

Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

1991 NISSAN Patrol LWB OEM Service and Repair Workshop Manual

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YES>>

Replace the electrically-driven intelligent brake unit. Refer to [Removal and Installation](#).

NO>>

INSPECTION END

Sample

DTC DETECTION LOGIC

DTC No.		CONSULT screen terms	DTC detection condition	
B14E3	09	Wheel sensor	Diagnosis condition	Power switch is ON.
			Signal (terminal)	Rear right wheel sensor signal
			Threshold	When distance between rear right wheel sensor and rear right wheel sensor rotor is large.
			Diagnosis delay time	1 second or less

POSSIBLE CAUSE

- Rear right wheel sensor
- Rear right sensor rotor

FAIL-SAFE

The following functions are suspended.

- Cooperative regenerative brake function
- e-Step function

1. PRECONDITIONING

If “Confirmation Procedure” has been previously conducted, always power switch OFF, get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:
Never operate the vehicle.

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[GO TO 2.](#)

2. CHECK DTC DETECTION

 With CONSULT

1. Power switch OFF to ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

2. Power switch OFF and disconnect CONSULT from data link connector.

3. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:
Never operate the vehicle.

4. Power switch ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

5. Erase self-diagnosis result for “BRAKE”.

6. Power switch OFF and disconnect CONSULT from data link connector.

7. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:
Never operate the vehicle.

8. Power switch ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

9. Perform self-diagnosis for “BRAKE”.

Is DTC “B14E3-09” detected?

YES>>

Refer to [DTC Diagnosis Procedure](#).

NO-1>>

To check malfunction symptom before repair: Refer to [Intermittent Incident](#).

NO-2>>

Confirmation after repair: INSPECTION END

Sample

CAUTION:

Never check between wheel sensor harness connector terminals.

1. CHECK 12V BATTERY

1. Power switch OFF and disconnect CONSULT from data link connector.
2. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:

Never operate the vehicle.

3. Check the 12V battery terminal connections.
4. Check the 12V battery.

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair or replace error-detected parts.

2. PERFORM SELF-DIAGNOSIS (1)

 With CONSULT

1. Connect 12V battery cable to negative terminal.
2. Power switch OFF to ON without depressing the brake pedal.

CAUTION:

Never set the vehicle to READY.

3. Power switch OFF and disconnect CONSULT from data link connector.
4. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:

Never operate the vehicle.

5. Power switch ON without depressing the brake pedal.

CAUTION:

Never set the vehicle to READY.

6. Erase self-diagnosis result for "BRAKE".
7. Power switch OFF and disconnect CONSULT from data link connector.
8. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:

Never operate the vehicle.

9. Power switch ON without depressing the brake pedal.

CAUTION:

Never set the vehicle to READY.

10. Perform self-diagnosis for "BRAKE".

Is DTC "B14E3-09" detected?

YES>>

[GO TO 3.](#)

NO>>

INSPECTION END

3. CHECK WHEEL HUB ASSEMBLY

Check that there is no excessive looseness in rear right wheel hub assembly. Refer to [REAR WHEEL HUB : Periodic Maintenance Operation](#).

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Repair or replace the rear right wheel hub assembly. Refer to [REAR WHEEL HUB : Removal & Installation](#). [GO TO 4.](#)

4. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) POWER SUPPLY AND GROUND CIRCUIT

1. Power switch OFF and disconnect CONSULT from data link connector.
2. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:

Never operate the vehicle.

3. Disconnect 12V battery cable from negative terminal.
4. Disconnect electrically-driven intelligent brake unit harness connector.
5. Check the electrically-driven intelligent brake unit power supply and ground circuit. Refer to [Diagnosis Procedure](#).

Is the inspection result normal?

YES>>

[GO TO 5.](#)

NO>>

Repair / replace harness, connector, terminal, fuse, or fusible link. [GO TO 5.](#)

5. CHECK TIRE

1. Power switch OFF.

2. Check the rear right tire air pressure, wear and size. Refer to [TIRE AIR PRESSURE : Service Data](#).

Is the inspection result normal?

YES>>

[GO TO 8.](#)

NO>>

Adjust air pressure or replace rear right tire. [GO TO 6.](#)

6. CHECK DATA MONITOR (1)

 With CONSULT

1. Power switch OFF to ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to **READY**.

2. Power switch OFF and disconnect CONSULT from data link connector.

3. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:
Never operate the vehicle.

4. Power switch ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to **READY**.

5. Set the vehicle to **READY**.

6. Erase self-diagnosis result for “BRAKE”.

7. Select “BRAKE” and “Data monitor”, check “Front LH wheel speed”, “Front RH wheel speed“, “Rear LH wheel speed“, and “Rear RH wheel speed“.



NOTE:
Set the “Data monitor” recording speed to “10 msec”.

8. Read a value (wheel speed) of all wheel sensor.



NOTE:
Vehicle must be driven after repair or replacement to erase the previous DTCs.

Note the difference at 50 km/h (31 MPH) between the wheel speed detected by rear right wheel sensor and the maximum/minimum wheel speed detected by the other rear right wheel sensor, is the difference within 5%, respectively?

YES>>

[GO TO 7.](#)

NO>>

7. PERFORM SELF-DIAGNOSIS (2)

 With CONSULT

1. Stop the vehicle.
2. Power switch OFF.
3. Power switch OFF to ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

4. Power switch OFF and disconnect CONSULT from data link connector.
5. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:
Never operate the vehicle.

6. Power switch ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

7. Erase self-diagnosis result for “BRAKE”.
8. Power switch OFF and disconnect CONSULT from data link connector.
9. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:
Never operate the vehicle.

10. Power switch ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

11. Perform self-diagnosis for “BRAKE”.

Is DTC “B14E3-09” detected?

YES>>

[GO TO 8.](#)

NO>>

INSPECTION END

8. CHECK WHEEL SENSOR AND SENSOR ROTOR

1. Power switch OFF and disconnect CONSULT from data link connector.

2. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1 minute or more without opening these doors.

CAUTION:

Never operate the vehicle.

3. Disconnect 12V battery negative terminal.
4. Disconnect rear right wheel sensor harness connector.
5. Remove dust and foreign matter adhered to the rear right wheel sensor and rear right sensor rotor with a vacuum dust collector through the rear right wheel sensor mounting hole.

CAUTION:

Install rear right wheel sensor with no backlash and float, and tighten the mounting bolt to the specified torque. Refer to [REAR WHEEL SENSOR : Exploded View](#).

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[GO TO 9.](#)

9. CHECK WHEEL SENSOR

Check the rear right wheel sensor for damage.

Is the inspection result normal?

YES>>

[GO TO 13.](#)

NO>>

[GO TO 10.](#)

10. CHECK WHEEL SENSOR OUTPUT SIGNAL

1. Disconnect 12V battery negative terminal.
2. Disconnect electrically-driven intelligent brake unit harness connector.
3. Disconnect rear right wheel sensor harness connector.
4. Connect ABS active wheel sensor tester (SST: J-45741-A) to rear right wheel sensor using appropriate adapter.
5. Turn the ABS active wheel sensor tester power switch ON.



NOTE:

The green POWER indicator should illuminate. If the POWER indicator does not illuminate, replace the battery in the ABS active wheel sensor tester before proceeding.

6. Spin the wheel of the vehicle by hand and observe the red SENSOR indicator on the ABS active wheel sensor tester. The red SENSOR indicator should flash ON and OFF to indicate an output signal.



NOTE:

If the red SENSOR indicator illuminates but does not flash, reverse the polarity of the tester leads and retest.

Does the ABS active wheel sensor tester detect a signal?

YES>>