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2017 NISSAN Altima Coupe OEM Service and Repair Workshop Manual

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DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detection condition		
U2159	83	CAN comm err (steering control unit)	Diagnosis condition	When vehicle is READY	
			Signal (terminal)	CAN communication signal	
			Threshold	If EPS control unit is not transmitting or receiving CAN communication signal	
			Diagnosis delay time	1 second or less	

POSSIBLE CAUSE

- EPS control unit
- Around view monitor control unit

FAIL-SAFE

The following systems are canceled.

• ProPILOT Park



1. CHECK DTC PRIORITY

If DTC "U2159-83" is displayed with Network-DTC, first diagnose the Network-DTC.

Is applicable DTC detected?

YES >>

Perform diagnosis of applicable. Refer to <u>DTC Index</u>.

NO >>

GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Set the vehicle to READY.
- 2. Perform "All DTC Reading" with CONSULT.
- 3. Check if the "U2159-83" is detected as the current malfunction in "Self Diagnostic Result" of "AROUND VIEW MONITOR".

Is "U2159-83" 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

1. CHECK DTC PRIORITY

If DTC "U2159-83" is displayed with Network-DTC, first diagnose the Network-DTC.

Is applicable DTC detected?

YES >>

Perform diagnosis of applicable. Refer to <u>DTC Index</u>.

NO >>

GO TO 2.

2. CHECK EPS CONTROL UNIT SELF-DIAGNOSIS RESULTS

Check if any DTC is detected in "Self Diagnostic Result" of "EPS/DAST 3".

Is any DTC detected?

YES >>

Perform diagnosis on the detected DTC and repair or replace the malfunctioning parts. Refer to DTC Index.

NO >>

Replace the around view monitor control unit. Refer to Removal and Installation.

DTC DETECTION LOGIC

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		CONSULT screen terms	DTC detection condition		
U2159	87	CAN comm err (steering control unit)	Diagnosis condition	When vehicle is READY	
			Signal (terminal)	CAN communication signal	
			Threshold	If around view monitor control unit 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

None

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 "AROUND VIEW MONITOR".

<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. CHECK CAN DIAGNOSIS

Perform the trouble diagnosis for CAN communication system. Refer to <u>Trouble Diagnosis Flow Chart</u>.

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INSPECTION END



DTC DETECTION LOGIC

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		CONSULT screen terms	DTC detection condition		
		CAN comm err (IPDM E/R)	Diagnosis condition	When power switch is ON	
U215B	87		Signal (terminal)	CAN communication signal	
	07		Threshold	Communication error	
			Diagnosis delay time	2 seconds or more	

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

- Rear view is not displayed even if shift lever is in R position.
- The following systems are canceled.
 - Lane keep function*
 - Lane change support function
 - Overtaking support function
 - Route driving support function
 - RAB

^{*:} ProPILOT Assist 2.0 display is blue

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the power switch ON, and then wait for 2 seconds or more.
- 2. Perform "Self Diagnostic Result" mode of "AROUND VIEW MONITOR" using CONSULT.

Is any DTC detected?

YES >>

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

NO-1 >>

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



1. CHECK CAN DIAGNOSIS

Perform the trouble diagnosis for CAN communication system. Refer to <u>Trouble Diagnosis Flow Chart</u>.

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INSPECTION END

