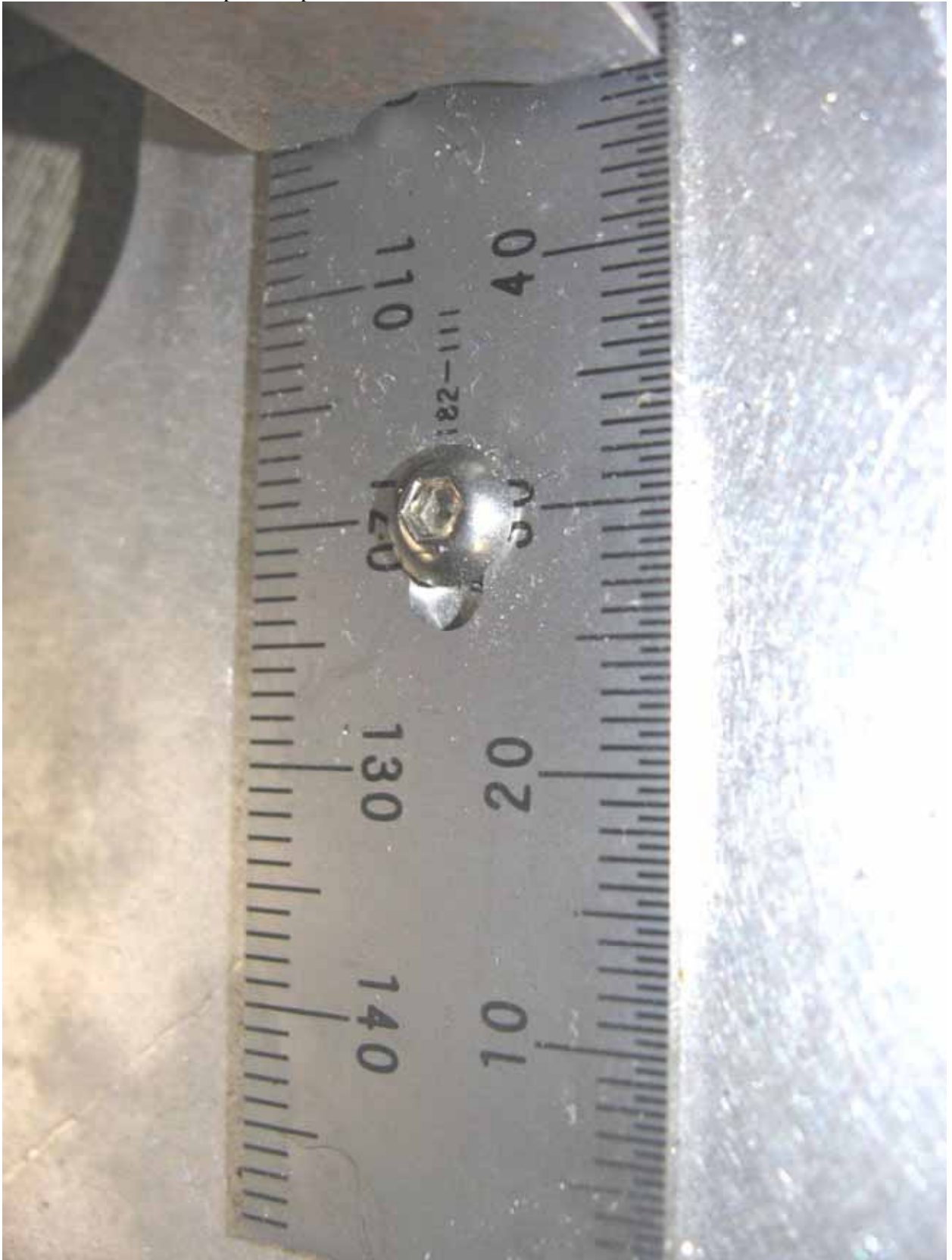
6.8.4 2<sup>nd</sup> Row RH position photo #2



6.8.5 2<sup>nd</sup> Row Center position photo #1



6.8.6 2<sup>nd</sup> Row Center position photo #2





6.8.7 3<sup>rd</sup> Row RH position photo #1



6.8.8 3<sup>rd</sup> Row RH position photo #2



- 6.9 Front view of test vehicle with test apparatus in place
- 6.9.1 SFAD II LH, Center, & RH 2<sup>nd</sup> Row



6.9.2 SFAD II RH 3<sup>rd</sup> Row & SFAD I LH 3<sup>rd</sup> Row



- 6.10 Pre-test views of each child restraint anchorage system installed in the vehicle
  - 6.10.1 Pre-test photo





6.10.2 Pre-test photo



6.10.3 Pre-test photo



6.10.4 Pre-test photo





6.10.5 Pre-test photo



6.10.6 Pre-test photo



6.10.7 Pre-test photo



6.10.8 Pre-test photo





6.10.9 Pre-test photo





6.10.10 Pre-test photo



6.10.11 Pre-test photo



6.10.12 Pre-test photo



6.10.13 Pre-test photo



6.10.14 Pre-test photo





6.10.15 Pre-test photo



6.11 Post-test condition of each child restraint anchorage system  
6.11.1 Post-test photo



6.11.2 Post-test photo



6.11.3 Post-test photo





6.11.4 Post-test photo





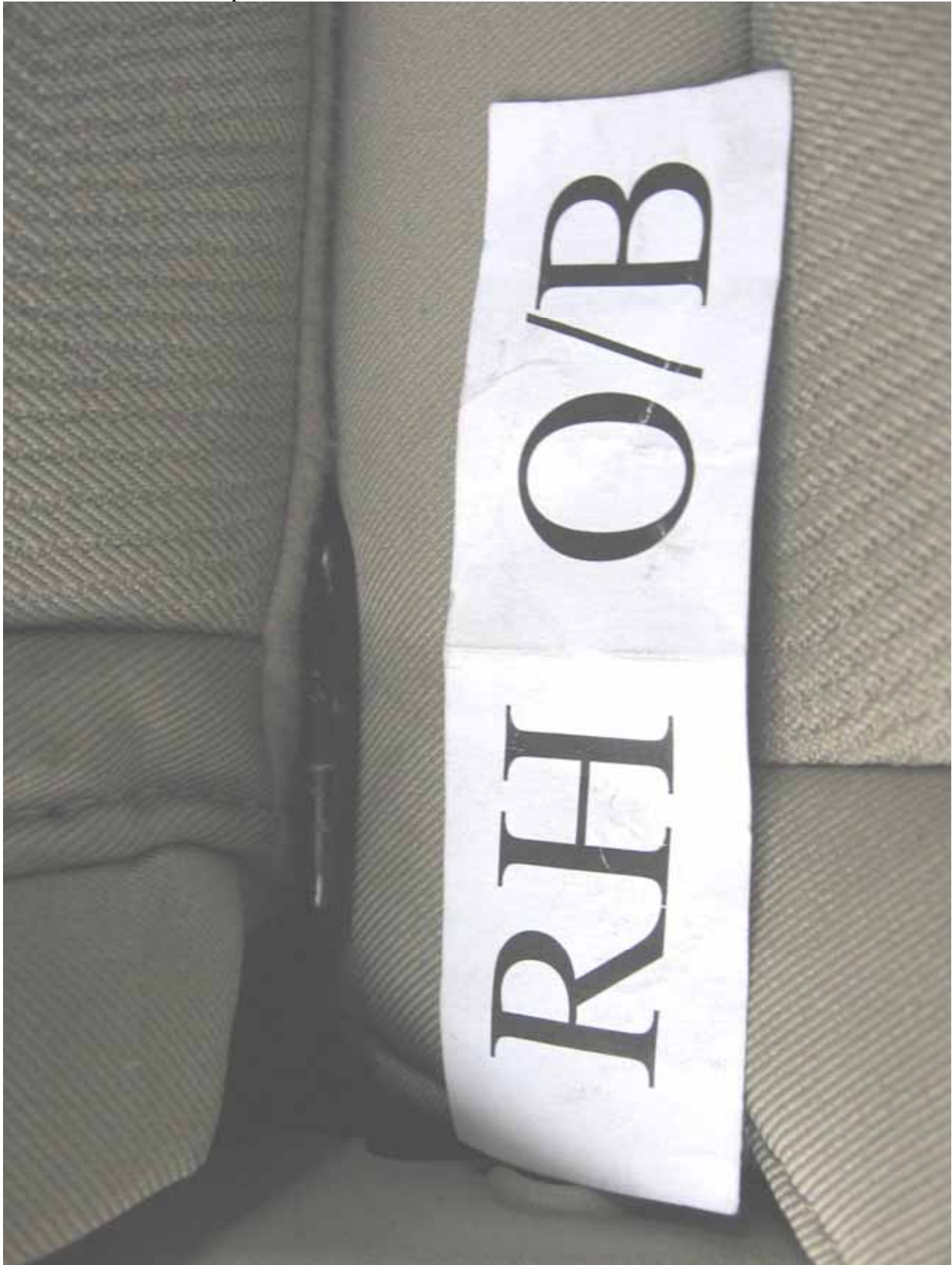
6.11.5 Post-test photo



6.11.6 Post-test photo



6.11.7 Post-test photo





6.11.8 Post-test photo



6.11.9 Post-test photo





6.11.10 Post-test photo



6.11.11 Post-test photo



6.11.12 Post-test photo





6.11.13 Post-test photo



6.11.14 Post-test photo





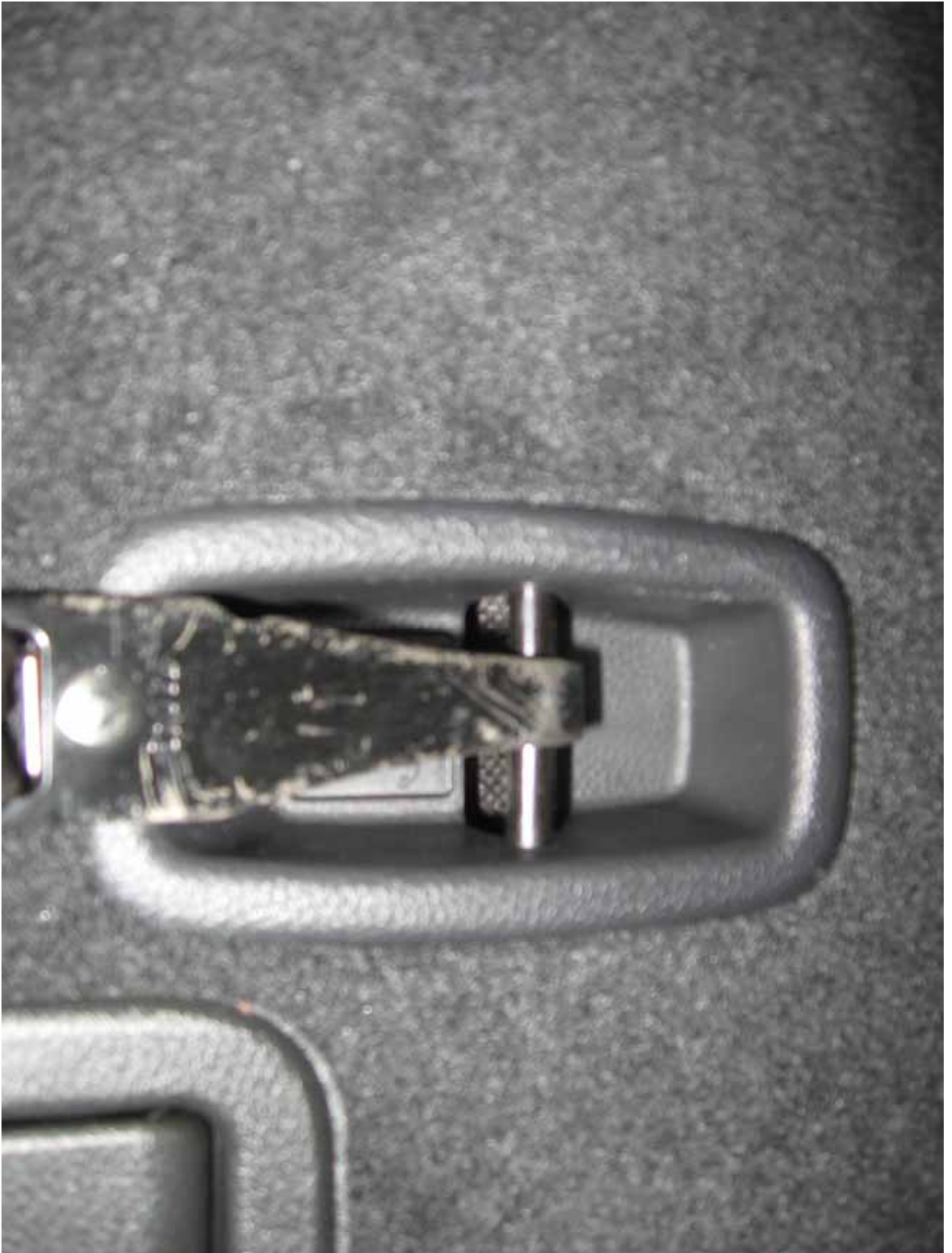
6.11.15 Post-test photo



6.11.16 Post-test photo



6.11.17 Post-test photo



6.11.18 Post-test photo



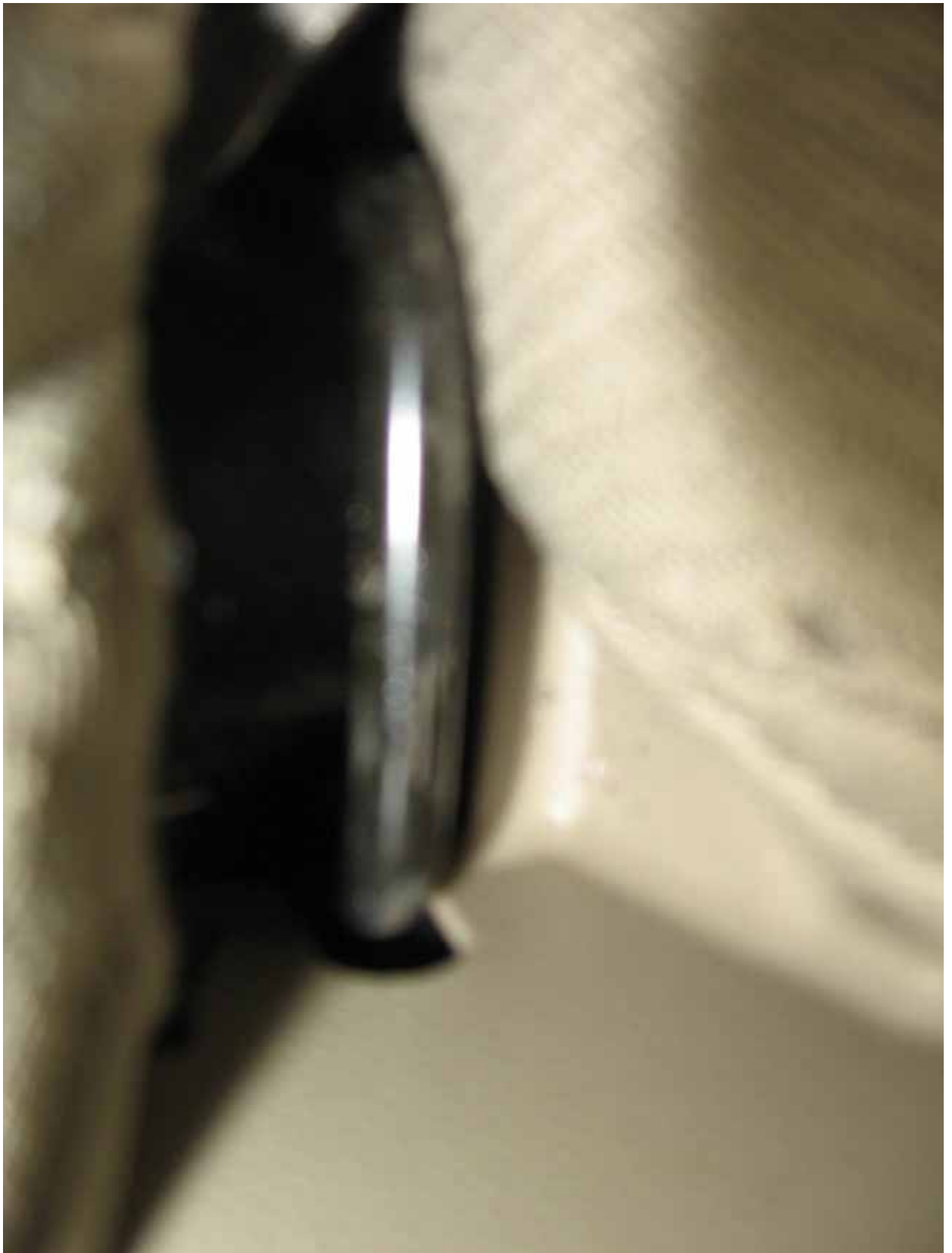


6.11.19 Post-test photo

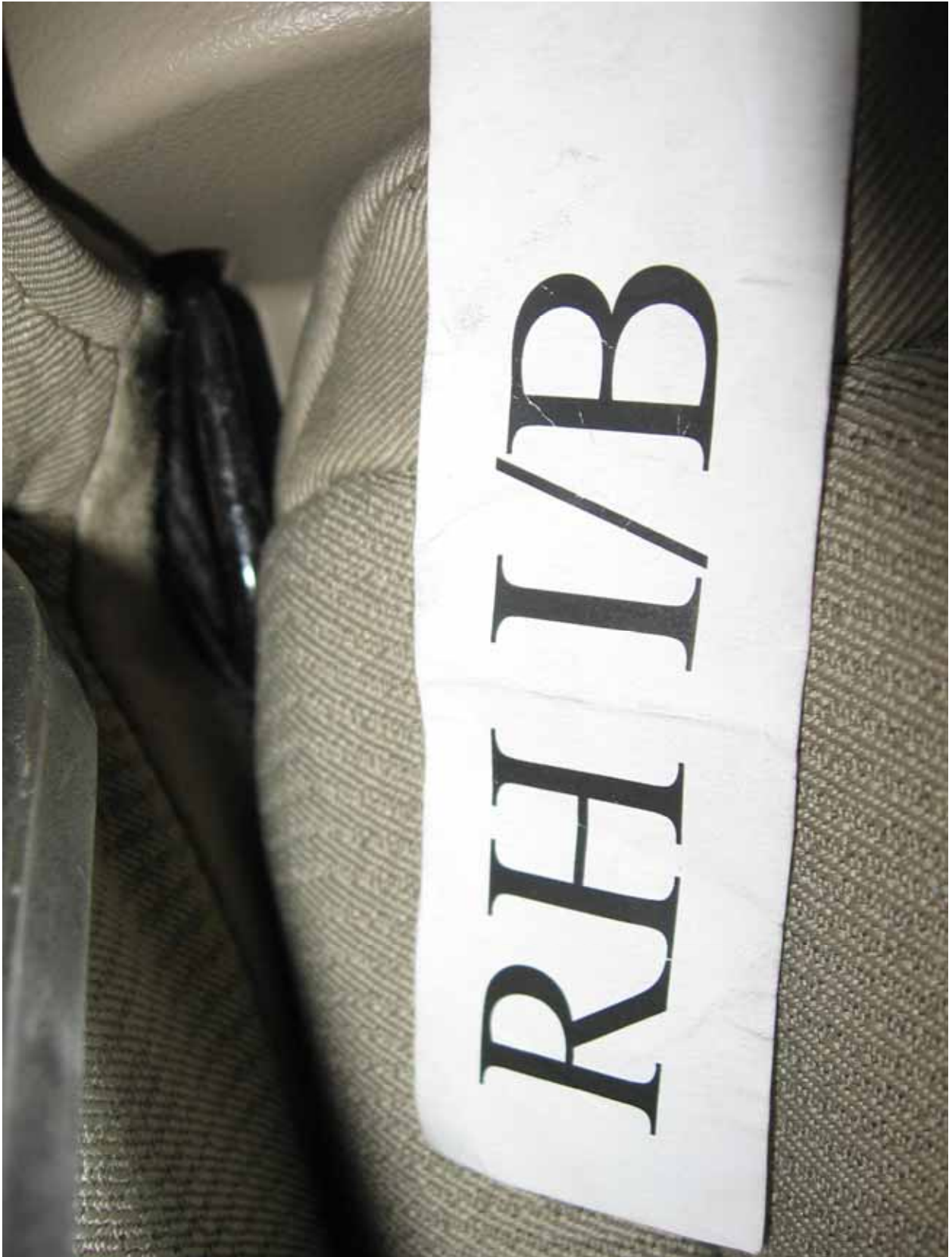




6.11.20 Post-test photo



6.11.21 Post-test photo



6.11.22 Post-test photo



6.11.23 Post-test photo



6.11.24 Post-test photo





6.11.25 Post-test photo



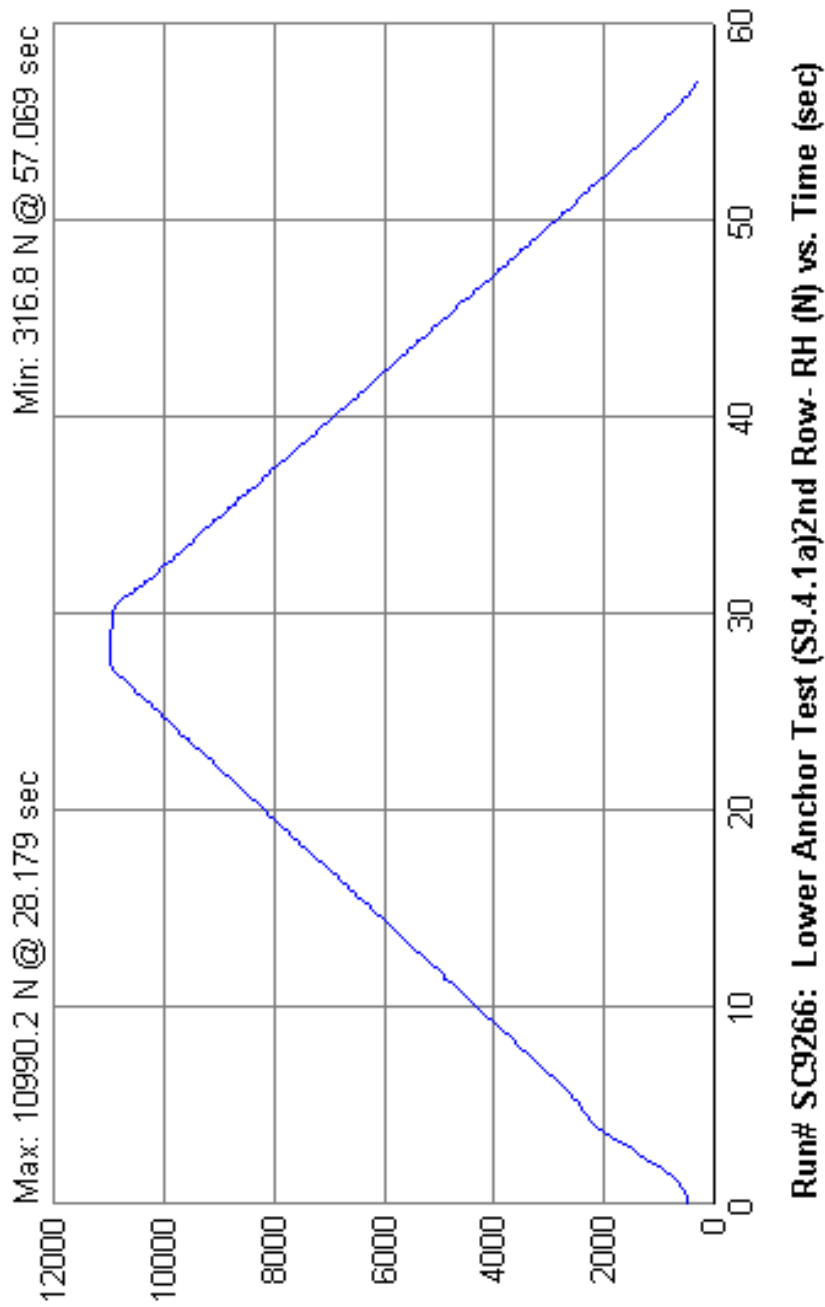
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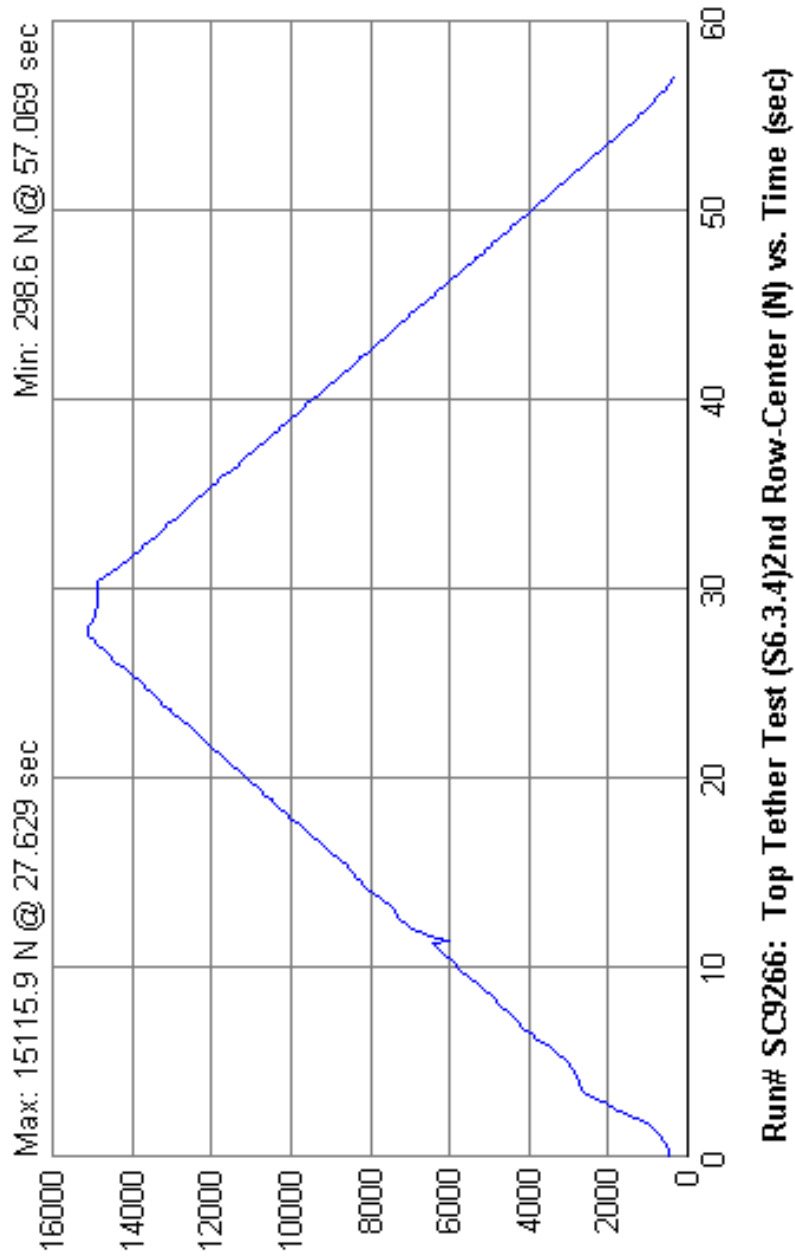


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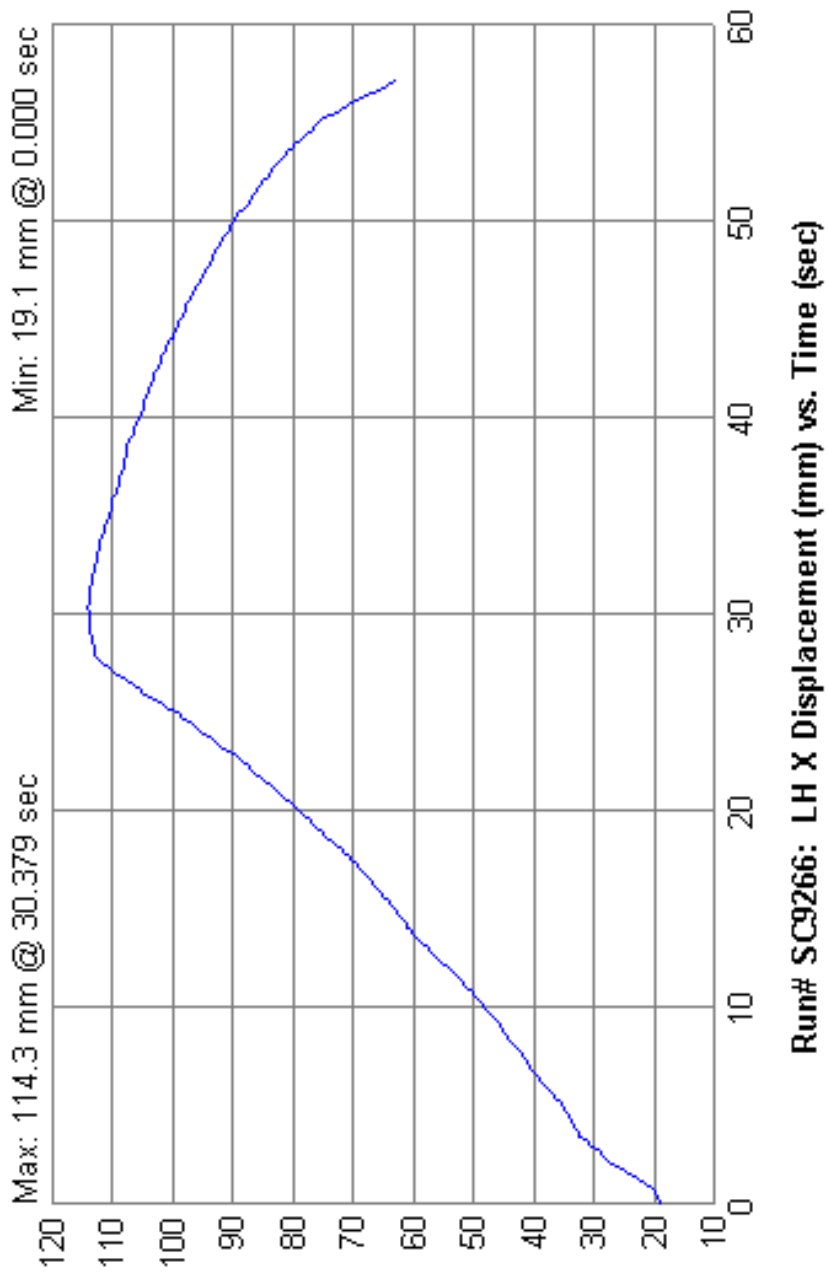


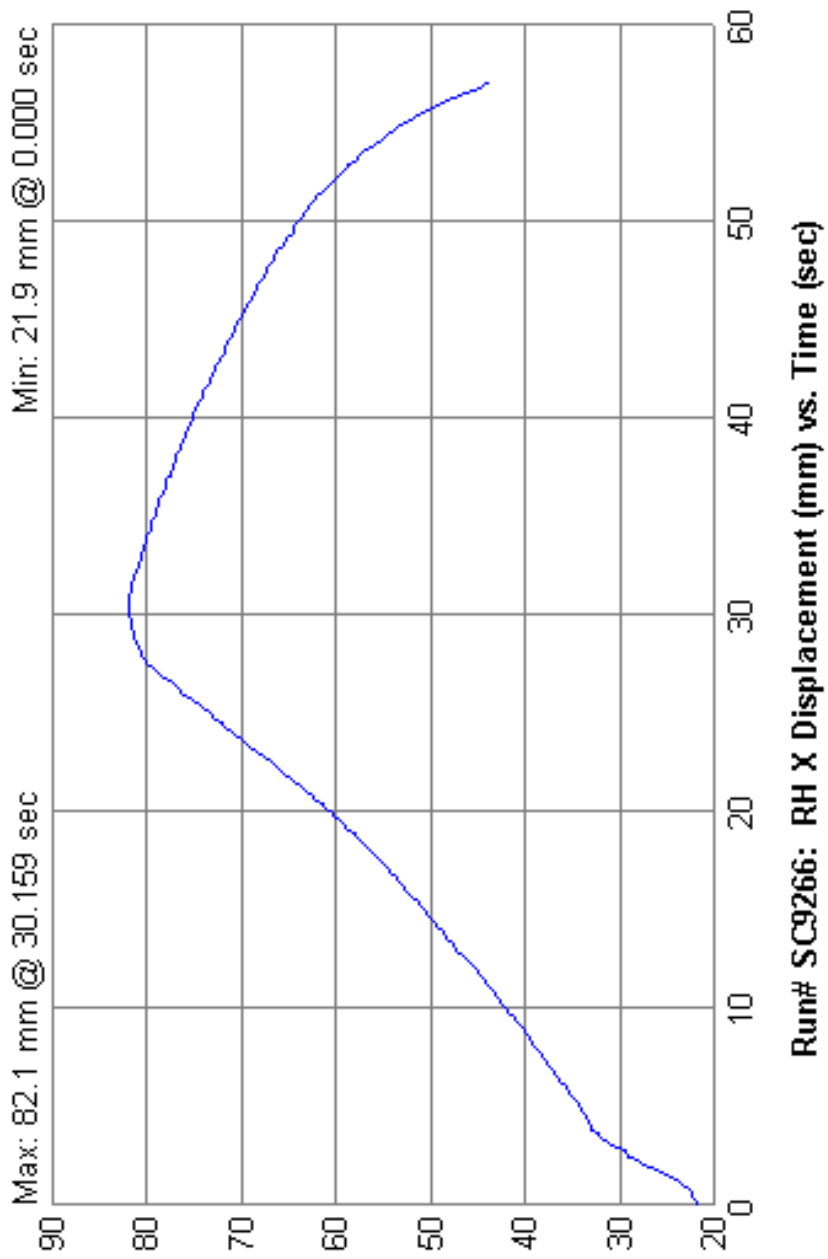
7.0 PLOTS

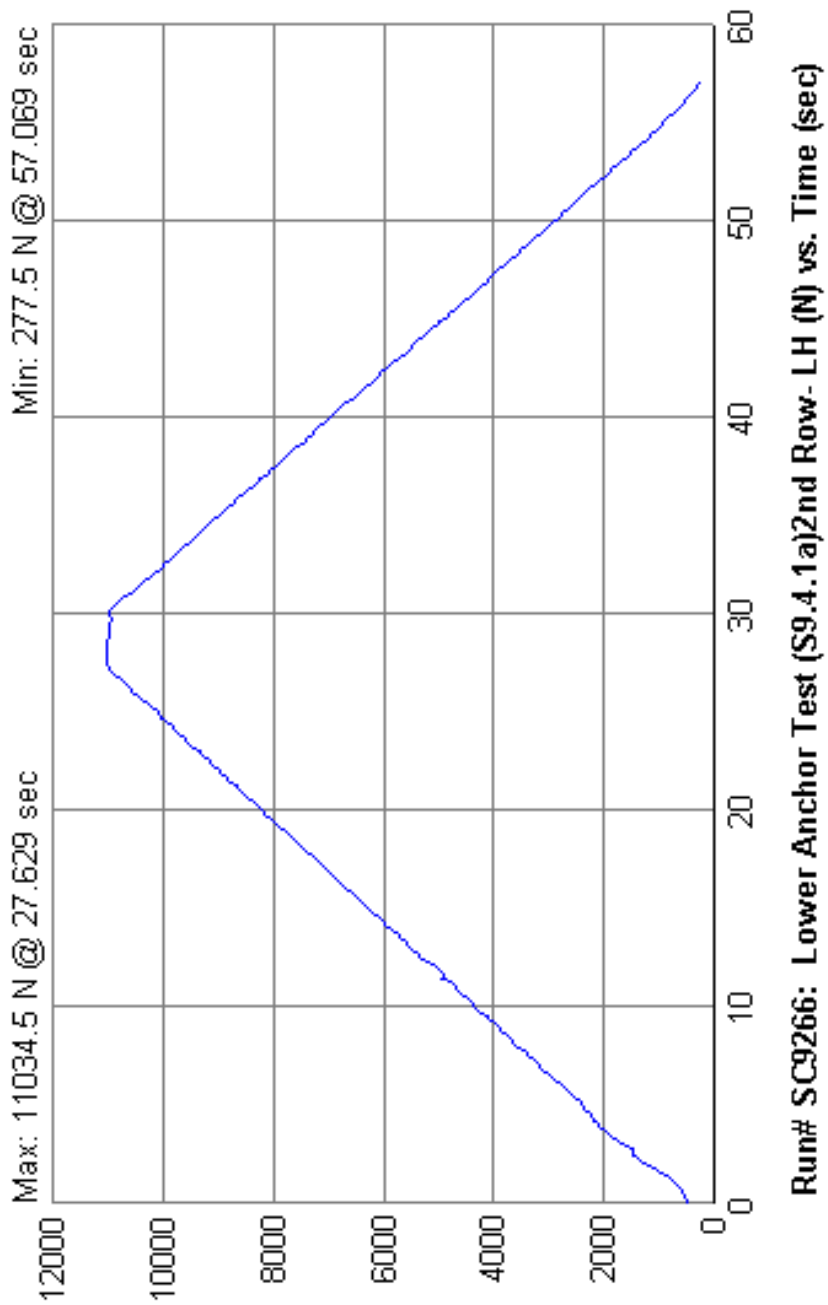


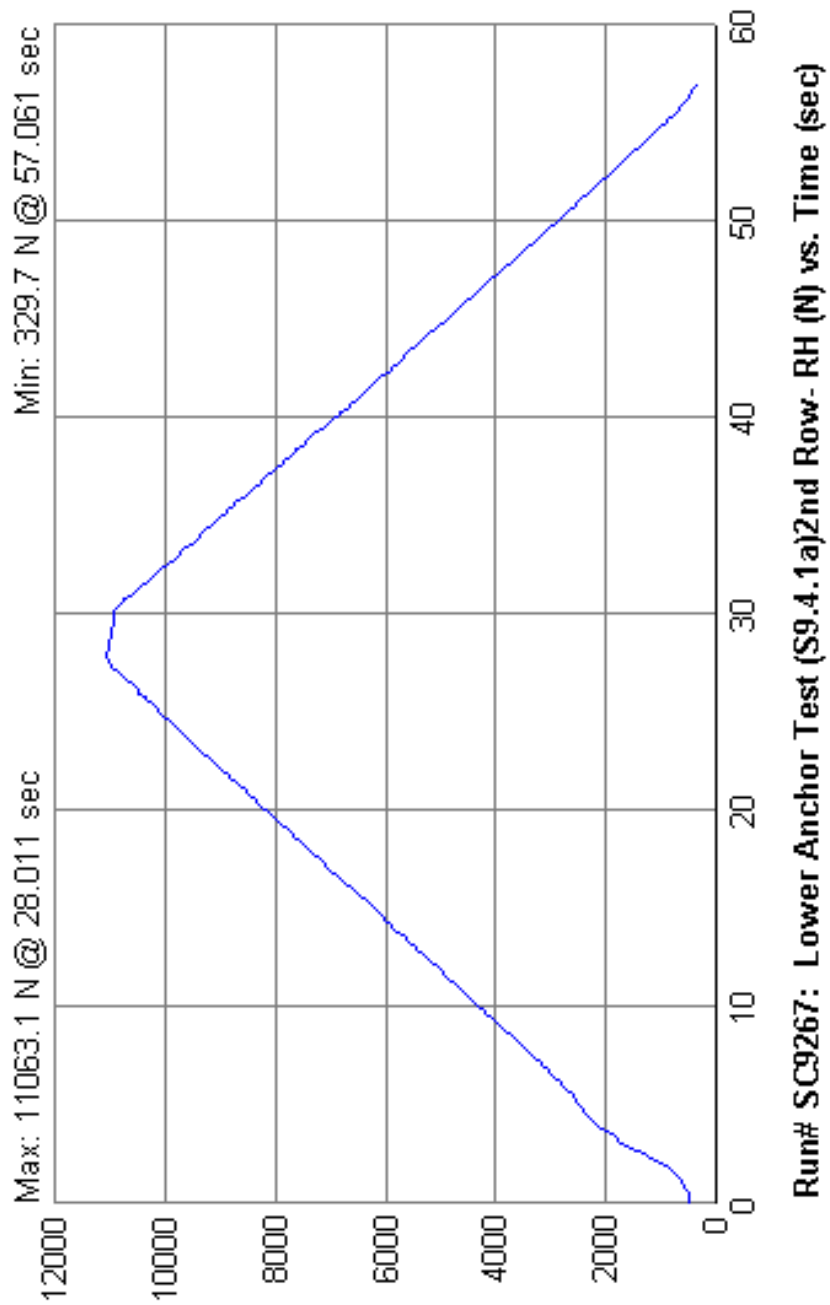


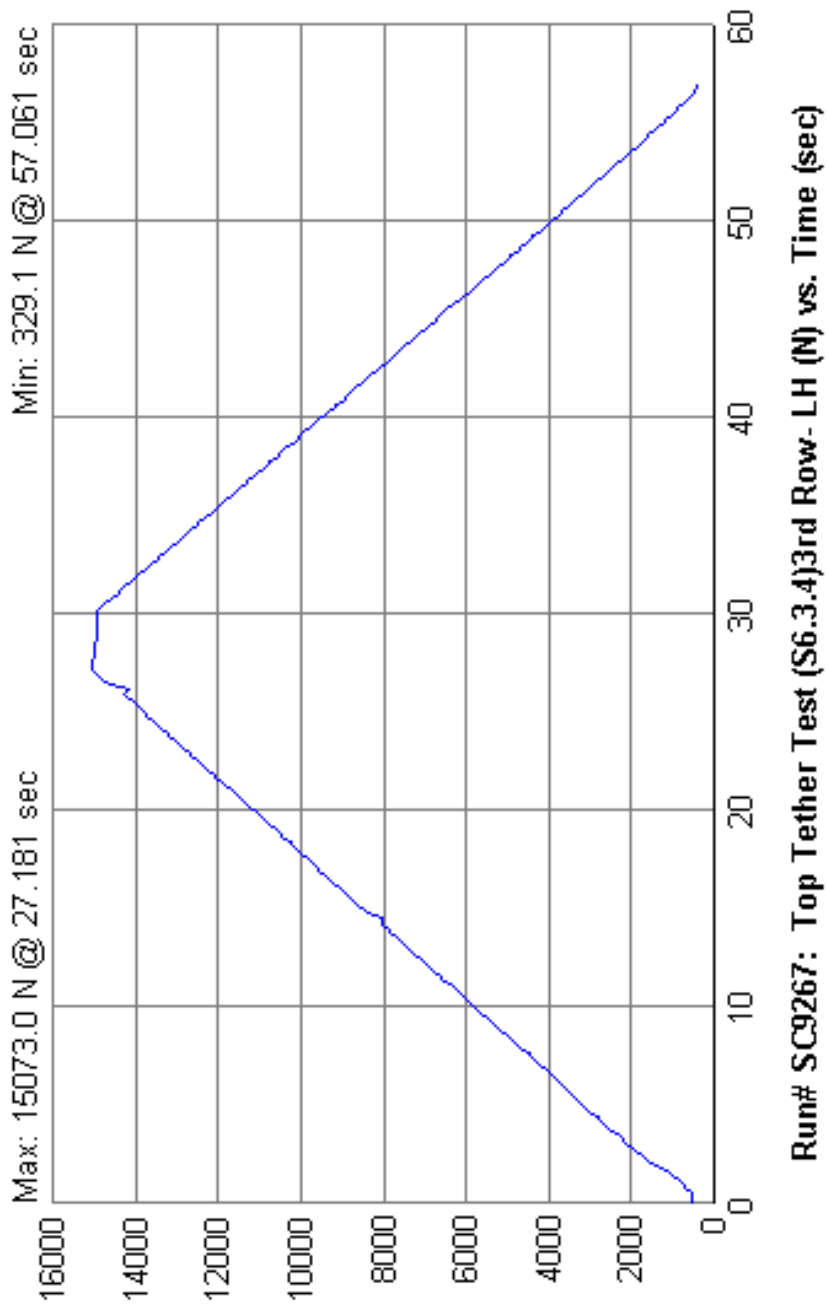




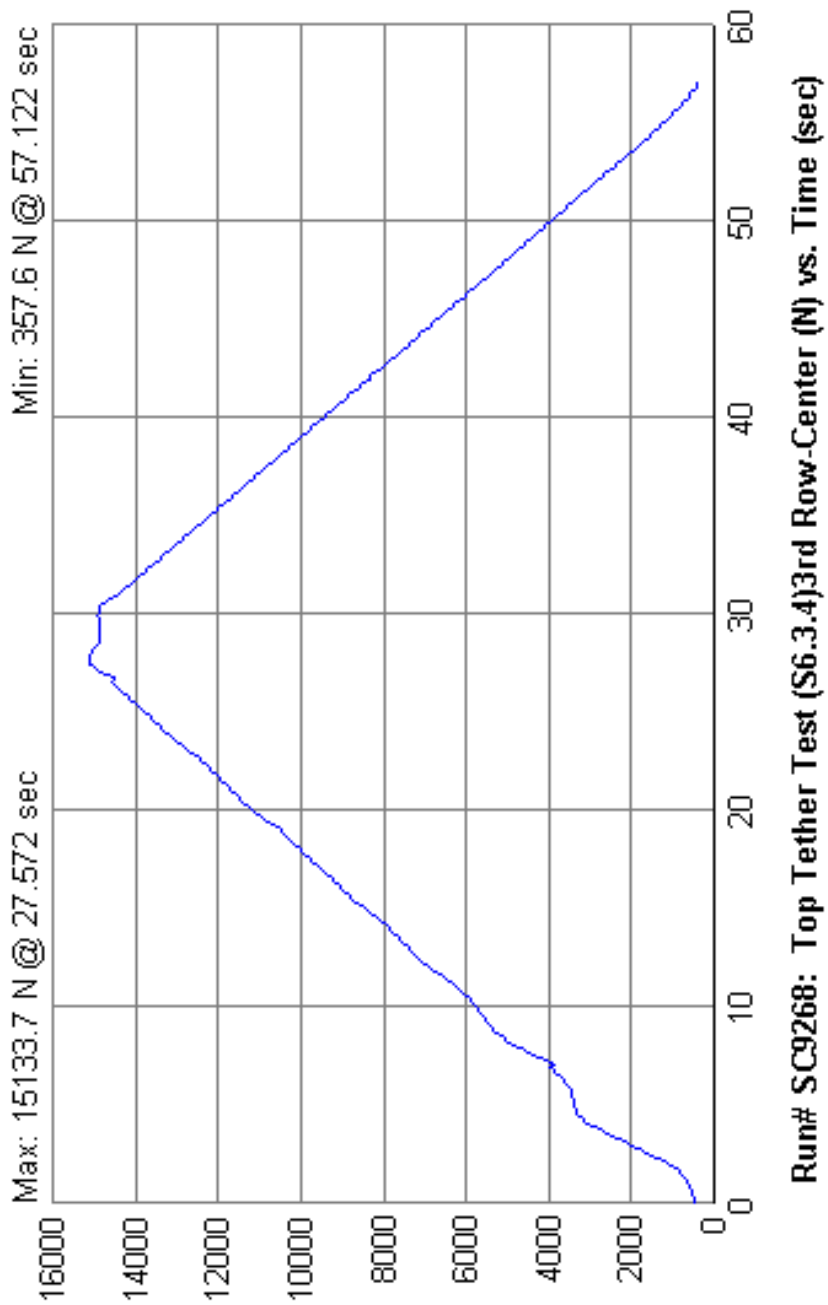


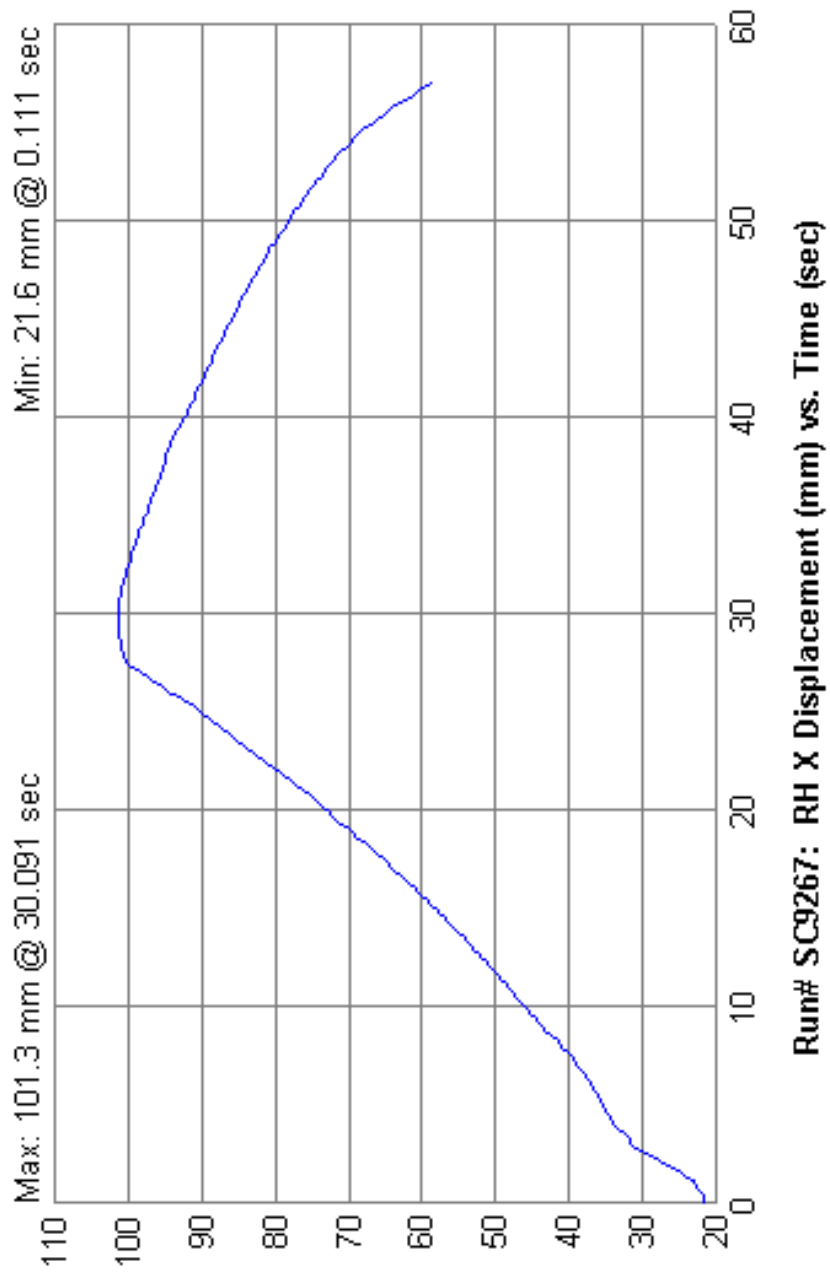












8.0

REPORT OF VEHICLE CONDITION

**REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING**

CONTRACT No.: 22DTNH22-06-C-00030/0007

DATE: March 6, 2008

From: MGA Research Corporation, 446 Executive Drive, Troy, MI 48083

To: NHTSA, OVSC, NVS-220

The following vehicle has been subjected to compliance testing for FMVSS No. 225

The vehicle was inspected upon arrival at the laboratory for the test and found to contain all of the equipment listed below. All variances have been reported within 2 working days of vehicle arrival, by letter, to the NHTSA Industrial Property Manager (NAD0-30), with a copy to the OVSC COTR. The vehicle is again inspected, after the above test has been conducted, and all changes are noted below. The final condition of the vehicle is also noted in detail.

VEH. MOD YR/MAKE/MODEL/BODY: 2009 Honda Pilot

VEH. NHTSA NO.: C95304

VIN: 5FNYP48219B042447

COLOR: Beige

ODOMETER READINGS: ARRIVAL 26 miles Date: 7/9/08

COMPLETION 26 miles Date: 3/6/09

PURCHASE PRICE: \$Unknown DEALER'S NAME: Unknown

ENGINE DATA: 6 Cylinders 3.7 Liters      Cubic Inches

TRANSMISSION DATA: X Automatic    Manual No. of Speeds

FINAL DRIVE DATA:    Rear Drive X Front Drive    4 Wheel Drive

CHECK APPROPRIATE BOXES FOR VEHICLE EQUIPMENT:

TEST LABORATORY: MGA Research Corporation

OBSERVERS: Fern Gatilao, Brad Reaume, Kenney Godfrey

<input checked="" type="checkbox"/>	Air Conditioning	<input checked="" type="checkbox"/>	Traction Control	<input checked="" type="checkbox"/>	Clock
<input checked="" type="checkbox"/>	Tinted Glass		All Wheel Drive	<input checked="" type="checkbox"/>	Roof Rack
<input checked="" type="checkbox"/>	Power Steering	<input checked="" type="checkbox"/>	Speed Control	<input checked="" type="checkbox"/>	Console
<input checked="" type="checkbox"/>	Power Windows	<input checked="" type="checkbox"/>	Rear Window Defroster	<input checked="" type="checkbox"/>	Driver Air Bag
<input checked="" type="checkbox"/>	Power Door Locks		Sun Roof or T-Top	<input checked="" type="checkbox"/>	Passenger Air Bag
<input checked="" type="checkbox"/>	Power Seat(s)	<input checked="" type="checkbox"/>	Tachometer	<input checked="" type="checkbox"/>	Front Disc Brakes
<input checked="" type="checkbox"/>	Power Brakes	<input checked="" type="checkbox"/>	Tilt Steering Wheel	<input checked="" type="checkbox"/>	Rear Disc Brakes
<input checked="" type="checkbox"/>	Antilock Brake System	<input checked="" type="checkbox"/>	AM/FM/Compact Disc		Other

**REMARKS:**

Salvage only.

**Equipment that is no longer on the test vehicle as noted on previous pages:**

All equipment inventoried and placed in vehicle.

**Explanation for equipment removal:**

**Test Vehicle Condition:**

Salvage only.

RECORDED BY: Fern Gatilao, Kenney Godfrey

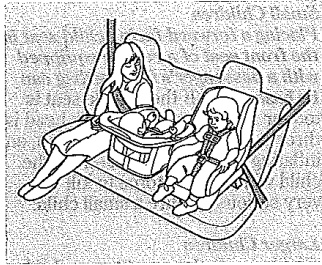
DATE: July 17, 2009

APPROVED BY: Brad Reaume

APPENDIX A  
OWNERS MANUAL CHILD RESTRAINT SYSTEMS



### Protecting Children – General Guidelines



Children depend on adults to protect them. However, despite their best intentions, many adults do not know how to *properly* protect child passengers.

If you have children, or ever need to drive with a child in your vehicle, be sure to read this section. It begins with important general guidelines, then presents special information for infants, small children, and larger children.

**All Children Must Be Restrained**  
Each year, many children are injured or killed in vehicle crashes because they are either unrestrained or not properly restrained. In fact, vehicle accidents are the number one cause of death of children age 12 and under.

To reduce the number of child deaths and injuries, every state and Canadian province requires that infants and children be properly restrained when they ride in a vehicle.

*Infants and small children must be restrained in an approved child seat that is properly secured to the vehicle* (see pages 42 – 54).

#### **WARNING**

Children who are unrestrained or improperly restrained can be seriously injured or killed in a crash.

Any child too small for a seat belt should be properly restrained in a child seat. A larger child should be properly restrained with a seat belt and use a booster seat if necessary.

*Larger children must be restrained with a lap/shoulder belt and ride on a booster seat until the seat belt fits them properly* (see pages 55 – 58).

FOR MORE INFORMATION, VISIT WWW.MGA.MV

## Protecting Children — General Guidelines

---

### **All Children Should Sit in a Back Seat**

According to accident statistics, children of all ages and sizes are safer when they are restrained in a back seat.

The National Highway Traffic Safety Administration and Transport Canada recommend that all children aged 12 and under be properly restrained in a back seat. Some states have laws restricting where children may ride.

Children who ride in the back are less likely to be injured by striking interior vehicle parts during a collision or hard braking. Also, children cannot be injured by an inflating front airbag when they ride in the back.

### **The Passenger's Front Airbag Can Pose Serious Risks**

Front airbags have been designed to help protect adults in a moderate to severe frontal collision. To do this, the passenger's front airbag is quite large, and it can inflate with enough force to cause very serious injuries.

Even though your vehicle has an advanced front airbag system that automatically turns the passenger's front airbag off (see page 34), please follow these guidelines:

#### **Infants**

***Never put a rear-facing child seat in the front seat of a vehicle equipped with a passenger's front airbag.*** If the airbag inflates, it can hit the back of the child seat with enough force to kill or very seriously injure an infant.

#### **Small Children**

***Placing a forward-facing child seat in the front seat of a vehicle equipped with a passenger's front airbag can be hazardous.*** If the vehicle seat is too far forward, or the child's head is thrown forward during a collision, an inflating front airbag can strike the child with enough force to kill or very seriously injure a small child.

#### **Larger Children**

***Children who have outgrown child seats are also at risk of being injured or killed by an inflating passenger's front airbag.*** Whenever possible, larger children should sit in the back seat, on a booster seat if needed, and be properly restrained with a seat belt. (See page 55 for important information about protecting larger children.)

Protecting Children – General Guidelines

To remind you of the passenger's front airbag hazards, and that children must be properly restrained in a back seat, your vehicle has warning labels on the dashboard (U.S. models) and on the front visors. Please read and follow the instructions on these labels.

**U.S. Models**

**SUN VISORS**



**Canadian Models**

**SUN VISORS**

**CAUTION**  
 TO AVOID SERIOUS INJURY:  
 • FOR MAXIMUM SAFETY PROTECTION IN ALL TYPES OF CRASHES, YOU MUST ALWAYS WEAR YOUR SAFETY BELT.  
 • DO NOT INSTALL REARWARD-FACING CHILD SEATS IN ANY FRONT PASSENGER SEAT POSITION.  
 • DO NOT SIT OR LEAN UNNECESSARILY CLOSE TO THE AIR BAG.  
 • DO NOT PLACE ANY OBJECTS OVER THE AIR BAG OR BETWEEN THE AIR BAG AND YOURSELF.  
 • SEE THE OWNER'S MANUAL FOR FURTHER INFORMATION AND EXPLANATIONS.

**PRECAUTIONS:**  
 POUR EVITER DES BLESSURES GRAVES:  
 • POUR PROFITER D'UNE PROTECTION MAXIMALE LORS D'UNE COLLISION BOUCLEZ TOUJOURS VOTRE CEINTURE DE SECURITE.  
 • N'INSTALLEZ JAMAIS UN SIEGE POUR ENFANTS FAISANT FACE A L'ARRIERE SUR LE SIEGE DU PASSAGER AVANT.  
 • NE VOUS APPUYEZ PAS ET NE VOUS ASSOYEZ PAS PRES DU COUSSIN GONFLABLE.  
 • NE DEPOSEZ AUCUN OBJET SUR LE COUSSIN GONFLABLE OU ENTRE LE COUSSIN GONFLABLE ET VOUS.  
 • LISEZ LE GUIDE UTILISATEUR POUR DE PLUS AMPLES RENSEIGNEMENTS.

**DASHBOARD**

This Vehicle is Equipped with  
 Advanced Air Bags

Even with Advanced Air Bags  
 Children can be killed or seriously injured by the air bag.  
 The back seat is the safest place for children.  
 Never put a rear-facing child seat in the front.  
 Always use seat belts and child restraints.  
 See owner's manual for more information about air bags.  
 To be removed by owner only.

Driver and Passenger Safety

## Protecting Children — General Guidelines

---

### **If You Must Drive with Several Children**

Your vehicle has two rows of back seats where children can be properly restrained. If you ever have to carry a group of children, and a child must ride in front:

- Place the largest child in the front seat, provided the child is large enough to wear the lap/shoulder belt properly (see page 55).
- Move the vehicle seat as far to the rear as possible (see page 13).
- Have the child sit upright and well back in the seat (see page 17).
- Make sure the seat belt is properly positioned and secured (see page 15).

### **If a Child Requires Close Attention**

Many parents say they prefer to put an infant or a small child in the front passenger seat so they can watch the child, or because the child requires attention.

Placing a child in the front seat exposes the child to hazards in a frontal collision, and paying close attention to a child distracts the driver from the important tasks of driving, placing both of you at risk.

If a child requires close physical attention or frequent visual contact, we strongly recommend that another adult ride with the child in a back seat. The back seat is far safer for a child than the front.

## Protecting Children – General Guidelines

### Additional Safety Precautions

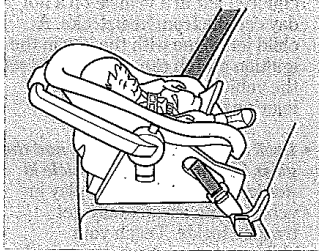
- **Never hold an infant or child on your lap.** If you are not wearing a seat belt in a crash, you could be thrown forward and crush the child against the dashboard or a seat-back. If you are wearing a seat belt, the child can be torn from your arms and be seriously hurt or killed.
  - **Never put a seat belt over yourself and a child.** During a crash, the belt could press deep into the child and cause serious or fatal injuries.
  - **Use the childproof door locks to prevent children from opening the rear doors.** This can prevent children from accidentally falling out (see page 142).
  - **Make sure any unused seat belt that a child can reach is buckled, the lockable retractor is activated, and the belt is fully retracted and locked.** If a child wraps a loose seat belt around their neck, they can be seriously or fatally injured. (See pages 51 and 52 for how to activate and deactivate the lockable retractor.)
  - **Never let two children use the same seat belt.** If they do, they could be very seriously injured in a crash.
  - **Do not leave children alone in a vehicle.** Leaving children without adult supervision is illegal in most states and Canadian provinces, and can be very hazardous.
- For example, infants and small children left in a vehicle on a hot day can die from heatstroke. A child left alone with the key in the ignition switch can accidentally set the vehicle in motion, possibly injuring themselves or others.
- **Lock all doors, the tailgate and the glass hatch when your vehicle is not in use.** Children who play in vehicles can accidentally get trapped inside. Teach your children not to play in or around vehicles.
  - **Keep vehicle keys/remote transmitters out of the reach of children.** Even very young children learn how to unlock vehicle doors, turn on the ignition switch, and open the tailgate or the glass hatch, which can lead to accidental injury or death.

DRIVER AND PASSENGER SAFETY



## Protecting Infants and Small Children

### Protecting Infants



#### **Child Seat Type**

An infant must be properly restrained in a rear-facing, reclining child seat until the child reaches the seat maker's weight or height limit for the seat, and the child is at least one year old.

Only a rear-facing child seat provides proper support for a baby's head, neck, and back.

Two types of seats may be used: a seat designed exclusively for infants, or a convertible seat used in the rear-facing, reclining mode.

**Do not put a rear-facing child seat in a forward-facing position.** If placed facing forward, an infant could be very seriously injured during a frontal collision.

#### **Rear-facing Child Seat Placement**

A rear-facing child seat can be placed in any seating position in the back seat, but not in the front. **Never put a rear-facing child seat in the front seat.**

If the passenger's front airbag inflates, it can hit the back of the child seat with enough force to kill or seriously injure an infant.

When properly installed in the second row, a rear-facing child seat may prevent the driver or a front passenger from moving their seat as far back as recommended, or from locking their seat-back in the desired position.

It could also interfere with proper operation of the passenger's advanced front airbag system.

## Protecting Infants and Small Children

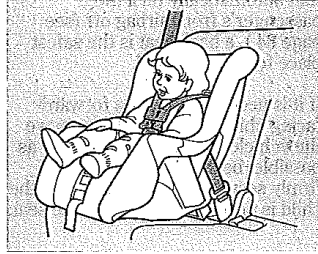
In any of these situations, we strongly recommend that you install the child seat directly behind the front passenger's seat, move the seat as far forward as needed, and leave it unoccupied. Or, you may wish to get a smaller rear-facing child seat.

### **▲ WARNING**

Placing a rear-facing child seat in the front seat can result in serious injury or death during a collision.

Always place a rear-facing child seat in the back seat, not the front.

### Protecting Small Children



#### **Child Seat Type**

A child who is at least one year old, and who fits within the child seat maker's weight and height limits, should be restrained in a forward-facing, upright child seat.

Of the different seats available, we recommend those that have a five-point harness system as shown.

We also recommend that a small child use the child seat until the child reaches the weight or height limit for the seat.

Illustration by [unreadable]

CONTINUED

## Protecting Infants and Small Children

### *Child Seat Placement*

We strongly recommend placing a forward-facing child seat in a back seat, not the front.

*Placing a forward-facing child seat in the front seat of a vehicle equipped with a passenger's airbag can be hazardous.* If the vehicle seat is too far forward, or the child's head is thrown forward during a collision, an inflating airbag can strike the child with enough force to cause very serious or fatal injuries.

Even with advanced front airbags that automatically turn the passenger's front airbag off (see page 34), a back seat is the safest place for a small child.

If it is necessary to put a forward-facing child seat in the front, move the vehicle seat as far to the rear as possible, be sure the child seat is firmly secured to the vehicle and the child is properly strapped in the seat.

### **▲WARNING**

Placing a forward-facing child seat in the front seat can result in serious injury or death if the front airbag inflates.

If you must place a forward-facing child seat in front, move the vehicle seat as far back as possible, and properly restrain the child.

### Selecting a Child Seat

When buying a child seat, you need to choose either a conventional child seat, or one designed for use with the lower anchors and tethers for children (LATCH) system.

Conventional child seats must be secured to a vehicle with a seat belt, whereas LATCH-compatible seats are secured by attaching the seat to hardware built into the rear seating positions.

Since LATCH-compatible child seats are easier to install and reduce the possibility of improper installation, we recommend selecting this style.

In seating positions and vehicles not equipped with LATCH, a LATCH-compatible child seat can be installed using a seat belt.

Whatever type of seat you choose, to provide proper protection, a child seat should meet three requirements:

- 1. The child seat should meet U.S. or Canadian Motor Vehicle Safety Standard 213.** Look for FMVSS 213 or CMVSS 213 on the box.
- 2. The child seat should be of the proper type and size to fit the child.** Rear-facing for infants, forward-facing for small children.
- 3. The child seat should fit the vehicle seating position (or positions) where it will be used.**

Before purchasing a conventional child seat, or using a previously purchased one, we recommend that you test the seat in the specific vehicle seating position or positions where the seat will be used.

SAFETY SEAT BELT

## Installing a Child Seat

---

After selecting a proper child seat and a good place to install the seat, there are three main steps in installing the seat:

**1. Properly secure the child seat to the vehicle.** All child seats must be secured to the vehicle with the lap part of a lap/shoulder belt or with the LATCH (lower anchors and tethers for children) system. A child whose seat is not properly secured to the vehicle can be endangered in a crash.

**2. Make sure the child seat is firmly secured.** After installing a child seat, push and pull the seat forward and from side-to-side to verify that it is secure.

A child seat secured with a seat belt should be installed as firmly as possible. However, it does not need to be "rock solid." Some side-to-side movement can be expected and should not reduce the child seat's effectiveness.

If the child seat is not secure, try installing it in a different seating position, or use a different style of child seat that can be firmly secured.

**3. Secure the child in the child seat.** Make sure the child is properly strapped in the child seat according to the child seat maker's instructions. A child who is not properly secured in a child seat can be seriously injured in a crash.

The following pages provide guidelines on how to properly install a child seat. A forward-facing child seat is used in all examples, but the instructions are the same for rear-facing child seats.



## Installing a Child Seat

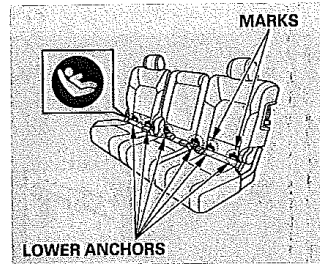
### Installing a Child Seat with LATCH

Your vehicle is equipped with LATCH (lower anchors and tethers for children) at each of the second row seats and the passenger's side third row seat.

The lower anchors are located between the seat-back and seat bottom, and are to be used only with a child seat designed for use with LATCH.

The location of each lower anchor is indicated by a small button above the anchor point.

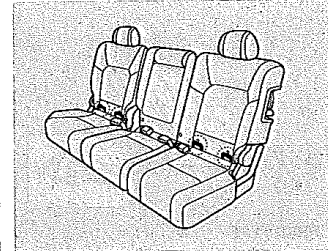
You can find lower anchors in the slits in the seat-backs.



When you install a child seat in the second row seating position, use the lower anchors as shown in the illustration. You can install up to three child seats at a time with LATCH.

Do not attach two child seat connectors to a single lower anchor at a time.

### Using the Outer LATCH

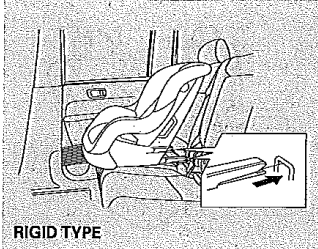


To install a LATCH-compatible child seat in either outer second row seat:

1. Move the seat belt buckle or tongue away from the lower anchors.
2. Make sure there are no objects near the anchors that could prevent a secure connection between the child seat and the anchors.

CONTINUED

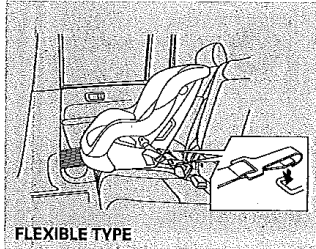
## Installing a Child Seat



RIGID TYPE

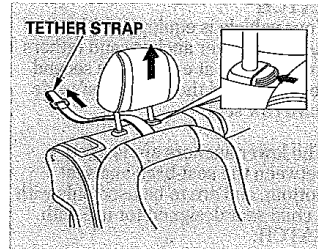
3. Place the child seat on the vehicle seat, then attach the seat to the lower anchors according to the child seat maker's instructions.

Some LATCH-compatible seats have a rigid-type connector as shown above.



FLEXIBLE TYPE

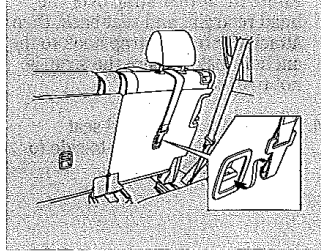
- Other LATCH-compatible seats have a flexible-type connector as shown above.
4. Whatever type you have, follow the child seat maker's instructions for adjusting or tightening the fit.



TETHER STRAP

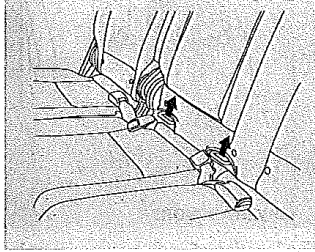
5. Lift the head restraint (see page 155), then route the tether strap through the legs of the head restraint and over the seat-back, making sure the strap is not twisted.

## Installing a Child Seat



6. Attach the tether strap hook to the tether anchor, then tighten the strap as instructed by the child seat maker.
7. Push and pull the child seat forward and from side-to-side to verify that it is secure.

### Using the Center LATCH



To install a LATCH-compatible child seat in the center seating position on the second row seat, use the center lower anchors as shown above.

1. Unlatch the detachable seat belt anchor latch and retract the seat belt all the way into the ceiling. Place the latch plate and anchor latch in their holding slots (see page 160).

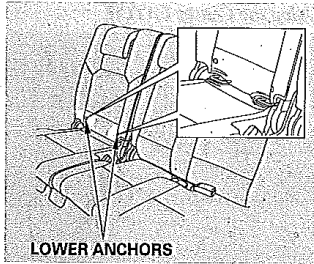
2. Follow step 1 through 4 as described previously to secure the child seat.
3. Lower the head restraint first. Route the tether strap over the head restraint and seat-back, then attach the tether strap hook to the anchor, making sure the strap is not twisted.
4. Push and pull the child seat forward and from side-to-side to verify that it is secure.

UNLATCH AND RESEATBELT SAFETY

## Installing a Child Seat

To install a LATCH-compatible child seat in the passenger's side seating position of the third row:

1. Unlatch the detachable seat belt anchor latch and retract the seat belt all the way into the passenger's side panel. Place the latch plate and anchor latch in their holding slots (see page 161).



The location of each lower anchor is indicated by a small button above the anchor point.

You can find lower anchors in the slits in the seat-backs.

2. Follow steps 1 through 4 of the second row installation on pages 47 and 48.

3. Lower the head restraint first. Route the tether strap over the head restraint and seat-back, then attach the tether strap hook to the anchor, making sure the strap is not twisted.
4. Push and pull the child seat forward and from side-to-side to verify that it is secure.

### Installing a Child Seat

#### Installing a Child Seat with a Lap/Shoulder Belt

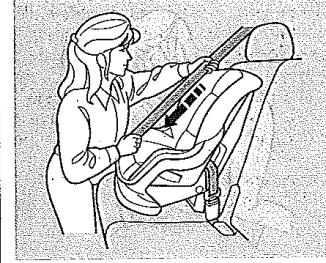
When not using the LATCH system, all child seats must be secured to the vehicle with the lap part of a lap/shoulder belt.

In addition, the lap/shoulder belts in all seating positions except the driver's have a lockable retractor that must be activated to secure a child seat.

If you intend to install a child seat in the center seating position of the second row or in the third row, make sure the detachable seat belt is securely latched (see page 161).



1. With the child seat in the desired seating position, route the belt through the child seat according to the seat maker's instructions, then insert the latch plate into the buckle.

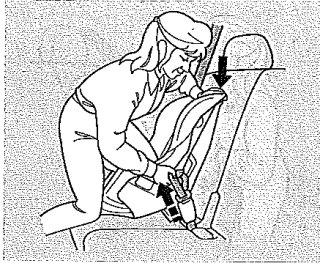


2. To activate the lockable retractor, slowly pull the shoulder part of the belt all the way out until it stops, then let the belt feed back into the retractor.

3. After the belt has retracted, tug on it. If the belt is locked, you will not be able to pull it out. If you can pull the belt out, it is not locked, and you will need to repeat these steps.

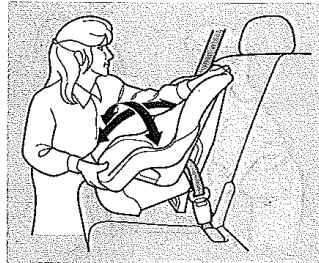
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## Installing a Child Seat



4. 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. Remember, if the lap part of the belt is not tight, the child seat will not be secure.

To remove slack, it may help to put weight on the child seat, or push on the back of the seat while pulling up on the belt.



5. Push and pull the child seat forward and from side-to-side to verify that it is secure enough to stay upright during normal driving maneuvers. If the child seat is not secure, unlatch the belt, allow it to retract fully, then repeat these steps.

To deactivate the lockable retractor and remove a child seat, unlatch the buckle, unroute the seat belt, and let the belt fully retract.

### Installing a Child Seat with a Tether

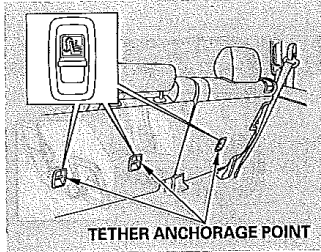
A child seat with a tether can be installed in any seating position in the second or third row.

Since a tether can provide additional security to the lap/shoulder belt installation, we recommend using a tether whenever one is required or available.

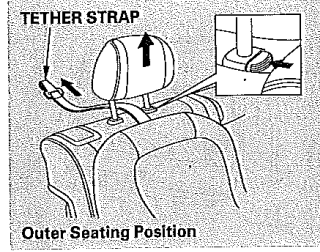


### Installing a Child Seat

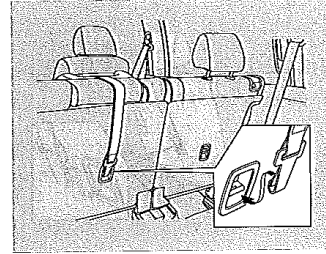
#### Second Row Installation



Each second row seat has a tether anchorage point behind the seat-back.



1. After properly securing the child seat (see page 51), lift the head restraint, then route the tether strap over the seat-back and through the head restraint legs.

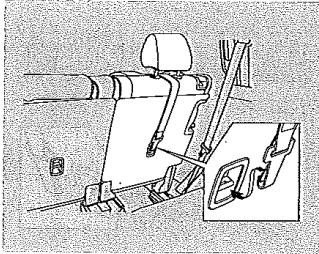


For the center seat, lower the head restraint, then route the tether strap over the head restraint and seat-back.

Driver and Passenger Safety

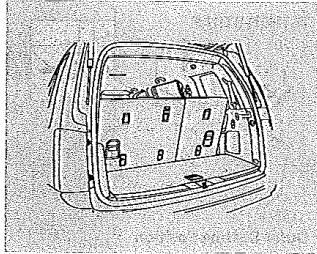
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## Installing a Child Seat



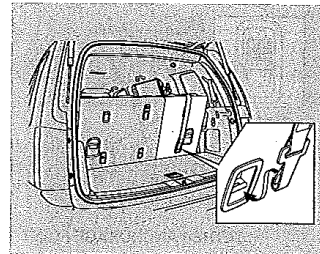
2. Attach the tether strap hook to the anchor, making sure the tether strap is not twisted.
3. Tighten the strap according to the seat maker's instructions.

### Third Row Installation :



Each third row seat has a tether anchorage point behind the seat-back.

1. After properly securing the child seat (see page 51), lower the head restraint.



2. Route the tether strap over the head restraint, then attach the tether strap hook to the anchor, making sure the strap is not twisted.
3. Tighten the strap according to the seat maker's instructions.

## Protecting Larger Children

When a child reaches the recommended weight or height limit for a forward-facing child seat, the child should sit in a back seat on a booster seat and wear a lap/shoulder belt.

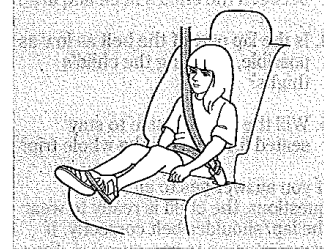
The following pages give instructions on how to check proper seat belt fit, what kind of booster seat to use if one is needed, and important precautions for a child who must sit in front.

### WARNING

Allowing a child age 12 or under to sit in front can result in injury or death if the passenger's front airbag inflates.

If a child must ride in front, move the vehicle seat as far back as possible, use a booster seat if needed; have the child sit up properly and wear the seat belt properly.

### Checking Seat Belt Fit



Driver and Passenger Safety

To determine if a lap/shoulder belt properly fits a child, have the child put on the seat belt, then ask yourself:

1. Does the child sit all the way back against the seat?
2. Do the child's knees bend comfortably over the edge of the seat?

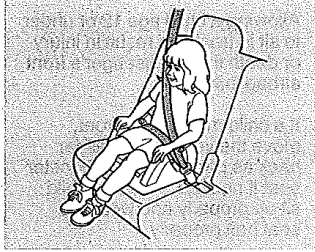
CONTINUED

## Protecting Larger Children

3. Does the shoulder belt cross between the child's neck and arm?
4. Is the lap part of the belt as low as possible, touching the child's thighs?
5. Will the child be able to stay seated like this for the whole trip?

If you answer yes to all these questions, the child is ready to wear the lap/shoulder belt correctly. If you answer no to any question, the child needs to ride on a booster seat.

### Using a Booster Seat



A child who has outgrown a forward-facing child seat should ride in a back seat and use a booster seat until the lap/shoulder belt fits them properly without the booster.

Some states and Canadian provinces also require children to use a booster seat until they reach a given age or weight (e.g., 6 years or 60 lbs). Be sure to check current laws in the states or provinces where you intend to drive.

Booster seats can be high-back or low-back. Whichever style you select, make sure the booster seat meets federal safety standards (see page 45) and that you follow the booster seat maker's instructions.

## Protecting Larger Children

If a child who uses a booster seat must ride in front, move the vehicle seat as far back as possible and be sure the child is wearing the seat belt properly.

A child may continue using a booster seat until the tops of their ears are even with the top of the vehicle's or booster's seat-back. A child of this height should be tall enough to use the lap/shoulder belt without a booster seat.

### When Can a Larger Child Sit in Front

The National Highway Traffic Safety Administration and Transport Canada recommend that all children age 12 and under be properly restrained in a back seat.

If the passenger's front airbag inflates in a moderate to severe frontal collision, the airbag can cause serious injuries to a child who is unrestrained, improperly restrained, sitting too close to the airbag, or out of position.

A side airbag also poses risks. If any part of a larger child's body is in the path of a deploying side airbag, the child could receive possibly serious injuries.

Of course, children vary widely. And while age may be one indicator of when a child can safely ride in front, there are other important factors you should consider.

### Physical Size

Physically, a child must be large enough for the lap/shoulder belt to properly fit (see pages 15 and 55). If the seat belt does not fit properly, with or without the child sitting on a booster seat, the child should not sit in front.

### Maturity

To safely ride in front, a child must be able to follow the rules, including sitting properly, and wearing the seat belt properly throughout a ride.

Driver and Passenger Safety

CONTINUED

## Protecting Larger Children

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If you decide that a child can safely ride up front, be sure to:

- Carefully read the owner's manual, and make sure you understand all seat belt instructions and all safety information.
- Move the vehicle seat to the rear-most position.
- Have the child sit up straight, back against the seat, and feet on or near the floor.
- Check that the child's seat belt is properly and securely positioned.
- Supervise the child. Even mature children sometimes need to be reminded to fasten the seat belts or sit properly.

### Additional Safety Precautions

- ***Do not let a child wear a seat belt across the neck.*** This could result in serious neck injuries during a crash.
- ***Do not let a child put the shoulder part of a seat belt behind the back or under the arm.*** This could cause very serious injuries during a crash. It also increases the chance that the child will slide under the belt in a crash and be injured.
- ***Two children should never use the same seat belt.*** If they do, they could be very seriously injured in a crash.

- ***Do not put any accessories on a seat belt.*** Devices intended to improve a child's comfort or reposition the shoulder part of a seat belt can make the belt less effective and increase the chance of serious injury in a crash.



APPENDIX B  
MANUFACTURER’S DATA (OVSC FORM 14)

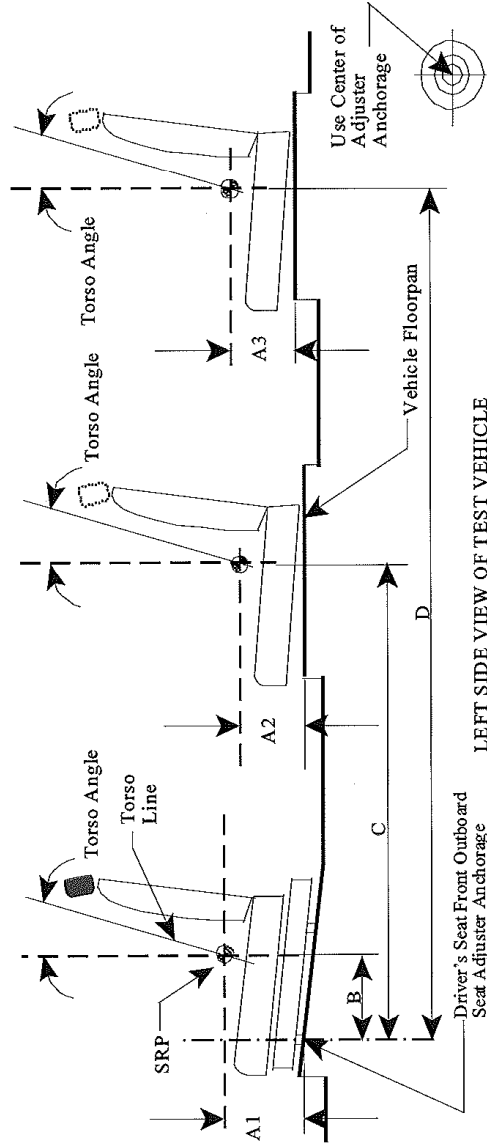
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FORM-225  
Rev. 10/10/08

### SEAT REFERENCE POINT (SRP) AND TORSO ANGLE DATA

FMVSS No. 225  
(All dimensions in mm<sup>1</sup>)

MODEL YEAR: 2009 / MAKE: Honda / MODEL: PILOT / BODY STYLE: SUV  
SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: Contoured / THIRD ROW: Contoured



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Table 1. Seating Positions<sup>1</sup> and Torso Angles

	Left (Driver Side) (Driver) 306	Center (if any)	Right (Front Passenger) 306
A1	333	N/A	333
A2	388	402	388
A3	304	N/A	304
B	1190	1175	1190
C	1972	1935	1972
D			
Torso Angle (degree)	Front Row	N/A	22
	Second Row	15	23
	Third Row	23	19

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

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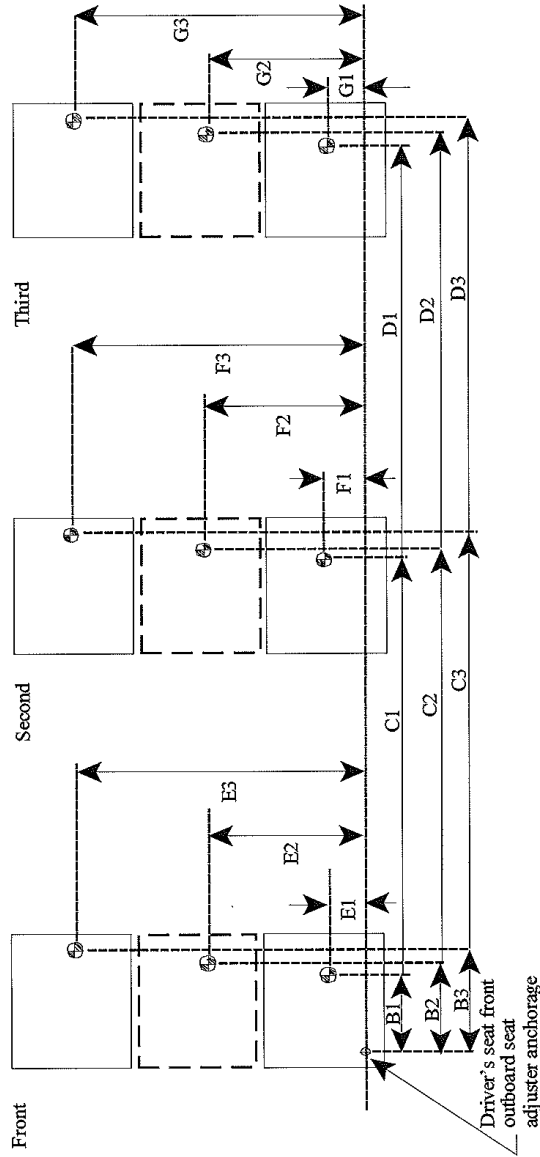
3

**SEATING REFERENCE POINT**

FMVSS No. 225  
 (All dimensions in mm)

MODEL YEAR: 2009 / MAKE: Honda / MODEL: PILOT / BODY STYLE: SUV

SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: Contoured / THIRD ROW: Contoured



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Table 2. Seating Reference Point and Tether Anchorage Locations

Seating Reference Point (SRP)		Distance from Driver's front outboard seat adjuster anchorage <sup>1</sup>
Front Row	B1	304
	E1	212
	B2	N/A
	E2	N/A
	B3	304
	E3	1062
Second Row	C1	1190
	F1	205
	C2	1175
	F2	617
	C3	1190
	F3	1070
Third Row	D1	1972
	G1	277
	D2	1935
	G2	602
	D3	1972
	G3	997

Note: Use the center of anchorage.

5

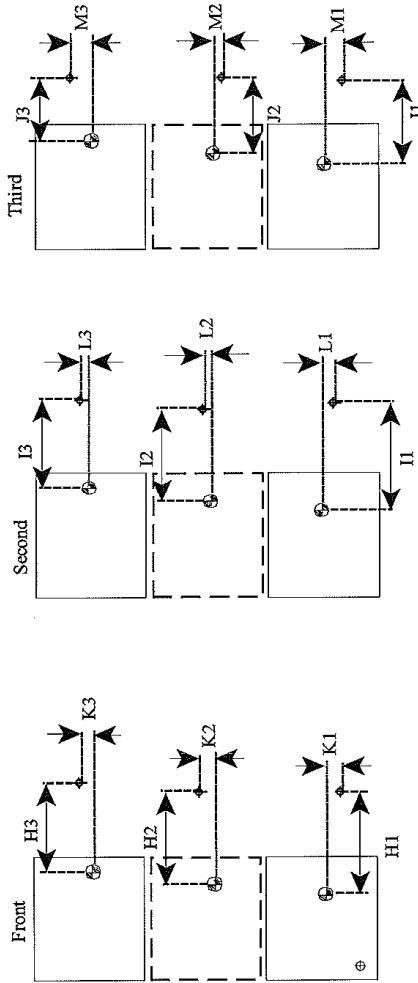
### TETHER ANCHORAGE LOCATIONS

FMVSS No. 225

(All dimensions in mm)

MODEL YEAR: 2009 / MAKE: Honda / MODEL: PILOT / BODY STYLE: SUV

SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: Contoured / THIRD ROW: Contoured



⊕: SRP  
 ⊕: Tether anchorage

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

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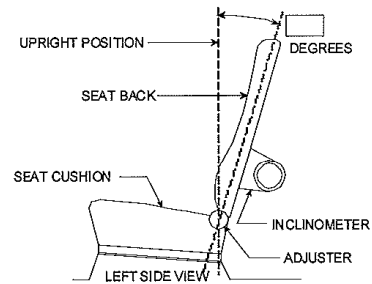
Table 3. Seating Reference Point and Tether Anchorage Locations

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	270
	L1	0
	I2	285
	L2	0
	I3	270
	L3	0
Third Row	J1	209
	M1	0
	J2	245
	M2	-7
	J3	209
	M3	0

Note: Use the center of anchorage.

**NOMINAL DESIGN RIDING POSITION**

For adjustable driver, passenger, 2<sup>nd</sup> row and 3<sup>rd</sup> row seat backs, describe how to position the inclinometer to measure the seat back angle. Include a description of the location of the seat back adjustment latch detent if applicable. Indicate if applicable, how the detents are numbered (Is the first detent "0" or "1"?). Indicate if the seat back angle is measured with the dummy in the seat.



Seat back angle for driver's seat = 12.7 degrees.

Measurement Instructions:

See page 10 of this attachment

Seat back angle for passenger's seat = 12.7 degrees.

Measurement Instructions:

See page 10 of this attachment

Seat back angle for 2<sup>nd</sup> row seat = 21 degrees.

Measurement Instructions:

4 steps FWD from rearmost detent position

Seat back angle for 3<sup>rd</sup> row seat = 20 degrees.

Measurement Instructions:

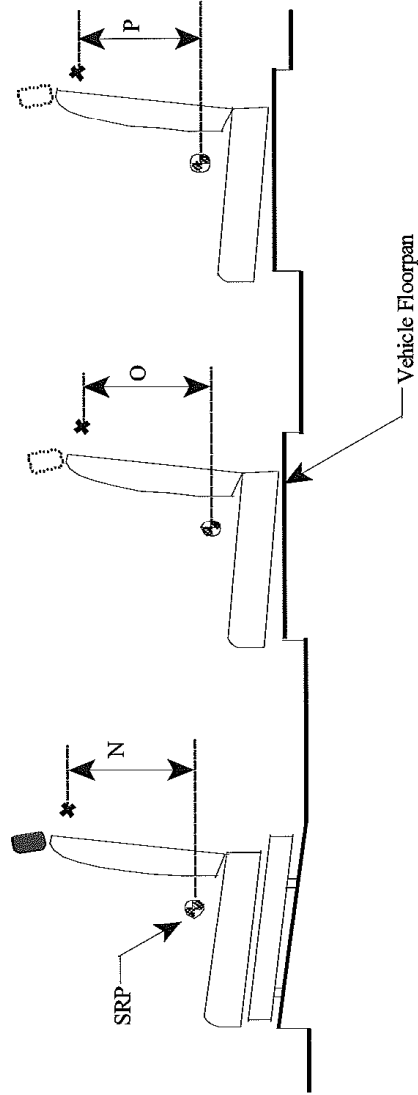
No adjustment system

### TETHER ANCHORAGE LOCATIONS - VERTICAL

FMVSS No. 225  
(All dimensions in mm)

MODEL YEAR: 2009 / MAKE: Honda / MODEL: PILOT / BODY STYLE: SUV

SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: Contoured / THIRD ROW: Contoured



LEFT SIDE VIEW OF TEST VEHICLE

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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) 114
	O2 (Center) 91
	O3 (Right) 114
Third Row	P1 (Left) 21
	P2 (Center) 7
	P3 (Right) 21

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

For each vehicle, provide the following information:

1. How many designated seating positions exist in the vehicle? :8
2. How many designated seating positions are equipped with lower anchorages and tether anchorages? Specify which position(s). :4, Left center right of mid row and right of third row.
3. How many designated seating positions are equipped with tether anchorages? Specify which positions(s). :6, All seating positions except front seats.
4. Lower Anchorages Marking and Conspicuity: Whether the anchorages are certified to S9.5(a) or S9.5(b) of FMVSS No. 225. :Yes,

10

**SEAT BACK ADJUSTMENT INFORMATION**  
Electric Power type



**Manual type**

Adjust seatback at 4 detents from the forward most locking position. (SID/HY. )

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