

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.

2021 NISSAN Sentra 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.

DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U2156	87	CAN communication error (steering angle sensor)	Diagnosis condition	When vehicle is READY
			Signal (terminal)	CAN communication signal
			Threshold	If distance sensor is not transmitting or receiving CAN communication signal
			Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode*1
- Conventional (fixed speed) cruise control mode*1
- Steering wheel assistance function*1
- Vehicle speed & vehicle-to-vehicle control function*2
- Lane keep function*2,3
- Lane keep function*2,4
- Lane change support function*2
- Overtaking support function*2
- Route driving support function*2
- AEB
- RAB
- I-FCW

*1: With ProPILOT Assist, Without ProPILOT Assist 2.0

*2: With ProPILOT Assist 2.0

*3: ProPILOT Assist 2.0 display is green

CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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 “U2156-87” is detected as the current malfunction in “Self Diagnostic Result” of “LASER/RADAR”.

Is “U2156-87” 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

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 “U2156-87” is detected as the current malfunction in “Self Diagnostic Result” of “LASER/RADAR”.

Is “U2156-87” detected as the current malfunction?

YES >>

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

NO >>

INSPECTION END

Sample

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.

DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U215B	87	CAN communication error (IPDME/R)	Diagnosis condition	When vehicle is READY
			Signal (terminal)	CAN communication signal
			Threshold	If distance sensor is not transmitting or receiving CAN communication signal
			Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode^{*1}
- Conventional (fixed speed) cruise control mode^{*1}
- Steering wheel assistance function^{*1}
- Vehicle speed & vehicle-to-vehicle control function^{*2}
- Lane keep function^{*2,3}
- Lane keep function^{*2,4}
- Lane change support function^{*2}
- Overtaking support function^{*2}
- Route driving support function^{*2}
- AEB
- RAB
- I-FCW

*1: With ProPILOT Assist, Without ProPILOT Assist 2.0

*2: With ProPILOT Assist 2.0

*3: ProPILOT Assist 2.0 display is green

CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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 “U215B-87” is detected as the current malfunction in “Self Diagnostic Result” of “LASER/RADAR”.

Is “U215B-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

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 “U215B-87” is detected as the current malfunction in “Self Diagnostic Result” of “LASER/RADAR”.

Is “U215B-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	
U275F	88	Ethernet circuit (Ethernet circuit)	Diagnosis condition	When vehicle is READY
			Signal (terminal)	Ethernet
			Threshold	If distance sensor is not receiving ethernet communication signal from ADAS control unit 2
			Diagnosis delay time	42 seconds or more

POSSIBLE CAUSE

- Ethernet harness
- ADAS control unit 2
- Distance sensor

FAIL-SAFE

The following systems are canceled.

- Vehicle-to-vehicle distance control mode^{*1}
- Conventional (fixed speed) cruise control mode^{*1}
- Steering wheel assistance function^{*1}
- Vehicle speed & vehicle-to-vehicle control function^{*2}
- Lane keep function^{*2,3}
- Lane keep function^{*2,4}
- Lane change support function^{*2}
- Overtaking support function^{*2}
- Route driving support function^{*2}
- AEB
- RAB
- I-FCW

*1: With ProPILOT Assist, Without ProPILOT Assist 2.0

*2: With ProPILOT Assist 2.0

*3: ProPILOT Assist 2.0 display is green

*4: ProPILOT Assist 2.0 display is blue

CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Set the vehicle to READY, and then wait for 42 seconds or more.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the DTC “U275F-88” is detected as the current malfunction in “Self Diagnostic Result” of “LASER/RADAR”.

Is DTC “U275F-88” 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. CHECK CONSULT DISPLAY OF ADAS CONTROL UNIT 2

1. Perform "All DTC Reading" with CONSULT.
2. Confirm that the "ICC/ADAS 2" item is displayed in "All DTC Reading".

Is any item of "ICC/ADAS 2" displayed?

YES>>

[GO TO 2.](#)

NO>>

Check power supply and ground circuit of ADAS control unit 2. Refer to [Work Procedure](#).

2. CHECK ADAS CONTROL UNIT 2 SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "ICC/ADAS 2".

Is any DTC detected?

YES>>

Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to [DTC Index](#) (Without ProPILOT Assist 2.0) or [DTC Index](#) (With ProPILOT Assist 2.0).

NO>>

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3. CHECK ETHERNET HARNESS

1. Turn the power switch OFF.
2. Check the ethernet harness connectors and terminals of distance sensor and ADAS control unit 2 for damage or looseness.

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Replace the ethernet harness.

4. REPLACE THE ETHERNET HARNESS

1. Replace the ethernet harness.
2. Perform DTC confirmation procedure again. Refer to [DTC Description](#).

Is DTC "U275F-88" detected as the current malfunction?

YES>>

[GO TO 5.](#)

NO>>

INSPECTION END