

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.

1998 NISSAN Patrol LWB OEM Service and Repair Workshop Manual

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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 before conducting the next test.

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[GO TO 2](#)

2. CHECK DTC DETECTION

 With CONSULT

1. Power switch OFF (Auto ACC is ON).
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. Power switch ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

4. Perform self-diagnosis for “ABS”.

Is DTC “C1061-92” detected?

YES-1>>

“CRNT” is displayed: Refer to [DTC Diagnosis Procedure](#).

YES-2>>

“PAST” is displayed: INSPECTION END (Erase the memory of self-diagnosis results.)

NO-1>>

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

NO-2>>

Confirmation after repair: INSPECTION END

CAUTION:

Never check between wheel sensor harness connector terminals.

1. CHECK WHEEL HUB ASSEMBLY

Check that there is no excessive looseness in front left wheel hub assembly. Refer to [FRONT WHEEL HUB AND KNUCKLE : Periodic Maintenance Operation](#).

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair or replace the front left wheel hub assembly. Refer to [FRONT WHEEL HUB AND KNUCKLE : Removal & Installation](#). [GO TO 2.](#)

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

Check the ABS actuator and electric unit (control unit) power supply and ground circuit. Refer to [Diagnosis Procedure](#).

Is the inspection result normal?

YES>>

[GO TO 3.](#)

NO>>

Repair / replace harness, connector, terminal, fuse, or fusible link.

3. CHECK TIRE

1. Power switch OFF.

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

Is the inspection result normal?

YES>>

[GO TO 6.](#)

NO>>

Adjust air pressure or replace front left tire. [GO TO 4.](#)

4. CHECK DATA MONITOR (1)

 With CONSULT

1. Erase self-diagnosis result for “ABS”.

2. Power switch OFF (Auto ACC function ON).

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. Set the vehicle to READY.

5. Select “ABS” and “Data monitor”, check “Front left wheel speed”, “Front right wheel speed“, “Rear left wheel speed“, and “Rear right wheel speed“.



NOTE:

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

6. 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 front left wheel sensor and the maximum/minimum wheel speed detected by the other front left wheel sensor, is the difference within 5%, respectively?

YES>>

[GO TO 5.](#)

NO>>

[GO TO 6.](#)

5. PERFORM SELF-DIAGNOSIS (1)

 With CONSULT

1. Stop the vehicle.
2. Power switch OFF (Auto ACC function ON).
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. Perform self-diagnosis for “ABS”.

Is DTC “C1061-92” detected?

YES>>

[GO TO 6.](#)

NO>>

INSPECTION END

6. CHECK WHEEL SENSOR AND SENSOR ROTOR

1. Disconnect 12V battery negative terminal.
2. Disconnect front left wheel sensor harness connector.
3. Remove dust and foreign matter adhered to the front left wheel sensor and front left sensor rotor with a vacuum dust collector through the front left wheel sensor mounting hole.

CAUTION:

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

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[GO TO 7.](#)

7. CHECK WHEEL SENSOR

Check the front left wheel sensor for damage.

Is the inspection result normal?

YES>>

[GO TO 11.](#)

NO>>

[GO TO 8.](#)

8. CHECK WHEEL SENSOR OUTPUT SIGNAL

1. Disconnect 12V battery negative terminal.
2. Disconnect ABS actuator and electric unit (control unit) harness connector.
3. Disconnect front left wheel sensor harness connector.
4. Connect ABS active wheel sensor tester (SST: J-45741-A) to front left 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>>

Replace the ABS actuator and electric unit (control unit). Refer to [Removal and Installation](#).

NO>>

[GO TO 9.](#)

9. REPLACE WHEEL SENSOR (1)

 With CONSULT

1. Replace the front left wheel sensor. Refer to [FRONT WHEEL SENSOR : Removal & Installation](#).
2. Connect 12V battery negative terminal.
3. Erase self-diagnosis result for “ABS”.
4. Power switch OFF (Auto ACC function ON).
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. Set the vehicle to READY.
7. Select “ABS” and “Data monitor”, check “Front left wheel speed”, “Front right wheel speed”, “Rear left wheel speed”, and “Rear right 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 front left wheel sensor and the maximum/minimum wheel speed detected by the other front left wheel sensor, is the difference within 5%, respectively?

YES>>

[GO TO 10.](#)

NO>>

[GO TO 22.](#)

10. PERFORM SELF-DIAGNOSIS (2)

 With CONSULT

1. Stop the vehicle.
2. Power switch OFF (Auto ACC function ON).
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. Perform self-diagnosis for “ABS”.

Is DTC “C1061-92” detected?

YES>>

[GO TO 22.](#)

NO>>

INSPECTION END

11. CHECK CONNECTOR

1. Disconnect 12V battery negative terminal.
2. Check the ABS actuator and electric unit (control unit) harness connector for disconnection or looseness.
3. Check the front left wheel sensor harness connector for disconnection or looseness.

Is the inspection result normal?

YES>>

[GO TO 14.](#)

NO>>

Repair / replace harness or connector, securely lock the connector. [GO TO 12.](#)

12. CHECK DATA MONITOR (2)

 With CONSULT

1. Connect 12V battery negative terminal.
2. Erase self-diagnosis result for “ABS”.
3. Power switch OFF (Auto ACC function ON).
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. Set the vehicle to READY.
6. Select “ABS” and “Data monitor”, check “Front left wheel speed”, “Front right wheel speed“, “Rear left wheel speed“, and “Rear right wheel speed“.



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

7. 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 front left wheel sensor and the maximum/minimum wheel speed detected by the other front left wheel sensor, is the difference within 5%, respectively?

YES>>

[GO TO 13.](#)

NO>>

[GO TO 14.](#)

13. PERFORM SELF-DIAGNOSIS (3)

 With CONSULT

1. Stop the vehicle.
2. Power switch OFF (Auto ACC function ON).
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. Perform self-diagnosis for "ABS".

Is DTC "C1061-92" detected?

YES>>

[GO TO 14.](#)

NO>>

INSPECTION END

14. CHECK TERMINAL

1. Disconnect 12V battery negative terminal.
2. Disconnect ABS actuator and electric unit (control unit) harness connector.
3. Check the ABS actuator and electric unit (control unit) terminals for damage or loose connection with harness connector.
4. Disconnect front left wheel sensor harness connector.
5. Check the front left wheel sensor terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES>>

[GO TO 17.](#)

NO>>

Repair / replace harness, connector, or terminal. [GO TO 15.](#)

15. CHECK DATA MONITOR (3)

 With CONSULT

1. Connect ABS actuator and electric unit (control unit) harness connector.
2. Connect front left wheel sensor harness connector.
3. Connect 12V battery negative terminal.
4. Erase self-diagnosis result for “ABS”.
5. Power switch OFF (Auto ACC function ON).
6. 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.

7. Set the vehicle to READY.
8. Select “ABS” and “Data monitor”, check “Front left wheel speed”, “Front right wheel speed“, “Rear left wheel speed“, and “Rear right wheel speed“.



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

9. 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 front left wheel sensor and the maximum/minimum wheel speed detected by the other front left wheel sensor, is the difference within 5%, respectively?

YES>>

[GO TO 16.](#)

NO>>

[GO TO 17.](#)

16. PERFORM SELF-DIAGNOSIS (4)

 With CONSULT

1. Stop the vehicle.
2. Power switch OFF (Auto ACC function ON).
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. Perform self-diagnosis for “ABS”.

Is DTC “C1061-92” detected?

YES>>

[GO TO 17.](#)

NO>>

INSPECTION END

17. CHECK WHEEL SENSOR HARNESS

1. Disconnect 12V battery negative terminal.
2. Disconnect ABS actuator and electric unit (control unit) harness connector.
3. Disconnect front left wheel sensor harness connector.
4. Check the continuity between ABS actuator and electric unit (control unit) harness connector and front left wheel sensor harness connector.

ABS actuator and electric unit (control unit)		—	Continuity
Connector	Terminal		
B2	24, 7	Ground	Not existed

Is the inspection result normal?

YES>>

[GO TO 18.](#)

NO>>

Repair / replace harness or connector. [GO TO 18.](#)

18. CHECK DATA MONITOR (4)

 With CONSULT

1. Connect ABS actuator and electric unit (control unit) harness connector.
2. Connect front left wheel sensor harness connector.
3. Connect 12V battery negative terminal.
4. Erase self-diagnosis result for “ABS”.
5. Power switch OFF (Auto ACC function ON).
6. 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.

7. Set the vehicle to **READY**.

8. Select “ABS” and “Data monitor”, check “Front left wheel speed”, “Front right wheel speed“, “Rear left wheel speed“, and “Rear right wheel speed“.