

# Your Ultimate Source for OEM Repair Manuals

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## 2018 NISSAN Armada OEM Service and Repair Workshop Manual

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- When route driving support function is canceled, lane change support display turns off.



**NOTE:**

- **When lane change support is cancelled in lane where lane change support is started, steering is controlled in the direction of returning to almost center of lane where lane change support is started.**
  - **When lane change support by the route driving support function is cancelled, turn signal indicator turns off automatically.**
- In the following conditions, lane change support display turns off with sound, and route driving support function is cancelled.
    - After pressing lane change support switch, when approaching to exit, road split, or lane deduction point without detecting sufficient space for lane change
    - When vehicle is detected in the desired lane after turn signal lamps are operated
    - When vehicle speed drops below 60 km/h (37 MPH) approx
    - When lane markers cannot be detected
    - When it detects that driver does not hold steering wheel
    - When the vehicle speed/inter-vehicle distance control function is canceled

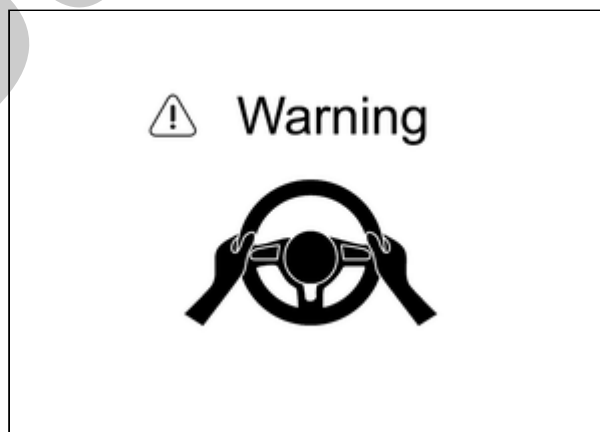
## Alarm/Warning

### When the driver determines that he does not have the steering wheel

**CAUTION:**

**When changing lanes, be sure to hold steering wheel during driving.**

- Monitor whether driver is holding or operating steering wheel.
- When driver is judged not to hold or operate steering wheel during lane change support operation, driver is warned by display to operate steering wheel.



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- When driver does not operate steering even after warning display, the driver is gradually warned by sound, display and short-time brake control.
- When driver continues not to operate steering, emergency warning sounds and "Deceleration" is displayed in the head-up display and combination meter to decelerate and make emergency stop.



**NOTE:**

**Steering wheel holding detection not accurate in the following conditions. Therefore, even if steering wheel is held, a warning may be displayed.**

- When driver is wearing gloves
- When cover is attached to steering wheel
- When gripping leather joints or spokes

## When lane change support function is malfunction

When lane change support function is malfunction, combination meter displays "Some steering wheel support functions cannot be operated (system error)".

Steering Assist Limited  
System Malfunction

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For details of warning message, refer to [Operation](#).



### NOTE:

- When lane keeping function is not operated, message due to malfunction of lane change support function is not displayed.
- When message is displayed due to malfunction, stop vehicle in safe place, turn off power switch, restart, and then start operation of ProPILOT Assist 2.0.

## FUNCTION DESCRIPTION

### VEHICLE-TO-VEHICLE DISTANCE CONTROL MODE FUNCTION

- When there are no vehicles traveling ahead, the vehicle-to-vehicle distance control mode maintains the speed set by the driver.
- When there is a vehicle traveling ahead, the vehicle-to-vehicle distance control mode turns off vehicle ahead detection indicator and adjusts the speed to maintain the distance, selected by driver, from a vehicle ahead. The adjusting speed range is up to the set speed.
- When the vehicle traveling ahead moves out from its travelling lane, the vehicle-to-vehicle distance control mode accelerates and maintains vehicle speed up to the set speed.
- Vehicle-to-vehicle distance can be set by vehicle-to-vehicle distance control switch.
- When brake is activated by vehicle-to-vehicle distance control mode, stop lamps of the vehicle are turned on.
- If the ahead vehicle stops while the vehicle is traveling on the main lane of highway or motorway with vehicle-to-vehicle distance control function, the vehicle also stops following the vehicle ahead and follows the vehicle ahead for about 30 seconds.
- If stopped for more than about 30 seconds, the stopped state is maintained. When RES + switch (upward push) is pressed or the accelerator pedal is depressed after the vehicle ahead starts, the vehicle also starts following driving again by vehicle-to-vehicle distance control function.



#### NOTE:

- **When the vehicle ahead starts and it is determined that driver of the vehicle does not face the front, activate warning with sound and display.**
- **In the following cases, the vehicle does not resume to follow after stopping due to vehicle-to-vehicle distance control function.**
  - **Approximately 30 seconds passed after stopping**
  - **When the brake pedal is depressed after stopping**
  - **When stopped on a road that is not on HD map**

#### CAUTION:

- **This system performance is limited. When a vehicle suddenly cuts in front of own vehicle or when a vehicle ahead suddenly brakes, or when a vehicle stopped appears after curving with poor visibility, or when weather is bad, proper deceleration may not be possible and the vehicle may approach the vehicle ahead. The driver should operate the accelerator pedal, brake pedal, and steering wheel according to the distance to vehicle ahead and the surrounding conditions, and always try to drive safely.**
- **This system does not detect anything other than vehicles such as pedestrians, bicycles and construction pylon. The driver should always pay attention to the situation ahead and operate the brake pedal and steering wheel if necessary.**
- **If a vehicle cuts in ahead after stopping with vehicle-to-vehicle distance control mode function, vehicle cuts in ahead may not be detected due to its position or orientation. Then when the vehicle ahead starts, own vehicle also starts to follow it and may approach to vehicle cuts in ahead.**

### VEHICLE CUTS IN DETECTION

When another vehicle cuts in ahead to close to own vehicle, vehicle ahead detection display flashes with a "plonk" sound to notify the driver.

## APPROACH WARNING

- During vehicle-to-vehicle distance control, if own vehicle comes closer to a vehicle ahead due to rapid deceleration of that vehicle or if another vehicle suddenly cuts in, the system warns the driver with the chime and warning display.
- When own vehicle comes closer to the vehicle ahead and it is judged that the distance between the vehicles is not sufficient, the buzzer beeps "beep, beep, beep...", vehicle ahead detection display and approach warning display are blink.

### CAUTION:

Even when inter-vehicle distance is short, approach warning may be not operated under the following conditions.

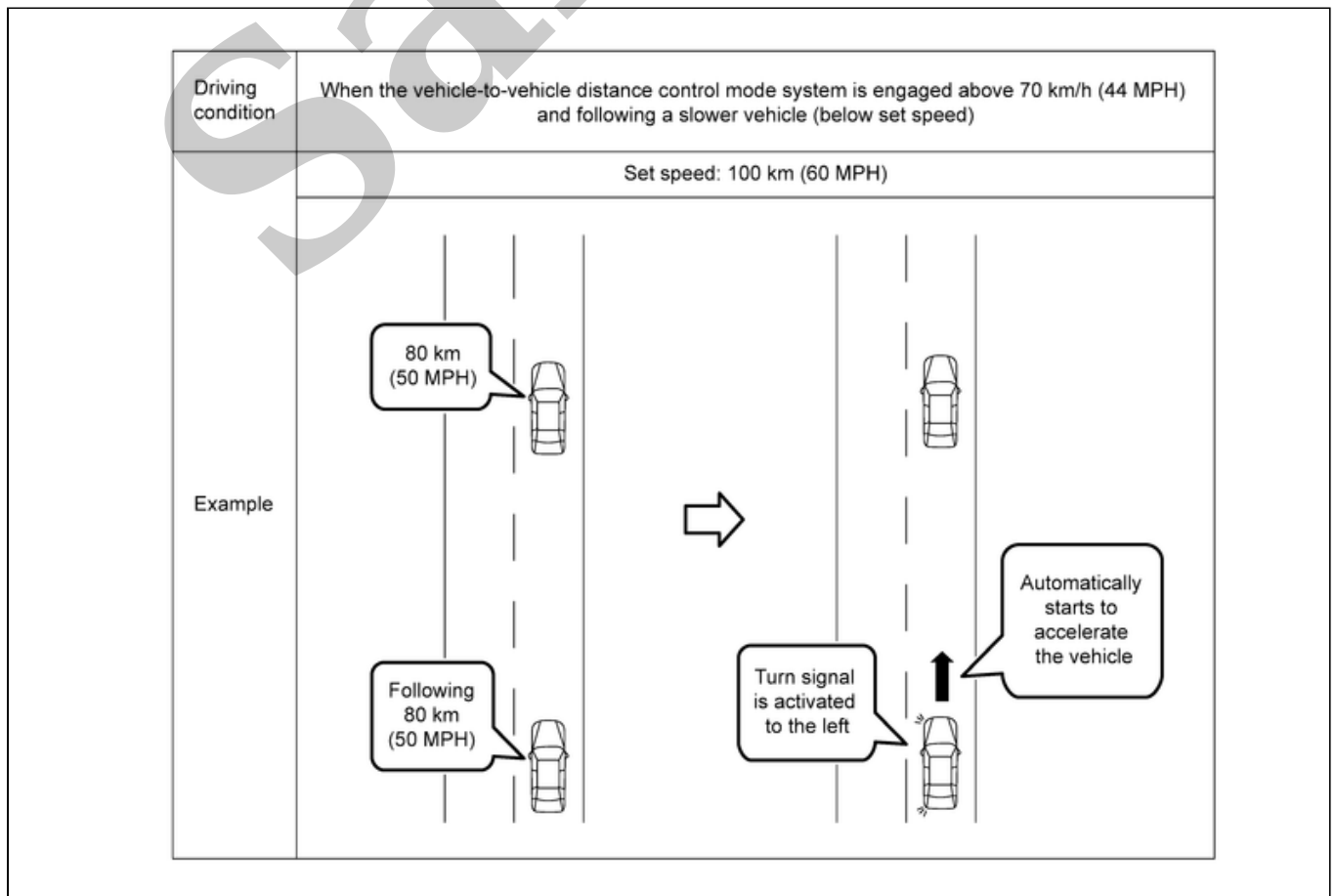
- When the relative speed compared to the vehicle ahead is small (When driving at almost the same speed)
- When the vehicle ahead is traveling faster than the vehicle (When the distance between the vehicles is gradually increasing)
- When another vehicle cuts in the lane at very close distance in front of the vehicle.

## CURVE WARNING

If it is determined that sufficient deceleration cannot be achieved during deceleration control according to the size of the curve ahead, "CURVE" is displayed on the combination meter to warn the driver.

## ACCELERATION FUNCTION AT OVERTAKING

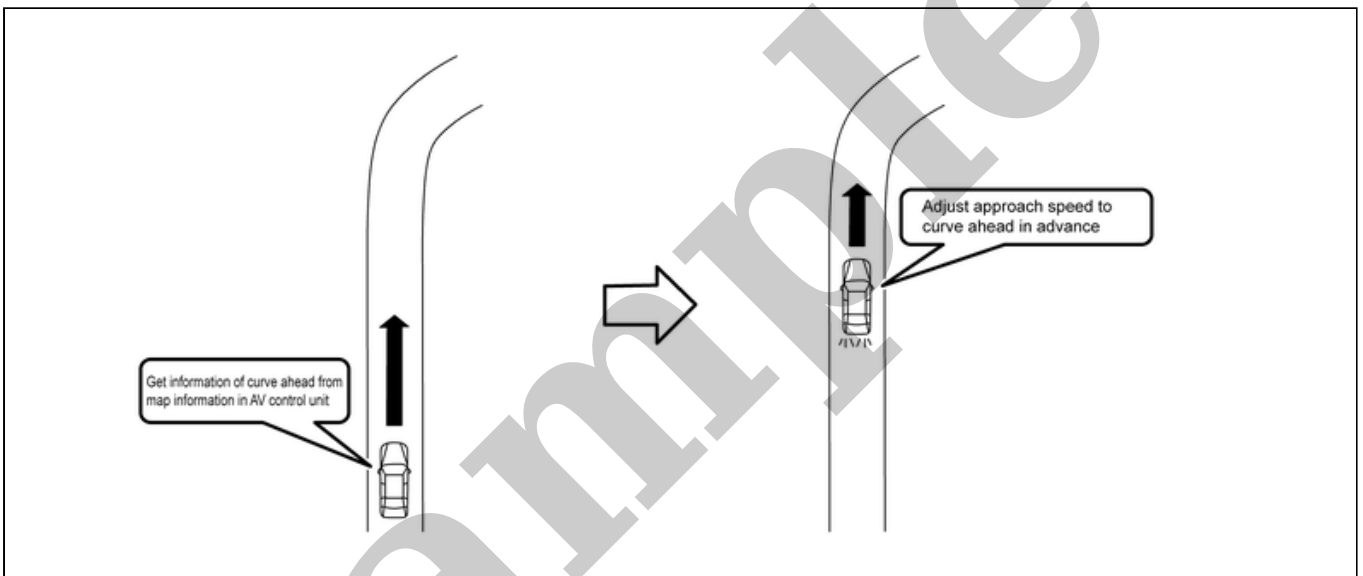
- When the turn signal switch operated to the right turn side while all of the following conditions are satisfied, the vehicle start to accelerate and prepare to overtake the vehicle ahead.
  - Set vehicle speed is 70 km/h (43 MPH) or more
  - During vehicle-to-vehicle distance control
  - Speed of the vehicle ahead is the set vehicle speed or less



- When next vehicle ahead is detected after driver changes lane to overtake the vehicle ahead, the distance between the vehicles is maintained according to the speed of next vehicle ahead.
- When next vehicle ahead is not detected, the vehicle travels at a constant speed set by the driver.
- When the vehicle is accelerating after the driver operates the turn signal to the right turn side and the distance to the vehicle ahead is too close, the acceleration is stopped and the vehicle returns to the set inter-vehicle distance.
- The overtaking acceleration function is cancelled under the following cases.
  - When brake pedal is depressed
  - When cancel switch is pressed

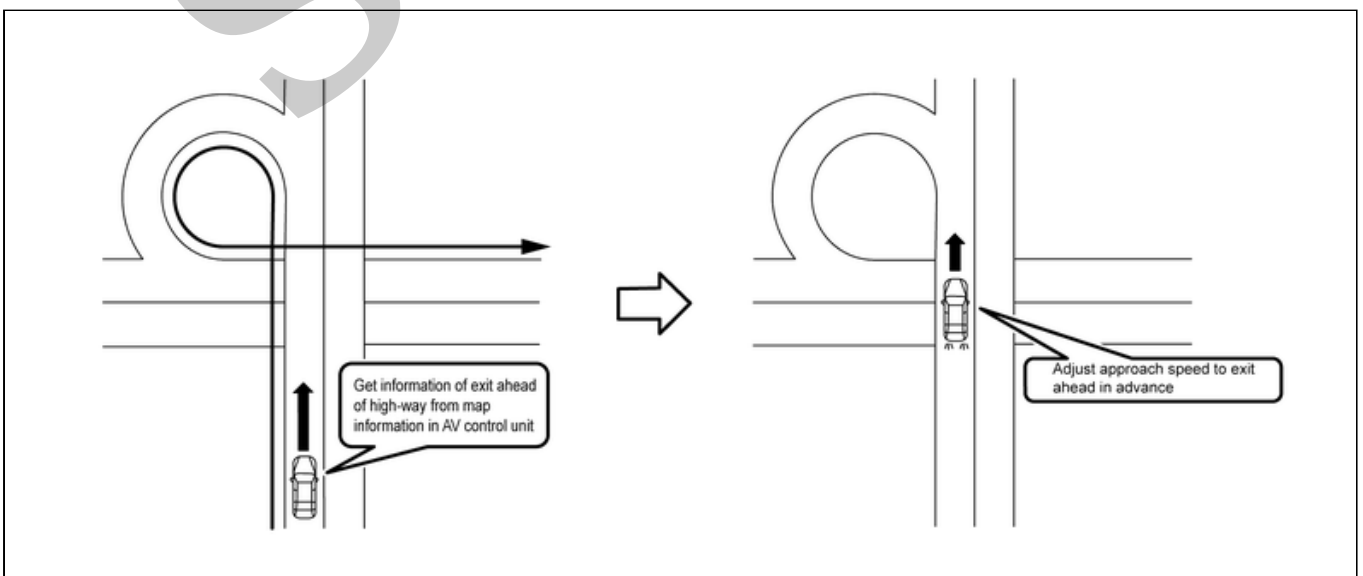
## ROUTE DECELERATION SUPPORT FUNCTION (CURVE DECELERATION SUPPORT FUNCTION)

- When route deceleration support function is ON, the entering speed is adjusted in advance according to curve ahead detected from map information in AV control unit.



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- When route deceleration support function is ON, the entering speed is adjusted in advance according to high-way exit ahead detected from map information in AV control unit.

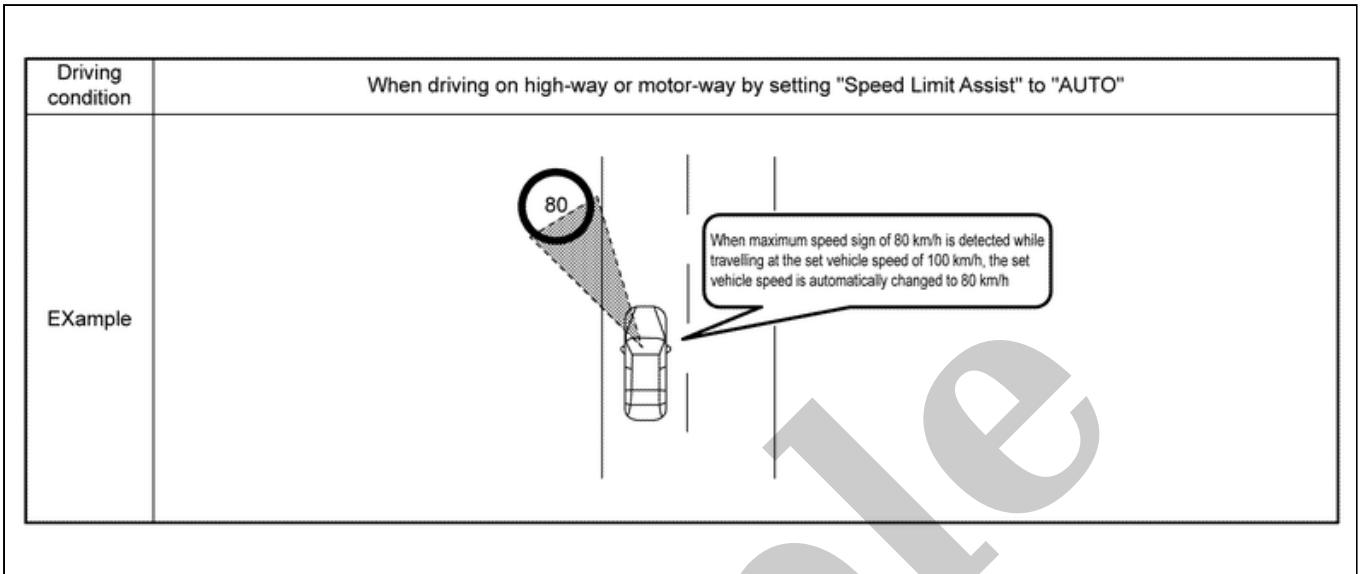


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- Control unstable driving due to over speed.
- The accuracy of the route deceleration support function increases when the route guide is activated (even if two roads are close to each other at a road split or exit, the road information of the travelling route is reflected as the regular work).

## SPEED LIMIT SUPPORT FUNCTION

- When a new maximum speed sign is detected with the road sign detection function, the new speed can be automatically or manually reflected in the set vehicle speed.
- When speed limit function is set to "AUTO" in the combination meter, the detected speed of the maximum speed sign is automatically or manually reflected in the vehicle set speed.



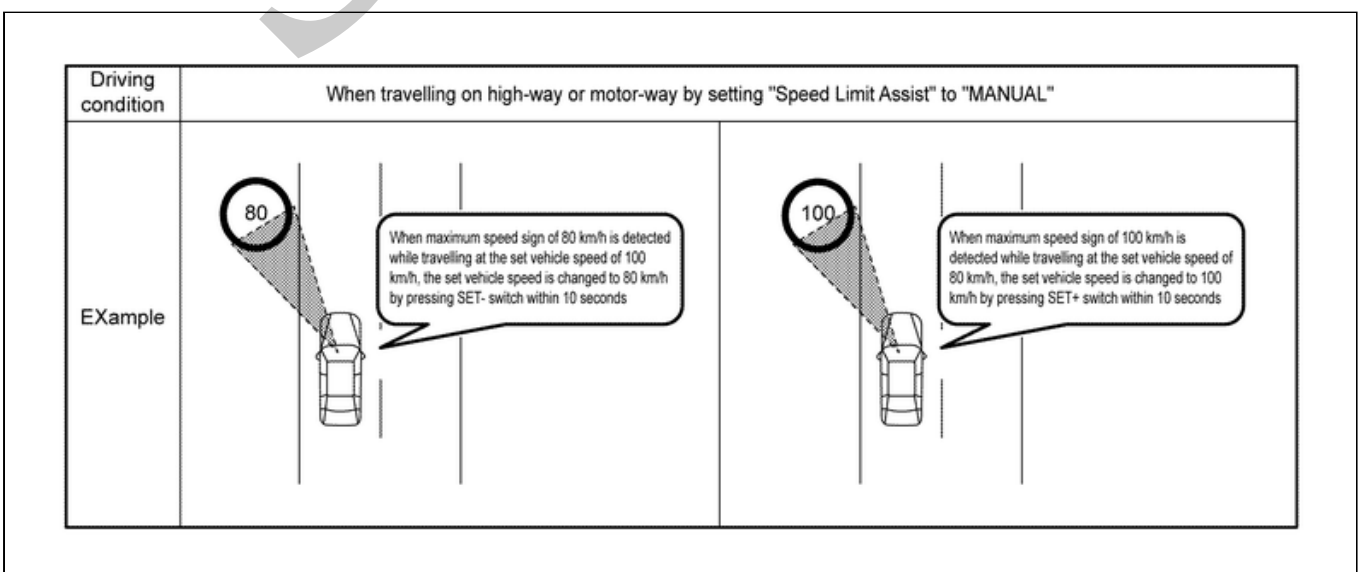
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- When pressing RES + switch or SET- switch within 10 seconds approx. after the maximum speed sign is detected (the speed sign support display "↑" or "↓" is displayed in the combination meter), while the speed limit support function is set to "manual" in the combination meter, the speed is reflected in the set vehicle speed.



### NOTE:

- When the detected maximum speed sign is higher than the current vehicle speed ("↑" is displayed in the combination meter), press RES + switch.
- When the detected maximum speed sign is lower than the current vehicle speed ("↓" is displayed in the combination meter), press SET-switch.
- When pressing the switches in the opposite direction, the speed sign support display is turned off.
- When the maximum speed sign is not detected, the speed limit support function does not work.



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## TEMPORARY ACCELERATION AND DECELERATION

- When acceleration is required, hold the steering wheel and depress the accelerator pedal to accelerate.
  - When the actual vehicle speed is higher than the set vehicle speed by depressing the accelerator pedal, the set vehicle speed display flashes.
  - When the accelerator pedal is released, the vehicle speed/vehicle-to-vehicle distance control mode is performed again.
- When deceleration is required, depress the brake pedal. ( ProPILOT Assist 2.0 is canceled)
- When resuming at the set vehicle speed before cancellation, press the RES + switch (upward).

**CAUTION:**

- **While the vehicle speed is about 10 km/h (6 MPH) or more and the display of ProPILOT Assist 2.0 is blue, when the accelerator pedal is depressed without holding the steering wheel, acceleration is impossible.**
- **When accelerating by operating the accelerator pedal, brake control, approach warning, and curve warning are not performed.**
  - **Normally, during vehicle-to-vehicle distance control, the vehicle is automatically accelerated and decelerated according to the speed of vehicle ahead.**
  - **When acceleration is required due to lane change, sudden deceleration of vehicle ahead, or approaching to the vehicle ahead that cuts in, the accelerator pedal or brake pedal is properly depressed according to the surrounding conditions.**

## OPERATION DESCRIPTION

- When pressing ProPILOT Assist 2.0 switch (less than 1.5 seconds) during ProPILOT Assist 2.0 OFF, ProPILOT Assist 2.0 state is displayed and is set to a standby state.
- Accelerate or decelerate vehicle to the desired speed and press SET- switch (press down).
- ADAS control unit 2 performs the control as follows:

Constant speed	Comparing the set vehicle speed with the current vehicle speed, transmit the command to VCM via CAN communication to reach the set vehicle speed, and controls traction motor torque
Following	According to speed change of vehicle ahead, the command is transmitted VCM and the electric control brake unit to control the vehicle speed so that vehicle-to-vehicle distance is held properly
Following → Stop	When vehicle ahead stops, own vehicle also stops accordingly. Even after stopping, the electric control brake unit keeps the hydraulic pressure and keeps the vehicle stopped state.
Start → Following	<ul style="list-style-type: none"> <li>◦ When vehicle ahead starts within 30 seconds after own vehicle stops, own vehicle also starts following vehicle ahead and resumes following driving by the vehicle speed / vehicle-to-vehicle distance control function</li> <li>◦ When own vehicle stops for more than 30 seconds, press RES + switch (upward) or depress the accelerator pedal after vehicle ahead starts, and the vehicle speed/vehicle-to-vehicle distance control function start following the vehicle again</li> </ul>

- When vehicle ahead is detected, ADAS control unit 2 determines size of object from signals of distance sensor and front camera unit. ADAS control unit 2 makes combination meter distinguish between passenger cars, lorries and motorcycles and display.
- When driving on a curve, ADAS control unit 2 detects size of curve ahead based on signals from HD map and front camera unit. Decelerate according to the size of the detected curve.
- When new maximum speed sign is detected by sign detection function, Based on sign detection signal received from front camera unit ADAS control unit 2 transmits signal to each ECU that controls vehicle speed up to the speed sign displayed. In addition, signal is transmitted to combination meter and head-up display to display detected speed sign.

## SET CONDITION



## CANCEL CONDITION

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- Vehicle speed/vehicle-to-vehicle distance control function is cancelled due to driver's operation

Vehicle speed/vehicle-to-vehicle distance control function is cancelled due to any following operation

- When CANCEL switch is pressed
- When brake pedal is depressed (Except when own vehicle is stopped due to vehicle speed/vehicle-to-vehicle distance control function)

When starting again required at set vehicle speed before cancellation, press RES+ switch (upward).



### NOTE:

**When ProPILOT Assist 2.0 system is cancelled while own vehicle is stopped due to vehicle speed/vehicle-to-vehicle distance control function, electric parking brake is operated.**

- Automatic cancellation of vehicle speed/vehicle-to-vehicle distance control function

In the following cases, the vehicle speed/vehicle-to-vehicle distance control function is automatically canceled with a warning sound.

- When vehicle speed is below 25 km/h (16 MPH) approx. during no vehicle ahead detected
- One of driver's, co-driver's and rear passengers doors is opened
- When seatbelt becomes unfasten state
- When 3 minutes approx. passed after own vehicle is stopped due to vehicle speed/vehicle-to-vehicle distance control function
- When shift position is except "D" or "B"
- When parking brake is applied
- When VDC is switched to OFF
- When VDC (including traction control) is operated
- When a wheel slips

## ALARM AND WARNING

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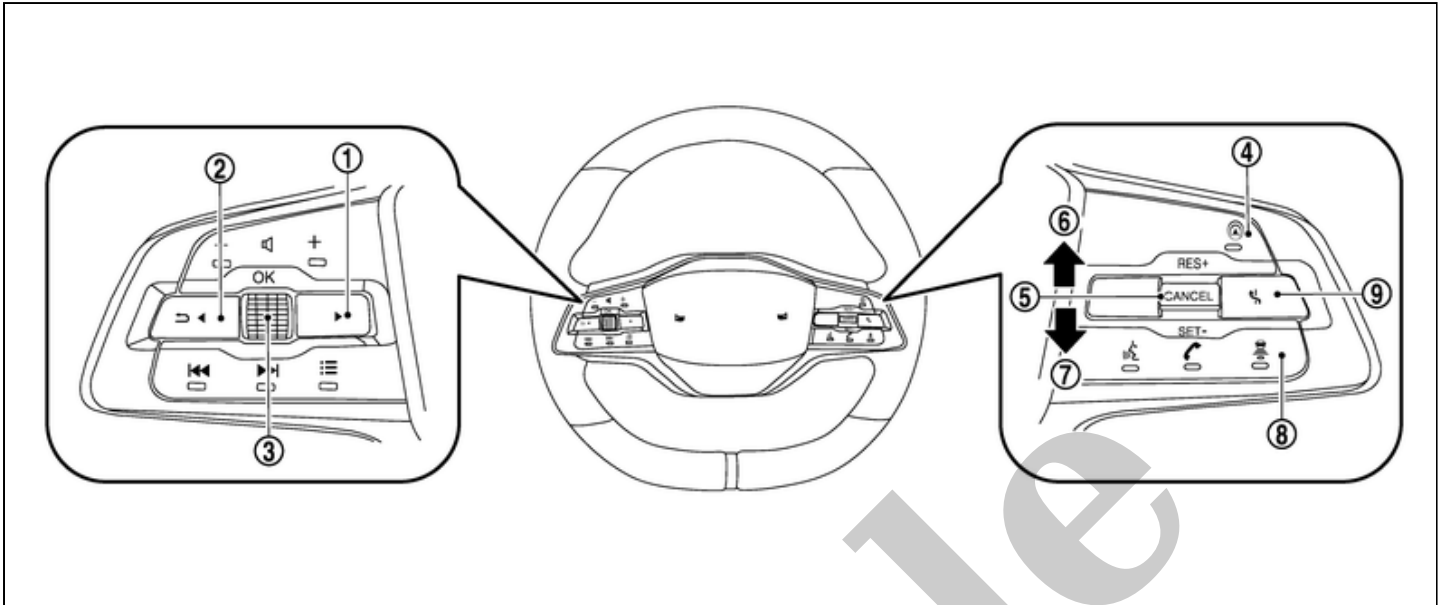
### When vehicle speed/vehicle-to-vehicle distance control function is abnormal

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- When it is determined that distance sensor is dirty and cannot detect vehicle ahead, vehicle speed/vehicle-to-vehicle distance control warning lamp (orange) is turned on with warning sound, warning message is displayed in the combination meter, and vehicle speed/vehicle-to-vehicle distance control function is automatically stopped.
- When vehicle speed/vehicle-to-vehicle distance control function is abnormal, vehicle speed/vehicle-to-vehicle distance control warning lamp (orange) is turned on with warning sound, and vehicle speed/vehicle-to-vehicle distance control functions automatically stopped.

For warning message, refer to [Operation](#).

## SWITCH NAME AND FUNCTION



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No.	Switch name	Description
①	RIGHT switch	<ul style="list-style-type: none"> <li>• SPEED ADJUST BY ROUTE                             <ol style="list-style-type: none"> <li>1. Select the [Settings] menu in the information display</li> <li>2. Select the [Driver Assistance] menu</li> <li>3. Select the [Intelligent Cruise] menu</li> <li>4. Select the [Speed Adjust by Route] item to turn the system ON/OFF</li> </ol> </li> </ul>
②	LEFT/BACK switch	<ul style="list-style-type: none"> <li>• SPEED LIMIT ASSIST                             <ol style="list-style-type: none"> <li>1. Select the [Settings] menu in the information display</li> <li>2. Select the [Driver Assistance] menu</li> <li>3. Select the [Intelligent Cruise] menu</li> <li>4. Select the [Speed Limit Assist] item to turn the system Auto/Manual/OFF</li> </ol> </li> </ul>
③	OK switch/Scroll dial	<ul style="list-style-type: none"> <li>• SPEED LIMIT ASSIST (OFFSET)                             <ol style="list-style-type: none"> <li>1. Select the [Settings] menu in the information display</li> <li>2. Select the [Driver Assistance] menu</li> <li>3. Select the [Intelligent Cruise] menu</li> <li>4. Select the [Speed Limit Assist Set] item to adjust Speed Limit Offset</li> </ol> </li> </ul>
④	ProPILOT Assist 2.0 switch	ProPILOT Assist 2.0 switch to activate the system
⑤	CANCEL switch	Pressing the switch cancels ProPILOT Assist 2.0 control
⑥	RES+ switch	Resumes set speed or increases speed incrementally <ul style="list-style-type: none"> <li>• Push and hold the switch to increase the set speed by 5 km/h (5 MPH)</li> <li>• Push then quickly release the switch to increase the set speed by 1 km/h (1 MPH)</li> </ul>