

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.

2002 NISSAN X-Trail (T30) OEM Service and Repair Workshop Manual

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1. CHECK CONNECTOR

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

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair / replace harness or connector, securely lock the connector. [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. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Connect 12V battery negative terminal.
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 "C10B7-17" detected?

YES>>

Replace the ABS actuator and electric unit (control unit). Refer to [ABS ACTUATOR AND ELECTRIC UNIT \(CONTROL UNIT\): Removal & Installation](#).

NO>>

Sample

DTC DETECTION LOGIC

DTC No.		CONSULT screen terms	DTC detection condition	
C10B0	01	Parking brake actuator (right)	Diagnosis condition	When parking brake is apply or release.
			Signal (terminal)	—
			Threshold	When an open circuit is detected in motor of parking brake actuator (RH).
			Diagnosis delay time	1 second or less

POSSIBLE CAUSE



NOTE:

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 style="list-style-type: none"> • Harness or connector • Parking brake actuator (RH) • ABS actuator and electric unit (control unit) power supply system • Fuse • Fusible link • 12V battery 	<ul style="list-style-type: none"> • Harness or connector • Parking brake actuator (RH) • ABS actuator and electric unit (control unit) • ABS actuator and electric unit (control unit) power supply system • Fuse • Fusible link • 12V battery

FAIL-SAFE

The following functions are suspended.

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

 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. Push the parking brake switch.

CAUTION:

- **Set the shift position in the P.**
- **Depress the brake pedal.**

5. Pull the parking brake switch.
6. Perform self-diagnosis for “ABS”.

Is DTC “C10B0-01” detected?

YES-1>>

“CRNT” is displayed (only “C10B0-01”): Refer to [DTC Diagnosis Procedure](#).

YES-2>>

“CRNT” is displayed (“C10B0-01” and “C10B0-09”): Refer to [DTC Diagnosis Procedure](#).

YES-3>>

“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

1. CHECK CONNECTOR

1. Disconnect 12V battery negative terminal.
2. Check the parking brake actuator (RH) harness connector for disconnection or looseness.
3. Check the ABS actuator and electric unit (control unit) harness connector for disconnection or looseness.

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair / replace harness or connector. [GO TO 2.](#)

2. CHECK PARKING BRAKE ACTUATOR CIRCUIT (1)

1. Disconnect the ABS actuator and electric unit (control unit) harness connector.
2. Check the continuity between ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit)		Continuity
Connector	Terminal	
B2	2 - 3	Existed

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

[GO TO 3.](#)

3. CHECK PARKING BRAKE ACTUATOR CIRCUIT (2)

Check the continuity between parking brake actuator (RH) harness connector terminals.

Terminal	Continuity
1 - 2	Existed

Is the inspection result normal?

YES>>

Repair / replace harness or connector.

NO>>

Replace the parking brake actuator (RH). Refer to [PARKING BRAKE ACTUATOR : Removal & Installation.](#)

4. CHECK MOTOR POWER SUPPLY

1. Connect 12V battery negative terminal.
2. Check the voltage between ABS actuator and electric unit (control unit) harness connector and ground.

+		—	Voltage
ABS actuator and electric unit (control unit)			
Connector	Terminal		
B2	30	Ground	10 – 16 V

Is the inspection result normal?

YES>>

[GO TO 6.](#)

NO>>

[GO TO 5.](#)

5. CHECK MOTOR POWER SUPPLY CIRCUIT

1. Disconnect 12V battery negative terminal.
2. Check the 30A fusible link (#K). (Without ProPILOT Assist 2.0)
3. Check the 30A fusible link (#W). (With ProPILOT Assist 2.0)
4. Check the continuity and short circuit between ABS actuator and electric unit (control unit) harness connector terminal (30) and 30A fusible link (#K). (Without ProPILOT Assist 2.0)
5. Check the continuity and short circuit between ABS actuator and electric unit (control unit) harness connector terminal (30) and 30A fusible link (#W). (With ProPILOT Assist 2.0)

Is the inspection result normal?

YES>>

Perform trouble diagnosis for 12V battery power supply.

NO>>

Repair/replace harness, connector or fusible link.

6. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) MODULE GROUND CIRCUIT

1. Disconnect 12V battery negative terminal.
2. Check the continuity between ABS actuator and electric unit (control unit) harness connector and ground.

ABS actuator and electric unit (control unit)		—	Continuity
Connector	Terminal		
B2	46	Ground	Existed

Is the inspection result normal?

YES>>

[GO TO 7.](#)

NO>>

Repair / replace harness or connector. [GO TO 7.](#)

7. CHECK TERMINAL

1. Check parking brake actuator (RH) terminals for damage or loose connection with harness connector
2. Check ABS actuator and electric unit (control unit) terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES>>

[GO TO 8.](#)

NO>>

Repair / replace harness, connector, or terminal. [GO TO 8.](#)

8. PERFORM SELF-DIAGNOSIS

 With CONSULT

1. Connect the parking brake actuator (RH) harness connector.
2. Connect the ABS actuator and electric unit (control unit) harness connector.
3. Connect 12V battery negative terminal.
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. Power switch ON without depressing the brake pedal.

CAUTION:
Never set the vehicle to READY.

7. Apply and release the parking brake five times.
8. Perform self-diagnosis for "ABS".

Is DTC "C10B0-01" detected?

YES-1>>

"CRNT" is displayed: Replace the ABS actuator and electric unit (control unit). Refer to [ABS ACTUATOR AND ELECTRIC UNIT \(CONTROL UNIT\) : Removal & Installation.](#)

YES-2>>

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

NO>>

INSPECTION END

DTC DETECTION LOGIC

DTC No.		CONSULT screen terms	DTC detection condition	
C10B0	09	Parking brake actuator (right)	Diagnosis condition	When parking brake is apply or release.
			Signal (terminal)	—
			Threshold	When a motor of the parking brake actuator (RH) is not rotate.
			Diagnosis delay time	10 seconds or more

POSSIBLE CAUSE



NOTE:

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 style="list-style-type: none"> • Harness or connector • Parking brake actuator (RH) • Rear brake caliper assembly (RH) • Fuse • Fusible link • 12V battery 	<ul style="list-style-type: none"> • Harness or connector • Parking brake actuator (RH) • Rear brake caliper assembly (RH) • ABS actuator and electric unit (control unit) • Fuse • Fusible link • 12V battery

FAIL-SAFE

The following functions are suspended.

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

 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. Push the parking brake switch.

CAUTION:

- **Set the shift position in the P.**
- **Depress the brake pedal.**

5. Pull the parking brake switch.
6. Perform self-diagnosis for “ABS”.

Is DTC “C10B0-09” 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