REPORT NO. 118-KAR-09-003

SAFETY COMPLIANCE TESTING FOR FMVSS 118

Power-Operated Window, Partition, And Roof Panel Systems

2009 NISSAN ROGUE S 5-DOOR MPV

NHTSA NO. C95205

PREPARED BY: KARCO ENGINEERING, LLC. 9270 HOLLY ROAD ADELANTO, CALIFORNIA 92301



June 26, 2009

Final Report

PREPARED FOR: U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION ENFORCEMENT OFFICE OF VEHICLE SAFETY COMPLIANCE MAIL CODE: NVS-221 1200 NEW JERSEY AVE SE, ROOM W43-498 WASHINGTON, D.C. 20590

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Mathew S. Haller

Prepared by:

Mr. Matthew S. Hubbard, Test Engineer KARCO Engineering, LLC.

Date: 06/26/09

Date: 06/26/09

Reviewed by:

Mr. Michael L. Dunlap, Director of Operations KARCO Engineering, LLC.

Approved by:

Date: 06/26/09

Mr. Frank D. Richardson, Program Manager KARCO Engineering, LLC.

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1. PURPOSE OF COMPLIANCE TEST

Tests were conducted on a 2009 Nissan Rogue S 5-Door MPV, manufactured by Nissan Motor Company LTD to determine compliance with FMVSS 118 "Power-Operated Window, Partition, and Roof Panel Systems". FMVSS 118 specifies requirements for power operated window, partition and roof panel systems to minimize the likelihood of death or injury from their accidental operation.

All tests were conducted based on the current National Highway Traffic Safety Administration (NHTSA), Office of Vehicle Safety Compliance (OVSC) Laboratory Procedures, TP-118-06, dated April 12, 2006, and corresponding KARCO Engineering test procedure KTP-118, dated March 23, 2009. Detailed procedures for receiving, inspecting, testing and reporting of test results are described in the test procedures and are not repeated in this report.

2. TEST PROCEDURE AND DATA SUMMARY

A 2009 Nissan Rogue S 5-Door MPV was subjected to FMVSS 118 compliance testing. The tests were conducted at KARCO Engineering in Adelanto, California on June 26, 2009. FMVSS 118 Compliance testing was performed in the following sequence:

- Vehicle Receiving Photographs
- Test Vehicle Check-in
- Power Window, Partitions and Roof Panel Identification/Documentation
- Interior, Exterior and Remote Control Switch Identification/Documentation
- Pre-Test Operation of all Power Windows, Partitions and Roof Panels
- Photograph Vehicle Ignition Switch and Master and Individual Power Window, Partition and Roof Panel Switches
- Perform Ignition Switch off Test
- Perform Ignition Key Removed Test
- Perform Exterior Key Locking System Test
- Perform Remote Control System Test
- Perform Reversal System Test
- Perform Sphere Test

DATA SUMMARY

VEHICLE				
YEAR	2009	MAKE	Nissan	
MODEL	Rogue S	BODY STYLE	5-Door MPV	
NHTSA NO.	C95205	VIN	JN8AS58T59W320598	
TEST DATE:	06/26/09			

SWITCH ACTUATION

WINDOWS,	INTERIO	EXTERIOR		
PARTITIONS,	IGNITION KEY	IGNITION KEY	IGNITION KEY	LOCKING
ROOF PANEL	OFF	REMOVED	REMOVED	SYSTEM
SWITCHES	(PASS/FAIL)	(PASS/FAIL)	DOOR OPENED	(PASS /
(WPRP)			(PASS/FAIL)	FAIL)
	MAST	ER SWITCH PANEL		1
Left Front (LF)	PASS	PASS	PASS	N/A
Right Front (RF)	PASS	PASS	PASS	N/A
Left Rear (LR)	PASS	PASS	PASS	N/A
Right Rear (RR)	PASS	PASS	PASS	N/A
Tail Gate (TG)	N/A	N/A	N/A	N/A
Partition	N/A	N/A	N/A	N/A
Roof Panel (RP) N/A		N/A	N/A	N/A
	INDI	IDUAL SWITCHES		
Left Front (LF)	PASS	PASS	PASS	N/A
Right Front (RF)	PASS	PASS	PASS	N/A
Left Rear (LR)	PASS	PASS	PASS	N/A
Right Rear(RR)	PASS	PASS	PASS	N/A
Tail Gate (TG)	N/A	N/A	N/A	N/A
Partition (P)	N/A	N/A	N/A	N/A
Roof Panel (RP)	N/A	N/A	N/A	N/A

REMARKS	: The master switch control panel is located on the driver's side door panel and
	includes the individual left front window switch. Vehicle passed as soon as ignition
	key "off" test was performed.
*PASS =	After ignition key cycled from ON, ACC, or START to OFF position, or removed
	WPRP does not close, or closes until either front door is opened

DATA SUMMARY...(CONTINUED)

REMOTE ACTUATION DEVICE

VEHICLE ORIENTATION REMOTE ACTUATION DEVICE	NON-LINE OF SIGHT REMOTE (METERS)	LINE OF SIGHT REMOTE (METERS)
FRONT	N/A	N/A
DRIVER SIDE	N/A	N/A
PASSENGER SIDE	N/A	N/A
REAR	N/A	N/A

WPRP OBSTRUCTION FORCE REVERSAL*

WINDOW, PARTITION, ROOF PANEL	FORCE TO REVERSE (NEWTONS)	DISTANCE WINDOW, PARTITION, OR ROOF PANEL OPENED ON REVERSAL (mm)
LEFT FRONT (LF)	N/A	N/A
RIGHT FRONT (RF)	N/A	N/A
LEFT REAR (LR)	N/A	N/A
RIGHT REAR (RR)	N/A	N/A
PARTITION (P)	N/A	N/A
ROOF PANEL (RP)	N/A	N/A
TAIL GATE (TG)	N/A	N/A

SPHERE TEST

WINDOW, PARTITION, ROOF PANEL	MASTER SWITCH	INDIVIDUAL SWITCH	PASS / FAIL
LEFT FRONT (LF)	See Data Sheet 9	See Data Sheet 9	PASS
RIGHT FRONT (RF)	See Data Sheet 9	See Data Sheet 9	PASS
LEFT REAR (LR)	See Data Sheet 9	See Data Sheet 9	PASS
RIGHT REAR (RR)	See Data Sheet 9	See Data Sheet 9	PASS
PARTITION (P)	N/A	N/A	N/A
ROOF PANEL (RP)	N/A	N/A	N/A
TAIL GATE (TG)	N/A	N/A	N/A

REMARKS: * The master switch is the same as the individual switch for the left front window. The vehicle passed as soon as ignition key "off" was performed. The Driver WPRP Switch is labeled with an 'A' on the switch to indicate auto express up may be a feature. The owner's manual states window switches with this marking are available with auto express up. The switch however does not function with automatic operation. Attempts were made to reset the switch according to the owner's manual and the operation of the switch did not change. On this vehicle the reversal feature is not required because the windows appear to meet the operational requirements of FMVSS 118 paragraph S.4. The subject 2009 Nissan Rogue S 5-Door MPV appeared to meet the requirements of FMVSS 118.

3. TEST DATA

DATA SHEET NO. 1 VEHICLE IDENTIFICATION

VEHICLE				
YEAR	2009	MAKE	Nissan	
MODEL	Rogue S	BODY STYLE	5-Door MPV	
NHTSA NO.	C95205	VIN	JN8AS58T59W320598	
TEST DATE:	06/26/09			

Identify Vehicle equipped WPRP and WPRP controls

	LEFT FRONT	LEFT REAR	RIGHT FRONT	RIGHT REAR	TAIL GATE	PARTITION	ROOF PANEL
Power Windows	Х	Х	Х	Х	N/A	N/A	N/A
Interior Switches	Х	Х	Х	Х	N/A	N/A	N/A
Master Control Panel	Х	Х	Х	Х	N/A	N/A	N/A
Exterior Switches	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Remote Controller	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auto-Reverse	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Master Control Panel Location: Driver Side Door Panel

Remote Control: None

Window Switch Design: <u>Master Control Switches – Flush Mounted Rocker Switch push</u> <u>down to open, pull up to close.</u> <u>Individual Window Switches – Flush Mounted Rocker Switch</u> push down to open, pull up to close.

Exterior Control Switch: None

Sunroof: <u>None</u>

REMARKS: Master control panel switch is located in the driver side door panel. Individual switches are located on the door panel for each door. On this vehicle the reversal feature is not required because the windows appear to meet the operational requirements of FMVSS 118 paragraph S.4.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	06/26/09
APPROVED BY:	MICHAEL L. DUNLAP	DATE:	06/26/09

DATA SHEET NO. 2 IGNITION KEY OFF TEST

VEHICLE				
YEAR	2009	MAKE	Nissan	
MODEL	Rogue S	BODY STYLE	5-Door MPV	
NHTSA NO.	C95205	VIN	JN8AS58T59W320598	
TEST DATE:	06/26/09			

Pre-Test Check: Window, Partition, Roof Panel Systems operate with Ignition Switch in "ON" Position				YES	Х	NO	N/A
	,	w, Partition, Roof Panel Systems witch in "ACCESSORY" Position			Х	NO	N/A
WINDOW	DOORS	CLOSED	LEFT DO	OR OPEN	RIGHT D		PASS
SWITCHES	INOP.	OPER.	INOP.	OPER.	INOP.	OPER.	FAIL
		N	MASTER				
Left Front (LF)	N/A	Х	Х	N/A	Х	N/A	PASS
Right Front (RF)	N/A	Х	Х	N/A	X	N/A	PASS
Left Rear (LR)	N/A	Х	Х	N/A	Х	N/A	PASS
Right Rear (RR)	N/A	Х	Х	N/A	Х	N/A	PASS
Tail Gate (TG)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Partition (P)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panel (RP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		IN	DIVIDUAL		L		
Left Front (LF)	N/A	Х	Х	N/A	Х	N/A	PASS
Right Front (RF)	N/A	Х	Х	N/A	Х	N/A	PASS
Left Rear (LR)	N/A	Х	Х	N/A	Х	N/A	PASS
Right Rear (RR)	N/A	Х	Х	N/A	Х	N/A	PASS
Tail Gate (TG)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Partition (P)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panel (RP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			the same as				

REMARKS: The master left front switch is the same as the individual left front switch. Lest was performed with key in the "Lock" position. For the pre-test check in the "Accessory" position the key was moved from the "Lock" position to the "Accessory" position without cycling through the "On" position or starting the engine. Vehicle passed as soon as ignition "off" test was performed.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	06/26/09
APPROVED BY:	MICHAEL L. DUNLAP	DATE:	06/26/09

DATA SHEET NO. 3 IGNITION KEY REMOVED TEST

	VEHICLE				
YEAR	2009	MAKE	Nissan		
MODEL	Rogue S	BODY STYLE	5-Door MPV		
NHTSA NO.	C95205	VIN	JN8AS58T59W320598		
TEST DATE:	06/26/09				

	DOORS CLOSED		LEFT DOOR OPEN		RIGHT DOOR OPEN		
WINDOW	DOOKS	CLOSED	LEFT DOOK OPEN		RIGHT DOOR OPEN		PASS/
SWITCHES	INOP.	OPER.	INOP.	OPER.	INOP.	OPER.	FAIL
			MASTER				
Left Front (LF)	N/A	Х	Х	N/A	Х	N/A	PASS
Right Front (RF)	N/A	Х	Х	N/A	X	N/A	PASS
Left Rear (LR)	N/A	Х	Х	N/A	x	N/A	PASS
Right Rear (RR)	N/A	Х	Х	N/A	Х	N/A	PASS
Tail Gate (TG)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Partition (P)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panel (RP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			NDIVIDUAL		_		
Left Front (LF)	N/A	Х	Х	N/A	Х	N/A	PASS
Right Front (RF)	N/A	Х	Х	N/A	Х	N/A	PASS
Left Rear (LR)	N/A	X	Х	N/A	Х	N/A	PASS
Right Rear (RR)	N/A	Х	Х	N/A	Х	N/A	PASS
Tail Gate (TG)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Partition (P)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panel (RP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

REMARKS: The master left front switch is the same as the individual left front switch. Vehicle passed as soon as ignition key "off" test was performed.

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APPROVED BY:	MICHAEL L. DUNLAP	DATE:	06/26/09

DATA SHEET NO. 4 EXTERIOR KEY LOCKING SYSTEM

	VEHICLE				
YEAR	2009	MAKE	Nissan		
MODEL	Rogue S	BODY STYLE	5-Door MPV		
NHTSA NO.	C95205	VIN	JN8AS58T59W320598		
TEST DATE:	06/26/09				

EXTERIOR LOCKING CONTROL SWITCH TEST				
Can Any WPRP Be Operated by Directly Using A Key in an Exterior Locking Control Switch?	Yes	N/A	No	x
If Yes: Is Continuous Activation of the Switch Required	Yes	N/A	No	Х

IDENTIFY WINDOW, PARTITION AND ROOF PANEL POSITIONS WHICH ARE OPERABLE WITH EXTERIOR KEY.

LOCATION			CONTINUOUS ACTION		PASS / FAIL
LOCATION	YES	NO	YES	NO	
LEFT FRONT (LF)	N/A	N/A	N/A	N/A	N/A
RIGHT FRONT (RF)	N/A	N/A	N/A	N/A	N/A
LEFT REAR (LR)	N/A	N/A	N/A	N/A	N/A
RIGHT REAR (RR)	N/A	N/A	N/A	N/A	N/A
PARTITION (P)	N/A	N/A	N/A	N/A	N/A
ROOF PANEL (RP)	N/A	N/A	N/A	N/A	N/A
TAIL GATE (TG)	N/A	N/A	N/A	N/A	N/A

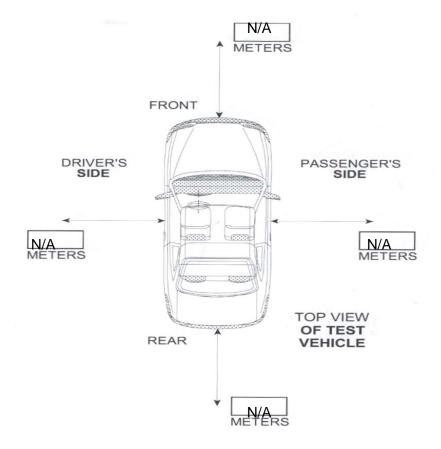
REMARKS: Vehicle is not equipped with an exterior key locking system capable of opening windows.

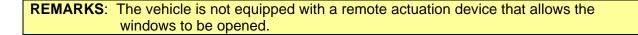
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APPROVED BY:	MICHAEL L. DUNLAP	DATE:	06/26/09

DATA SHEET NO. 5 MAXIMUM OPERATING RANGE FOR LINE-OF-SIGHT REMOTE

	VEHICLE			
YEAR	2009	MAKE	Nissan	
MODEL	Rogue S	BODY STYLE	5-Door MPV	
NHTSA NO.	C95205	VIN	JN8AS58T59W320598	
TEST DATE:	06/26/09			

If range of operation exceeds 11 meters in any of the below measured directions, the window, partition, and roof panel must meet the reversing requirements of FMVSS 118. Continuous activation of remote device is required to close windows, partition and roof panel YES () NO ().



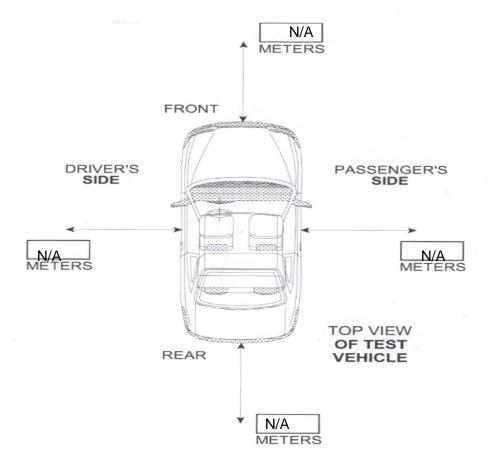


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DATA SHEET NO. 6 MAXIMUM OPERATING RANGE FOR NON-LINE-OF-SIGHT REMOTE

	VEHICLE			
YEAR	2009	MAKE	Nissan	
MODEL	Rogue S	BODY STYLE	5-Door MPV	
NHTSA NO.	C95205	VIN	JN8AS58T59W320598	
TEST DATE:	06/26/09			

If range of operation exceeds 6 meters in any of the below measured directions, the window, partition, and roof panel must meet the reversing requirements of FMVSS 118. Continuous activation of remote device is required to close windows, partition and roof panel YES () NO ().



REMARKS: The vehicle is not equipped with a remote actuation device that allows the windows to be opened.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	06/26/09
APPROVED BY:	MICHAEL L. DUNLAP	DATE:	06/26/09

DATA SHEET NO. 7 AUTO REVERSAL

VEHICLE			
YEAR	2009	MAKE	Nissan
MODEL	Rogue S	BODY STYLE	5-Door MPV
NHTSA NO.	C95205	VIN	JN8AS58T59W320598
TEST DATE:	06/26/09		

IDENTIFY WINDOW, PARTITION AND ROOF PANEL POSITIONS WHICH ARE EQUIPPED WITH AUTO REVERSAL.

Is vehicle equipped with Auto Reversal	YES	N/A	NO	Х

SWITCHES EQUIPPED WITH AUTO REVERSAL	MASTER	INDIVIDUAL
LEFT FRONT (LF)	N/A	N/A
RIGHT FRONT (RF)	N/A	N/A
LEFT REAR (LR)	N/A	N/A
RIGHT REAR (RR)	N/A	N/A
PARTITION (P)	N/A	N/A
ROOF PANEL (RP)	N/A	N/A
TAIL GATE (TG)	N/A	N/A

REMARKS: The master switch is the same as the individual switch for the left front window. The vehicle passed as soon as ignition key "off" was performed. The Driver WPRP Switch is labeled with an 'A' on the switch to indicate auto express up may be a feature. The owner's manual states window switches with this marking are available with auto express up. The switch however does not function with automatic operation. Attempts were made to reset the switch according to the owner's manual and the operation of the switch did not change. On this vehicle the reversal feature is not required because the windows appear to meet the operational requirements of FMVSS 118 paragraph S.4. The subject 2009 Nissan Rogue S 5-Door MPV appeared to meet the requirements of FMVSS 118.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	06/26/09
APPROVED BY:	MICHAEL L. DUNLAP	DATE:	06/26/09

DATA SHEET NO. 8 AUTO REVERSAL

VEHICLE			
YEAR	2009	MAKE	Nissan
MODEL	Rogue S	BODY STYLE	5-Door MPV
NHTSA NO.	C95205	VIN	JN8AS58T59W320598
TEST DATE:	06/26/09		

Distance window is open from top seam to start position.

N/A

WPRP OBSTRUCTION FORCE REVERSAL

LEADING EDGE LEFT FRONT WINDOW	FORCE TO REVERSE (NEWTONS)	DISTANCE WINDOW, PARTITION, OR ROOF PANEL OPENED ON REVERSAL (mm)
5mm semi rigid rod	N/A	N/A
25mm semi rigid rod	N/A	N/A
50mm semi rigid rod	N/A	N/A
100mm semi rigid rod	N/A	N/A
200mm semi rigid rod	N/A	N/A

WPRP OBSTRUCTION FORCE REVERSAL

REAR EDGE LEFT FRONT WINDOW	FORCE TO REVERSE (NEWTONS)	DISTANCE WINDOW, PARTITION, OR ROOF PANEL OPENED ON REVERSAL (mm)
5mm semi rigid rod	N/A	N/A
25mm semi rigid rod	N/A	N/A
50mm semi rigid rod	N/A	N/A
100mm semi rigid rod	N/A	N/A
200mm semi rigid rod	N/A	N/A

REMARKS: The master switch is the same as the individual switch for the left front window. The vehicle passed as soon as ignition key "off" was performed. The Driver WPRP Switch is labeled with an 'A' on the switch to indicate auto express up may be a feature. The owner's manual states window switches with this marking are available with auto express up. The switch however does not function with automatic operation. Attempts were made to reset the switch according to the owner's manual and the operation of the switch did not change. On this vehicle the reversal feature is not required because the windows appear to meet the operational requirements of FMVSS 118 paragraph S.4. The subject 2009 Nissan Rogue S 5-Door MPV appeared to meet the requirements of FMVSS 118.

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DATA SHEET NO. 9 SPHERE TEST

VEHICLE			
YEAR	2009	MAKE	Nissan
MODEL	Rogue S	BODY STYLE	5-Door MPV
NHTSA NO.	C95205	VIN	JN8AS58T59W320598
TEST DATE:	06/26/09		

SPHERE TEST CONDUCTED ON MASTER SWITCH CONTROL PANEL

WINDOW	FORCE APPLIED TO ACTIVATE SWITCH (NEWTONS)	SWITCH ACTIVATED (YES / NO)	PASS / FAIL
LEFT FRONT (LF)	155.0	NO	PASS
RIGHT FRONT (RF)	146.0	NO	PASS
LEFT REAR (LR)	165.3	NO	PASS
RIGHT REAR (RR)	147.4	NO	PASS
PARTITION (P)	N/A	N/A	N/A
ROOF PANEL (RP)	N/A	N/A	N/A
TAIL GATE (TG)	N/A	N/A	N/A

SPHERE TEST CONDUCTED ON INDIVIDUAL SWITCH

WINDOW	FORCE APPLIED TO ACTIVATE SWITCH (NEWTONS)	SWITCH ACTIVATED (YES / NO)	PASS / FAIL
LEFT FRONT (LF)	155.0	NO	PASS
RIGHT FRONT (RF)	167.1	NO	PASS
LEFT REAR (LR)	171.4	NO	PASS
RIGHT REAR (RR)	142.2	NO	PASS
PARTITION (P)	N/A	N/A	N/A
ROOF PANEL (RP)	N/A	N/A	N/A
TAIL GATE (TG)	N/A	N/A	N/A

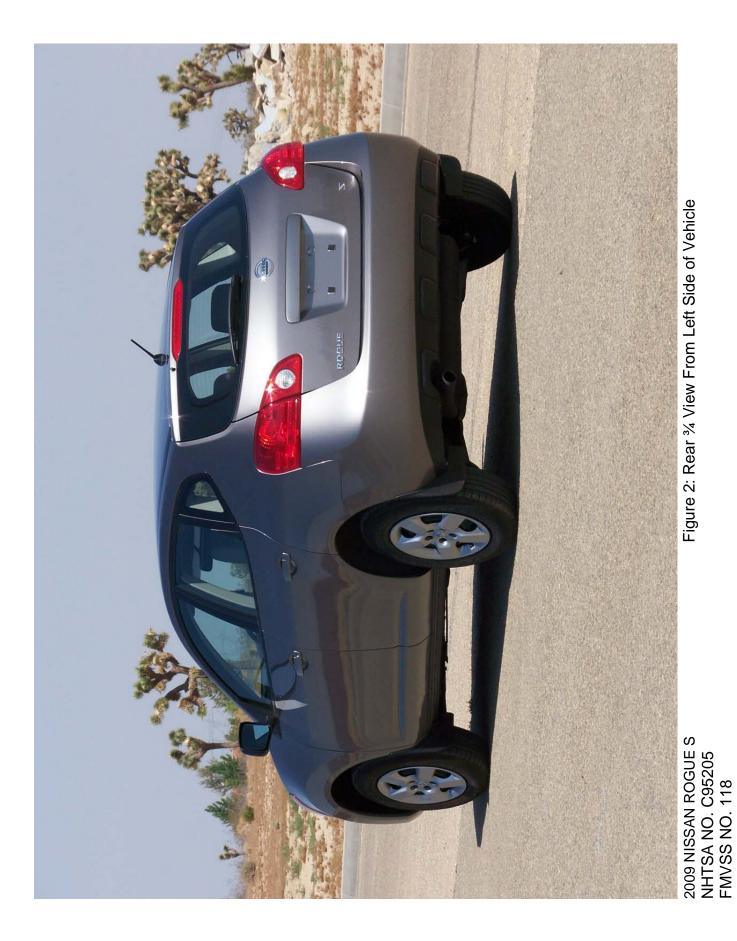
REMARKS: The master switch is the same as the individual switch for the left front window.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	06/26/09
APPROVED BY:	MICHAEL L. DUNLAP	DATE:	06/26/09

4. PHOTOGRAPHS

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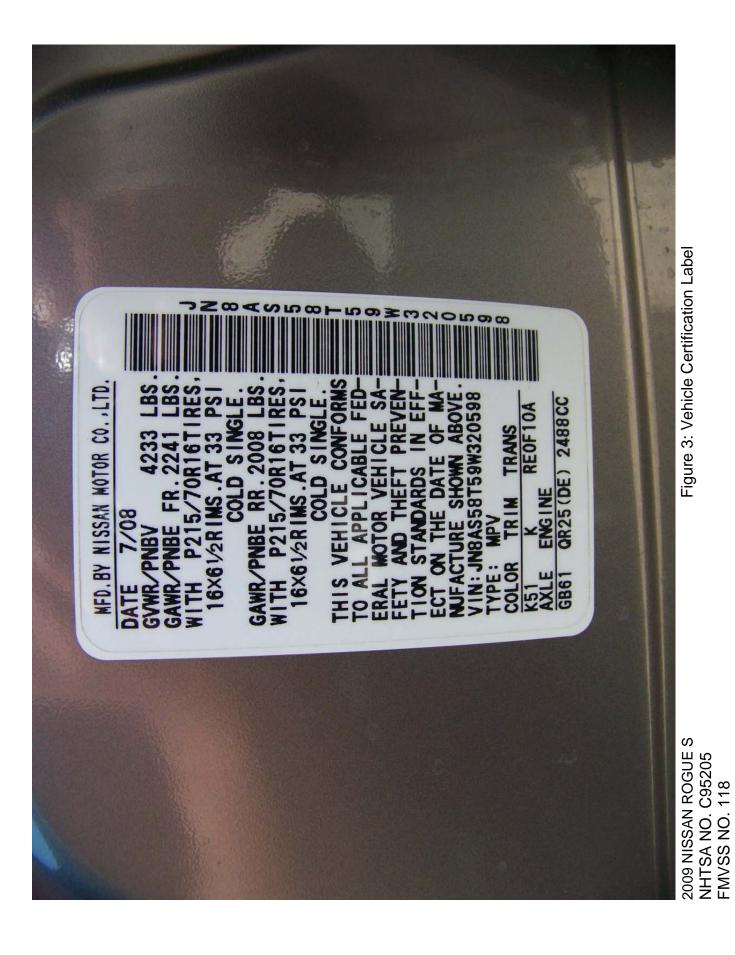










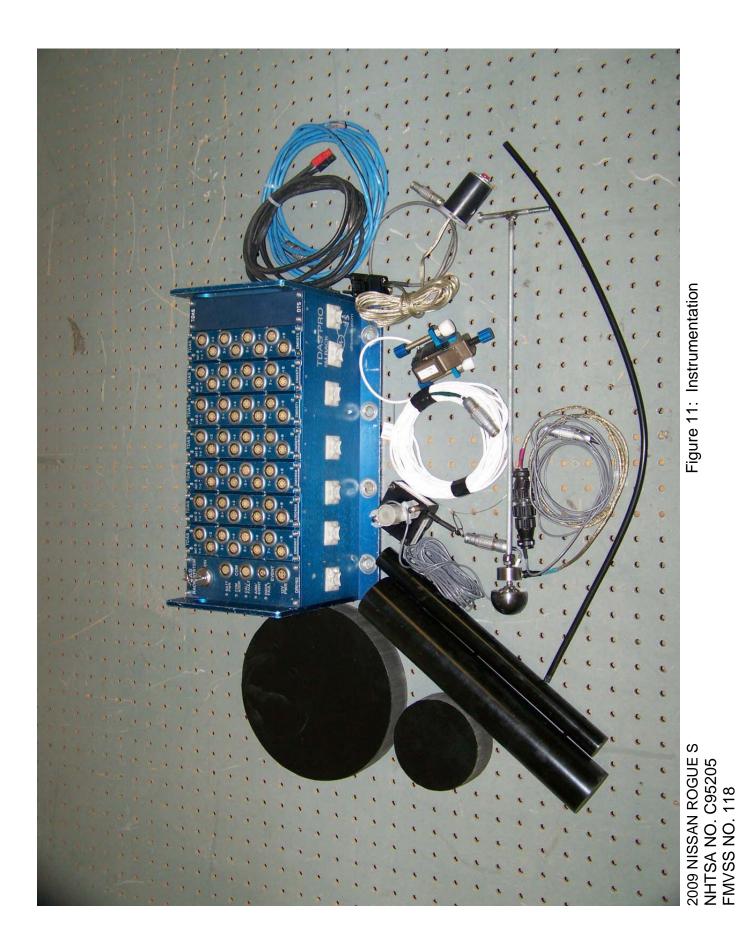






Figure 10: Overall Test Set-Up

2009 NISSAN ROGUE S NHTSA NO. C95205 FMVSS NO. 118





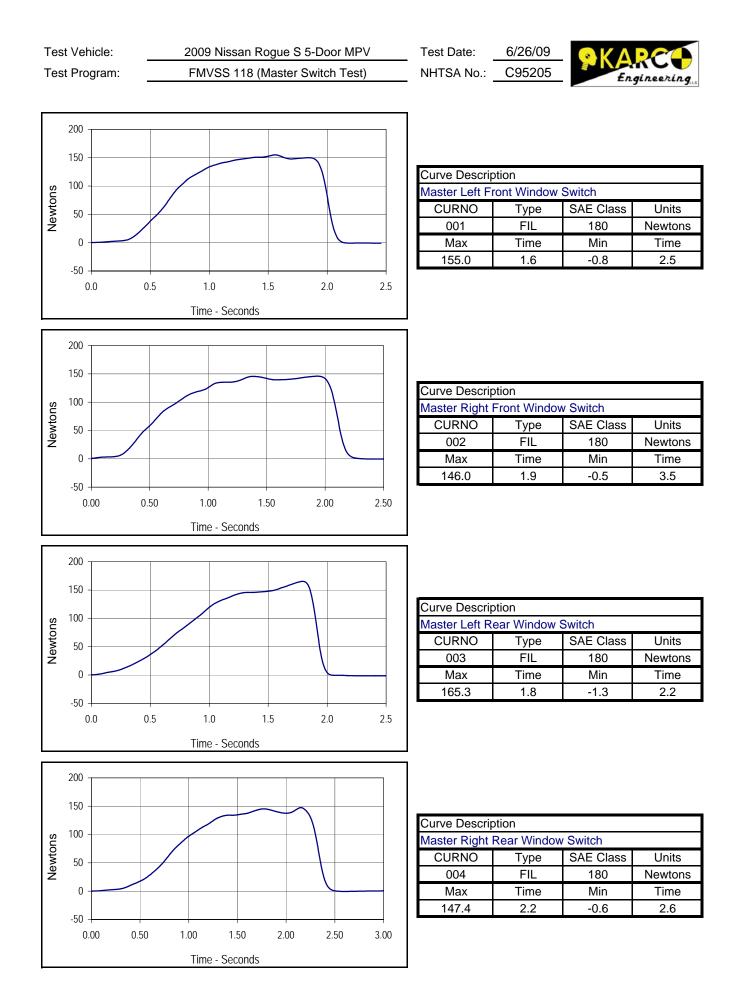


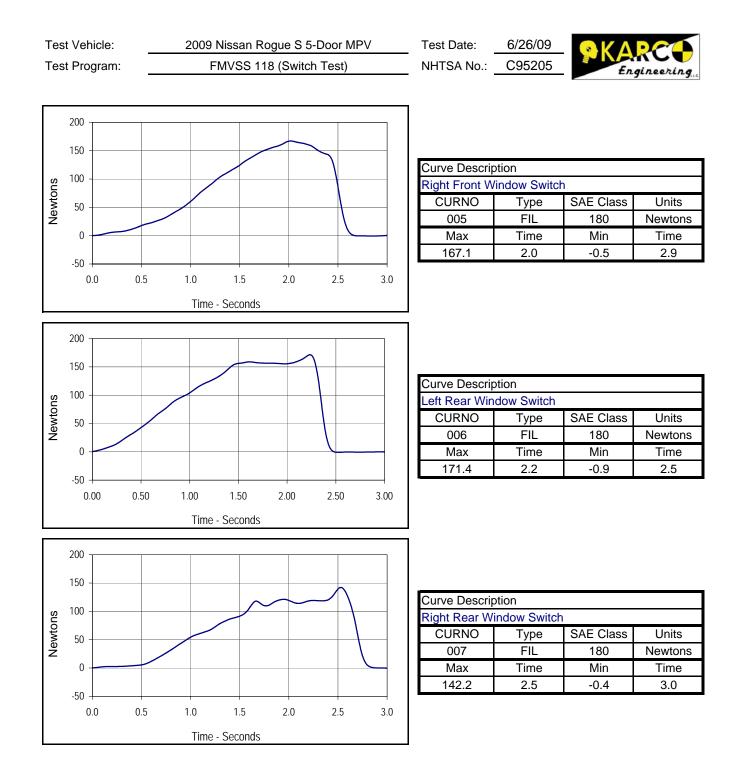




5. DATA PLOTS

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FMVSS 118

Test Equipment List and Calibration Information

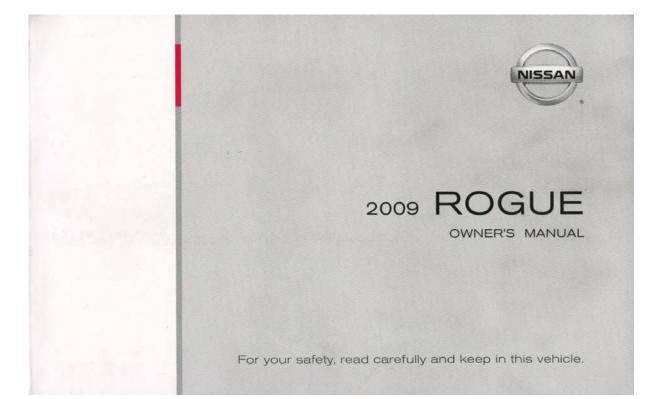
06/26/09

2009 Nissan Rogue S 5-Door MPV

Description	Manufacturer	Model No.	Serial No.	Limit	Accuracy	Accuracy Cal. Date Due Cal.	Due Cal.
DAS	DTS	TDAS Pro	DM0429	N/A	SAE J211	SAE J211 03/02/09	03/02/10
-aptop Computer	Toshiba	Satellite	LAP02	N/A	N/A	N/A	N/A
Load Cell	Lebow	261134	K118	300 Newtons	± 1.0%	± 1.0% 04/26/09 04/26/10	04/26/10



		VEHICLE	
YEAR	2009	MAKE	Nissan
MODEL	Rogue S	BODY STYLE	5-Door MPV
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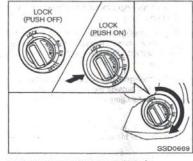
diately after driving in mud or water. See "BRAKE SYSTEM" later in this section for wet brakes.

Avoid parking your vehicle on steep hills. If you get out of the vehicle and it rolls forward, backward or sideways, you could be injured.

Whenever you drive off-road through sand, mud or water as deep as the wheel hub, more frequent maintenance may be required. See the maintenance information in the "NISSAN Service and Maintenance Guide".

Spinning the front wheels on slippery surfaces may cause the AWD warning light to flash and the AWD system to automatically switch from the AWD mode to the 2WD mode. This could reduce traction. Be especially careful when towing a trailer. (AWD models)

IGNITION SWITCH



INTELLIGENT KEY SYSTEM (if so equipped)

The Intelligent Key system can operate the ignition switch without taking the key out from your pocket or purse. The operating environment and/or conditions may affect the Intelligent Key system operation.

A CAUTION

- Be sure to carry the Intelligent Key with you when operating the vehicle.
- Never leave the Intelligent Key inside the vehicle when you leave the

vehicle.

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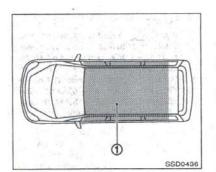
Dope Missin

If the vehicle battery is discharged, the ignition switch cannot be moved from the LOCK position and if the steering lock is engaged, the steering wheel cannot be moved. Charge the battery as soon as possible. See "JUMP STARTING" in the "6. In case of emergency" section.

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Starting and driving 5-9

		VEHICLE	
YEAR	2009	MAKE	Nissan
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Operating range

The Intelligent Key functions can only be used for starting the engine when the Intelligent Key is within the specified operating range 1.

When the Intelligent Key battery is almost discharged or strong radio waves are present near the operating location, the Intelligent Key system's operating range becomes narrower and may not function properly.

If the Intelligent Key is within the operating range, it is possible for anyone, even someone who does not carry the Intelligent Key, to turn the ignition switch to start the engine.

· The cargo area is not included in the

5-10 Starting and driving

CONTINUOUSLY VARIABLE TRANS-MISSION (CVT)

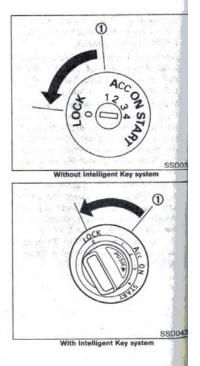
The ignition lock is designed so that the ignition switch cannot be turned to the LOCK position until the selector lever is moved to the P (Park) position.

- When turning the ignition switch to the LOCK position, make sure that the selector lever is in the P (Park) position.
- When removing the key from the ignition switch (if it is inserted), make sure that the selector lever is in the P (Park) position.
- When the ignition switch cannot be turned to the LOCK position:
- 1. Move the selector lever to the P (Park) position,
- 2. Turn the ignition switch slightly in the ON direction.
- 3. Turn the ignition switch to the LOCK position.
- Remove the key, if it is inserted in the ignition switch.

If the ignition switch is turned to the LOCK position, the selector lever cannot be moved from the P (Park) position. The selector lever can be moved if the ignition switch is in the ON position with the foot brake pedal depressed.

operating range, but the Intelligent Key may function.

- If the Intelligent Key is placed on the instrument panel, inside the glove box or door pocket, the Intelligent Key may not function.
- If the Intelligent Key is placed near the door or window outside the vehicle, the Intelligent Key may function.



The OFF position ① is between the LOCK and ACC positions, although it is not marked on the ignition switch.

STEERING LOCK

To lock steering wheel

- 1. Turn the ignition switch to the LOCK position.
- 2. Remove the key, if it is inserted in the ignition switch.
- 3. Turn the steering wheel 1/6 of a turn clockwise from the straight up position.
- To unlock steering wheel
- Insert the key into the ignition switch, if necessary.
- Gently turn the ignition switch while rotating the steering wheel slightly right and left.

KEY POSITIONS LOCK (0)

Except for the Intelligent Key equipped model:

The key can only be removed from the ignition switch at this position. The steering lock can only be locked at this

position.

For the Intelligent Key equipped model: PUSH OFF -

THURSDAY BUT BELLY MALE STOLEN

- The steering lock can only be locked at this position.
- PUSH ON -
- The ignition switch will be unlocked while carrying the Intelligent Key. OFF (1)

The engine is turned off with the steering wheel unlocked.

ACC (2)

The electrical accessory power activates without the engine turned on.

ON (3)

The ignition system and the electrical accessory power activate without the engine turned on.

START (4)

The engine starter activates and the engine will start. The ignition switch, when released, will automatically turn to the ON position.

A CAUTION

As soon as the engine has started, release the ignition switch immediately.

Starting and driving 5-11

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BEFORE STARTING THE ENGINE

- Make sure the area around the vehicle is clear.
- Check fluid levels such as engine oil, coolant, brake fluid, and window washer fluid as frequently as possible, or at least whenever you refuel.
- Check that all windows and lights are clean.
- Visually inspect tires for their appearance and condition. Also check tires for proper inflation.
- Lock all doors.
- Position seat and adjust head restraints.
- Adjust inside and outside mirrors.
- Fasten seat belts and ask all passengers to . do likewise.
- Check the operation of warning lights when the ignition key is turned to the ON position. "WARNING/INDICATOR LIGHTS (See AND AUDIBLE REMINDERS" in the "2. Instruments and controls" section.)

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RECORDER STRATES

5-12 Starting and driving

stool.

STARTING THE ENGINE

- 1. Apply the parking brake.
- 2. Move the selector lever to the P (Park) or N (Neutral) position. (P is recommended.)

The starter is designed so that it does not operate unless the selector lever is in either of the above positions.

- 3. Crank the engine with your foot off the accelerator pedal by turning the ignition switch to START. Release the switch when the engine starts. If the engine starts, but fails to run, repeat the above procedure.
 - If the engine is very hard to start in extremely cold weather or when restarting, depress the accelerator pedal a little (approximately 1/3 to the floor) and hold it and then crank the engine. Release the accelerator pedal when the engine starts.
 - If the engine is very hard to start • because it is flooded, depress the accelerator pedal all the way to the floor and hold it. Crank the engine for 5 - 6 seconds. After cranking the engine, release the accelerator pedal. Crank the engine with your foot off the accelerator pedal by turning the igni-tion switch to START. Release the ignition switch when the engine starts. If the engine starts, but fails to run,

repeat the above procedure.

A CAUTION Do not operate the starter for more

than 15 seconds at a time. If the engine does not start, turn the ignition switch off and wait 10 seconds before cranking again, otherwise the starter could be damaged.

4. Warm-up

Allow the engine to idle for at least 30 seconds after starting. Do not race the engine while warming it up. Drive at moderate speed for a short distance first. especially in cold weather. In cold weather keep the engine running for a minimum of 2 3 minutes before shutting it off. Starting and stopping the engine over a short period of time may make the vehicle more difficult to start.

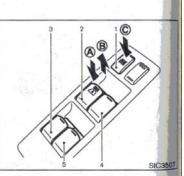
WINDOWS

POWER WINDOWS

WARNING

- Make sure that all passengers have their hands, etc. inside the vehicle while it is in motion and before closing the windows. Use the window lock switch to prevent unexpected use of the power windows.
- Do not leave children unattended inside the vehicle. They could unknowingly activate switches or controls and become trapped in the window. Unattended children could become involved in serious accidents.

The power windows operate when the ignition switch is in the ON position, or for about 45 seconds after the ignition switch is turned to the OFF position. If the driver's or front passenger's door is opened during this period of about 45 seconds, power to the windows is canceled.



Main power window switch (driver's side)

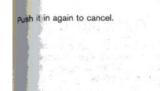
- 1. Window lock button
- 2. Driver side window
- 3. Rear left passenger side window
- 4. Front passenger side window

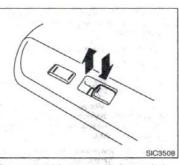
5. Rear right passenger side window To open or close the window, push down (A) of

pull up (B) the switch and hold it. The main switch (driver side switches) will open or close all the windows.

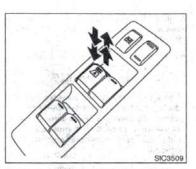
Locking passengers' windows When the lock button (C) is pushed in, only the driver side window can be opened or closed

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Passenger side power window switch The passenger side switch will open or close only the corresponding window. To open or close the window, push down or pull up the switch and hold it.



Automatic operation (if so equipped) The automatic operation is available for the switch that has an <u>A</u> mark on its surface.

Type A: To fully open or close the window, push down or pull up the switch to the second detent and release it; the switch need not be held. The window will automatically open or close all the way. To stop the window, just push or lift the switch in the opposite direction.

Type B: To fully open the window, push down the switch to the second detent and release it; the switch need not be held. The window will automatically open all the way. To stop the window, just lift the switch. To fully close the window, push and hold the switch.

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MOONROOF (if so equipped)

A light push or pull on the switch will cause the window to open or close until the switch is released.

Auto-reverse function (if so equipped)



There are some small distances immediately before the closed position which cannot be detected. Make sure that all passengers have their hands, etc., inside the vehicle before closing the window.

If the control unit detects something caught in the window as it is closing, the window will be immediately lowered.

The auto reverse function can be activated when the window is closed by automatic operation when the ignition switch is in the ON position or for 45 seconds after the ignition switch is turned to the OFF position.

Depending on the environment or driving conditions, the auto reverse function may be activated if an impact or load similar to something being caught in the window occurs.

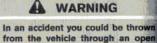
If the windows do not close automatically If the power window automatic function (closing

2-42 Instruments and controls

only) does not operate properly, perform the following procedure to initialize the power window system.

- 1. Turn the ignition switch to the ON position.
- 2. Close the door.
- Open the window completely by operating the power window switch.
- Pull the power window switch and hold it to close the window, and then hold the switch more than 3 seconds after the window is closed completely.
- 5. Release the power window switch. Operate the window by the automatic function to confirm the initialization is complete.

If the power window automatic function does not operate properly after performing the procedure above, have your vehicle checked by a NISSAN dealer.



- from the vehicle through an open moonroof. Always use seat belts and child restraints. Do not allow anyone to stand up or
- extend any portion of their body out of the moonroof opening while the vehicle is in motion or while the moonroof is closing.

A CAUTION

- Remove water drops, snow, ice or sand from the moonroof before opening.
- Do not place any heavy object on the moonroof or surrounding area.

AUTOMATIC MOONROOF

The moonroof only operates when the ignition switch is in the ON position.

The automatic moonroof is operational for about 45 seconds, even if the ignition switch is turned to the OFF position. If the driver's door or the passenger's door is opened during this period of