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2004 NISSAN Maxima OEM Service and Repair Workshop Manual

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Warning / Indicator / Chime List

SIEMD-6898899

Name	Design	Layout/Function
Power steering warning lamp		For layout, refer to Design .
		For function, refer to Power steering warning lamp .

Sample

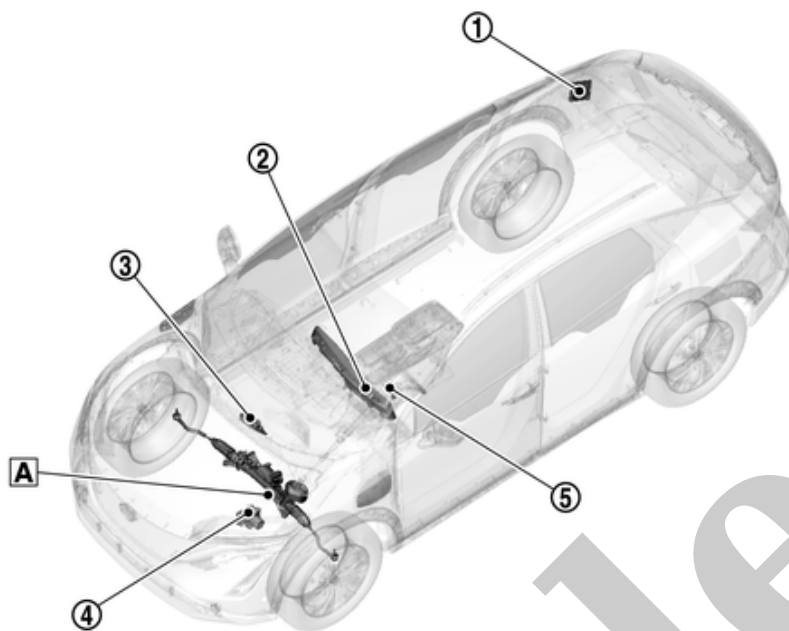
Check the following item when performing the trouble diagnosis.

- Check any possible causes by interviewing the symptom and it's condition from the customer if any malfunction, such as power steering warning lamp is turned ON, occurs.
- Check if air pressure and size of tires are proper, the specified part is used for the steering wheel, and control unit is genuine part.
- Check if the connection of steering column assembly and steering gear assembly is proper (there is not looseness of mounting bolts, damage of rods, boots or sealants, and leakage of grease, etc).
- Check if the wheel alignment is adjusted properly.
- Check if there is any damage or modification to suspension or body resulting in increased weight or altered ground clearance.
- Check if installation conditions of each link and suspension are proper.
- Check if the 12V battery voltage is proper.
- Check connection conditions of each connector are proper.

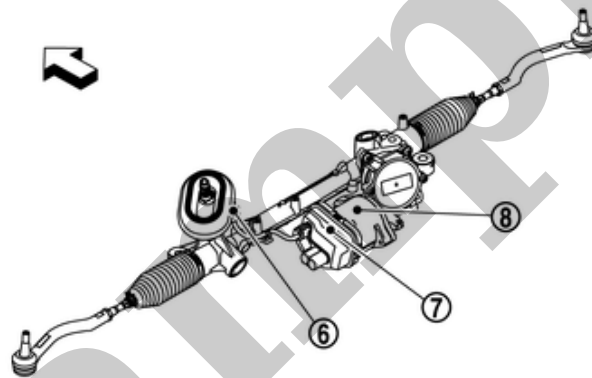
CAUTION:

Never disconnect power steering control module harness connector.

- Before connecting or disconnecting the power steering control module harness connector, turn power switch "OFF" and disconnect 12V battery ground cable.



A



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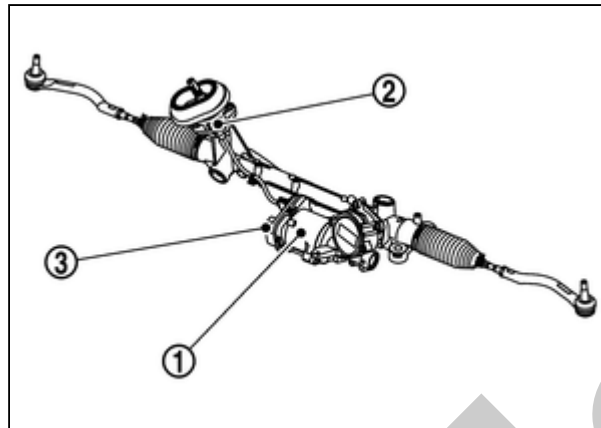
A

Steering gear assembly

①	ADAS control unit 2 Refer to Component Part Location .for detailed installation location.	②	Combination meter Refer to Component part location .for detailed installation location.	③	VCM Refer to Component part location .for detailed installation location.
④	ABS actuator and electric unit (control unit) Refer to Component part Location .for detailed installation location.	⑤	Steering angle sensor Refer to Component part Location .for detailed installation location.	⑥	Power steering torque sensor
⑦	Power steering control module	⑧	EPS motor		
←	Vehicle front				

FUNCTIONS WITHIN THE SYSTEM

The steering gear assembly is primarily composed of EPS motor ①, power steering torque sensor ② and power steering control module ③.



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POWER STEERING CONTROL MODULE

- By receiving steering angle sensor signal, vehicle speed signal and power steering torque sensor signal, the power steering control module calculates the current of motor drive according to the driving conditions. The power steering control module controls the EPS motor.
- Diagnoses can be performed via CONSULT.

POWER STEERING TORQUE SENSOR

Power steering torque sensor detects the steering torque, and transmit the signal to power steering control module.

EPS MOTOR

The EPS motor provides the assist torque according to the signal from power steering control module.

INDIVIDUAL OPERATION


Refer to [System Description](#).

PARTS LOCATION

Refer to [Component Part Location](#).

APPLICATION ITEMS

CONSULT can display each diagnostic item using the diagnostic test modes shown following.

Diagnosis mode	Description
Self Diagnostic Result	Display DTC which power steering control module memorizes
Data monitor	Displays power steering control module input/output data in real time
ECU Identification	Displays power steering control module part number
Work support	This mode enables a technician to adjust some devices faster and more accurately  NOTE: "OTA status reset" is displays but not used
Replace ECU	Write the vehicle specification when replacing power steering control module

SELF DIAGNOSTIC RESULT

Refer to [DTC Index](#).

When "CRNT" is displayed on self-diagnosis result.


- The system is presently malfunctioning.

When "PAST" is displayed on self-diagnosis result.

- System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)

The following vehicle status is recorded when DTC is detected and is displayed on CONSULT.

Monitor item	Unit	Description
Ignition switch counter	0 – 255	The number of times that power switch ON after the DTC is detected is displayed.
		<ul style="list-style-type: none"> When "0" is displayed: It indicates that the system is presently malfunctioning. When except "0" is displayed: It indicates that system malfunction in the past is detected, but the system is presently normal.  NOTE: Each time when ignition switch OFF to ON, numerical number increases in 1 → 2 → 3...38 → 255. When the operation number of times exceeds 255, the number do not increase and "255" is displayed until self-diagnosis is erased.
ODO/TRIP METER	Km	—

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.

Monitor item	Unit	Description
Steering torque	Nm	Displays the steering torque detected by power steering torque sensor.
Demanded motor current	A	Displays the current value demanded by EPS motor.
Assist level	%	Displays the assist level of EPS motor.
Vehicle speed for control	km/h	Displays the vehicle speed.
Electric power steering warning	No error / Error1 / Error2	Displays the power steering warning lamp status.
Demanded assistance torque	Nm	Displays the assist torque of EPS motor.
Measured motor current	A	Displays the current value consumed by EPS motor.
ECU temperature	°C	Displays the temperature of power steering control module.
Battery voltage	V	Displays the power supply voltage.
Rack end learning status (Right)	Complete / Incomplete	Displays the learning status of the rack end (steering angle) (right side).
Rack end learning status (Left)	Complete / Incomplete	Displays the learning status of the rack end (steering angle) (left side).
Vehicle speed	km/h	Displays the vehicle speed.
Engine status	Stop / Reserved / Running / Stating	Displays the traction motor status.
Parking assist status	Inactive / Active	Displays the parking assist active status.
Lane keep assist status	Inactive / Active	Displays the LDW/LDP active status.
ProPILOT status	Inactive / Active	Displays the ProPILOT active status.

ECU IDENTIFICATION

Displays the part number stored in the power steering control module.

WORK SUPPORT

Monitor item	Description
Rack end value reset	Reset the learning value of the rack end (steering wheel turning angle).
OTA status reset	Displays but not used.

REPLACE ECU

Write the vehicle specification when replacing power steering control module.

1. CHECK THE ILLUMINATION OF THE EPS WARNING LAMP

Check that the EPS warning lamp turns ON when power switch is placed ON. Then, EPS warning lamp turns OFF after the vehicle is READY state.

Is the inspection result normal?

YES>>

Inspection End.

NO>>

Perform trouble diagnosis. Refer to [Diagnosis Procedure](#).

Sample

1. PERFORM SELF DIAGNOSTIC RESULT

CONSULT

1. Power switch OFF to ON.
2. Select “Self Diagnostic Result” mode of “EPS/DAST 3”.

Is any DTC detected?

YES>>

Check the DTC. Refer to [DTC Index](#).

NO>>

[GO TO 2.](#)

2. CHECK EPS WARNING LAMP SIGNAL

CONSULT

1. Select “WARNING LAMP” in “Data Monitor” mode of “EPS/DAST 3”.
2. Check that the item in “Data Monitor” is “On”.
3. Set the vehicle to READY.

CAUTION:
Never drive the vehicle.

4. Check that the item in “Data Monitor” is “Off”.

Is the inspection result normal?

YES>>

Perform the trouble diagnosis for combination meter power supply circuit. Refer to [Diagnosis Procedure](#).

NO>>

EPS control unit is malfunctioning. Replace EPS control unit. Refer to [Removal and Installation](#).

DTC DETECTION LOGIC

DTC No.		CONSULT screen terms	DTC detection condition	
C1615	4B	Control unit over heat	Diagnosis condition	When power switch is ON.
			Signal (terminal)	—
			Threshold	When the protection function of the power steering control module operates.
			Diagnosis delay time	2 seconds or more

POSSIBLE CAUSE

Excessive steering operation

FAIL-SAFE

Limit steering assist level state

Sample