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## 2021 NISSAN Navara NP300 King Cab Service and Repair Manual

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## PRECAUTIONS FOR FRONT CAMERA UNIT

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Refer to [Precautions for Lane Departure Warning](#).

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## PRECAUTIONS FOR TSR

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The TSR system is only intended to be a support device to provide the driver with information. It is not a replacement for the driver's attention to traffic conditions or responsibility to drive safely. It cannot prevent accidents due to carelessness. It is the driver's responsibility to stay alert and drive safely at all times.

- The TSR system is intended as an aid to careful driving. It is the driver's responsibility to stay alert, drive safely, and observe all road regulations that currently apply, including looking out for road signs.
- The TSR system may not function properly under all conditions. Below are some examples:
  - When the road sign is not clearly visible, for example, due to damage or weather conditions.
  - When rain, snow or dirt adheres to the windshield in front of the multi-sensing front camera unit.
  - When the headlights are not bright, for example, due to dirt on the lens or if the aiming is not adjusted properly.
  - When strong light enters the camera unit. (For example, the light directly shines on the front of the vehicle at sunrise or sunset.)
  - When a sudden change in brightness occurs. (For example, when the vehicle enters or exits a tunnel or under a bridge.)
  - In areas not covered by the navigation system.
  - If there are deviations in relation to the navigation, for example due to changes in the road routing.
  - When overtaking buses or trucks with speed stickers.
  - When the data from the navigation system is not up-to-date or is unavailable.
- The TSR system may display a traffic sign, though there is no traffic sign in front of the vehicle. It may display a different speed limit from that for a passenger vehicle. (The maximum speed limit sign may show a higher or lower number than the actual maximum speed, for example, when detecting a speed limit sign for truck, advisory sign, different speed limit sign between daytime and nighttime, or speed limit sign written in different unit near the border, etc.)

## PRECAUTIONS FOR I-DA

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Failure to follow the warnings and instructions for proper use of the I-DA system could result in serious injury or death.

- The I-DA system is only a warning to inform the driver of a potential lack of driver attention or drowsiness. It does not steer the vehicle or prevent loss of control.
- The I-DA system does not detect and provide an alert of the driver's lack of attention or fatigue in every situation.
- It is the driver's responsibility to:
  - Stay alert.
  - Drive safely.
  - Keep the vehicle in the traveling lane.
  - Be in control of the vehicle at all times.
  - Avoid driving when tired.
  - Avoid distractions (texting, etc).

Listed below are the system limitations for the I-DA system. Failure to operate the vehicle in accordance with these system limitations could result in serious injury or death.

- The I-DA system may not operate properly and may not provide an alert in the following conditions:
  - Poor road conditions such as an uneven road surface or pot holes.
  - Strong side wind.
  - If the driver has adopted a sporty driving style with higher cornering speeds or higher rates of acceleration.
  - Frequent lane changes or changes to vehicle speed.
- The I-DA system does not provide an alert in the following conditions:
  - Vehicle speeds lower than 60 km/h (37 MPH).
  - Short lapses of attention.
  - Instantaneous distractions such as dropping an object.

## PRECAUTIONS FOR DRIVER MONITOR CAMERA

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Observe the followings to ensure proper system operation.

- Always keep the area around the driver monitor camera clean. Remove dust and dirt, soak a soft cloth in fresh water, squeeze it tightly, and wipe gently.
- Rubbing with a hard brush, cloth or tissue can cause scratches.
- Do not put anything around the driver monitor camera, put stickers (including transparent ones), or install accessories. It may cause malfunction.
- Do not give a strong impact to the area around the driver monitor camera.

## PRECAUTIONS FOR DRIVER MONITOR SYSTEM

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- The driver monitoring system may not be able to properly detect the driver in the following cases:
  - When sunlight enters to the cabin and the driver monitor camera or driver is illuminated.
  - When sunlight and shadows repeat in the cabin.
  - When the driver wears glasses, sunglasses, a hat, a mask, an eyepatch, etc., if any of eyes, nose, or mouth is hidden, or if driver wears clothes that change the shape of driver's face or head.
  - When the shape of the eyes, nose, mouth, face or head is hidden by the steering wheel, driver's hands, or other obstacles.
  - When the driver monitor camera is touched and gets dirt or fingerprints.
  - When there are two or more faces near the driver's seat, such as when passengers in the co-driver or rear seat leans out near the driver's seat.
  - When the driver squints or loses driving posture due to glare such as sunlight from front.
- Depending on the situation, the warning sound may not be heard due to external loud noise.

Failure to follow the warnings and instructions for proper use of ProPILOT Park systems could result in serious injury or death.

- ProPILOT Park systems are not a self-driving systems and are only capable within the limits as described in this manual.
- ProPILOT Park systems are not a replacement for proper driving procedures. It is a driver assistance system and is not intended to replace the driver. The driver is always responsible for the driving task.
- The ProPILOT Park System is designed to operate only under certain conditions. Accordingly the system may not always function as intended. It is the drivers responsibility to actively monitor the operation of the system and intervene as necessary.

Many factors can impact the performance of ProPILOT Park causing the system not to perform as intended. ProPILOT Park should not be used in certain situations. These include (but are not limited to):

- Poor visibility due to heavy rain, snow, ice, fog, etc.
- Bright light (due to oncoming traffic, direct sunlight, etc.)
- Obstruction to sensors, and cameras caused by mud, dirt, ice, snow, etc.
- When using a trailer hitch (if so equipped)

ProPILOT Park may not react to:

- Stationary vehicles
- Pedestrians, bicycles or animals
- Road debris
- Road pylon in a construction zone

It is the drivers responsibility to always park in a legal manner and obey all local and state regulations.

Before exiting the vehicle, check that the electronic parking brake is activated and the shift position is in P (Park).

Many factors can impact the performance of ProPILOT Park causing the system to not perform as intended. ProPILOT Park should not be used in certain situations. These include (but are not limited to):

- When there is rain, snow, ice, dirt or other substance adhering to the sonar sensors or camera lens.
- When people, children or animals enter the area.
- When there is a loud noise or thick grass in the surrounding area.
- When there is a structure (such as a wall, toll collection equipment, or parking gate) located nearby to the side of the vehicle.
- When there is a step, projecting object, or drain cover on the road.
- When under a hanging flag, plastic curtain, or similar object.
- When the surrounding area is dark, such as at night or in a parking garage.
- When parking space lines are not clearly visible.
- When parking on a steep hill, gravel, or unpaved roads.
- When strong light from the sun or streetlight shines on the road or camera.
- When there is a device generating ultrasound (including vehicles equipped with sonar sensors in the surrounding area).
- Under certain conditions it may be impossible or difficult to detect a parking position. As necessary, move the vehicle to a more suitable position.
- When the vehicle is equipped with non-original or winter tires. It is recommended own visit a NISSAN certified ARIYA dealer.

## APPLICATION ITEMS

CONSULT performs the following functions via CAN communication using distance sensor.

Diagnosis mode	CGW Status			Description
	Restricted Mode	Diag Test Mode	Open Mode	
Self Diagnostic Result	Display	Display	Display	Retrieve DTC from ECU and display diagnostic items
CGW Information	Display	Display	Display	<ul style="list-style-type: none"> <li>• Display the current CGW mode</li> <li>• Enables CGW to switch mode</li> </ul>
Data Monitor	Display	Display	Display	Monitor the input/output signal of the control unit in real time
Work Support	Non-display	Non-display	Display	This mode enables a technician to adjust some devices faster and more accurately
ECU Identification	Display	Display	Display	Display the ECU identification number (part number etc.) of the selected system
Configuration*	Display	Display	Display	The vehicle specification can be written when the control unit is replaced
Network-DTC*	Display	Display	Display	Display network DTC which the control unit memorizes when performing "Diagnosis (All System)".

\*: Displays when performing "Diagnosis (All System)".

## SELF DIAGNOSTIC RESULT

Refer to [DTC Index](#).

## CGW INFORMATION

- Display the diagnosis mode which a user can perform in Diag Test mode/Open Mode by switching the CGW status from Restricted mode to Diag Test Mode/Open Mode.
- For the method of switching CAN Gateway status, Refer to [CONSULT Function](#).



### NOTE:

In some vehicles, it is not malfunctioning in case of no display of "CGW Information". In this case, it is not necessary to switch the CGW status.

## DATA MONITOR




### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored item [Unit]	Description
Horizontal Alignment value [°]	Indicates the alignment value (Horizontal value) (Default value)
Vertical Alignment value [°]	Indicates the alignment value (Vertical value) (Default value)
Horizontal Alignment value 2 [°]	Indicates the alignment value (Horizontal value) (Current value)
Vertical Alignment value 2 [°]	Indicates the alignment value (Vertical value) (Current value)
Vehicle status for alignment [OK/Vehicle/System/No condi]	Indicates the vehicle status for radar alignment
Alignment status [Incomp/Comp/NG1/NG2/NG3/NG4/Running]	Indicates the radar alignment status (Default value)
Alignment status 2 [Comp/Aborted/Running/NG1/NG2]	Indicates the radar alignment status (Current value)

## WORK SUPPORT

Work support items	Description
MILLIWAVE RADAR ADJUST	Outputs millimeter waves, calculates the displacement in radar direction, and indicates an adjustment direction
OTA status reset	 <b>NOTE:</b> The item is displayed, but it is not used

## MILLIWAVE RADAR ADJUST

Refer to [Work Procedure](#).

## ECU IDENTIFICATION

Distance sensor part number is displayed.

## CONFIGURATION

Vehicle specification can be written, when distance sensor is replaced.

## NETWORK-DTC

Displays the network-DTCs judged by distance sensor, when all self-diagnosis is performed. Refer to [DTC Index](#).

## APPLICATION ITEMS

CONSULT performs the following functions via CAN communication using front camera unit.

Diagnosis mode	CGW Status			Description
	Restricted Mode	Diag Test Mode	Open Mode	
Self Diagnostic Result	Display	Display	Display	Retrieve DTC from ECU and display diagnostic items
CGW Information	Display	Display	Display	<ul style="list-style-type: none"> <li>• Display the current CGW mode</li> <li>• Enables CGW to switch mode</li> </ul>
Data Monitor	Display	Display	Display	Monitor the input/output signal of the control unit in real time
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## SELF DIAGNOSTIC RESULT

Refer to [DTC Index](#).

## FREEZE FRAME DATA (FFD)

Front camera unit records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item (Indication/Unit)	Description
ODO/TRIP METER (Km)	Vehicle speed of the moment a particular DTC is detected
DTC count (count)	Indicates the detection count of the corresponding DTC

## CGW INFORMATION

Display the diagnosis mode which a user can perform in Diag Test mode/Open Mode by switching the CGW status from Restricted mode to Diag Test Mode/Open Mode.

For the method of switching CAN Gateway status, Refer to [CONSULT Function](#).



### NOTE:

In some vehicles, it is not malfunctioning in case of no display of "CGW Information". In this case, it is not necessary to switch the CGW status.

## DATA MONITOR



### NOTE:



The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored item [Unit]	Description
AIMING DONE [0/1]	Indicates whether camera aiming has been performed
AIMING RESULT [0/1]	Indicates the result of camera aiming
AIM NG REASON [0/1/2/3/4/5/6/7/8/9/16/18/19/20/21/22/23/24/25/26/27/255]	Indicates the NG reason of camera aiming
AIM YAW [deg]	Indicates the yaw angle result of camera aiming (Current value)
AIM ROL [deg]	Indicates the roll angle result of camera aiming (Current value)
AIM PIT [deg]	Indicates the pitch angle result of camera aiming (Current value)
FCTRY AIM YAW [deg]	Indicates the yaw angle result of camera aiming (Default value)
FCTRY AIM ROL [deg]	Indicates the roll angle result of camera aiming (Default value)
FCTRY AIM PIT [deg]	Indicates the pitch angle result of camera aiming (Default value)
Configuration result 1 [Finished/Unfnshd]	Indicates the result of configuration
Configuration status [NG1/NG2/NG3/NG4/NG5/NG6/OK]	Indicates the NG reason of configuration
Heater system [Off/Type1/Type2]	Indicates the type of front camera unit heater <ul style="list-style-type: none"> <li>• Off: The front camera unit heater is not installed</li> <li>• Type1: The front camera unit heater is installed on windshield</li> <li>• Type2: The windshield itself has a</li> </ul>

Monitored item [Unit]	Description
	heater function
ECU power supply voltage [V]	Indicates the front camera unit power supply voltage
Configuration type [Type1/Type2]	Indicates the type of front camera unit configuration <ul style="list-style-type: none"> <li>• Type1: Renault type</li> <li>• Type2: Nissan type</li> </ul>
Engine type [Gasoline/EV/HEV/PHEV]	Indicates the engine type
Manufacturer [Renault/Nissan/Renault Sport/MMC/Daimler]	Indicates the manufacturer
Vehicle width	Indicates the vehicle width
Transmission type [MT/ AT/CVT]	Indicates the transmission type
ALH [Off/On]	Indicates the ALH system installation status
HBA function [Off/On]	Indicates the status of HBA system
Camera image bottom [pixel]	Indicates the pixel number of the camera image bottom
Camera height [mm]	Indicates the front camera unit height
Camera distance 1 [mm]	Indicates the distance from front wheel axle center to front camera unit
Camera distance 2 [mm]	Indicates the distance from front bumper center to front camera unit
Camera offset [mm]	Indicates the front camera unit offset
Camera pitch [deg]	Indicates the front camera unit pitch
Vehicle speed [Km/h]	Indicates the vehicle speed
ECU operating state	Indicates the operating status of