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2023 NISSAN Patrol Service and Repair Manual

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CAN COMMUNICATION

- CAN communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting control units with 2 communication lines.
- CAN communication lines adopt twisted-pair line style (two lines twisted) for noise immunity. Refer to [CAN Communication Signal Chart](#).

DTC DETECTION LOGIC

DTC No.		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U2148	87	CAN communication error (brake control unit)	Diagnosis condition	When vehicle is READY
			Signal (terminal)	CAN communication signal
			Threshold	If side radar front RH is not transmitting or receiving CAN communication signal
			Diagnosis delay time	2 seconds or more



NOTE:

If “U2148-87” is detected, first diagnose the CAN communication system.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following systems are canceled.

- Vehicle speed & vehicle-to-vehicle control function
- Lane keep function^{*1}
- Lane keep function^{*2}
- Lane change support function
- Overtaking support function
- Route driving support function

*1 : ProPILOT Assist 2.0 display is green

*2 : ProPILOT Assist 2.0 display is blue



NOTE:

With the detection of “U2148-87” some systems do not perform the fail-safe operation. A system controlling based on a signal received from the control unit performs fail-safe operation when the communication with the side radar front RH becomes inoperable.

CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION

1. Set the vehicle to READY, and then wait for 2 seconds or more.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “U2148-87” is detected as the current malfunction in “Self Diagnostic Result” of “Side radar (Front right)”.

Is the “U2148-87” detected as the current malfunction?

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

1. PERFORM THE SELF-DIAGNOSIS OF SIDE RADAR FRONT RH

1. Erase all self-diagnosis results of “Side radar (Front right)” with CONSULT.
2. Perform DTC confirmation procedure again. Refer to [DTC Description](#).
3. Check if the “U2148-87” is detected as the current malfunction in “Self Diagnostic Result” of “Side radar (Front right)”.

Is “U2148-87” detected as the current malfunction?

YES>>

Refer to [Trouble Diagnosis Flow Chart](#).

NO>>

INSPECTION END

Sample

DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U2143	87	CAN communication error (VCM/HCM)	Diagnosis condition	When power switch is ON
			Signal (terminal)	CAN communication signal
			Threshold	If driver monitor camera control unit is not transmitting or receiving CAN communication signal
			Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following system are cancelled.

- Lane keep function*
- Lane change support function
- Overtaking support function
- Route driving support function

* : ProPILOT Assist 2.0 display is blue

Confirmation Procedure

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power switch ON, and then wait for 2 seconds or more.
2. Perform "All DTC Reading" with CONSULT.
3. Check if "U2143-87" is detected as current malfunction in self-diagnosis result of "Driver Monitor Camera".

Is DTC U2143-87 detected as current malfunction?

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

1. CHECK SELF-DIAGNOSIS RESULT

1. Turn power switch ON.
2. Erase self-diagnosis result.
3. Perform DTC confirmation procedure again.

Is DTC U2143-87 detected?

YES>>

Refer to [Trouble Diagnosis Flow Chart](#).

NO>>

INSPECTION END

Sample

DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U2148	87	CAN communication error (brake control unit)	Diagnosis condition	When power switch is ON
			Signal (terminal)	CAN communication signal
			Threshold	If driver monitor camera control unit is not transmitting or receiving CAN communication signal
			Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following system are cancelled.

- Lane keep function*
- Lane change support function
- Overtaking support function
- Route driving support function

* : ProPILOT Assist 2.0 display is blue

Confirmation Procedure

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power switch ON, and then wait for 2 seconds or more.
2. Perform "All DTC Reading" with CONSULT.
3. Check if "U2148-87" is detected as current malfunction in self-diagnosis result of "Driver Monitor Camera".

Is DTC U2148-87 detected as current malfunction?

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

1. CHECK SELF-DIAGNOSIS RESULT

1. Turn power switch ON.
2. Erase self-diagnosis result.
3. Perform DTC confirmation procedure again.

Is DTC U2148-87 detected?

YES>>

Refer to [Trouble Diagnosis Flow Chart](#).

NO>>

INSPECTION END

Sample

DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U214F	87	CAN communication error (BCM)	Diagnosis condition	When power switch is ON
			Signal (terminal)	CAN communication signal
			Threshold	If driver monitor camera control unit is not transmitting or receiving CAN communication signal
			Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following system are cancelled.

- Lane keep function*
- Lane change support function
- Overtaking support function
- Route driving support function

* : ProPILOT Assist 2.0 display is blue

Confirmation Procedure

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power switch ON, and then wait for 2 seconds or more.
2. Perform "All DTC Reading" with CONSULT.
3. Check if "U214F-87" is detected as current malfunction in self-diagnosis result of "Driver Monitor Camera".

Is DTC U214F-87 detected as current malfunction?

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

1. CHECK SELF-DIAGNOSIS RESULT

1. Turn power switch ON.
2. Erase self-diagnosis result.
3. Perform DTC confirmation procedure again.

Is DTC U214F-87 detected?

YES>>

Refer to [Trouble Diagnosis Flow Chart](#).

NO>>

INSPECTION END

Sample