

# Your Ultimate Source for OEM Repair Manuals

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## 2003 NISSAN Pathfinder OEM Service and Repair Workshop Manual

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**NOTE:**

If “DTC: U1000-01” is detected, first diagnose the CAN communication system.

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[GO TO 6.](#)

## 6. MALFUNCTIONING PART REPAIR

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Repair or replace the identified malfunctioning parts.

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[GO TO 7.](#)

## 7. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

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1. Erases self-diagnosis results.
2. Perform “All DTC Reading” again after repairing or replacing the specific items.
3. Check if any DTC is detected in self-diagnosis results of following.
  - “ICC/ADAS 2”

Is any DTC detected?

YES>>

[GO TO 5.](#)

NO>>

[GO TO 8.](#)

## 8. REPAIR CHECK (ACTION TEST)

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Perform the RAB system action test. Check that the malfunction symptom is solved or no other symptoms occur.

Is there a malfunction symptom?

YES>>

[GO TO 4.](#)

NO>>

INSPECTION END

**CAUTION:**

Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom	Confirmation item	Reference page
RAB system display does not display	Combination meter	<a href="#">On Board Diagnosis Function</a>

Sample

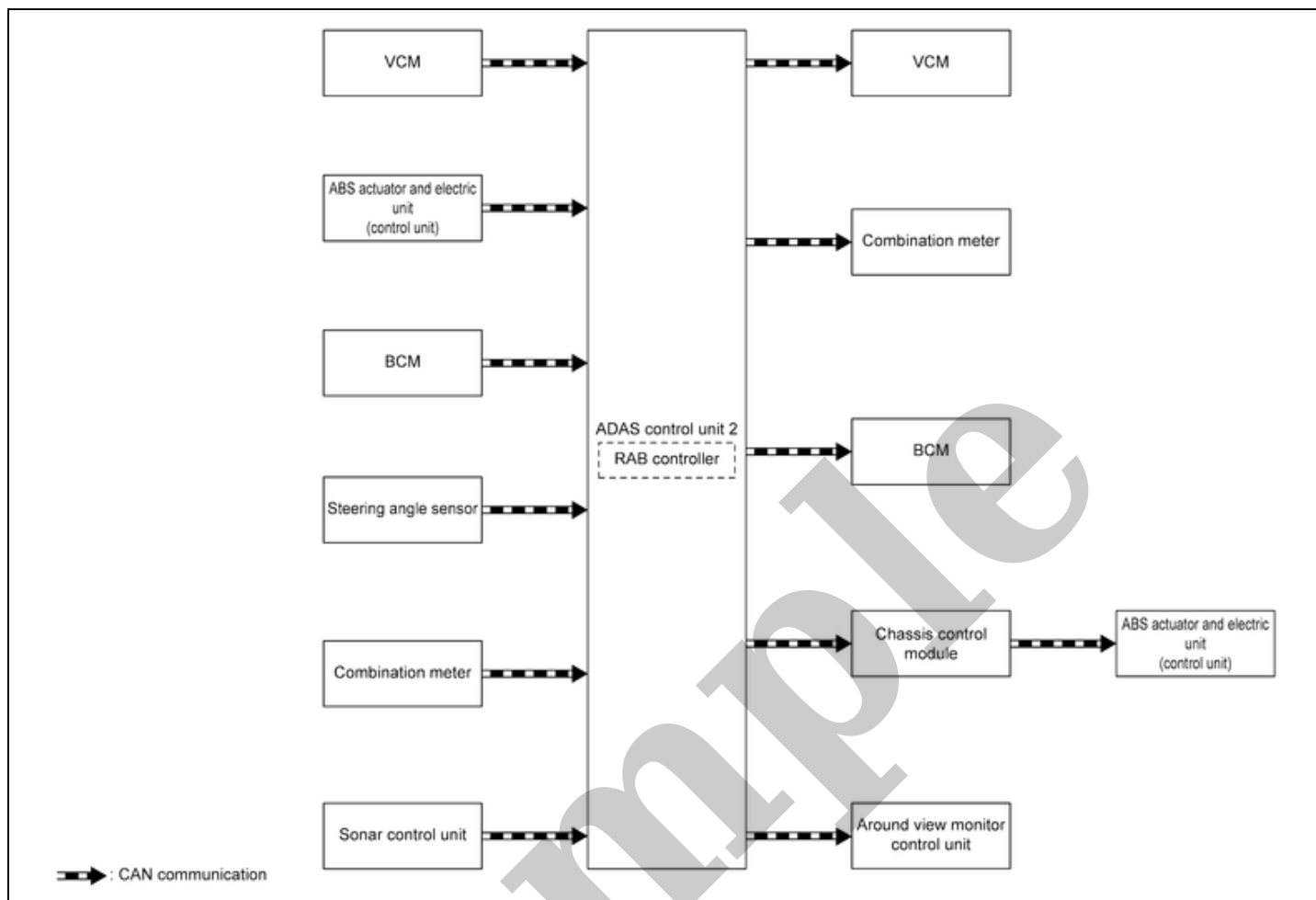
## PRECAUTIONS FOR RAB

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Refer to [Precautions for Rear Automatic Braking](#).

Sample

**SYSTEM DIAGRAM**



SIEMD-7106196-01-000373369

Component	Function
VCM	<a href="#">Component Description</a>
ABS actuator and electric unit (control unit)	<a href="#">Component Description</a>
Chassis control module	<a href="#">Component Description</a>
BCM	<a href="#">System Description</a>
Steering angle sensor	<a href="#">Component Description</a>
Combination meter	<a href="#">Combination Meter</a>
Sonar control unit	<a href="#">Sonar Control Unit</a>
Around view monitor control unit	<a href="#">Around View Monitor Control Unit</a>
ADAS control unit 2	<a href="#">ADAS Control Unit 2</a>

**ADAS CONTROL UNIT 2 INPUT/OUTPUT SIGNAL ITEM**

**Input Signal Item**

Transmit unit	Signal name	Description
VCM	CAN communication	READY status signal Receives READY status
	CAN communication	Accelerator pedal position signal Receives accelerator pedal position (angle)

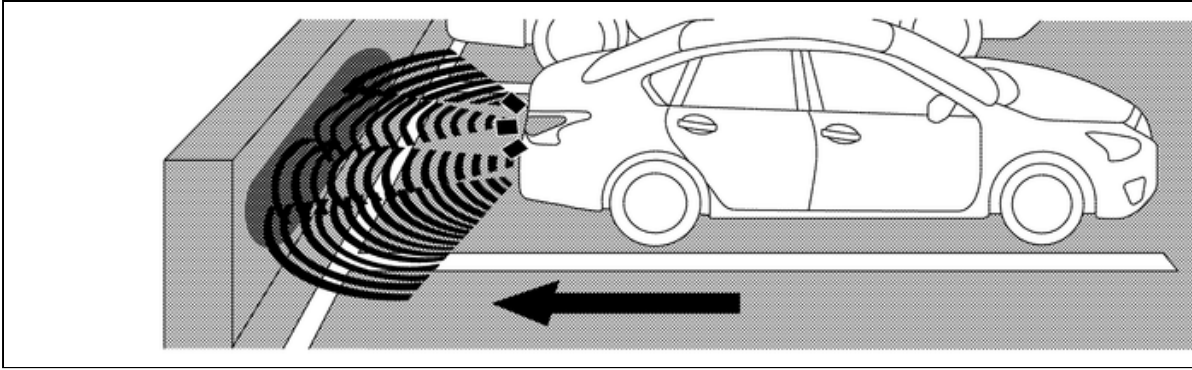
Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	ABS malfunction signal	Receives a malfunction state of ABS
		TCS malfunction signal	Receives a malfunction state of TCS
		VDC malfunction signal	Receives a malfunction state of VDC
		Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
		Brake fluid pressure signal	Receives brake fluid pressure
BCM	CAN communication	Stop lamp switch signal	Receives an operational state of the brake pedal
Steering angle sensor	CAN communication	Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel
Combination meter	CAN communication	System selection signal	Receives a selection state of each item selected with the combination meter
Sonar control unit	CAN communication	Sonar sensor signal	Receives obstacle information (existence & distance)

## Output Signal Item

Reception unit	Signal name		Description
VCM	CAN communication	Torque down request signal	Transmits a signal to control the motor torque
Combination meter	CAN communication	Meter display signal	Transmits a signal to display a state of the system on the information display
		Buzzer output signal	Transmits a signal to activate buzzer
		RAB warning lamp signal	<ul style="list-style-type: none"> <li>Transmits a signal to illuminate RAB warning lamp</li> <li>Transmits an ON/OFF state of the RAB</li> </ul>
BCM	CAN communication	Stop lamp request signal	Transmits a signal to activates the stop lamp
ABS actuator and electric unit (control unit) (via chassis control module)	CAN communication	Brake fluid pressure control signal	Transmits a brake fluid pressure control signal to activates the brake
Around view monitor control unit	CAN communication	RAB warning signal	Transmits a RAB warning signal to appear the red frame in the center display

## FUNCTION DESCRIPTION

- The Rear Automatic Braking system can assist the driver when the vehicle is backing up and approaching objects directly behind the vehicle.



SIEMD-7106196-MD-4727084-MD-4727084-02-0002265-C6AD39B4-000226591

- When the shift lever is in the R (Reverse) position and the vehicle speed is less than approximately 3 and 15 km/h (2 and 9 MPH), the RAB system operates.
- The RAB system detects obstacles behind the vehicle using the sonar sensors.
- If a risk of a collision with an obstacle is detected when own vehicle is backing up, the RAB system warning indicator blinks in the vehicle information display, a red frame appears in the center display (with Intelligent Around View Monitor system), and the system chimes three times.
- The system automatically applies the brakes.



**NOTE:**

- **After the automatic brake application, the driver must depress the brake pedal to maintain brake pressure.**
- **The driver can temporarily cancel the sonar function in the vehicle, this will also temporarily cancel the RAB system.**

## OPERATION DESCRIPTION

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- Sonar detects a object approaching, and transmits the object detection signal to ADAS control unit 2 via CAN communication.
- The ADAS control unit 2 performs the following operations according to the degree of possibility of a collision.
  - Transmits the buzzer output signal to the combination meter and sounds the buzzer.
  - Transmits the meter display signal to the combination meter and displays the RAB system warning indicator.
  - Transmits the brake fluid pressure control signal to the ABS actuator and electric unit (control unit) and performs the brake control.
  - Transmits the stop lamp request signal to BCM and turn ON the stop lamp.



**NOTE:**

- **ON/OFF of RAB system is performed with the combination meter.**
- **The RAB system is automatically turned ON when the EV system is restarted.**

## OPERATION CONDITION

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ADAS control unit 2 performs the control when the following conditions are satisfied.

- RAB system: ON
- Vehicle speed: Between approximately 3 and 15 km/h (2 and 9 MPH)
- When there is a possibility of a collision with the object backward.

## CANCEL CONDITION

The ADAS control unit 2 cancels the operation when the system is under any conditions of the operation cancellation condition.

- When the system judges that the vehicle comes to a standstill by the system control.
- When the system malfunction occurs.
- When the sonar area of the rear bumper is dirty and the measurement of the distance between the object becomes difficult.

Sample




# Fail-safe (ADAS Control Unit 2)

SIEMD-7106193

Refer to [Fail-safe \(ADAS Control Unit 2\)](#).

Sample

## Warning Lamp/Indicator Lamp

Name	Design	Function
RAB warning lamp		<ul style="list-style-type: none"><li>• The RAB warning lamp warns the driver that RAB system is OFF.</li><li>• The RAB warning lamp warns the driver of a malfunction in the RAB system.</li><li>• For layout, Refer to <a href="#">Design</a>.</li></ul>

Sample