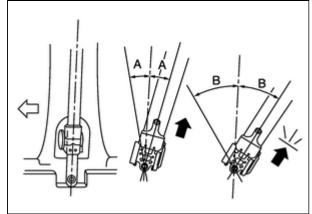


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2005 NISSAN Almera / Pulsar 4 Doors OEM Service and Repair Workshop Manual

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RPR-001930847-01-MHIA1056ZZ

• The webbing cannot be pulled out when the angle (B) is 27 degrees or more.

A and B	: Tilting angles	
\Diamond	: Vehicle front	

3 Replace the seat belt assembly if it does not operate normally.



Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

DDF-001933937

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision.

Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.
- Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

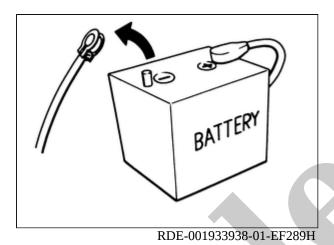
PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition/power switch ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition/power switch OFF, disconnect the 12V battery or batteries, and wait at least 3 minutes before performing any service.

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the Intelligent Key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.





ECU may be active for several minutes after the power switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- Disconnect 12V battery terminal according to the following steps. Even when the power switch is OFF, the 12V battery automatic charge control may automatically start.
- CAUTION:

Do not remove the battery during the update as the software update cannot be completed normally if the battery is removed during the software update.

WORK PROCEDURE

- 1. Open the hood (LHD models) or the back door (RHD models).
- 2. Check that charge cable (including EVSE) is not connected to the charge port.



If charge cable (including EVSE) is connected, the air conditioning system may be automatically activated by the timer A/C function.

3. Turn the power switch OFF \rightarrow ON \rightarrow press the power switch for at least 2 seconds to turn the high voltage system OFF, and then check that the charging status indicator is not illuminated.



When the high voltage system is turned ON, the charging status indicator blinks green with a frequency of 1 second.

- 4. Get out of the vehicle. Close all doors {except the hood (LHD models) or the back door (RHD models)}.
- 5. Check that the combination meter turns OFF and wait for 5 minutes or more.

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.



If the battery is removed within 5 minutes after the power switch is turned OFF, plural DTCs may be detected.

- 6. Check that the followings are not illuminated.
 - Charging status indicator
 - Electric parking brake warning lamp
- 7. Remove 12V battery terminal within 60 minutes after the power switch is turned OFF at Step 3.

CAUTION:

- After all doors (including hood and back door) are closed, if a door (including hood and back door) is opened before battery terminals are disconnected, start over from Step 3.
- After turning the power switch OFF, if "Remote A/C" is activated by user operation, stop the air conditioner and start over from Step 3.



Once the power switch is turned ON \rightarrow OFF, the 12V battery automatic charge control does not start for approximately 1 hour.

• For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the power switch.



If the power switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

• After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.



The removal of 12V battery may cause a DTC detection error.

OPERATION PROHIBITION

WARNING:

- · Parts with strong magnet is used in this vehicle.
- Technicians using a medical electric device such as pacemaker must never perform operation on the vehicle, as magnetic field can affect the device function by approaching to such parts.

NORMAL CHARGE PRECAUTION

WARNING:

- If a technician uses a medical electric device such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator, the possible effects on the devices must be checked with the device manufacturer before starting the charge operation.
- As radiated electromagnetic wave generated by PDM (Power Delivery Module) at normal charge operation may
 affect medical electric devices, a technician using a medical electric device such as implantable cardiac pacemaker
 or an implantable cardioverter defibrillator must not approach motor room [PDM (Power Delivery Module)] at
 the hood-opened condition during normal charge operation.

PRECAUTION AT TELEMATICS SYSTEM OPERATION

WARNING:

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of TCU might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), when using the service, etc.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of TCU might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before TCU use.

PRECAUTION AT INTELLIGENT KEY SYSTEM OPERATION

WARNING:

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of Intelligent Key might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), at door operation, at each request switch operation, or at engine starting.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of Intelligent Key might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before Intelligent Key use.

FOR REAR COLLISION: When SRS is not activated in a collision

CAUTION:

Due to varying models and option levels, not all parts listed in the chart below apply to all vehicles.

WORK PROCEDURE

- 1 Before performing any of the following steps, ensure that all vehicle body and structural repairs have been completed.
- 2 Check the SRS components using the table below. Replace any SRS components showing visible signs of damage. (dents, cracks and deformation, etc).
- 3 Perform self-diagnosis using CONSULT or air bag warning lamp. Refer to <u>DTCIndex</u>. for details. Ensure entire SRS operates properly.
- 4 After the work is completed, check that no malfunction is detected by air bag warning lamp.

SRS INSPECTION (FOR REAR COLLISION)

Part	Inspection
Driver air bag module	If the driver air bag has not been activated:
	Remove driver air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.
	2. Install driver air bag module into the steering wheel to check fit and alignment with the wheel.
	3. If no damage is found, reinstall with new fasteners.
	4. If damaged - REPLACE. Install driver air bag modules with new fasteners.
Driver knee air bag module	If the driver knee air bag has not been activated:
	Remove driver knee air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.
	2. Install driver knee air bag module into the instrument panel to check fit with the instrument panel.
	3. If no damage is found, reinstall with new fasteners.
	4. If damaged - REPLACE. Install driver knee air bag modules with new fasteners.
Front passenger air bag module	If the front passenger air bag has not been activated:
	Remove front passenger air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.
	2. Install front passenger air bag module into the instrument panel to check fit with the instrument panel.
	3. If no damage is found, reinstall with new fasteners.
	4. If damaged - REPLACE. Install front passenger air bag modules with new fasteners.
Front passenger knee air bag	If the front passenger knee air bag has not been activated:
module	Remove front passenger knee air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.

Part	Inspection
	2. Install front passenger knee air bag module into the instrument panel to check fit with the instrument panel.
	3. If no damage is found, reinstall with new fasteners.
	4. If damaged - REPLACE. Install front passenger knee air bag modules with new fasteners.
Crash zone sensor	If the front air bags or seat belt pre-tensioners have not been activated:
	Remove the crash zone sensor. Check harness connectors for damage, terminals for deformities, and harness for binding.
	2. Check for visible signs of damage (dents, cracks, deformation) of the crash zone sensor and bracket.
	3. Install the crash zone sensor to check fit.
	4. If no damage is found, reinstall with new fasteners.
	5. If damaged - REPLACE the crash zone sensor and bracket with new fasteners.
Seat belt pre-tensioner	If the pre-tensioners have not been activated:
assemblies	1. Remove seat belt pre-tensioners.
(All applicable locations: buckle, retractor, lap outer)	Check harness cover and connectors for damage, terminals for deformities, and harness for binding.
	2. Check belts for damage and anchors for loose mounting.
	3. Check retractor for smooth operation.
	4. Check seat belt adjuster for damage.
	5. Check for deformities of the center pillar inner.
	6. If the center pillar inner has no damage, REPLACE the seat belt pre-tensioner assembly.
	7. If no damage is found, reinstall seat belt pre-tensioner assembly with new fasteners.
	8. If damaged - REPLACE. Install the seat belt pre-tensioner assembly with new fasteners.
Diagnosis sensor unit	If none of the SRS components have been activated:
	1. Check case for dents, cracks or deformities.
	2. Check connectors for damage, and terminals for deformities.
	3. If no damage is found, reinstall with new fasteners.
	4. If damaged - REPLACE. Install diagnosis sensor unit with new fasteners.
Steering wheel	1. Visually check steering wheel for deformities.
	Check harness (built into steering wheel) and connectors for damage, and terminals for deformities.
	3. Install driver air bag module into the steering wheel to check fit and alignment with the wheel.
	4. Check steering wheel for excessive free play.
	5. If no damage is found, reinstall.

Part	Inspection
	6. If damaged - REPLACE.
Spiral cable	If the driver front air bag has not deployed:
	1. Visually check spiral cable and combination switch for damage.
	2. Check connectors and protective tape for damage.
	3. Check steering wheel for noise, binding or heavy operation.
	4. If no damage is found, reinstall.
	5. If damaged - REPLACE.
Occupant detection system (Passenger seat)	1. Remove passenger seat assembly.
	2. Check control unit case for dents, cracks of deformities.
	3. Check connectors for damage and terminals for deformities.
	4. Check seat frame and cushion pan for dents or deformities.
	5. If no damage is found, reinstall seat with new fasteners.
	6. If damaged - REPLACE seat cushion assembly with new fasteners.
	7. Perform zero point reset function after front passenger seat is installed in the vehicle and all bolts are tightened to specification. Refer to Work Procedure .
Harness and connectors	1 Charles and the formation of the second terminals for deformation
	Check connectors for poor connection, damage, and terminals for deformities. Check barness for binding, chefing, cuts, or deformities.
	2. Check harness for binding, chafing, cuts, or deformities.
	3. If no damage is found, reinstall the harness and connectors.
	4. If damaged - REPLACE the damaged harness. Do not attempt to repair, splice or modify any SRS harness.
Instrument panel assembly	If the passenger front air bag has not deployed:
	1. Visually check instrument panel for damage.
	2. If no damage is found, reinstall the instrument panel assembly.
	3. If damaged - REPLACE the instrument panel assembly.

FOR FRONTAL COLLISION: When SRS is activated in a collision

CAUTION:

Due to varying models and option levels, not all parts listed in the chart below apply to all vehicles.

WORK PROCEDURE

- 1 Before performing any of the following steps, ensure that all vehicle body and structural repairs have been completed.
- 2 Replace the diagnosis sensor unit.
- 3 Remove the front air bag modules, knee air bag module, crash zone sensor assembly, bracket and seat belt pre-tensioner assemblies.
- 4 Check the SRS components using the table below.

Replace any SRS components showing visible signs of damage. (dents, cracks and deformation, etc).

- 5 Install new front air bag modules, knee air bag module, crash zone sensor assembly, bracket and seat belt pre-tensioner assemblies.
- 6 Perform self-diagnosis using CONSULT or air bag warning lamp. Refer to <u>DTCIndex</u>. for details. Ensure entire SRS operates properly.
- 7 After the work is completed, check that no malfunction is detected by air bag warning lamp.

SRS INSPECTION (FOR FRONTAL COLLISION)

Part	Inspection
Driver air bag module	If the driver air bag has deployed:
	REPLACE
	Install with new fasteners.
Driver knee air bag module	If the driver knee air bag has deployed:
	REPLACE
	Install with new fasteners.
Front passenger air bag module	If the front passenger air bag has deployed:
	REPLACE
	Install with new fasteners.
Front passenger knee air bag module	If the front passenger knee air bag has deployed:
	REPLACE
	Install with new fasteners.
Crash zone sensor	If any of the front air bags or seat belt pre-tensioners* have been activated:
	REPLACE the crash zone sensor and bracket with new fasteners.
	*: Confirm seat belt pre-tensioner activation using CONSULT only.
Seat belt pre-tensioner assemblies	If either the driver or passenger seat belt pre-tensioner* has been activated:
	REPLACE all seat belt pre-tensioner assemblies with new fasteners.
(All applicable locations: buckle, retractor, lap outer)	*: Confirm seat belt pre-tensioner activation using CONSULT only.
Diagnosis sensor unit	If any of the SRS components have been activated: