

# Your Ultimate Source for OEM Repair Manuals

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2019 NISSAN Teana Service and Repair Manual

Go to manual page



With the detection of "U2155-87" 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 ADAS control unit 2 becomes inoperable.

# **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 "U2155-87" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS 2".

Is "U2155-87" 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

# **CAN COMMUNICATION**

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.

CAN communication signal chart.Refer to CAN Communication Signal Chart.

# **DTC DETECTION LOGIC**

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition		
U2159	87	CAN comm err (steering control unit)  [Controller area network communication error (steering control unit)]	Diagnosis condition	When vehicle is READY	
			Signal (terminal)	CAN communication signal	
			Threshold	If ADAS control unit 2 is not transmitting or receiving CAN communication signal	
			Diagnosis delay time	2 seconds or more	



If "U2159-87" 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
- AEB
- RAB
- I-FCW
- I-LI
- I-BSI

• TSR

- \*1: ProPILOT Assist 2.0 display is green
- \*2: ProPILOT Assist 2.0 display is blue



With the detection of "U2159-87" 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 ADAS control unit 2 becomes inoperable.

## 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 "U2159-87" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS 2".

<u>Is "U2159-87" detected as the current malfunction?</u>

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. PERFORM DIAGNOSIS OF CAN COMMUNICATION CIRCUIT

Perform diagnosis of CAN communication circuit. Refer to <u>Trouble Diagnosis Flow Chart</u>.

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INSPECTION END



#### CAN COMMUNICATION

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.

CAN communication signal chart. Refer to CAN Communication Signal Chart.

# **DTC DETECTION LOGIC**

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition		
U2159	87	CAN comm err (steering control unit)  [Controller area network communication error (steering control unit)]	Diagnosis condition	When vehicle is READY	
			Signal (terminal)	CAN communication signal	
			Threshold	If ADAS control unit 2 is not transmitting or receiving CAN communication signal	
			Diagnosis delay time	2 seconds or more	



If "U2159-87" is detected, first diagnose the CAN communication system.

# POSSIBLE CAUSE

CAN communication system

#### **FAIL-SAFE**

The following systems are canceled.

- Vehicle-to-vehicle distance control mode
- Steering wheel assistance function



With the detection of "U2159-87" 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 ADAS control unit 2 becomes inoperable.

## **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 "U2159-87" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS 2".

## Is "U2159-87" detected as the current malfunction?

YES >>

Refer to <u>DTC Diagnosis Procedure</u>.

NO-1 >>

To check malfunction symptom before repair:Refer to Intermittent Incident.

NO-2 >>

Confirmation after repair: INSPECTION END



## **CAN COMMUNICATION**

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads the required data only.

CAN communication signal chart.Refer to <a href="Mailto:CAN Communication Signal Chart">CAN Communication Signal Chart</a>.

#### DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
	87	CAN comm err (AVM)  [Controller area network communication error (Around view monitor)]	Diagnosis condition	When vehicle is READY
U2175			Signal (terminal)	CAN communication signal
			Threshold	If ADAS control unit 2 is not transmitting or receiving CAN communication signal
			Diagnosis delay time	2 seconds or more



If "U2175-87" is detected, first diagnose the CAN communication system.

# POSSIBLE CAUSE

CAN communication system

#### **FAIL-SAFE**

The following systems are canceled.

- Lane keep function\*
- Lane change support function
- Overtaking support function
- Route driving support function
- \*: ProPILOT Assist 2.0 display is blue



With the detection of "U2175-87" 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 ADAS control unit 2 becomes inoperable.

#### 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 "U2175-87" is detected as the current malfunction in "Self Diagnostic Result" of "ICC/ADAS 2".

#### <u>Is "U2175-87" detected as the current malfunction?</u>

YES >>

Refer to DTC Diagnosis Procedure.

NO-1 >>

To check malfunction symptom before repair:Refer to Intermittent Incident.

NO-2 >>



# 1. PERFORM DIAGNOSIS OF CAN COMMUNICATION CIRCUIT

Perform diagnosis of CAN communication circuit. Refer to <u>Trouble Diagnosis Flow Chart</u>.

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INSPECTION END

