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2000 NISSAN Patrol LWB OEM Service and Repair Workshop Manual

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# **DTC DETECTION LOGIC**

DTC No.		CONSULT screen terms	DTC detection condition		
C1067	1C	Rear right wheel sensor	Diagnosis condition	<ul> <li>Power switch is ON.</li> <li>When rear right wheel sensor power supply voltage is normal.</li> </ul>	
			Signal (terminal)	<ul><li>Rear right wheel sensor signal</li><li>Rear right wheel sensor power supply</li></ul>	
			Threshold	When rear right wheel sensor power supply out of range.	
			Diagnosis delay time	1 second or less	

# **POSSIBLE CAUSE**



Confirm if DTC is PAST or CRNT. If DTC is CRNT, proceed with Diagnosis Procedure. If DTC is PAST, clear DTC. Do not replace the ABS actuator and electric unit (control unit) for a PAST DTC.

PAST DTC	CRNT DTC		
<ul> <li>Harness or connector</li> <li>ABS actuator and electric unit (control unit) power supply system</li> <li>Fuse</li> <li>Fusible link</li> <li>12V battery</li> </ul>	<ul> <li>Vehicle was not driven after previous repair</li> <li>Harness or connector</li> <li>Rear right wheel sensor</li> <li>ABS actuator and electric unit (control unit)</li> <li>ABS actuator and electric unit (control unit) power supply system</li> <li>Fuse</li> <li>Fusible link</li> <li>12V battery</li> </ul>		

# **FAIL-SAFE**

The following functions are suspended.

- VDC function
- TCS function
- · ABS function
- EBD function
- hill start assist function

- Brake limited slip differential (BLSD) function
- Brake assist function
- Brake force distribution function
- Cooperative regenerative brake function
- Electric parking brake 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 before conducting the next test.

>>

#### **GO TO 2**

# 2. CHECK DTC DETECTION

# **(H)**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 "C1067-1C" 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 SENSOR

- 1. Disconnect 12V battery negative terminal.
- 2. Check the rear right wheel sensor for damage.

Is the inspection result normal?

YES>>

GO TO 3.

NO>>

GO TO 2.

# 2. REPLACE WHEEL SENSOR (1)



- 1. Replace the rear right wheel sensor. Refer to REAR WHEEL SENSOR: Removal & Installation.
- 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. Drive the vehicle at approximately 50 km/h (31 MPH) or more for approximately 2 minutes.



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

- 7. Stop the vehicle.
- 8. Power switch OFF (Auto ACC function ON).
- 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.

NO>> INSPECTION END 3. 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 rear right wheel sensor harness connector for disconnection or looseness. Is the inspection result normal? YES>> GO TO 5. NO>> Repair / replace harness or connector, securely lock the connector. GO TO 4. 4. PERFORM SELF-DIAGNOSIS (1) 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. Drive the vehicle at approximately 50 km/h (31 MPH) or more for approximately 2 minutes.

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

9. Get out of the vehicle, close all doors (other than hood assembly), check that the combination meter is OFF, and wait for 1

11. Perform self-diagnosis for "ABS".

Is DTC "C1067-1C" detected?

NOTE:

7. Stop the vehicle.

**CAUTION:** 

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

minute or more without opening these doors.

Never operate the vehicle.

YES>>

GO TO 3.

10. Power switch ON without depressing the brake pedal.

#### **CAUTION:**

Never set the vehicle to READY.

11. Perform self-diagnosis for "ABS".

Is DTC "C1067-1C" detected?

YES>>

GO TO 5.

NO>>

INSPECTION END

# 5. 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 7.

NO>>

Repair / replace harness, connector, terminal, fuse, or fusible link. GO TO 6.

# 6. PERFORM SELF-DIAGNOSIS (2)

# **!** With CONSULT

- 1. Connect ABS actuator and electric unit (control unit) harness connector.
- 2. Connect rear right 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. Drive the vehicle at approximately 50 km/h (31 MPH) or more for approximately 2 minutes.



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

- 9. Stop the vehicle.
- 10. Power switch OFF (Auto ACC function ON).

11. 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.

12. Power switch ON without depressing the brake pedal.

#### **CAUTION:**

Never set the vehicle to READY.

13. Perform self-diagnosis for "ABS".

Is DTC "C1067-1C" detected?

YES>>

GO TO 7.

NO>>

INSPECTION END

# 7. CHECK WHEEL SENSOR HARNESS

- 1. Disconnect 12V battery negative terminal.
- 2. Disconnect ABS actuator and electric unit (control unit) harness connector.
- 3. Disconnect rear right wheel sensor harness connector.
- 4. Check the continuity between ABS actuator and electric unit (control unit) harness connector and rear right wheel sensor harness connector. (Check the continuity while turning steering wheel right and right, or while moving center harness in wheel housing.)
  - · Measurement connector and terminal for power supply circuit

ABS actuator and electric unit	(control unit)	Rear right wheel sensor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B2	22	B180	1	Existed

• Measurement connector and terminal for signal circuit

ABS actuator and electric unit	(control unit)	Rear right wheel sensor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B2	37	B180	2	Existed

Is the inspection result normal?

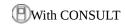
YES>>

GO TO 10.

NO>>

Repair / replace harness or connector. GO TO 8.

# 8. PERFORM SELF-DIAGNOSIS (3)



1. Connect ABS actuator and electric unit (control unit) harness connector. 2. Connect rear right 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. Drive the vehicle at approximately 50 km/h (31 MPH) or more for approximately 2 minutes. NOTE: Vehicle must be driven after repair or replacement to erase the previous DTCs. 9. Stop the vehicle. 10. Power switch OFF (Auto ACC function ON). 11. 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. 12. Power switch ON without depressing the brake pedal. **CAUTION:** Never set the vehicle to READY. 13. Perform self-diagnosis for "ABS". Is DTC "C1067-1C" detected? YES>> GO TO 9. NO>> INSPECTION END 9. CHECK WHEEL SENSOR OUTPUT SIGNAL

- 1. Disconnect 12V battery negative terminal.
- 2. Disconnect ABS actuator and electric unit (control 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.



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.



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 10.

# 10. REPLACE WHEEL SENSOR

- 1. Replace the rear right wheel sensor. Refer to REAR WHEEL SENSOR: Removal & Installation.
- 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. Drive the vehicle at approximately 50 km/h (31 MPH) or more for approximately 2 minutes.



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

- 7. Stop the vehicle.
- 8. Power switch OFF (Auto ACC function ON).
- 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 "ABS".