

STEERING Warning Light

POWER ASSISTED SYSTEM (POWER STEERING) (DIAGNOSTICS)

10. STEERING Warning Light

A: STEERING WARNING LIGHT DOES NOT COME ON

1. POWER STEERING ASSIST ENABLED

DETECTING CONDITION:

- Defective combination meter
- Defective harness

TROUBLE SYMPTOM:

When the ignition switch is turned to ON (engine OFF), the STEERING warning light does not illuminate.

NOTE:

It is operating normally if the warning light illuminates when the ignition switch is turned to ON (engine OFF), and turns off approximately two seconds after engine start.

Step	Check	Yes	No
1 CHECK ILLUMINATION OF OTHER LIGHTS. Turn the ignition switch to ON. (engine OFF)	Do other warning lights illuminate?	Go to step 2.	Check the combination meter. <Ref. to IDI-12, INSPECTION, Combination Meter System.>
2 CHECK LAN SYSTEM. Perform the diagnosis for LAN system using the Subaru Select Monitor. <Ref. to LAN(w/o HEV)(diag)-2, Basic Diagnostic Procedure.> <Ref. to LAN(HEV)(diag)-2, Basic Diagnostic Procedure.>	Is a DTC of the CAN communication displayed?	Perform the diagnosis according to DTC. <Ref. to LAN(w/o HEV)(diag)-64, List of Diagnostic Trouble Code (DTC).> <Ref. to LAN(HEV)(diag)-87, List of Diagnostic Trouble Code (DTC).>	Go to step 3.
3 CHECK COMBINATION METER. Perform the self-diagnosis of combination meter. <Ref. to IDI-8, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	Is the self diagnosis normal?	The combination meter is normal.	Check the combination meter. <Ref. to IDI-12, INSPECTION, Combination Meter System.>

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2. POWER STEERING ASSIST DISABLED

DETECTING CONDITION:

CAN communication error (engine rpm signal not received)

TROUBLE SYMPTOM:

- There is no assist due to power supply voltage failure.
- The STEERING warning light is normal but there is no power steering assist (steering feels heavy).

Step	Check	Yes	No
1 CHECK BATTERY. Check the battery and fuse.	Is the voltage 12 V or more? Is the specific gravity 1.260 or more? Is the battery terminal installed properly? Is the fuse OK?	Go to step 2.	Repair the defective part.
2 CHECK DTC. Using the Subaru Select Monitor, read all DTCs.	Is DTC related to VDC system or ignition power supply system displayed?	Perform the diagnosis according to DTC. <Ref. to VDC(diag)-40, List of Diagnostic Trouble Code (DTC).>	Go to step 3.
3 CHECK CURRENT DATA. 1) Start the engine. 2) Display the current data «Engine Speed» of the power steering control module using the Subaru Select Monitor.	Is «Engine Speed» the same as that in the combination meter?	Go to step 4.	Check the CAN communication. <Ref. to LAN(w/o HEV)(diag)-2, Basic Diagnostic Procedure.> <Ref. to LAN(HEV)(diag)-2, Basic Diagnostic Procedure.>
4 CHECK CURRENT DATA. Display the current data «EPS Status» of the power steering control module using the Subaru Select Monitor.	Is «Assist limitation» displayed?	It is possible that temporary assist limitation has occurred due to overheat protection. Stop the engine for approx. 10 minutes, and check again.	Go to step 5.
5 CHECK CURRENT DATA. 1) Display the current data «Torque sensor main output» and «Torque sensor sub output» of the power steering control module using the Subaru Select Monitor. 2) Move the steering wheel to the left and right.	Do the values of «Torque sensor main output» and «Torque sensor sub output» change according to the operations?	Go to step 6.	Check the installation status of torque sensor, and check again.
6 CHECK CURRENT DATA. Display the current data «IG Voltage» of the power steering control module using the Subaru Select Monitor.	Is the value of «IG Voltage» steady? (While shaking the harness)	Go to step 7.	Check the ignition switch and IG voltage harness, and repair the defective part.
7 CHECK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the connector (B450).	Are there any damages to terminal or other parts either on the power steering control module side or on the connector side?	Repair the terminal.	Replace the power steering control module. <Ref. to PS-44, Power Steering Control Module.>

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NOTE:

- During driving, the assist system will not be activated when the ignition voltage drops.
- Power steering assist is not started unless both of the ignition switch ON signal and the engine speed signal are input.
- In any of the following cases, the power steering assist is limited and steering wheel operation may become heavy.

If the steering wheel is held to an end for a long time, or the steering wheel turning to right and left at slow speed is repeated during parking, the assist limitation (overheat protection control) may operate to prevent failures by overheat.

In this case, by stopping the engine for approx. 10 minutes for cooling, the assist will start operating. While assist limitation (overheat protection control) is in active, «Assist limitation» is displayed in the «EPS operating condition» in the Subaru Select Monitor “Current Data Display & Save”.

- History can be confirmed on «Overheating protection intervention history» or «IGN count from overheating protection» of “Current Data Display & Save”.
- The overheat protection control system is normal operation, therefore, the STEERING warning light will not come on and there will be no DTC displayed.
- If the power steering system connector is disconnected while cooling under the overheat protection control, different DTC may be recorded. If there is no DTC and assist limitation is in active, stop the engine for approx. 10 minutes for cooling.

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B: STEERING WARNING LIGHT DOES NOT GO OFF

DETECTING CONDITION:

- Defective combination meter
- Open circuit of harness

TROUBLE SYMPTOM:

When starting the engine, the STEERING warning light continues to illuminate.

Step	Check	Yes	No
1 CHECK DTC. Read the DTC of the power steering control module using the Subaru Select Monitor. <Ref. to PS(diag)-19, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to PS(diag)-26, List of Diagnostic Trouble Code (DTC).>	Go to step 2.
2 CHECK LAN SYSTEM. Perform the diagnosis for LAN system using the Subaru Select Monitor. <Ref. to LAN(w/o HEV)(diag)-2, Basic Diagnostic Procedure.> <Ref. to LAN(HEV)(diag)-2, Basic Diagnostic Procedure.>	Is a DTC of the CAN communication detected?	Perform the diagnosis according to DTC. <Ref. to LAN(w/o HEV)(diag)-64, List of Diagnostic Trouble Code (DTC).> <Ref. to LAN(HEV)(diag)-87, List of Diagnostic Trouble Code (DTC).>	Check the combination meter. <Ref. to IDI-12, INSPECTION, Combination Meter System.>