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2001 NISSAN Almera / Pulsar 5 Doors OEM Service and Repair Workshop Manual

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DTC No.	CONSULT screen terms	DTC detection condition	
		time	

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
	Vehicle was not driven after previous repair
Harness or connector	Harness or connector
	Front left wheel sensor
Front left wheel sensor	Front left wheel sensor
Front left sensor rotor	Front left sensor rotor
Front left tire size	Front left tire size
Front right wheel sensor	Front right wheel sensor
Front right sensor rotor	Front right sensor rotor
Front right tire size	Front right tire size
Rear left wheel sensor	Rear left wheel sensor
Rear left sensor rotor	Rear left sensor rotor
Rear left tire size	Rear left tire size
Rear right wheel sensor	Rear right wheel sensor
Rear right sensor rotor	Rear right sensor rotor
Rear right tire size	Rear right tire size
ABS actuator and electric unit (control unit) power outputs existent	ABS actuator and electric unit (control unit)
• Fuse	ABS actuator and electric unit (control unit) power supply system
Fusible link	• Fuse
• 12V battery	Fusible link
	• 12V battery

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

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- 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 "C106A-55" 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 TIRE

Check the tire air pressure, wear and size. Refer to TIRE AIR PRESSURE: Service Data.

Is the inspection result normal?

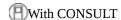
YES>>

GO TO 6.

NO>>

Adjust air pressure or replace tire. GO TO 2.

2. CHECK DATA MONITOR (1)



- 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".



Set the "Data monitor" recording speed to "10 msec".

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



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

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

YES>>

GO TO 3.

NO>>

GO TO 4.

3. PERFORM SELF-DIAGNOSIS (1)

- **(H)**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 "C106A-55" detected?

YES>>

GO TO 4.

NO>>

INSPECTION END

4. 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 5.

NO>>

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

5. CHECK WHEEL SENSOR AND SENSOR ROTOR

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

CAUTION:

Install wheel sensor with no backlash and float, and tighten the mounting bolt to the specified torque.

- Front: Refer to FRONT WHEEL SENSOR: Exploded View.
- Rear: Refer to REAR WHEEL SENSOR: Exploded View.

GO TO 6.

6. CHECK WHEEL SENSOR

Check the wheel sensor for damage.

<u>Is the inspection result normal?</u>

YES>>

GO TO 10.

NO>>

GO TO 7.

7. CHECK WHEEL SENSOR OUTPUT SIGNAL

- 1. Disconnect 12V battery negative terminal.
- 2. Disconnect ABS actuator and electric unit (control unit) harness connector.
- 3. Disconnect wheel sensor harness connector.
- 4. Connect ABS active wheel sensor tester (SST: J-45741-A) to 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 8.

8. REPLACE WHEEL SENSOR (1)

(H)With CONSULT

- 1. Replace the wheel sensor.
 - Front: Refer to FRONT WHEEL SENSOR: Removal & Installation.
 - Rear: Refer to REAR 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".



Set the "Data monitor" recording speed to "10 msec".

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



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

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

YES>>

GO TO 9.

NO>>

GO TO 21.

9. 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 "C106A-55" detected?

GO TO 21.

NO>>

INSPECTION END

10. 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 wheel sensor harness connector for disconnection or looseness.

Is the inspection result normal?

YES>>

GO TO 13.

NO>>

Repair / replace harness or connector, securely lock the connector. GO TO 11.

11. CHECK DATA MONITOR (2)



- 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".



Set the "Data monitor" recording speed to "10 msec".

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



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

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

YES>>

GO TO 12.

NO>>

12. PERFORM SELF-DIAGNOSIS (3)

- **(H)**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 "C106A-55" detected?

YES>>

GO TO 13.

NO>>

INSPECTION END

13. 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 wheel sensor harness connector.
- 5. Check the wheel sensor terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES>>

GO TO 16.

NO>>

Repair / replace harness, connector, or terminal. GO TO 14.

14. CHECK DATA MONITOR (3)

- **(E)**With CONSULT
 - 1. Connect ABS actuator and electric unit (control unit) harness connector.
 - 2. Connect wheel sensor harness connector.