

126-TRC-07-002

SAFETY COMPLIANCE TESTING FOR FMVSS 126 (Indicant) Electronic Stability Control Systems

American Honda Motor Company, Inc.
2007 Honda Odyssey EX
NHTSA No. C75309

TRANSPORTATION RESEARCH CENTER INC.

10820 State Route 347
East Liberty, Ohio 43319



October 22, 2007

FINAL REPORT

Prepared Under Contract No.: DTNH22-07-P-00332

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Enforcement

Office of Vehicle Safety Compliance
1200 New Jersey Avenue, SE
West Building, 4th Floor (NVS-221)
Washington, DC 20590

1. Report No. 126-TRC-07-002	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Final Report of FMVSS 126 (Indicant) Compliance Testing of 2007 Honda Odyssey EX multi-purpose passenger vehicle, NHTSA No. C75309		5. Report Date October 22, 2007	
		6. Performing Organization Code TRC 20070164/2000	
7. Author(s) Jason Church, Project Engineer Jeff Sankey, Manager, DDO Project Operations		8. Performing Organization Report No. TRC-DOT-126-002	
9. Performing Organization Name and Address Transportation Research Center Inc. 10820 State Route 347 East Liberty, OH 43319		10. Work Unit No.	
		11. Contract or Grant No. DTNH22-07-P-00332	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Enforcement Office of Vehicle Safety Compliance 1200 New Jersey Avenue, SE, West Building, 4 th Floor (NVS-221) Washington, D.C. 20590		13. Type of Report and Period Covered Final test report July 17 to October 22, 2007	
		14. Sponsoring Agency Code NVS-220	
15. Supplementary Notes This test is classified as an "Indicant" test because manufacturers are not required to certify vehicles to FMVSS 126 until on or after September 1, 2008.			
16. Abstract A test was conducted on a 2007 Honda Odyssey EX, NHTSA No. C75309, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-126-00 for the determination of FMVSS 126 compliance. Test failures identified were as follows: None			
17. Key Words Compliance Testing Safety Engineering FMVSS 126		18. Distribution Statement Copies of this report are available from: NHTSA Technical Information Services (TIS) (NPO 411) 1200 New Jersey Avenue, SE Washington, D.C. 20590 Email: tis@nhtsa.dot.gov FAX: (202) 493-2833	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 55	22.

Prepared for the Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-07-P-00332.

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products of manufacturers.

Prepared By: Alana Ida

Approved By: Jeff Suley

Approval Date: 12/5/07

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: John Finnan

Acceptance Date: 12/5/07

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
1.0	PURPOSE OF COMPLIANCE TEST	1
2.0	TEST PROCEDURE AND DISCUSSION OF RESULTS	1
3.0	TEST DATA	5
4.0	TEST EQUIPMENT LIST AND CALIBRATION INFORMATION	25
5.0	PHOTOGRAPHS	26
6.0	DATA PLOTS	39
7.0	OTHER DOCUMENTATION	44
	7.1 Owner's Manual Pages	45
	7.2 Vehicle Arrival Condition Report	50
	7.3 Vehicle Completion Condition Report	51
	7.4 Sine with Dwell Test Results	52
	7.5 Slowly Increase Steer Test Results	54
	7.6 Inertial Sensing System Location Coordinates	55

1.0 PURPOSE OF COMPLIANCE TEST

The purpose of this test is to determine if the test vehicle, an MY 2007 Honda Odyssey EX meets the minimum equipment and performance requirements stated in Federal Motor Vehicle Safety Standard (FMVSS) 126, "Electronic Stability Control Systems."

This test is considered an "Indicant" Test because manufacturers are not required to certify vehicles to FMVSS 126 until on or after September 1, 2008.

This standard establishes performance and equipment requirements for Electronic Stability Control (ESC) Systems installed in passenger cars, multipurpose passenger vehicles, trucks, and buses with a gross vehicle weight rating of 4,536 kilograms or less.

2.0 TEST PROCEDURE AND DISCUSSION OF RESULTS

Testing of the MY 2007 Honda Odyssey EX was conducted at Transportation Research Center Inc. (TRC Inc.) in accordance with NHTSA TP-126-00, dated April 6, 2007.

The vehicle was inspected to ensure it was equipped with an ESC System that:

- Augments vehicle directional stability by applying and adjusting the vehicle brake torque individually to induce a correcting yaw moment to a vehicle;
- Is computer controlled with the computer using a closed-loop algorithm to limit vehicle oversteer and to limit vehicle understeer;
- Has a means to determine the vehicle's yaw rate and to estimate its side slip or side slip derivative with respect to time;
- Has a means to monitor driver steering inputs;
- Has an algorithm to determine the need, and a means to modify engine torque, as necessary, to assist the driver in maintaining control of the vehicle, and;
- Is operational over the full speed range of the vehicle (except at vehicle speeds less than 15km/h (9.3mph) or when being driven in reverse).

The vehicle was subjected to a 0.7Hz sine with dwell steering maneuver to ensure that it would meet the stability and responsiveness requirements of the standard as follows:

- At 1.0 second after completion of a required sine with dwell steering input, the yaw rate of the vehicle must not exceed 35 percent of the first peak value of yaw rate recorded after the steering wheel angle changes sign (between first and second peaks during the same test run).
- At 1.75 seconds after completion of a required sine with dwell steering input, the yaw rate of the vehicle must not exceed 20 percent of the first peak value of yaw rate recorded after the steering wheel angle changes sign (between first and second peaks during the same test run).

- The lateral displacement of the vehicle center of gravity with respect to its initial straight path must be at least 1.83 m (6 feet) (for vehicles with a GVWR of 3,500kg (7,716 lbs.) or less) when computed 1.07 seconds after the Beginning of Steer (BOS) at the specified steering wheel angles.

System malfunction simulations were executed to verify vehicle could identify and indicate a malfunction.

The vehicle's ESC System appears to meet the performance and equipment requirements as required by FMVSS 126. The test results are summarized on the following summary sheet.

2.0 TEST PROCEDURE AND DISCUSSION OF RESULTS ...continued

DATA SUMMARY SHEET (1 of 2)

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

VEHICLE NHTSA NO.: C75309 VIN: 5FNRL38477B439828

VEHICLE TYPE: MPV DATE OF MANUFACTURE: 03/07

LABORATORY: Transportation Research Center, Inc.

REQUIREMENTS	PASS/FAIL
ESC Equipment and Operational Characteristics (Data Sheet 2)	

The vehicle is be equipped with an ESC system that meets the equipment and operational characteristics requirements. (S126, S5.1, S5.6) PASS

ESC Malfunction Telltale – Location, Labeling and Bulb Check (Data Sheet 3)

Telltale meets the requirements for mounting, symbol or text, color and check of lamp function. (S126, S5.3.1*, S5.3.2*, S5.3.4* and S5.3.5, S5.3.6) SEE REMARKS

“ESC Off” and other System Controls and Telltale* (Data Sheet 3)

If provided, ESC OFF telltale meets the requirements for mounting, symbol or abbreviation, color and check of lamp function. (S126, S5.5.1, S5.5.2*, S5.5.3*, S5.5.6*, S5.5.7, and S5.5.8) SEE REMARKS

If provided, dedicated off control meets the label requirements (S126, S5.4.2*) SEE REMARKS

If provided, off control and other system controls meets the operational requirements (S126, S5.4, S5.4.1, S5.4.3*, S5.5.4, and S5.5.9) PASS

Vehicle Lateral Stability (Data Sheet 7)

Yaw Rate Ratio at 1 second after COS is less than 35% of peak value. (S126, S5.2.1) PASS

Yaw Rate Ratio at 1.75 seconds after COS is less than 20% of peak value. (S126, S5.2.2) PASS

2.0 TEST PROCEDURE AND DISCUSSION OF RESULTS ...continued

DATA SUMMARY SHEET (2 of 2)

REQUIREMENTS

PASS/FAIL

Vehicle Responsiveness (Data Sheet 7)

Lateral displacement at 1.07 seconds after BOS is at least 1.83 m (6 feet) for vehicles with a GVWR of 3,500kg (7,716 lbs.) or less, and 1.52 m (5 feet) for vehicles with a GVWR greater than 3,500 kg (7,716 lbs.). (S126 S5.2.3)

PASS

ESC Malfunction Warning (Data Sheet 8)

Warning is provided to driver after malfunction occurrence. (S126. S5.3.3*)

PASS

Malfunction telltale stayed illuminated as long as malfunction existed and must extinguished after malfunction was corrected. (S126, S5.3.3*, S5.3.7)

PASS

*Requirements effective on and after September 1, 2011.

REMARKS:

ESC System malfunction and off telltales and controls do not have to meet the requirements of FMVSS No. 126 until on or after September 1, 2011.

3.0 TEST DATA

**DATA SHEET 1
TEST VEHICLE INSPECTION AND TEST PREPARATION**

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

NHTSA No.: C75309 TEST DATE: 7-17-07

VIN: 5FNRL38477B439828 MANUFACTURE DATE: 03/07

GVWR: 2700 KG FRONT GAWR: 1285 KG REAR GAWR 1450 KG

SEATING POSITIONS: FRONT 2 MID 3 REAR 3

ODOMETER READING AT START OF TEST: 92 (57) Kilometers (Miles)

DESIGNATED TIRE SIZE(S) FROM VEHICLE LABELING:

Front Axle 235/65R16-103T Rear Axle 235/65R16-103T

INSTALLED TIRE SIZE(S) ON VEHICLE:

<u>From Tire Sidewall</u>	<u>Front Axle</u>	<u>Rear Axle</u>
Manufacturer and Model	<u>Michelin Energy LX4</u>	<u>Michelin Energy LX4</u>
Tire Size Designation	<u>235/65R16-103T</u>	<u>235/65R16-103T</u>

Are installed tire sizes same as labeled tire sizes? Yes No
If no, contact COTR for further guidance.

DRIVETRAIN CONFIGURATION:

Front Wheel Drive (FWD) Rear Wheel Drive (RWD)
 Four Wheel Drive (4WD) All Wheel Drive (AWD)

VEHICLE STABILITY SYSTEMS (Check applicable technologies):

ESC Traction Control Roll Stability Control
 Active Suspension Electronic Throttle Control Active Steering
 ABS

List other systems; _____

REMARKS:

RECORDED BY: Jason Church
APPROVED BY: Jeff Sankey

DATE: 7-17-07
DATE: 9-27-07

3.0 TEST DATA....continued

**DATA SHEET 2 (Sheet 2 of 2)
ESC SYSTEM HARDWARE AND OPERATIONAL CHARACTERISTICS**

ESC SYSTEM OPERATIONAL CHARACTERISTICS (continued):

System is capable of modifying engine torque during ESC activation. Yes (PASS)
 No (FAIL)

Method used to modify engine torque: VSA actuates Engine Torque Control Unit

System is capable of activation at speeds of 15 km/h (9.3 mph) and higher. Yes (PASS)
 No (FAIL)

Speed system becomes active. 14.4 km/h

System is capable of activation during the following driving phases (acceleration, deceleration, coasting, and during activation of ABS or traction control). Yes (PASS)
 No (FAIL)

Driving phases system is capable of activation. All phases listed above

Vehicle manufacturer submitted documentation explaining how the ESC system mitigates understeer? Yes (PASS)
 No (FAIL)

DATA INDICATES COMPLIANCE PASS/FAIL PASS

REMARKS:

RECORDED BY: Jason Church

DATE: 7-17-07

APPROVED BY: Jeff Sankey

DATE: 9-27-07

3.0 TEST DATA....continued

DATA SHEET 3 (Sheet 1 of 5)
**ESC MALFUNCTION AND OFF TELLTALES AND CONTROLS – Location,
Labeling and Bulb Check**

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

NHTSA No.: C75309 TEST DATE: 7-17-07

ESC Malfunction Telltale

Malfunction Telltale Location Instrument Panel Cluster – Outside Speedometer Gauge

Telltale is mounted inside the occupant compartment in front of and in clear view of the driver?

Yes No (fail) If no, explain: _____

Telltale is part of a common space? Yes No

Malfunction Telltale symbol or abbreviation required by FMVSS No. 101.



Or **ESC**

- Vehicle uses this symbol
- Vehicles uses this abbreviation
- Neither symbol nor abbreviations used

Note any words or additional symbols used.

"VSA" is the malfunction telltale symbol used to indicate a system malfunction.
(See photograph 5.5).

“ESC OFF” Telltale (if provided)

“ESC OFF” Telltale Location Telltale is located in the instrument panel cluster,
outside of the speedometer gauge.

“ESC OFF” telltale is mounted inside the occupant compartment in front of and in clear view of the driver?

Yes No (fail) If no, explain: _____

Telltale is part of a common space? Yes No

3.0 TEST DATA....continued

DATA SHEET 3 (Sheet 2 of 5)
ESC MALFUNCTION AND OFF TELLTALES AND CONTROLS

“ESC OFF” Telltale symbol or abbreviation required by FMVSS No. 101.



Or **ESC OFF** _____ Vehicle uses this symbol
_____ Vehicle uses this abbreviation
 X _____ Neither symbol nor abbreviations used

Note any words or additional symbols used.

To indicate the ESC System has been turned off Honda uses a symbol of a triangle surrounding an exclamation point. (Refer to photograph 5.5.)

Malfunction Telltale Lamp Function:

Identify position of ignition locking system when malfunction telltale illuminates.

- | | |
|--|--|
| <input type="checkbox"/> OFF/LOCK | <input type="checkbox"/> Between OFF/LOCK and ON/RUN |
| <input checked="" type="checkbox"/> ON/RUN | <input type="checkbox"/> Between ON/RUN and Start |

Is telltale yellow in color? X Yes _____ No (fail)

Time telltale remains illuminated 2 seconds

Note: If telltale is part of common space, it is not required to illuminate during this check of lamp function.

Starter Interlock:

Does vehicle have any starter, transmission or other interlocks that affect operation of the Mal-function telltale lamp check functions? _____ Yes X No

If yes, describe the interlock feature:

3.0 TEST DATA....continued

DATA SHEET 3 (Sheet 3 of 5)
ESC MALFUNCTION AND OFF TELLTALES AND CONTROLS

“ESC OFF” Telltale Lamp Function:

Identify position of ignition locking system when “ESC OFF” telltale illuminates.

- | | |
|--|--|
| <input type="checkbox"/> OFF/LOCK | <input type="checkbox"/> Between OFF/LOCK and ON/RUN |
| <input checked="" type="checkbox"/> ON/RUN | <input type="checkbox"/> Between ON/RUN and Start |

Is telltale yellow in color? X Yes No (fail)

Time telltale remains illuminated 2 seconds

Note: If telltale is part of common space, it is not required to illuminate during the check of lamp function.

Starter Interlock:

Does vehicle have any starter, transmission or other interlocks that affect operation of the “ESC OFF” telltale lamp check functions? Yes X No

If yes, describe the interlock feature:

ESC OFF Control Operational Check:

Is the vehicle equipped with a control whose sole purpose is to deactivate the ESC System? X Yes No

“ESC OFF” Control identification symbol or abbreviation required by FMVSS No. 101.



- Or **ESC OFF** Vehicle uses this symbol
 Vehicle uses this abbreviation
 X Neither symbol nor abbreviations used

Note any words or additional symbols used.

 Control switch is labeled "VSA OFF" not "ESC OFF"

3.0 TEST DATA....continued

**DATA SHEET 3 (Sheet 4 of 5)
ESC MALFUNCTION AND OFF TELLTALES AND CONTROLS**

Does the "ESC Off" telltale illuminate upon activation of the ESC off control?
 Yes No (fail)

If no, describe off control function:

Does the "ESC Off" telltale extinguish when the ignition is cycled from "On" ("Run") to "Lock" or "Off" and then back again to the "On" ("Run") position?

Yes No (fail)

If no, describe the off control function:

Other System Controls that have an ancillary effect on ESC Operation:

List other controls (i.e. low speed off-road axle/transfer case):

N/A

Does the "ESC OFF" telltale illuminate upon activation of each control system listed above?

Yes No

If no, describe off control function:

For electrical controls, does the "ESC OFF" telltale extinguish and remain extinguished when the ignition is cycled from "On" ("Run") to "Lock" or "Off" and then back again to the "On" ("Run") position?

Yes No

If no, describe the off control function:

3.0 TEST DATA....continued

**DATA SHEET 3 (Sheet 5 of 5)
ESC MALFUNCTION AND OFF TELLTALES AND CONTROLS**

For mechanical controls, does the "ESC OFF" telltale extinguish after de-activation of mechanical control?

_____ Yes _____ No

If no, describe the off control function:

DATA INDICATES COMPLIANCE:

PASS/FAIL SEE REMARKS

REMARKS:

ESC System malfunction and off telltales and controls do not have to meet the requirements of FMVSS No.126 until on or after September 1, 2011.

RECORDED BY: Jason Church

DATE: 7-17-07

APPROVED BY: Jeff Sankey

DATE: 9-27-07

3.0 TEST DATA....continued

**DATA SHEET 4 (Sheet 1 of 3)
VEHICLE AND TEST TRACK DATA**

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

NHTSA No.: C75309 TEST DATE: 8-7-07

Test Track Requirements: Test Surface Slope (0-1 %) 1 %
Peak Friction Coefficient (at least 0.9) 0.92

Full Fluid Levels: Fuel X Coolant X Other Fluids Washer (specify)

Tire Pressures: Required: Front Axle 230 KPA Rear Axle 240 KPA
Actual: LF 230 KPA RF 230 KPA LR 240 KPA RR 240 KPA

Vehicle Dimensions: Track Width 167.6 cm Wheelbase 301.0 cm
Roof Height 172.2 cm

Vehicle weight ratings: GAWR Front 1285 KG GAWR Rear 1450 KG

Unloaded Vehicle Weight (UVW)

Front Axle 1,118.0 KG Right Front 549.0 KG Left Front 569.0 KG
Rear Axle 911.0 KG Right Rear 447.5 KG Left Rear 463.5 KG
Total UVW 2,029.0 KG

Baseline Weight and Outrigger Selection (only for MPVs, Trucks, Buses)

Calculated Baseline Weight (UVW+ 73 kg) 2,102 KG

Outrigger size required ("Standard" or "Heavy") Standard

Standard - Baseline weight under 2,722 kg (6,000 lbs)

Heavy - Baseline weight equal to or greater than 2,722 kg (6,000 lbs)

3.0 TEST DATA....continued

DATA SHEET 4 (Sheet 2 of 3) VEHICLE AND TEST TRACK DATA

UVW with Outriggers (only for MPVs, Trucks, Buses)

Front Axle 1,162.0 KG Right Front 570.5 KG Left Front 591.5 KG

Rear Axle 945.0 KG Right Rear 464.0 KG Left Rear 481.0 KG

Total UVW w/ Outriggers 2,107.0 KG

Loaded Vehicle Weight w/ Driver and Instrumentation (No Ballast)

Front Axle 1,256.0 KG Right Front 609.5 KG Left Front 646.5 KG

Rear Axle 1,009.0 KG Right Rear 486.0 KG Left Rear 523.0 KG

Total Loaded weight w/ Driver 2,265.0 KG

$$\begin{aligned} \text{Ballast Required} &= [\text{UVW} + 168 \text{ KG}] - \text{Total Loaded Vehicle Weight} \\ &\quad \text{w/Driver and Instrumentation} \\ &= [2,107.0 \text{ KG} + 168 \text{ KG}] - 2,265.0 \text{ KG} \\ &= 10.0 \text{ KG} \end{aligned}$$

Total Loaded Vehicle Weight

Front Axle 1,262.0 KG Right Front 615.5 KG Left Front 646.5 KG

Rear Axle 1,014.0 KG Right Rear 489.0 KG Left Rear 525.0 KG

Total Loaded Vehicle Weight 2,276.0 KG

3.0 TEST DATA....continued

**DATA SHEET 4 (Sheet 3 of 3)
VEHICLE AND TEST TRACK DATA**

Center of Gravity and Inertial Sensing System Location at Loaded Vehicle Condition

- x-distance (longitudinal) Point of reference is the front axle centerline.
(Positive from front axle toward rear of vehicle.)
- y-distance (lateral) Point of reference is the vehicle centerline.
(Positive from the center toward the right.)
- z-distance (vertical) Point of reference is the ground plane.
(Positive from the ground up.)

Locations:

	Center of Gravity	Inertial Sensing System
x-distance	<u>134.1</u> cm	<u>200.7</u> cm
y-distance	<u>-2.5</u> cm	<u>2.9</u> cm
z-distance	<u>65.4</u> cm	<u>63.3</u> cm

Distance Between Ultrasonic Sensors: 200.0 cm

TEST TRACK DATA MEETS REQUIREMENTS: YES/NO YES
If no, explain: _____

REMARKS:

RECORDED BY: Jason Church
APPROVED BY: Jeff Sankey

DATE: 8-7-07
DATE: 9-27-07

3.0 TEST DATA....continued

**DATA SHEET 5 (Sheet 1 of 3)
BRAKE AND TIRE CONDITIONING**

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

VEHICLE NHTSA No.: C75309

Measured Cold Tire Pressures: LF 230 KPA LR 240 KPA

RF 230 KPA RR 240 KPA

Wind Speed 1 m/sec
(10m/sec (22mph) max for passenger cars; 5m/s (11mph) max. for MPVs and Trucks)

Ambient Temperature (7°C (45°F) - 40°C (104°F)) 30 °C

Brake Conditioning Time; 1:35PM Date; 8-8-07

56 km/h (35 mph) Brake Stops

Number of stops executed (10 required) 10 stops

Observed deceleration rate range (.5g target) 0.45 - 0.55 g

72 km/h (45 mph) Brake Stops

Number of stops executed (3 required) 3 stops

Number of stops ABS activated (3 required) 3 stops

Observed deceleration rate range 0.85 - 0.95 g

72 km/h (45 mph) Brake Cool Down Period

Duration of cool down period (5 minutes min.) 6 minutes

3.0 TEST DATA....continued

**DATA SHEET 5 (Sheet 2 of 3)
BRAKE AND TIRE CONDITIONING**

Tire Conditioning Series No. 1 Time: 7:45AM Date: 8-9-07

Measured Tire Pressures: LF 230* KPA LR 240* KPA
RF 230* KPA RR 240* KPA

Wind Speed 2 m/sec
(10m/sec (22mph) max for passenger cars; 5m/s (11mph) max. for MPVs and Trucks)

Ambient Temperature (7°C (45°F) - 40°C (104°F)) 24 °C

30 meter (100 ft) Diameter Circle Maneuver				
Test Runs	Steering Direction	Target Lateral Acceleration (g)	Observed Lateral Acceleration (g)	Observed Vehicle Speed (km/h)
1-3	Clockwise	0.5-0.6	0.55	43
4-6	Counterclockwise	0.5-0.6	0.52	43

1 Hz 3 Cycle Sinusoidal Steering Maneuver to Determine Steering Wheel Angle For 0.5-0.6g Lateral Acceleration				
Test Runs	Vehicle Speed Km/h(mph)	Steering Wheel Angle (degrees)	Target Peak Lateral Acceleration (g)	Observed Peak Lateral Acceleration (g)
1	56±2 (35±1)	30	0.5-0.6	0.18
2	56±2 (35±1)	90	0.5-0.6	0.48
3	56±2 (35±1)	100	0.5-0.6	0.55
4	56±2 (35±1)		0.5-0.6	

Steering wheel angle that corresponds to a peak 0.5–0.6g lateral acceleration; 100 degrees

1 Hz 10 Cycle Sinusoidal Steering Maneuver				
Test Runs	Vehicle Speed Km/h (mph)	Steering Wheel Angle (degrees)	Target Peak Lateral Acceleration (g)	Observed Peak Lateral Acceleration (g)
1 - 3	56±2 (35±1)	100 (cycles 1-10)	0.5-0.6	0.55
4	56±2 (35±1)	100 (cycles 1-9)	0.5-0.6	0.55
		200 (cycle 10)*	NA	NA

* The steering wheel angle used for cycle 10 should be twice the angle used for cycles 1-9.

3.0 TEST DATA....continued

**DATA SHEET 6 (1 of 2)
SLOWLY INCREASING STEER (SIS) MANEUVER**

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

NHTSA No.: C75309 TEST DATE: 8-9-07

Wind Speed 2 m/sec
(10m/sec (22mph) max for passenger cars; 5m/s (11mph) max. for MPVs and Trucks)

Ambient Temperature (7°C (45°F) - 40°C (104°F)) 24 °C

Preliminary Left Steer Maneuver:

Lateral Acceleration measured at 30 degrees steering wheel angle ($a_{y,30 \text{ degrees}}$)

$$a_{y,30 \text{ degrees}} = \underline{0.24} \text{ g}$$

Assuming a linear relationship the following ratio should be used to calculate the steering wheel angle at .55g.

$$\frac{30 \text{ degrees}}{a_{y,30 \text{ degrees}}} = \frac{\delta_{SIS}}{0.55 \text{ g}} \quad \delta_{SIS} = \underline{70} \text{ degrees}$$

Steering Wheel Angle at Corrected 0.3 g Lateral Acceleration:

Maneuver #	Initial Steer Direction	Time Clock (5 min max between runs)	Steering Wheel Angle to nearest 0.1 degree (degrees)	All Conditions Met?
1	Left	8:04am	- 37.5	Yes
2	Left	8:06am	- 38.6	Yes
3	Left	8:07am	- 37.9	Yes
4	Right	8:11am	38.3	Yes
5	Right	8:13am	39.0	Yes
6	Right	8:15am	38.0	Yes

3.0 TEST DATA....continued

**DATA SHEET 6 (2 of 2)
SLOWLY INCREASING STEER (SIS) MANEUVER**

Average Overall Steering Wheel Angle:

$$\delta_{0.3 \text{ g, overall}} = (|\delta_{0.3 \text{ g, left (1)}}| + |\delta_{0.3 \text{ g, left (2)}}| + |\delta_{0.3 \text{ g, left (3)}}| + \delta_{0.3 \text{ g, right (1)}} + \delta_{0.3 \text{ g, right (2)}} + \delta_{0.3 \text{ g, right (3)}}) / 6$$

$$\delta_{0.3 \text{ g, overall}} = \underline{\quad 38.2 \quad} \text{ degrees}$$

[to nearest 0.1 degree]

REMARKS:

RECORDED BY: Jason Church
APPROVED BY: Jeff Sankey

DATE: 8-9-07
DATE: 9-27-07

3.0 TEST DATA....continued

DATA SHEET 7 (1 of 3) VEHICLE LATERAL STABILITY AND RESPONSIVENESS

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

NHTSA No.: C75309 TEST DATE: 8-9-07

Tire conditioning completed X Yes No
 ESC System is enabled X Yes No
 On track calibration checks have been completed X Yes No
 On track static data file for each sensor obtained X Yes No

Overall steering wheel angle ($\delta_{0.3g, overall}$) 38.2 degrees

Lateral Stability Test Series No. 1 – Counterclockwise Initial Steer Direction

Maneuver #	Clock Time (1.5 - 5 min. between each test run)	Commanded Steering Wheel Angle ¹ (degrees)		Yaw Rates (degrees/sec)			YRR at 1.0 sec after COS [$\leq 35\%$]		YRR at 1.75 sec after COS [$\leq 20\%$]	
		Scalar	Angle	$\dot{\psi}_{Peak}$	$\dot{\psi}_{1.0sec}$	$\dot{\psi}_{1.75sec}$	%	Pass/Fail	%	Pass/Fail
1	9:10am	1.5* $\delta_{0.3g}$	57	13.58	-0.08	0.75	-0.61	Pass	5.51	Pass
2	9:14am	2.0* $\delta_{0.3g}$	76	17.54	-0.17	0.18	-0.98	Pass	1.03	Pass
3	9:16am	2.5* $\delta_{0.3g}$	96	22.71	-0.03	0.40	-0.11	Pass	1.76	Pass
4	9:19am	3.0* $\delta_{0.3g}$	115	27.15	-0.20	-0.11	-0.72	Pass	-0.41	Pass
5	9:22am	3.5* $\delta_{0.3g}$	134	32.74	0.13	0.07	0.40	Pass	0.21	Pass
6	9:26am	4.0* $\delta_{0.3g}$	153	38.49	0.64	-0.02	1.67	Pass	-0.04	Pass
7	9:29am	4.5* $\delta_{0.3g}$	172	41.49	0.83	-0.31	2.00	Pass	-0.75	Pass
8	9:33am	5.0* $\delta_{0.3g}$	191	45.91	-3.89	-0.26	-8.47	Pass	-0.57	Pass
9	9:37am	5.5* $\delta_{0.3g}$	210	49.40	-5.70	-0.69	-11.54	Pass	-1.39	Pass
10	9:40am	6.0* $\delta_{0.3g}$	229	53.71	-1.56	-0.02	-2.90	Pass	-0.04	Pass
11	9:44am	6.5* $\delta_{0.3g}$	248	56.54	0.68	0.69	1.21	Pass	1.23	Pass
12	9:47am	7.0* $\delta_{0.3g}$	267	58.40	0.76	0.81	1.30	Pass	1.39	Pass
13	9:51am	7.1* $\delta_{0.3g}$	270	58.75	0.10	0.51	0.17	Pass	0.87	Pass

1. Maneuver execution should continue until a steering wheel angle magnitude factor of $6.5 * \delta_{0.3g, overall}$ or 270 degrees is utilized, whichever is greater provided the calculated magnitude of $6.5 * \delta_{0.3g, overall}$ is less than or equal to 300 degrees. If $6.5 * \delta_{0.3g, overall}$ is less than 270 degrees maneuver execution should continue by increasing the steering wheel angle magnitude by multiples of $0.5 * \delta_{0.3g, overall}$ without exceeding the 270 degree steering wheel angle.

3.0 TEST DATA....continued

DATA SHEET 7 (2 of 3)
VEHICLE LATERAL STABILITY AND RESPONSIVENESS

Lateral Stability Test Series No. 2 – Clockwise Initial Steer Direction

Maneuver #	Clock Time <small>(1.5 - 5 min. between each test run)</small>	Commanded Steering Wheel Angle ¹ (degrees)		Yaw Rates (degrees/sec)			YRR at 1.0 sec after COS [$< 35\%$]		YRR at 1.75 sec after COS [$< 20\%$]	
		Scalar	Angle	$\dot{\psi}_{Peak}$	$\dot{\psi}_{1.0sec}$	$\dot{\psi}_{1.75sec}$	%	Pass/Fail	%	Pass/Fail
1	9:54am	1.5* $\delta_{0.3g}$	57	-13.75	-0.01	-0.07	0.09	Pass	0.51	Pass
2	9:58am	2.0* $\delta_{0.3g}$	76	-17.97	-0.17	-0.17	0.97	Pass	0.97	Pass
3	10:01am	2.5* $\delta_{0.3g}$	96	-23.18	-0.21	-0.26	0.92	Pass	1.10	Pass
4	10:04am	3.0* $\delta_{0.3g}$	115	-28.34	-0.19	-0.09	0.66	Pass	0.31	Pass
5	10:07am	3.5* $\delta_{0.3g}$	134	-33.33	-0.51	-0.14	1.52	Pass	0.43	Pass
6	10:10am	4.0* $\delta_{0.3g}$	153	-37.91	-1.12	-0.21	2.96	Pass	0.56	Pass
7	10:13am	4.5* $\delta_{0.3g}$	172	-41.46	-1.26	-0.12	3.05	Pass	0.28	Pass
8	10:16am	5.0* $\delta_{0.3g}$	191	-46.17	1.15	0.12	-2.49	Pass	-0.25	Pass
9	10:20am	5.5* $\delta_{0.3g}$	210	-50.12	2.89	0.27	-5.76	Pass	-0.54	Pass
10	10:23am	6.0* $\delta_{0.3g}$	229	-53.93	5.78	0.36	-10.72	Pass	-0.67	Pass
11	10:26am	6.5* $\delta_{0.3g}$	248	-55.97	6.42	0.40	-11.48	Pass	-0.72	Pass
12	10:30am	7.0* $\delta_{0.3g}$	267	-58.65	3.80	-0.10	-6.48	Pass	0.17	Pass
13	10:33am	7.1* $\delta_{0.3g}$	270	-60.17	3.21	-0.33	-5.33	Pass	0.55	Pass

1. Maneuver execution should continue until a steering wheel angle magnitude factor of $6.5 * \delta_{0.3g, overall}$ or 270 degrees is utilized, whichever is greater provided the calculated $6.5 * \delta_{0.3g, overall}$ is less than or equal to 300 degrees. If $6.5 * \delta_{0.3g, overall}$ is less than 270 degrees maneuver execution should continue by increasing the steering wheel angle magnitude by multiples of $0.5 * \delta_{0.3g, overall}$ without exceeding the 270 degree steering wheel angle.

During execution of the sine with dwell maneuvers were any of the following events observed?

- Rim-to-pavement contact _____ Yes X No
- Tire debanding _____ Yes X No
- Loss of pavement contact of vehicle tires _____ Yes X No
- Did the test driver experience any vehicle loss of control or spinout? _____ Yes X No

If "Yes" explain the event and consult with the COTR. _____

3.0 TEST DATA....continued

DATA SHEET 7 (3 of 3)
VEHICLE LATERAL STABILITY AND RESPONSIVENESS

Responsiveness – Lateral Displacement

Maneuver #	Initial Steer Direction	Commanded Steering Wheel Angle (5.0*δ _{0.3g, overall} or greater)		Lateral Acceleration at 1.07 seconds after BOS ¹	Calculated Lateral Displacement ²	
		Scalar	Angle (degrees)	Corrected (g)	Distance (m)	Pass/Fail
8	Counter Clockwise	5.0*δ _{0.3g}	191	0.35	2.72	Pass
9	Counter Clockwise	5.5*δ _{0.3g}	210	0.30	2.77	Pass
10	Counter Clockwise	6.0*δ _{0.3g}	229	0.20	2.82	Pass
11	Counter Clockwise	6.5*δ _{0.3g}	248	0.15	2.88	Pass
12	Counter Clockwise	7.0*δ _{0.3g}	267	0.13	2.90	Pass
13	Counter Clockwise	7.1*δ _{0.3g}	270	0.12	2.87	Pass
8	Clockwise	5.0*δ _{0.3g}	191	0.37	2.64	Pass
9	Clockwise	5.5*δ _{0.3g}	210	0.27	2.68	Pass
10	Clockwise	6.0*δ _{0.3g}	229	0.18	2.77	Pass
11	Clockwise	6.5*δ _{0.3g}	248	0.17	2.83	Pass
12	Clockwise	7.0*δ _{0.3g}	267	0.13	2.87	Pass
13	Clockwise	7.1*δ _{0.3g}	270	0.11	2.82	Pass

1. Measured Lateral Accelerations are corrected for sensor location CG offset and vehicle body roll.
 2. Lateral displacement should be ≥ 1.83 m (6 ft) for vehicles with a GVWR of 3,500 kg (7,716 lb) or less; and ≥ 1.52 m (5ft) for vehicles with a GVWR greater than 3,500 kg (7,716 lb).

DATA INDICATES COMPLIANCE: PASS/FAIL PASS

REMARKS:

RECORDED BY: Jason Church
 APPROVED BY: Jeff Sankey

DATE: 8-9-07
 DATE: 9-20-07

3.0 TEST DATA....continued

**DATA SHEET 8
MALFUNCTION WARNING TEST**

VEHICLE MAKE/MODEL/BODY STYLE: Honda / Odyssey EX / MPV

NHTSA No.: C75309 TEST DATE: 8-9-07

CHECK MALFUNCTION TELLTALE BULB CHECK FUNCTION:

Before simulating an ESC system malfunction activate the vehicle ignition locking system and verify telltale illuminates for the bulb check and then extinguishes.

X Yes No

METHOD OF MALFUNCTION SIMULATION:

Describe method of malfunction simulation: (1) Disconnect Steering Wheel Angle (SWA) Sensor (2) Disconnect Left Rear Wheel Speed Sensor

MALFUNCTION TELLTALE ILLUMINATION:

Telltale illuminates and remains illuminated after ignition locking system is activated and if necessary the vehicle is driven at least 2 minutes X Yes No

Time for telltale to illuminate after ignition system is activated and vehicle speed of 48± 8 km/h (30± 5mph) is reached.

SEE REMARKS Seconds (must be within 2 minutes) X Pass Fail

Cycle ignition locking system and start the vehicle's engine. Verify that the malfunction telltale illuminates and stays illuminated. X Yes No

After the ESC system is restored to normal operation verify that the telltale does not remain illuminated. X Yes No

DATA INDICATES COMPLIANCE: PASS/FAIL PASS

REMARKS:

For Method number (1), disconnection of the SWA sensor, the malfunction telltale illuminated immediately upon cycling ignition locking system without driving vehicle. For method number (2), disconnection of wheel speed sensor, the vehicle had to be driven in forward gear for approximately 5 seconds.

RECORDED BY: Jason Church

DATE: 8-9-07

APPROVED BY: Jeff Sankey

DATE: 9-27-07

4.0 TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

Type	Output	Range	Resolution	Accuracy	Specifics	Serial Number	Calibration
Tire Pressure Gage	Vehicle Tire Pressure	0-100psi	1 psi	±2.0% of applied pressure	Marsh Model: Series J 0-100psi	<u>AG-102</u>	By: <u>TRC</u> Date: <u>11-6-06</u> Due: <u>11-6-07</u>
Platform Scales	Vehicle Total, Wheel, and Axle Load	0-2500 lb per each of four pads	0.5 lb	±1.0% of applied load	Mettler Toledo Model: JXGA1000	<u>5225831-5JC</u>	By: <u>Mettler</u> Date: <u>5-14-07</u> Due: <u>8-14-07</u>
Automated Steering Machine with Steering Angle Encoder	Handwheel Angle	±800 deg	0.25 deg	±0.25 deg	Heitz Automotive Testing Model: Sprint 3	<u>60303</u>	By: <u>TRC</u> Date: <u>6-18-07</u> Due: <u>6-18-08</u>
Multi-Axis Inertial Sensing System	Longitudinal, Lateral, and Vertical Acceleration Roll, Yaw, and Pitch Rate	Accelerometers: ±2 g Angular Rate Sensors: ±100 deg /s	Accelerometers: ≤10 ug Angular Rate Sensors: ≤0.004 deg/s	Accelerometers: ≤0.05% of full range Angular Rate Sensors: 0.05% of full range	BEI Technologies Model: MotionPAK MP-1	<u>0767</u>	By: <u>BEI Tech.</u> Date: <u>6-21-07</u> Due: <u>6-21-08</u>
Radar Speed Sensor and Dashboard Display	Vehicle Speed	0-125 mph	0.009 mph	±0.25% of full scale	A-DAT Corp. Radar Model: DRS-6 Display Model: RD-2	<u>1400603</u>	By: <u>A-DAT</u> Date: <u>9-9-06</u> Due: <u>9-9-07</u>
Ultrasonic Distance Measuring System	Left and Right Side Vehicle Height	5-24 inches	0.01 inches	±0.25% of maximum distance	Massa Products Corporation Model: M-5000/220	<u>104619 & 104613</u>	By: <u>TRC</u> Date: <u>per test</u> Due: <u>per test</u>
Data Acquisition System [Amplify, Anti-Alias, and Digitize]	Record Time; Velocity; Distance; Lateral, Longitudinal, and Vertical Accelerations; Roll, Yaw, and Pitch Rates; Steering Wheel Angle.	Sufficient to meet or exceed individual sensors	200 Hz	Sufficient to meet or exceed individual sensors	Dewetron Sidehand DAS Model: DA-121-16 Digitizer Model: Dewe-Orion-1616-100 Amplifier/AntiAliasing: MDAQ-FILT-10-S	<u>12060</u> <u>1105</u>	By: <u>Dewetron</u> Date: <u>3-20-07</u> Due: <u>3-20-08</u>
Load Cell	Vehicle Brake Pedal Force	0-300 lb	1 lb	±0.05% of full scale	DATRON Model: DTM-LPA	<u>4970-1103</u>	By: <u>TRC</u> Date: <u>per test</u> Due: <u>per test</u>
Coordinate Measurement Machine	Inertial Sensing System Location	0-10 feet	0.001 inch	±0.003% of full scale	FARO International Model: Faro Arm N10	<u>N10-02-03-01310</u>	By: <u>FARO</u> Date: <u>12-04-06</u> Due: <u>12-04-07</u>
Outriggers	No output. Safety Item.	N/A	N/A	N/A	NHTSA Titanium Outriggers Model: Docket TBD	N/A	N/A

5.0 PHOTOGRAPHS

- 5.1 ¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE
- 5.2 VEHICLE CERTIFICATION LABEL
- 5.3 VEHICLE PLACARD
- 5.4 WINDOW STICKER (MONRONEY LABEL)
- 5.5 ESC MALFUNCTION AND ESC OFF TELLTALE
- 5.6 ESC OFF CONTROL
- 5.7 TEST VEHICLE WITH OUTRIGGERS
- 5.8 TEST INSTRUMENTATION – STEERING WHEEL CONTROLLER AND DATA ACQUISITION SYSTEM
- 5.9 TEST INSTRUMENTATION – STEERING CONTROLLER BATTERY BOX AND BALLAST
- 5.10 TEST INSTRUMENTATION – VEHICLE SPEED SENSOR
- 5.11 TEST INSTRUMENTATION – BODY ROLL SENSOR
- 5.12 TEST INSTRUMENTATION – BODY ROLL SENSOR



27

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

5.1 ¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE

28

MFD. BY HONDA MFG. OF ALABAMA, LLC 03/'07

GVWR 2700KG(5952LBS) TIRE SIZE RIM SIZE

GAWR F 1285KG(2833LBS) 235/65R16 103T 16X7J

GAWR R 1450KG(3197LBS) 235/65R16 103T 16X7J

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

V.I.N.: 5FNRL38477B439828 TYPE: MPV



SHJ 7 AC5 - R529P - F - B

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

5.2 VEHICLE CERTIFICATION LABEL



TIRE AND LOADING INFORMATION

SEATING CAPACITY: TOTAL 8 : FRONT 2 : SECOND 3 : THIRD 3

The combined weight of occupants and cargo should never exceed 630kg or 1388lbs.

TIRE	SIZE	COLD TIRE PRESSURE	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
FRONT	235/65R16 103T	230KPA, 33PSI	
REAR		240KPA, 35PSI	
SPARE	T135/80D17 103M	420KPA, 60PSI	

JA3

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007



2007 ODYSSEY 5DR EX

VEHICLE NUMBER: 5FNRL38477B439828
ENGINE NUMBER: J35A6-3207713 EXT: DARK CHERRY P.
CONTROL NUMBER: 109314 INT: IVORY

STANDARD EQUIPMENT AT NO EXTRA COST

* TECHNICAL FEATURES *

- 244hp 3.5-Liter SOHC 24-Valve VTEC V6 Engine
- 5-Speed Automatic Transmission with Grade Logic Control
- 4-Wheel Disc Brakes
- Electronic Brake Distribution (EBD)
- Brake Assist
- Front MacPherson Strut Suspension
- Rear Double-Wishbone Suspension
- Variable-Assist Rack-and-Pinion Power Steering
- EPA-Certified Tier-2 Bin-5
- CARB-Certified ULEV2
- 100K+ Miles - No Scheduled Tune-ups (Under Normal Conditions)

* SAFETY FEATURES *

- Driver's and Front Passenger's Dual-Stage Airbags (SRS)
- Driver's and Front Passenger's Side Airbags
- Side Curtain Airbags with Rollover Sensor
- Vehicle Stability Assist (VSA)
- Anti-Lock Braking System (ABS)
- Tire Pressure Monitoring System
- ACE Body Structure
- Remote Entry with Security System
- Immobilizer Theft-Deterrent System
- LATCH System for Child Seats

* INTERIOR FEATURES *

- AM/FM/6Disc In-dash CD Audio System with 6 Speakers
- Steering Wheel Audio Controls
- Tilt & Telescoping Steering Column
- Front Dual-Zone Automatic Climate Control with Manual Rear Control
- Driver's 8-Way Power Seat
- 60/40 Split Folding 3rd-Row Magic Seat
- Stowable 2nd-Row PlusOne Seat
- Two-Row Power Windows
- Second-Row Sunshade
- Driver's Auto Up/Down Window
- Power Door and Tailgate Locks
- Coin Holder
- In-Floor Storage
- 12-Volt Power Outlets
- Exterior Temperature Gauge
- Floor Mats
- Sunglasses Holder with Conversation Mirror
- HomeLink System
- Maintenance Minder System

* EXTERIOR FEATURES *

- 16" x 7.0" Alloy Wheels
- 235/65 R16 103T All-Season Tires
- Dual Power Sliding Doors
- Auto-off Headlights
- Heated Power Door Mirrors
- Roof Rails

Manufacturer's Suggested Retail Price **\$28,695.00**

Full Tank of Fuel No Charge

Destination and Handling 595.00

TOTAL VEHICLE PRICE
(includes Pre-Delivery Service)
\$29,290.00

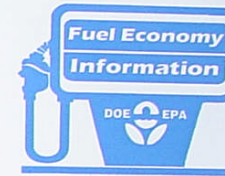
License and title fees, state and local taxes and dealer options and accessories are not included in the manufacturer's suggested retail price.

Compare this vehicle to others in the **FREE FUEL ECONOMY GUIDE** available at the dealer.

CITY MPG

18

ACTUAL MILEAGE will vary with options, driving conditions, driving habits and vehicles condition. Results reported to EPA indicate that the majority of vehicles with these estimates will achieve between
15 and 21 mpg in the city and between
21 and 29 mpg on the highway



2007 ODYSSEY
3.5 LITER 6-CYL ENGINE
5-SPD AUTOMATIC TRANSMISSION
MULTIPOINT FUEL INJECTION

Estimated Annual Fuel Cost
\$1988

HIGHWAY MPG

25

FOR COMPARISON SHOPPING, all vehicles classified as **SPEC.PURPOSE** have been issued mileage ratings ranging from
09 to 36 mpg city and
13 to 32 mpg highway

see www.fueleconomy.gov

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE
U.S./Canadian Parts Content: **70%**
Major Sources of Foreign Parts Content:
JAPAN 15%

NOTE: Parts content does not include final assembly, distribution or other non-parts costs.

FOR THIS VEHICLE
Final Assembly Point:
LINCOLN, ALABAMA, USA
Country of Origin: Engine: **U.S.A.**
Transmission: **U.S.A.**

GOVERNMENT CRASH TEST RATINGS

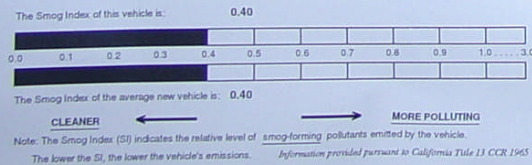
Frontal Star Rating Driver Passenger **★★★★★**
based on risk of head and chest injury

Side Star Rating Fr Seat Rr Seat **★★★★★**
based on risk of chest injury

Rollover Resistance **★★★★**
based on risk of rollover in the event of a single automobile crash

Government star ratings are part of the National Highway Traffic Safety Administration's (NHTSA's) New Car Assessment Program (NCAP)

SMOG EMISSIONS INFORMATION



DEALER: 208267



JIM RIEHL'S FRIENDLY AUTO
18900 HALL ROAD
CLINTON TOWNSHIP MI 48038

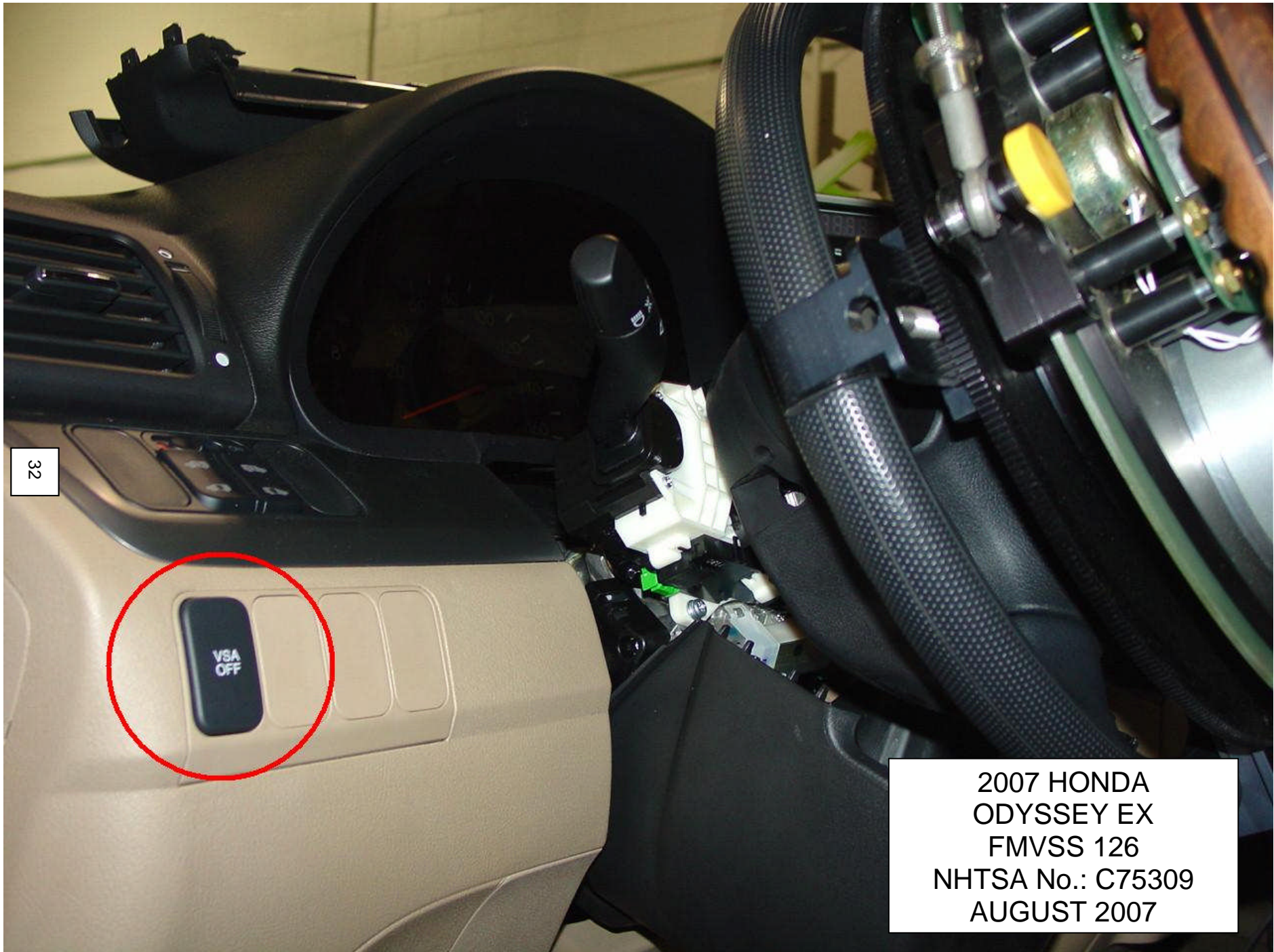
PORT OF ENTRY: ALABAMA
DELIVERY POINT: CHICAGO
SHIP#: 718-044
ROW/SPACE:
TRANSPORTATION METHOD: G30 WALBRIDGE

**2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007**

5.4 WINDOW STICKER (MONRONEY LABEL)



5.5 ESC MALFUNCTION AND ESC OFF TELLTALE



32

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

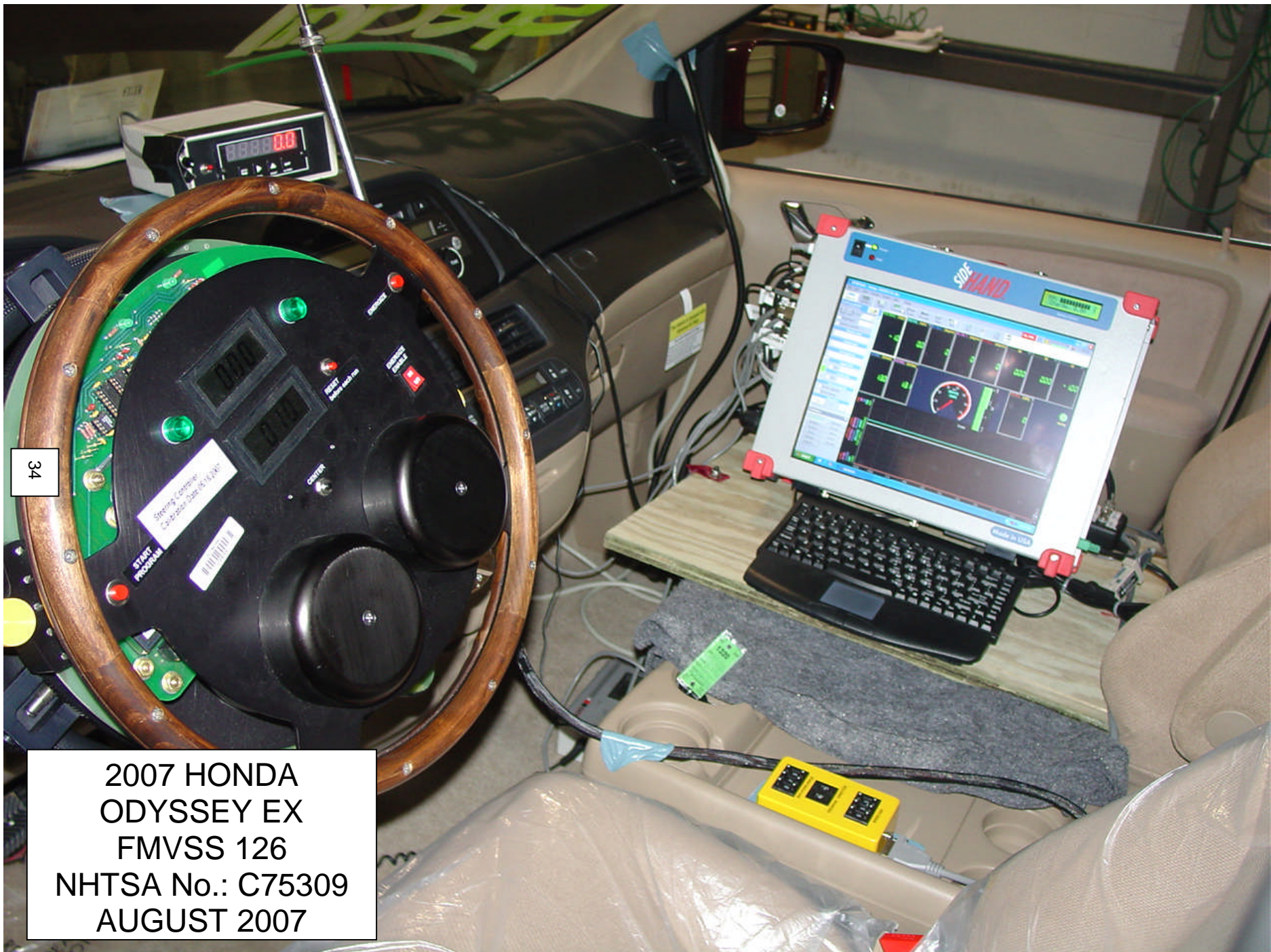
5.6 ESC OFF CONTROL



33

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

5.7 TEST VEHICLE WITH OUTRIGGERS



34

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

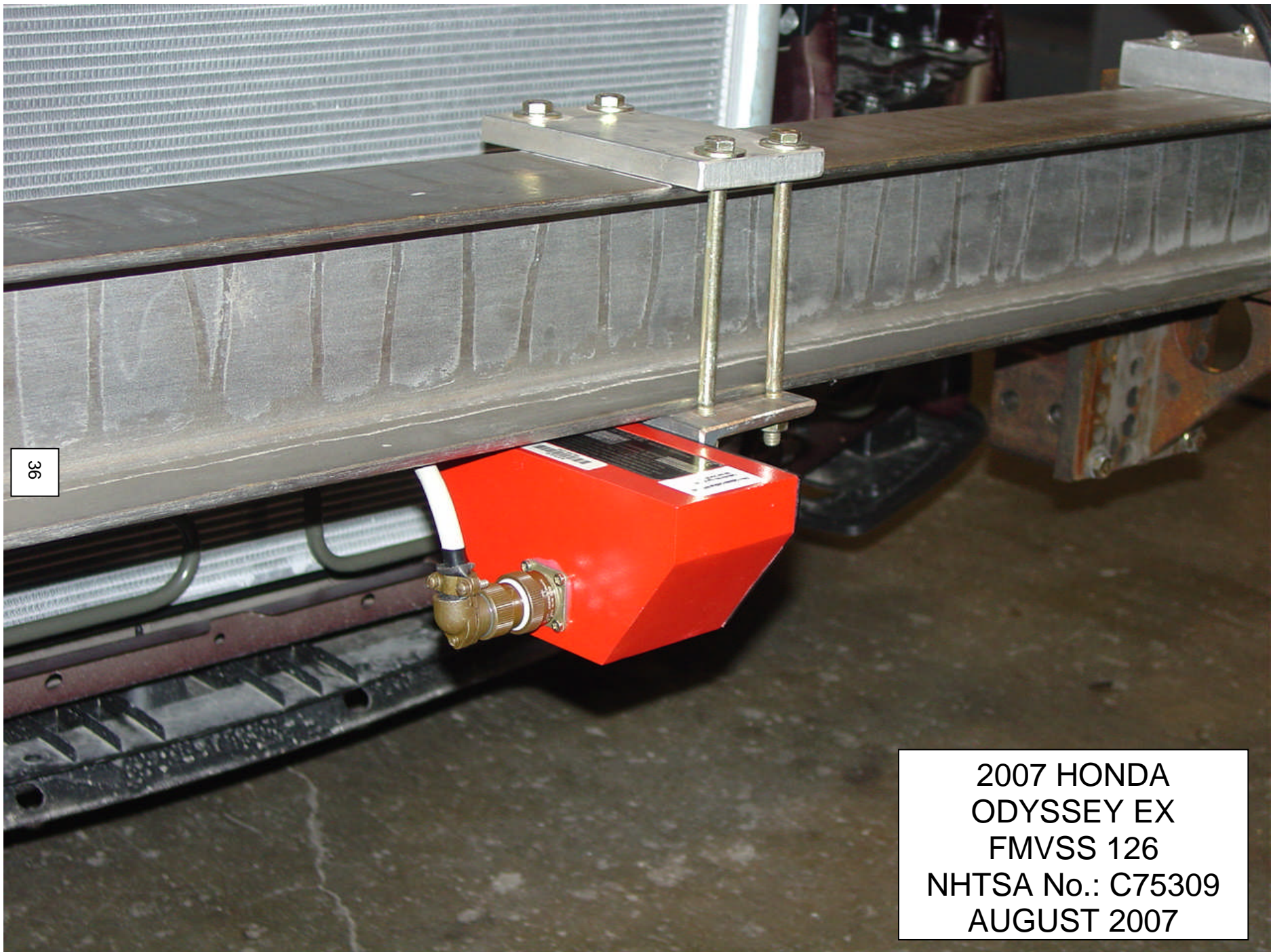
5.8 TEST INSTRUMENTATION – STEERING WHEEL
CONTROLLER & DATA ACQUISITION SYSTEM



35

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

5.9 TEST INSTRUMENTATION – STEERING
CONTROLLER BATTERY BOX AND BALLAST



36

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

5.10 TEST INSTRUMENTATION – VEHICLE SPEED SENSOR



37

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

5.11 TEST INSTRUMENTATION – BODY ROLL SENSOR



38

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

5.12 TEST INSTRUMENTATION – BODY ROLL SENSOR

6.0 DATA PLOTS

Figure 1. Steering Angle and Yaw Rate Time History, Counter-Clockwise Initial Steer Tests

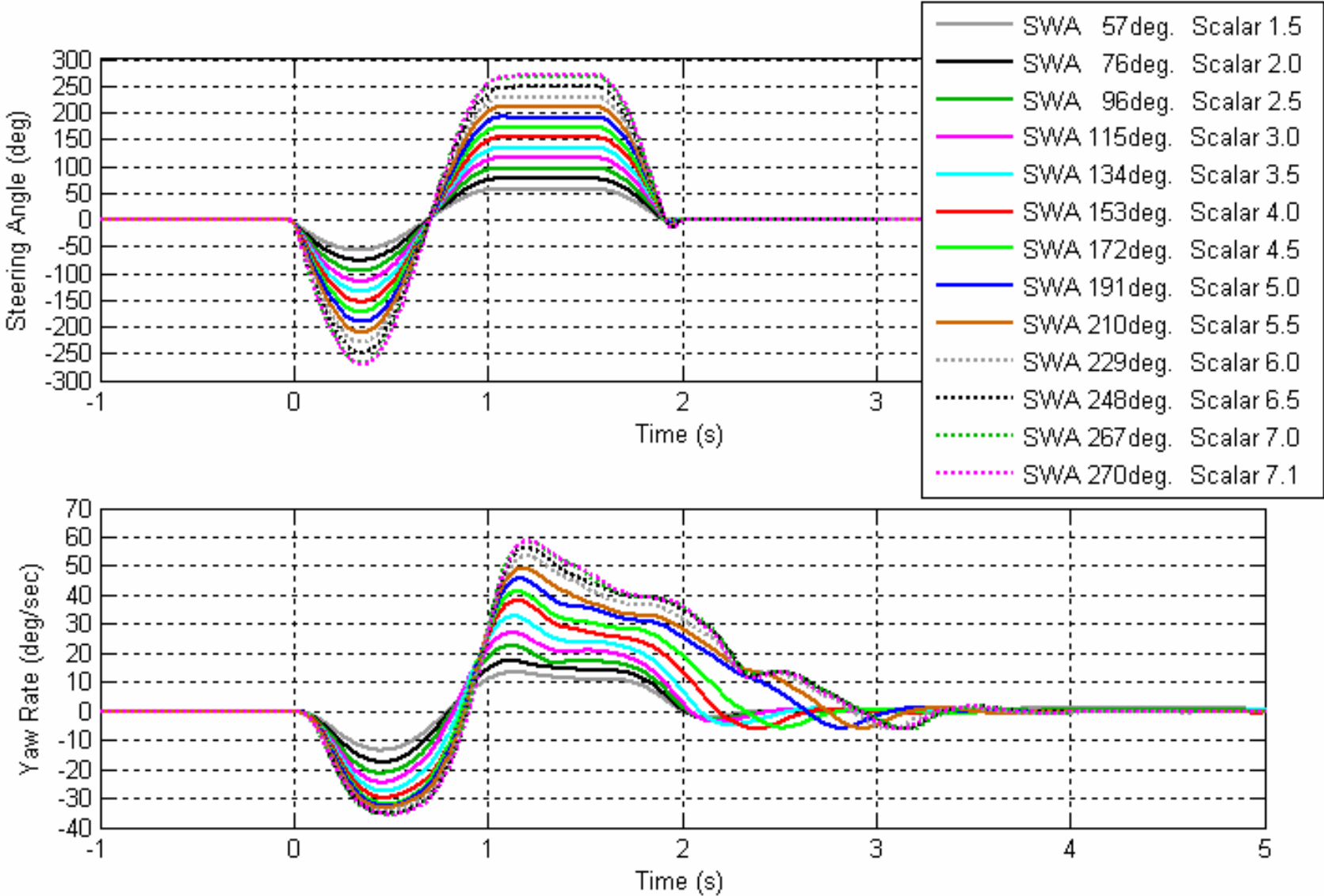
Figure 2. Steering Angle, Lateral Acceleration, and Lateral Displacement Time History, Counter-Clockwise Initial Steer Tests

Figure 3. Steering Angle and Yaw Rate Time History, Clockwise Initial Steer Tests

Figure 4. Steering Angle, Lateral Acceleration, and Lateral Displacement Time History, Clockwise Initial Steer Tests

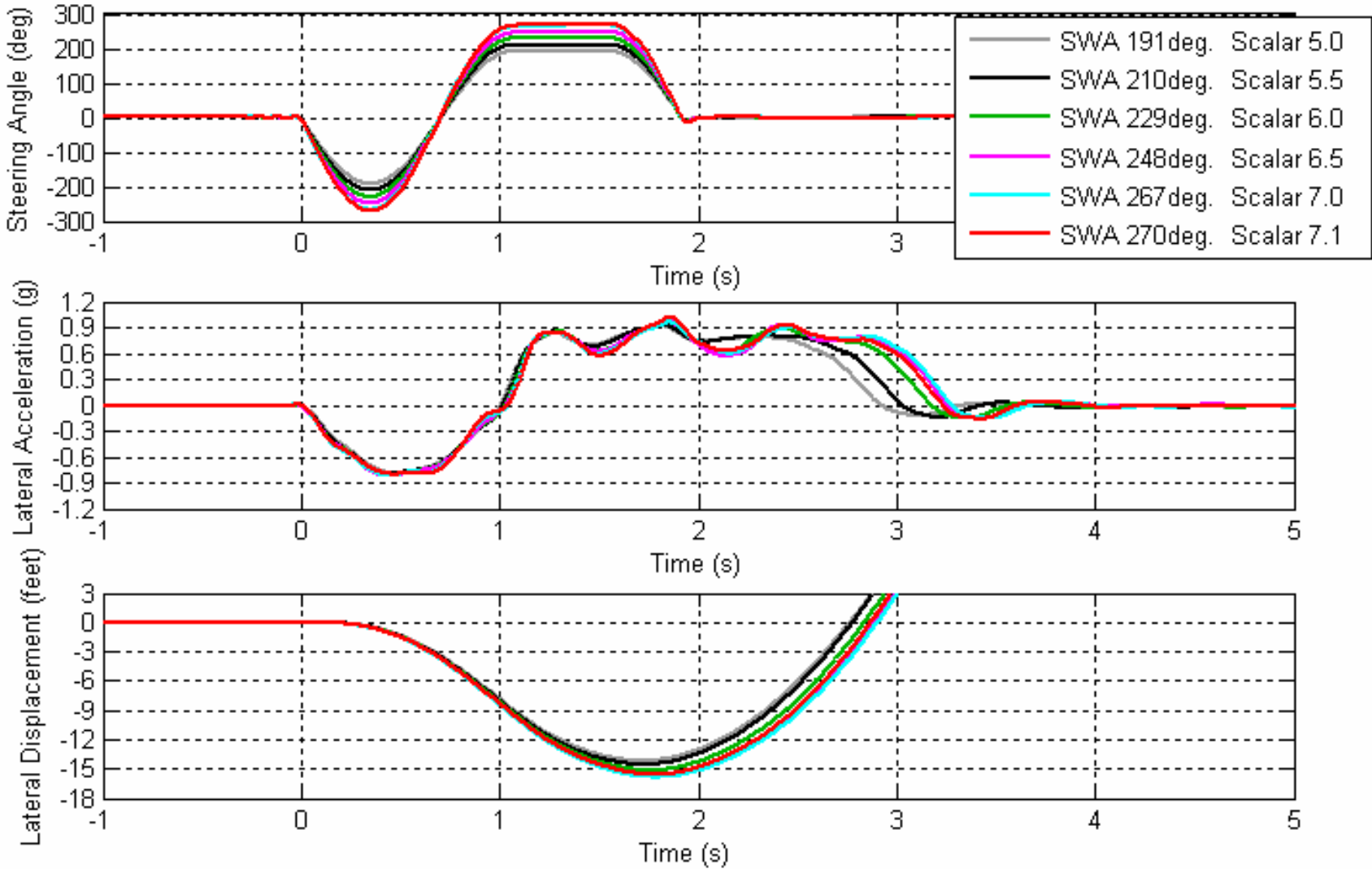
6.0 DATA PLOTS

Figure 1. Steering Angle and Yaw Rate Time History, Counter-Clockwise Initial Steer Tests



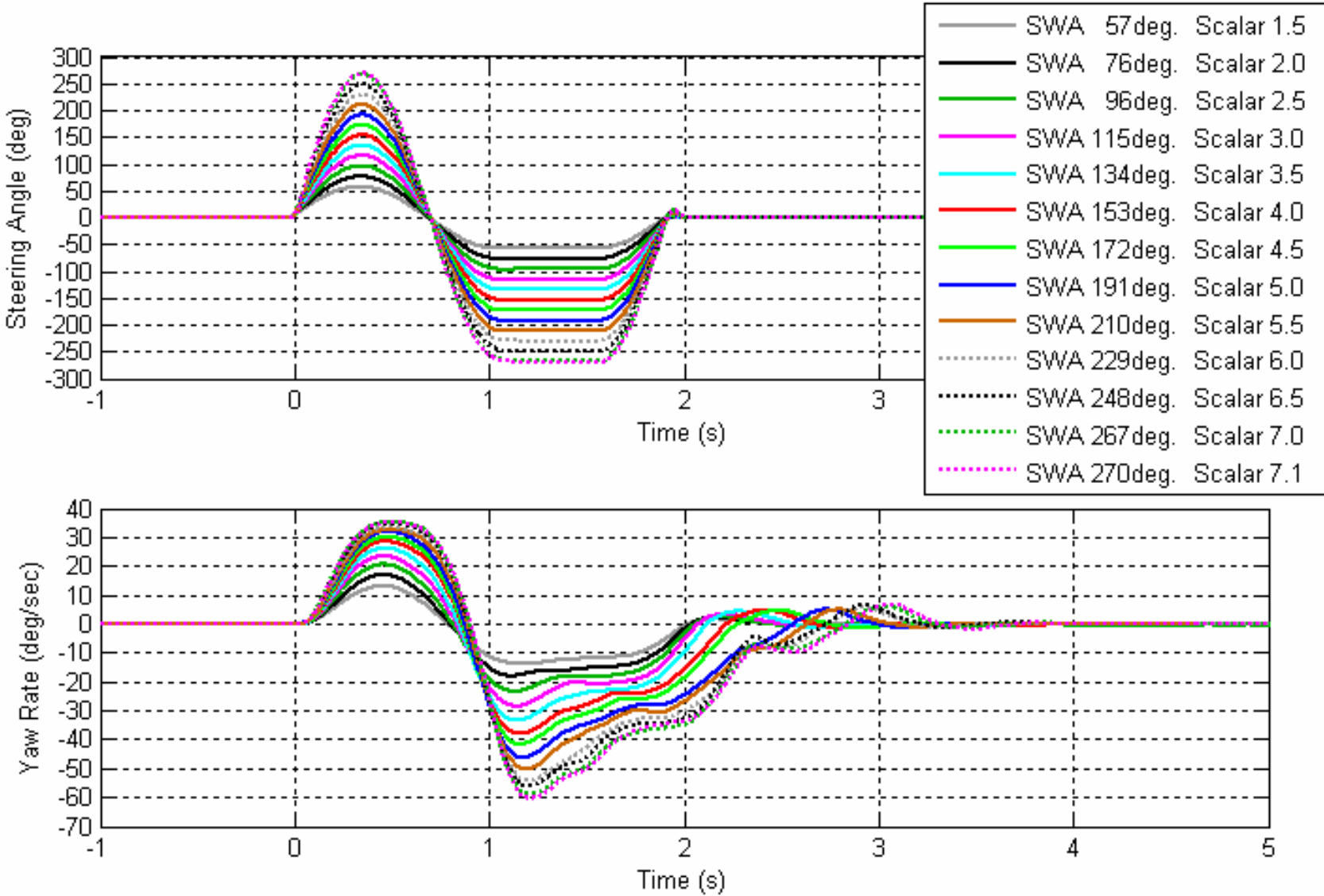
6.0 DATA PLOTS...continued

Figure 2. Steering Angle, Lateral Acceleration, and Lateral Displacement Time History, Counter-Clockwise Initial Steer Tests



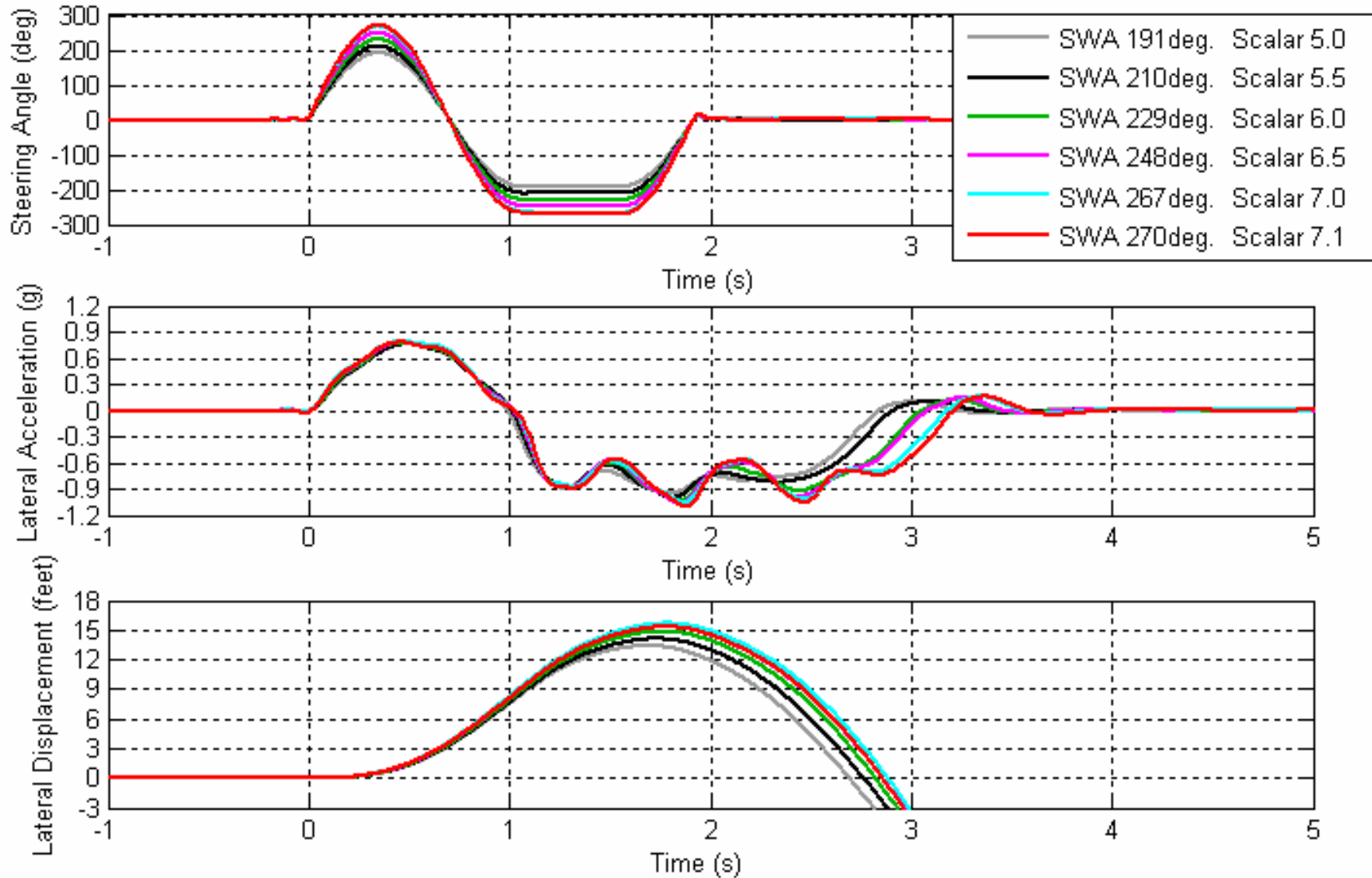
6.0 DATA PLOTS...continued

Figure 3. Steering Angle and Yaw Rate Time History, Clockwise Initial Steer Tests



6.0 DATA PLOTS...continued

Figure 4. Steering Angle, Lateral Acceleration, and Lateral Displacement Time History, Clockwise Initial Steer Tests



7.0 OTHER DOCUMENTATION

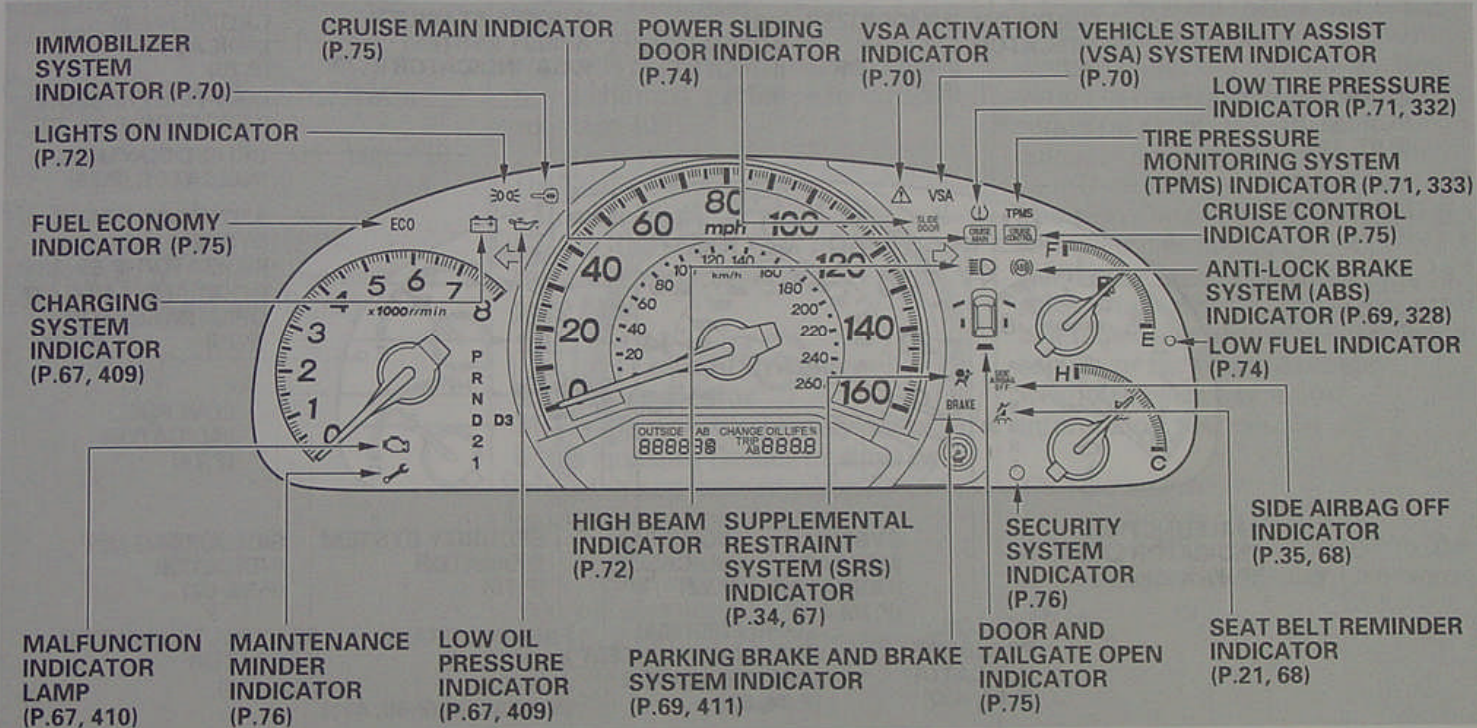
- 7.1 OWNER'S MANUAL PAGES
- 7.2 VEHICLE ARRIVAL CONDITION REPORT
- 7.3 VEHICLE COMPLETION CONDITION REPORT
- 7.4 SINE WITH DWELL TEST RESULTS
- 7.5 SLOWLY INCREASING STEER TEST RESULTS
- 7.6 INERTIAL SENSING SYSTEM LOCATION COORDINATES

7.1 OWNER'S MANUAL PAGES

2007 HONDA
 ODYSSEY EX
 FMVSS 126
 NHTSA No.: C75309
 AUGUST 2007

Instrument Panel

LX, EX and EX-L models



Instruments and Controls

46

The U.S. instrument panel is shown. Differences for the Canadian models are noted in the text.

Instrument Panel Indicators



Immobilizer System Indicator

This indicator comes on for a few seconds when you turn the ignition switch to the ON (II) position. It will go off if you have inserted a properly-coded ignition key. If it is not a properly-coded key, the indicator will blink and the engine will not start (see page 146).

This indicator also blinks several times when you turn the ignition switch from the ON (II) position to the ACCESSORY (I) or LOCK (0) position.



Vehicle Stability Assist (VSA) System Indicator

This indicator normally comes on for a few seconds when you turn the ignition switch to the ON (II) position.

If it comes on and stays on at any other time, or if it does not come on when you turn the ignition switch to the ON (II) position, there is a problem with the VSA system. Take your vehicle to a dealer to have it checked. Without VSA, your vehicle still has normal driving ability, but will not have VSA traction and stability enhancement. See page 330 for more information on the VSA system.

On Touring models

You will also see a "CHECK VSA SYSTEM" message on the multi-information display (see page 89).



VSA Activation Indicator

This indicator has three functions:

1. It comes on as a reminder that you have turned off the vehicle stability assist (VSA) system.
2. It flashes when VSA is active (see page 330).
3. It comes on along with the VSA system indicator if there is a problem with the VSA system.

On Touring models

You will also see a "CHECK VSA SYSTEM" message on the multi-information display (see page 89).

This indicator normally comes on for a few seconds when you turn the ignition switch to the ON (II) position. See page 330 for more information.



This i
a few
igniti
positi

If it c
indic
vehic
press

If thi
road
of a
the c
and
soon
are t
tow
mor

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

Vehicle Stability Assist (VSA) System

The vehicle stability assist (VSA) system helps to stabilize the vehicle during cornering if the vehicle turns more or less than desired. It also assists you in maintaining traction while accelerating on loose or slippery road surfaces. It does this by regulating the engine's output, and by selectively applying the brakes.

When VSA activates, you may notice that the engine does not respond to the accelerator in the same way it does at other times. You will also see the VSA activation indicator blink.

The VSA system cannot enhance the vehicle's driving stability in all situations and does not control your vehicle's entire braking system. It is still your responsibility to drive and corner at reasonable speeds and to leave a sufficient margin of safety.



VSA Activation Indicator

When VSA activates, you will see the VSA activation indicator blink (see page 70).



VSA System Indicator

If the VSA system indicator comes on while driving, pull to the side of the road when it is safe, and turn off the engine. Reset the system by restarting the engine. If the VSA system indicator stays, or comes back on while driving, have the VSA system inspected by your dealer.

If the indicator does not come on when the ignition switch is turned to the ON (II) position, there may be a problem with the VSA system. Have your dealer inspect your vehicle as soon as possible.

On Touring models only

You will also see a "CHECK VSA SYSTEM" message on the multi-information display if there is a problem with the VSA system.

Without VSA, your vehicle still has normal braking and cornering ability, but it does not have VSA traction and stability enhancement.

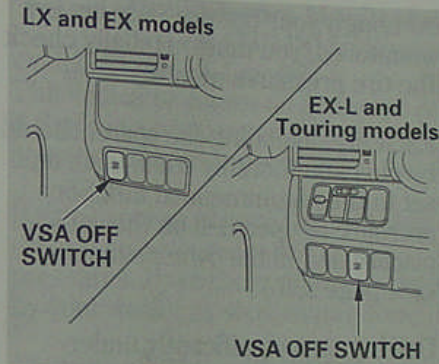
If the low tire pressure indicator comes on (see page 71), or the multi-information display shows a "CHECK TPMS SYSTEM" message (see page 88), the VSA system automatically turns on even if you turn it off with the VSA OFF switch.

Vehicle Stability Assist (VSA) System

VSA Off Switch

In certain unusual conditions when your vehicle gets stuck in shallow mud or fresh snow, it may be easier to free it with the VSA temporarily switched off. When the VSA system is off, the traction control system is also off. You should only attempt to free your vehicle with the VSA off if you are not able to free it when the VSA is on.

Immediately after freeing your vehicle, be sure to switch the VSA on again. We do not recommend driving your vehicle with the VSA and traction control systems switched off.



This switch is under the left vent. Press it to turn the VSA system on and off.

When VSA is off, the VSA activation indicator comes on as a reminder.

VSA is turned on every time you start the engine, even if you turned it off the last time you drove the vehicle.

VSA and Tire Sizes

Driving with varying tire or wheel sizes may cause the VSA to malfunction. When replacing tires, make sure they are of the same size and type as your original tires (see page 386).

If you install winter tires, make sure they are the same size as those that were originally supplied with your vehicle. Exercise the same caution during winter driving as you would if your vehicle was not equipped with VSA.

Driving

2007 HONDA
ODYSSEY EX
FMVSS 126
NHTSA No.: C75309
AUGUST 2007

7.2 VEHICLE ARRIVAL CONDITION REPORT

CONTRACT NO. DTNH22- 07-P-00332 DATE: 7-17-07

FROM: Event Vehicles (Leasing Company)

TO: TRC

PURPOSE: (X) Initial Receipt () Received via Transfer () Present vehicle condition

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2007 / Honda / Odyssey EX / MPV

MANUFACTURE DATE: 03/07 NHTSA NO.: C75309

BODY COLOR: maroon VIN: 5FNRL38477B439828

ODOMETER READING: 57 miles GVWR: 2700 kg

PURCHASE PRICE: \$ (leased) DEALER'S NAME: (leased)

X ALL OPTIONS LISTED ON "WINDOW STICKER" ARE PRESENT ON THE TEST VEHICLE

X TIRES AND WHEEL RIMS ARE NEW AND THE SAME AS LISTED

X THERE ARE NO DENTS OR OTHER INTERIOR OR EXTERIOR FLAWS

X THE VEHICLE HAS BEEN PROPERLY PREPARED AND IS IN RUNNING CONDITION

X THE GLOVE BOX CONTAINS AN OWNER'S MANUAL, WARRANTY DOCUMENT, CONSUMER INFORMATION, AND EXTRA SET OF KEYS

X PROPER FUEL FILLER CAP IS SUPPLIED ON THE TEST VEHICLE

X PLACE VEHICLE IN STORAGE AREA

X INSPECT THE VEHICLE'S INTERIOR AND EXTERIOR, INCLUDING ALL WINDOWS, SEATS, DOORS, ETC., TO CONFIRM THAT EACH SYSTEM IS COMPLETE AND FUNCTIONAL PER THE MANUFACTURER'S SPECIFICATIONS. ANY DAMAGE, MISADJUSTMENT, OR OTHER UNUSUAL CONDITION THAT COULD INFLUENCE THE TEST PROGRAM OR TEST RESULTS SHALL BE RECORDED. REPORT ANY ABNORMAL CONDITION TO THE NHTSA COTR BEFORE BEGINNING ANY TEST

RECORDED BY: Jason Church

DATE: 7-17-07

APPROVED BY: Jeff Sankey

DATE: 9-27-07

7.3 VEHICLE COMPLETION CONDITION REPORT

CONTRACT NO. DTNH22- 07-P-00332 DATE: 8-14-07

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2007 / Honda / Odyssey EX / MPV

MANUFACTURE DATE: 03/07 NHTSA NO.: C75309

BODY COLOR: Maroon VIN: 5FNRL38477B439828

ODOMETER READING: 160 miles GVWR: 2700 kg

LIST OF FMVSS TESTS PERFORMED BY THIS LAB: 126

- THERE ARE NO DENTS OR OTHER INTERIOR OR EXTERIOR FLAWS
- THE VEHICLE HAS BEEN PROPERLY MAINTAINED AND IS IN RUNNING CONDITION
- THE GLOVE BOX CONTAINS AN OWNER'S MANUAL, WARRANTY DOCUMENT, CONSUMER INFORMATION, AND EXTRA SET OF KEYS
- PROPER FUEL FILLER CAP IS SUPPLIED ON THE TEST VEHICLE

REMARKS:

Equipment that is no longer on the test vehicle as noted on Vehicle Arrival Condition Report:
None.

Explanation for equipment removal:
N/A

Test Vehicle Condition:
Like new.

RECORDED BY: Jason Church
APPROVED BY: Jeff Sankey

DATE: 8-14-07
DATE: 9-27-07

7.4 SINE WITH DWELL TEST RESULTS

2007 Honda Odyssey EX

NHTSA No.: C75309

Date Created

9-Aug-07

File	SWA @ 5deg	Ct	MES	Time@5deg	COS	Time@COS	MOS	Time@MOS	YRR1(%)	YR1 (deg/sec)	YRR1 Ct	YRR175(%)	YR175 (deg/sec)
9		2153	50.15259	10.7578406	2535	12.6658687	2291	11.446092	-0.6096	-0.082803921	2735	5.5123703	0.748766969
10		1902	50.27297	9.50253658	2285	11.4153702	2041	10.196349	-0.97876	-0.17172124	2485	1.0321353	0.181086534
11		2176	50.11511	10.8704006	2559	12.7871907	2315	11.5677731	-0.11394	-0.025870573	2759	1.7610387	0.399860951
12		2116	50.28925	10.5707034	2499	12.4887262	2256	11.2703085	-0.72287	-0.196289617	2699	-0.4116411	-0.111777588
13		2191	50.1254	10.9480246	2575	12.8660902	2331	11.6489983	0.403446	0.132095905	2775	0.2133084	0.069841291
14		1921	50.17689	9.59826631	2305	11.5161116	2061	10.2998064	1.672161	0.643547161	2505	-0.0402013	-0.015471868
15		1588	50.06207	7.93128899	1971	9.84895535	1728	8.6329269	1.99756	0.828862579	2171	-0.7479659	-0.31035917
16		1882	50.26565	9.40417322	2266	11.3218282	2023	10.1062492	-8.46734	-3.887100513	2466	-0.5736524	-0.263346531
17		1614	50.3822	8.06199315	1997	9.97895315	1754	8.76381389	-11.5434	-5.702534501	2197	-1.3882185	-0.685793967
18		1696	50.31826	8.47025402	2079	10.3869575	1836	9.1716145	-2.8996	-1.557290203	2279	-0.0443647	-0.023826966
19		1829	50.13944	9.13533142	2212	11.0525971	1969	9.83667411	1.208922	0.683550791	2412	1.2257987	0.693093181
20		1939	50.06235	9.68580517	2322	11.6028477	2079	10.3868576	1.297437	0.757720254	2522	1.3904978	0.812069176
21		1888	50.29274	9.43394655	2272	11.3508775	2028	10.1350281	0.167088	0.098161107	2472	0.8722643	0.512440427
22		2082	50.09714	10.4035387	2464	12.3110612	2220	11.0920856	0.085977	-0.011822963	2664	0.5124143	-0.070463636
23		1685	50.0714	8.41900454	2068	10.3310836	1824	9.1128065	0.968552	-0.174032753	2268	0.9657822	-0.17353498
24		1753	50.17772	8.75783764	2136	10.673956	1893	9.45556618	0.915021	-0.212130185	2336	1.1020963	-0.255499974
25		1862	50.18725	9.30201725	2245	11.2196404	2002	10.0018157	0.658207	-0.186509614	2445	0.3051594	-0.086469952
26		1593	50.18577	7.95778712	1977	9.87554706	1733	8.65894077	1.517328	-0.505713577	2177	0.4292457	-0.143064224
27		1821	50.18904	9.09739257	2205	11.0157448	1961	9.79893804	2.957726	-1.121253693	2405	0.5614468	-0.212840674
28		1876	50.28352	9.37215368	2260	11.2902035	2016	10.0740566	3.045408	-1.262699386	2460	0.2814822	-0.116709288
29		1741	50.25857	8.69714603	2124	10.614639	1881	9.39901048	-2.49206	1.150605768	2324	-0.2537396	0.117153877
30		1993	50.13645	9.95797456	2376	11.8750481	2133	10.659666	-5.75996	2.886820053	2576	-0.5434364	0.272363611
31		1983	50.30691	9.90714851	2366	11.8237744	2123	10.6087223	-10.723	5.783287545	2566	-0.6732833	0.36312634
32		1559	50.19411	7.78546058	1942	9.70181193	1699	8.48662925	-11.4754	6.422735234	2142	-0.7163684	0.400948471
33		2016	50.25366	10.0711089	2399	11.9881474	2156	10.7720191	-6.48344	3.802351296	2599	0.1670589	-0.097975193
34		1586	50.31622	7.92180711	1969	9.83809071	1726	8.62290073	-5.33445	3.209487372	2169	0.5490254	-0.33032249

7.4 SINE WITH DWELL TEST RESULTS

2007 Honda Odyssey EX

NHTSA No.: C75309

Date Created

9-Aug-07

File	YRR175 Ct	2nd Yaw Peak(deg/sec)	2nd Yaw Peak Ct	Lat Disp (ft)	Lat. Acc. 1.07s (g)	1st SWA Peak(deg)	1st SWA Peak Ct	2nd SWA Mean(deg)
9	2885	13.58339386	2382	-3.7725789	0.334010105	57.17192304	2219	56.72001153
10	2635	17.54484446	2125	-5.069994	0.403225199	76.13415454	1969	75.65233421
11	2909	22.70597214	2400	-6.0012244	0.464659823	95.94278082	2244	95.64506524
12	2849	27.15413787	2341	-6.8529312	0.49218621	115.153959	2184	114.9410399
13	2925	32.74193784	2418	-7.5885769	0.486037825	134.0674659	2260	133.9770094
14	2655	38.48596593	2151	-8.1185533	0.402471842	153.0860865	1990	153.1399566
15	2321	41.49375702	1818	-8.6656151	0.390046351	172.0336042	1657	172.1068959
16	2616	45.90698314	2115	-8.922131	0.353473127	191.0489361	1952	191.0636484
17	2347	49.40101061	1849	-9.0876817	0.295800351	210.5812867	1683	210.2749891
18	2429	53.70702801	1935	-9.2430629	0.204637661	229.6490794	1765	229.2365518
19	2562	56.54216971	2067	-9.4554692	0.151074476	248.4837829	1898	247.8552651
20	2672	58.40132731	2178	-9.5070859	0.131310569	267.09483	2008	266.6583374
21	2622	58.74830064	2128	-9.4086395	0.124978951	270.1327802	1958	269.6002121
22	2814	-13.75130213	2316	3.8766699	-0.329513826	57.60053891	2148	57.40913525
23	2418	-17.96833489	1907	4.8020098	-0.413075698	76.431204	1753	76.42444358
24	2486	-23.18309061	1979	5.804016	-0.463488433	96.35018173	1822	96.31894326
25	2595	-28.33599878	2090	6.6523616	-0.494519564	115.7246707	1931	115.6142697
26	2327	-33.32921218	1821	7.3031297	-0.500756678	134.8995061	1662	134.4230383
27	2555	-37.90931894	2053	7.8950437	-0.443543236	153.953997	1890	153.5543037
28	2610	-41.46240223	2108	8.172146	-0.406120449	173.0720578	1945	172.4902684
29	2474	-46.17090566	1975	8.6370787	-0.368923195	191.9595223	1810	191.4430493
30	2726	-50.118768	2230	8.7960649	-0.266122736	211.1338021	2062	210.9030082
31	2716	-53.93365884	2223	9.0759327	-0.180142536	230.0253331	2052	229.895225
32	2292	-55.9695903	1799	9.2686678	-0.170725834	248.6715804	1628	248.7545079
33	2749	-58.6471098	2257	9.4063988	-0.134035231	267.1591689	2085	267.7136448
34	2319	-60.16524752	1828	9.265177	-0.107847659	269.8537929	1656	270.7238294

7.5 SLOWLY INCREASING STEER TEST RESULTS

2007 Honda Odyssey EX

NHTSA No.: C75309

Date Created

9-Aug-07

File	Vehicle	EventPt	DOS	MES [mph]	Mean SPD [mph]	AYcount	THETAENC [degree]	AYCG [g]	r_squared	ZeroBegin	ZeroEnd
2	2007 Honda Odyssey	1963	1	50.694987	50.64102297	2519	-37.49752861	-0.29718	0.998633	1763	1963
3	2007 Honda Odyssey	2062	1	50.027116	50.13731692	2645	-38.6330325	-0.2998	0.998852	1862	2062
4	2007 Honda Odyssey	1051	1	50.173355	50.04971189	1694	-37.91968946	-0.30018	0.998127	851	1051
5	2007 Honda Odyssey	1495	0	49.909358	50.32557832	2060	38.26197814	0.299436	0.99625	1295	1495
6	2007 Honda Odyssey	1491	0	49.450026	50.24930387	2067	39.04906285	0.306326	0.99839	1291	1491
7	2007 Honda Odyssey	1314	0	50.273108	50.14415722	1874	37.99508958	0.302405	0.997218	1114	1314
Averages								38.2	0.300887		

54

Scalars

Steering Angles (deg)

1.5	57
2	76
2.5	96
3	115
3.5	134
4	153
4.5	172
5	191
5.5	210
6	229
6.5	248
7	267
7.1	270

7.6 INERTIAL SENSING SYSTEM LOCATION COORDINATES

2007 Honda Odyssey EX

NHTSA No.: C75309

Device : N10-02-03-01310
device version : 1.55
device certification date : 12/04/06
today is : 08/08/07
units : Millimeters

Label	ActualX	ActualY	ActualZ
C_DEVICEPOS001			
M_PLANE001	1562.539	-653.8229	-321.8704
M_LINE001	941.6948	20.3256	-84.8746
M_FRONT_AXLE_ORIGIN	0	0	0
C_COORDSYS001	0	0	0
M_LEFT_FRT_TIRE_TREAD_CEN1	326.3985	96.8649	-145.2423
M_TOP_OF_SENSOR	2006.8286	963.6186	401.1122
M_TOP_OF_ROOF	2222.6446	945.2848	1401.2381
M_FLOOR	2007.5471	-83.0966	-320.7811
Track Width		1676	
Roof Height (relative to ground)			1722.0192
Motion Pak - x-distance	2006.8286		
Motion Pak - y-distance		28.7537	
Motion Pak - z-distance			632.9933