

# 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.

## 2019 NISSAN Navara NP300 King Cab Service and Repair Manual

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## 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	
C1F60	97	VCM system circuit (Vehicle control module system circuit)	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



**NOTE:**

If “C1F60-97” is detected, first diagnose the CAN communication system.

## POSSIBLE CAUSE

CAN communication system

## FAIL-SAFE

The following system are cancelled.

- 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
- TSR

\*1: ProPILOT Assist 2.0 display is green

\*2: ProPILOT Assist 2.0 display is blue



**NOTE:**

- With the detection of “C1F60-97” 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

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### 1. PERFORM DTC CONFIRMATION PROCEDURE

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1. Set the vehicle to READY and wait at least 2 seconds.
2. Perform “All DTC Reading” with CONSULT.
3. Check if the “C1F60-97” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS 2”.

Is “C1F60-97” 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. PERFORM DIAGNOSIS OF CAN COMMUNICATION SYSTEM

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Perform diagnosis of CAN communication system. Refer to [Trouble Diagnosis Flow Chart](#).

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INSPECTION END

Sample

## DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
C1F92	64	EPS sub system circuit (Electric power steering sub system circuit)	Diagnosis condition	<ul style="list-style-type: none"> <li>When vehicle is READY</li> <li>When AEB system is ON</li> </ul>
			Signal (terminal)	—
			Threshold	If ADAS control unit 2 detects an error signal that is received from EPS control unit via CAN communication
			Diagnosis delay time	1 second or less

## POSSIBLE CAUSE

- EPS control unit
- ADAS control unit 2

## 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. CHECK DTC PRIORITY

If DTC “C1F92-64” is displayed with Network-DTC, first diagnose the Network-DTC.

Is applicable DTC detected?

YES>>

Perform diagnosis of applicable. Refer to [DTC Index](#).

NO>>

[GO TO 2.](#)

### 2. PERFORM DTC CONFIRMATION PROCEDURE

- Set the vehicle to READY.

2. Turn the AEB system ON.

3. Perform “All DTC Reading” with CONSULT.

4. Check if the “C1F92-64” is detected as the current malfunction in self-diagnosis results of “ICC/ADAS 2”.

Is “C1F92-64” 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 DTC PRIORITY

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If DTC “C1F92-64” is displayed with Network-DTC, first diagnose the Network-DTC.

Is applicable DTC detected?

YES>>

Perform diagnosis of applicable. Refer to [DTC Index](#).

NO>>

[GO TO 2.](#)

## 2. PERFORM SELF-DIAGNOSIS OF EPS CONTROL UNIT

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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 ADAS control unit 2. Refer to [Removal and Installation](#).

## DTC DETECTION LOGIC

DTC		CONSULT screen terms (Trouble diagnosis content)	DTC detection condition	
U19B0	87	LIN comm err (Touch sensor) [LIN communication error (Touch sensor)]	Diagnosis condition	When vehicle is READY
			Signal (terminal)	LIN communication signal
			Threshold	ADAS control unit 2 detects a steering wheel touch sensor voltage error
			Diagnosis delay time	2 seconds or more

## POSSIBLE CAUSE

- Steering wheel touch sensor
- ADAS control unit 2

## FAIL-SAFE

The following systems are canceled.

- Lane keep function\*<sup>1</sup>
- Lane keep function\*<sup>2</sup>
- 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

## 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 “U19B0-87” is detected as the current malfunction in “Self Diagnostic Result” of “ICC/ADAS 2”.

Is “U19B0-87” 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>>



Sample

## 1. REPLACE STEERING WHEEL

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1. Replace steering wheel. Refer to [STEERING WHEEL : Removal & Installation](#).
2. Perform confirmation procedure again. Refer to [DTC Description](#) (Without ProPILOT Assist 2.0) or [DTC Description](#) (With ProPILOT Assist 2.0).

Is "U19B0-87" detected as the current malfunction?

YES>>

Replace the ADAS control unit 2. Refer to [Removal and Installation](#) (Without ProPILOT Assist 2.0) or [Removal and Installation](#) (With ProPILOT Assist 2.0).

NO>>

INSPECTION END

Sample