REPORT NO. 118-KAR-06-005

SAFETY COMPLIANCE TESTING FOR FMVSS 118

Power-Operated Window, Partition, And Roof Panel Systems

2006 NISSAN TITAN 4-DOOR TRUCK

NHTSA NO. C65204

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



September 14, 2006

Final Report

PREPARED FOR: U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION ENFORCEMENT OFFICE OF VEHICLE SAFETY COMPLIANCE ROOM 6111 (NVS-220) 400 SEVENTH STREET, SW WASHINGTON, D.C. 20590 This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract DTNH22-01-C-31025.

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16. Abstract					
Compliance tests were conducted on t the Office of Vehicle Safety Compliance	he subject 2006 Nissan Titan 4-Door e Test Procedure No. TP118-05 for the	Truck in accordance determination of FM	with the specifications of IVSS 118 compliance.		
Test failures identified were as follows:					
None					
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1. PURPOSE OF COMPLIANCE TEST

Tests were conducted on a 2006 Nissan Titan 4-Door Truck, 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-118-05, dated March 24, 2005, and corresponding KARCO Engineering test procedure KTP-118, dated March 16, 2004. 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 2006 Nissan Titan 4-Door Truck was subjected to FMVSS 118 compliance testing. The tests were conducted at KARCO Engineering in Adelanto, California on September 13-14, 2006. 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

DATA SUMMARY

VEHICLE					
YEAR	2006	MAKE	Nissan		
MODEL	Titan	BODY STYLE	4-Door Truck		
NHTSA NO.	C65204	VIN	1N6AA07A46N516578		
TEST DATE:	09/13/06- 09/14/06				

SWITCH ACTUATION

WINDOWS,	INTERIOR KEY	LOCKING SYSTEM	EXTERIOR
PARTITIONS,	IGNITION KEY	IGNITION KEY REMOVED	LOCKING
ROOF PANEL	OFF	(PASS/FAIL)	SYSTEM
SWITCHES	(PASS/FAIL)		(PASS / FAIL)
	MASTER SW	ITCH PANEL	
Left Front (LF)	PASS	PASS	PASS
Right Front (RF)	PASS	PASS	PASS
Left Rear (LR)	PASS	PASS	PASS
Right Rear (RR)	PASS	PASS	PASS
Tail Gate (TG)	N/A	N/A	N/A
Partition	N/A	N/A	N/A
Roof Panel (RP)	N/A	N/A	N/A
	INDIVIDUAL	SWITCHES	
Left Front (LF)	PASS	PASS	PASS
Right Front (RF)	PASS	PASS	PASS
Left Rear (LR)	PASS	PASS	PASS
Right Rear(RR)	PASS	PASS	PASS
Tail Gate (TG)	N/A	N/A	N/A
Partition (P)	PASS	PASS	PASS
Roof Panel (RP)	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 "off" test was performed.

DATA SUMMARY...(CONTINUED)

REMOTE ACTUATION DEVICE

VEHICLE ORIENTATION REMOTE ACTUATION DEVICE	NON-LINE OF SIGHT REMOTE (METERS)	LINE OF SIGHT REMOTE (METERS)
FRONT	30.5	N/A
DRIVER SIDE	30.5	N/A
PASSENGER SIDE	30.5	N/A
REAR	30.5	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)	See Data Sheets No. 8 & 9	See Data Sheets No. 8 & 9
RIGHT FRONT (RF)	See Data Sheets No. 8 & 9	See Data Sheets No. 8 & 9
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: This vehicle is equipped with a remote actuation device that allows the windows to be opened but not closed. Continuous activation is necessary to operate. The remote works Non-Line of Sight in excess of 30.5 meters but not in excess of 36.5 meters.

The subject 2006 Nissan Titan 4-Door Truck appeared to meet the requirements of FMVSS 118.

3. TEST DATA

DATA SHEET NO. 1 VEHICLE IDENTIFICATION

VEHICLE					
YEAR	2006	MAKE	Nissan		
MODEL	Titan	BODY STYLE	4-Door Truck		
NHTSA NO.	C65204	VIN	1N6AA07A46N516578		
TEST DATE:	09/13/06- 09/14/06				

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	Х	N/A
Interior Switches	Х	Х	Х	Х	N/A	Х	N/A
Master Control Panel	Х	Х	Х	Х	N/A	N/A	N/A
Exterior Switches	Х	N/A	Х	N/A	N/A	N/A	N/A
Remote Controller	Х	N/A	Х	N/A	N/A	N/A	N/A
Auto-Reverse	Х	N/A	Х	N/A	N/A	N/A	N/A

Master Control Panel Location: Driver Side Door Panel

Remote Control: Yes

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: Key slot of driver door.

Sunroof: <u>N/A</u>

Rear Partition: Flush Mounted Rocker Switch, push down to open, pull up to close.

REMARKS: Master control panel switch is located in the driver side door panel. Individual switches are located in each respective door panel. 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:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

DATA SHEET NO. 2 IGNITION KEY OFF TEST

VEHICLE					
YEAR	2006	MAKE	Nissan		
MODEL	Titan	BODY STYLE	4-Door Truck		
NHTSA NO.	C65204	VIN	1N6AA07A46N516578		
TEST DATE:	09/13/06- 09/14/06				

Pre-Test Check: Window, Partition, Roof Panel Systems operate with Ignition Switch in "ON" Position				YES	Х	NO	
Pre-Test Check: Wind operate with Ignition S	ow, Partitio witch in "A0	n, Roof Par CCESSOR	nel Systems Y" Position	YES		NO	х
WINDOW	DOORS	CLOSED	LEFT DOOR OPEN R		RIGHT DO	RIGHT DOOR OPEN	
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	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	X	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				•
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	Х	Х	N/A	Х	N/A	PASS
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. Test 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							

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

ignition "off" test was performed.

DATA SHEET NO. 3 IGNITION KEY REMOVED TEST

VEHICLE					
YEAR	2006	MAKE	Nissan		
MODEL	Titan	BODY STYLE	4-Door Truck		
NHTSA NO.	C65204	VIN	1N6AA07A46N516578		
TEST DATE:	09/13/06- 09/14/06				

WINDOW	DOORS	CLOSED	LEFT DOOR 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	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
		Ì	NDIVIDUAL				
Left Front (LF)	N/A	Х	Х	N/A	Х	N/A	PASS
Right Front (RF)	N/A	X	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	X	Х	N/A	X	N/A	PASS
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. The vehicle passed as soon as ignition "off" test was performed.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

DATA SHEET NO. 4 EXTERIOR KEY LOCKING SYSTEM

VEHICLE				
YEAR	2006	MAKE	Nissan	
MODEL	Titan	BODY STYLE	4-Door Truck	
NHTSA NO.	C65204	VIN	1N6AA07A46N516578	
TEST DATE:	09/13/06- 09/14/06			

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

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

	OPERABLE W/KEY		CONTINUOUS ACTION		PASS / FAIL
LUCATION	YES	NO	YES	NO	
LEFT FRONT (LF)	Х	N/A	Х	N/A	PASS
RIGHT FRONT (RF)	Х	N/A	Х	N/A	PASS
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: Turning the key in the driver door operates both left front and right front windows simultaneously. Continuous action is necessary to operate the windows up and down.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

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

VEHICLE				
YEAR	2006	MAKE	Nissan	
MODEL	Titan	BODY STYLE	4-Door Truck	
NHTSA NO.	C65204	VIN	1N6AA07A46N516578	
TEST DATE:	09/13/06- 09/14/06			

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 (N/A) NO ().



REMARKS: This vehicle is equipped with a remote actuation device that allows the windows to be opened but not closed. The remote works Non-Line of Sight in excess of 30.5 meters but not in excess of 36.5 meters.

RECORDED BY:	MATTHEW A. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

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

VEHICLE				
YEAR	2006	MAKE	Nissan	
MODEL	Titan	BODY STYLE	4-Door Truck	
NHTSA NO.	C65204	VIN	1N6AA07A46N516578	
TEST DATE:	09/13/06- 09/14/06			

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 (N/A) NO ().



REMARKS: This vehicle is equipped with a remote actuation device that allows the windows to be opened but not closed. The remote works Non-Line of Sight in excess of 30.5 meters but not in excess of 36.5 meters.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

DATA SHEET NO. 7 AUTO REVERSAL

VEHICLE				
YEAR	2006	MAKE	Nissan	
MODEL	Titan	BODY STYLE	4-Door Truck	
NHTSA NO.	C65204	VIN	1N6AA07A46N516578	
TEST DATE:	09/13/06- 09/14/06			

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

Is vehicle equipped with Auto Reversal	YES	Х	NO	

SWITCHES EQUIPPED WITH AUTO REVERSAL	MASTER	INDIVIDUAL
LEFT FRONT (LF)	Х	Х
RIGHT FRONT (RF)	Х	Х
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 left front and right front windows are equipped with an auto reversal feature. On this vehicle the reversal feature is not required because the window appears to meet the operational requirements of FMVSS 118 paragraph S.4.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

DATA SHEET NO. 8 AUTO REVERSAL

VEHICLE			
YEAR	2006	MAKE	Nissan
MODEL	Titan	BODY STYLE	4-Door Truck
NHTSA NO.	C65204	VIN	1N6AA07A46N516578
TEST DATE:	09/13/06- 09/14/06		

Distance window is open from top seam to start position.

365mm

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	206.8	-103.1mm
25mm semi rigid rod	210.5	-103.0mm
50mm semi rigid rod	193.7	-100.8mm
100mm semi rigid rod	243.5	-98.7mm
200mm semi rigid rod	163.3	-101.3mm

Distance window is open from top seam to start position.

425mm

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	202.7	-98.6mm
25mm semi rigid rod	215.1	-105.8mm
50mm semi rigid rod	165.2	-104.4mm
100mm semi rigid rod	193.7	-102.7mm
200mm semi rigid rod	216.1	-105.5mm

REMARKS: The left front and right front windows are equipped with an auto reversal feature. On this vehicle the reversal feature is not required because the window appears to meet the operational requirements of FMVSS 118 paragraph S.4.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

DATA SHEET NO. 9 AUTO REVERSAL

VEHICLE			
YEAR	2006	MAKE	Nissan
MODEL	Titan	BODY STYLE	4-Door Truck
NHTSA NO.	C65204	VIN	1N6AA07A46N516578
TEST DATE:	09/13/06- 09/14/06		

Distance window is open from top seam to start position.

360mm

WPRP OBSTRUCTION FORCE REVERSAL

LEADING EDGE RIGHT FRONT WINDOW	FORCE TO REVERSE (NEWTONS)	DISTANCE WINDOW, PARTITION, OR ROOF PANEL OPENED ON REVERSAL (mm)
5mm semi rigid rod	197.5	-105.2mm
25mm semi rigid rod	195.7	-106.3mm
50mm semi rigid rod	173.6	-104.9mm
100mm semi rigid rod	192.2	-105.8mm
200mm semi rigid rod	159.9	-104.4mm

Distance window is open from top seam to start position.

360mm

WPRP OBSTRUCTION FORCE REVERSAL

REAR EDGE RIGHT FRONT WINDOW	FORCE TO REVERSE (NEWTONS)	DISTANCE WINDOW, PARTITION, OR ROOF PANEL OPENED ON REVERSAL (mm)
5mm semi rigid rod	195.7	-104.5mm
25mm semi rigid rod	178.6	-105.5mm
50mm semi rigid rod	167.7	-104.1mm
100mm semi rigid rod	195.7	-107.5mm
200mm semi rigid rod	182.0	-106.9mm

REMARKS: The left front and right front windows are equipped with an auto reversal feature. On this vehicle the reversal feature is not required because the window appears to meet the operational requirements of FMVSS 118 paragraph S.4.

RECORDED BY:	MATTHEW S. HUBBARD	DATE:	09/14/06
APPROVED BY:	MATTHEW A. IVORY	DATE:	09/14/06

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Figure 13: Overall Test Set-Up



Figure 14: Instrumentation





5. DATA PLOTS

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Test Vehicle: Test Program:		200 FM	06 Nissan ⁻ VSS 118 (l	Titan 4-Doo Left Front V	r Truck Vindow)	Test Date: 9/13 to 9/14/06 NHTSA No.: C65204		RCO gineering		
	300									
	200	\sim					Curve Descri	ption		
su	100	$\langle \rangle$					Window Ford	e 200MM Lea	ding Edge	
wto							CURNO	Туре	SAE Class	Units
Re							001	FIL	180	Newtons
	0 -						Max	Time	Min	Time

Max

163.3



-100 -

Curve Descrip	otion		
Window Trave	el 200MM Le	ading Edge	
	. .		11.14

Min

-0.6

Time

0.9

Time

0.1

Curve Description					
Window Travel 200MM Leading Edge					
CURNO Type SAE Class Units					
002	FIL	180	MM		
Max	Time	Min	Time		
9.5 0.1 -101.3 1.4					



















FMVSS 118 Test Equipment List and Calibration 9/13 to 9/14/06 2006 Nissan Titan 4-Door Truck

Date Due Cal.	3/06 01/03/07	A N/A	2/06 03/22/07	Each Use
Cal. I	01/0;	/N	03/22	
Accuracy	SAE J211	N/A	± 1.0%	± 1.0%
Limit	N/A	N/A	445 Newtons	76 CM
Serial No.	DM0429	LAP02	85	J0654653
Model No.	TDAS Pro	Satellite	2409	PTX101-0030
Manufacturer	DTS	Toshiba	Denton	Celesco
Description	DAS	Laptop Computer	Load Cell	Displacement Xdcr.



VEHICLE					
YEAR	2006	MAKE	Nissan		
MODEL	Titan	BODY STYLE	4-Door Truck		
NHTSA NO.	C65204	VIN	1N6AA07A46N516578		
TEST DATE:	09/13/06- 09/14/06				



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Auto reverse function (when closing or tilting down the sunroof)	If the auto reverse function mailunctions and re- peats opening or tilting up the surroot, keep	If the sunroof does not close Have your NISSAN dealer check and repair the sunroof.
The auto reverse function can be activated when the surroof is closed or titled down by automatic operation when the ignition key is in the ON realizing of the about 45 seconds after the ignition	pushing the tilt down switch within 5 seconds after it happens, then the surroof will fully close gradually. In this case, make sure nothing is caught in the surroof.	
key is turned to the OFF position.	AWARNING	
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 sunroof oc-	 In an accident you could be thrown from the vehicle through an open sumroot. Always use seat belts and child restraints. 	
curs.	. Do not allow anyone to stand up or	
AWARNING	extend any portion of their body out of the surgoof opening while the vehicle is	
There are some small distances immedi- ately before the closed position which	in motion or while the sunroof is closing.	
passengers have their hands, etc., inside the vehicle before closing the sunroof.	ACAUTION	
When closing:	 Remove water drops, snow, ice or sand from the sunroof before opening. 	
If the control unit detects something caught in the surroof as it moves to the front, the surroof will immediately ones backward.	 Do not place heavy objects on the sun- roof or surrounding area. 	
When tilting down:	Sunshade	
If the control unit detects something caught in the suproof as it tits down, the suproof will immedi- ately tit up.	Open and close the sunshade by sliding it for- ward or backward.	
2-48 Instruments and controls		

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To remove the key from the ignition switch: 1. Shift the selector lever to the P (Park) posi-tion with the key in the ON position. 2. Turn the key is the LOCK position. 3. Remove tho key from the ignition. 11 the selector lever is abilited to the P (Park) position when the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the OPF posi-tion of the key is turned to the option of the option to the turne of the turned to the option of the turned to the turned to the option of the turned to the key.

shift selector lever into the P (Park)

To lock the the LOCK

If the key will not turn from the LOCK tion, turn the steering wheel to the right while turning the key to unloc key cylinder.

AWARNING

Never remove or turn the key to the LOC position while driving. The steering whe will lock. This may cause the driver to lo control of the vehicle and could result

and tur ing who n it ge

fum the ignition key slightly toward the ON

n the key to the LOCK position. ove the key.

remove the kty.
 The shift selector inver is designed so it cannot moved out of P (Pink) and into any of the other gear position of it the spinor key is turned to OFF position of it the key is envoyed in the twich.
 The shift selector lever can be moved if the ignition switch is in the ON position and the foot brake pocial is depresed.

5-8 Starting and driving

There is an OFF position between the LOCK and ACC positions. The OFF position is indicated by a "t" on the Stephen the ignition is in the OFF position, the steering wheel is not locked. ACC (Accession) (2 LOCK: Normal parking position (0) OFF: (Not used) (1) ACC: (Accessories) (2) order for the steering wheel to be loo at be turned about 1/8 of a turn clo ed, it

This position activates electrica such as the radio when the engine eering wheel, turn the key to silion. Remove the key. To pering wheel, insert the key ntly while rotating the steer-htly right and left. ON: Normal operating position (3) This position turns on the ignition sy electrical accessories.

electrical accessories. START: (4) This position starts the engine. As soon as engine has started, release the key, it autor cally returns to the ON position. NISSAN VEHICLE IMMOBILIZER SYSTEM

The NISSAN Vehicle Imm allow the engine to start registered key.

If the engine fails to start using a reg for example, when interference is arother registered key, an automati-device or automatic payment device ing), restart the engine using the fol-outness:

Leave the ignition switch in the ON position for approximately 5 seconds. . Turn the ignition switch to the OFF or LOCK position, and wait approximately 10 sec-

Repeat steps 1 and 2.

. Restart the engine while holding the de (which may have caused the interfere separate from the registered key. he no start condition re-occurs, NISSAN smends placing the registered key on a to key ring to avoid interference from C ate key

BEFORE STARTING THE ENGINE STARTING THE ENGINE

- Make sure the area around the vehicle is 2. Move the shift selector let (Neutral). P (Park) is reco Check fluid levels such as engine oil, coci-ant, 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 times for their appearance and condition. Also check times for proper inflation.
 Lock all doors.

Position seat and adjust head metraints. Position seat and adjust head restr Adjust inside and outside mirrors.

Adjust make any outside menors.
 Fasten each belts and sak all passengers to do likewise.
 Orack the operation of warring lights when the key is tuned to the CN (3) position. See "Warrengindicater lights and auditie re-mixidem" in the "Instruments and controls" section of this manual.

1/3 to the floor

1. Apply the parking br

The shift solector lever canno moved out of P (Park) and into a the other gear positions if the ign key is turned to the OFF position the key is removed from the ign moved the oth key is t the key switch.

The starter is di the shift select driving positio

Starting and driving 5-9