

AfterSales Diagnostic Sheet



MAS002249
(BOL 20-07)

From: Aftersales - TSO
To: Maserati Network
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Diagnostic Guide for Electric Steering Rack Complaints (EPS)

Issue: Diagnostic Guide for Electric Steering Rack anomalies (EPS)

Models: M157/M156/M161 from MY 18 and later

Troubleshooting:

A) Customer complaint: Noise From EPS

NOTE: The below in depth diagnostic procedures are to be used along with the procedures listed in the Workshop Manuals if a more comprehensive diagnosis is required.

Important: A BOL must be opened prior to removal of any parts (components). Please remember to attach pictures/ videos showing in detail the issue.

Preliminary checks:

- 1) Under which conditions does the anomaly appear?:
 - Steering Angle: steering lock, or low steering angle (state the steering wheel range and, if possible, the steering speed)
 - Vehicle: at standstill or running? At what speed exactly?
 - Engine: running or not running?
 - When Stop&Start is ON? (for example during Autostop or Autostart)
- 2) Check the Tire Pressures as per the workshop manual section: 00.AB - 1 TECHNICAL DATA -> Wheels
- 3) Check for possible signs of impact on the EPS or on the front underframe
- 4) Correct functioning/Integrity of the EPS motor;

- 5) Check the status of the drain valve: is the white section level with the outside face of the nut (as Figure 1)? Attach a photo to the BOL. (In cases of water inside the housing, the white section will move inwards)



Figure 1: Drain valve

- 6) Check for the presence of cuts/damages on the steering rack bellows (figure 2) and attach photo's to the BOL.



Figure 2: steering tensioners bellows

B) Customer complaint: Steering Wheel is Hard to Turn/Stiffening

- 1) Under which conditions does the Anomaly appear ?

- Autostart from Stop&Start
- After extended usage
- When cold or warm
- Is the EPS warning coming ON in the Instrument Panel?
- Frequency of the Anomaly?
- Is there any DTC in the EPS module ?
- Is the anomaly not there on other similar vehicles, i.e. same Vehicle Model/Model Year?

2) Are the following cables/connectors intact and correctly connected ? (do not unplug the connectors) follow wiring diagram FE0507 - Electric driving system.

- EPS Power Supply
- CAN network interface
- Wirings between ECU and SWAS (module of the Steering Wheel Angle Sensor, see figure 3)

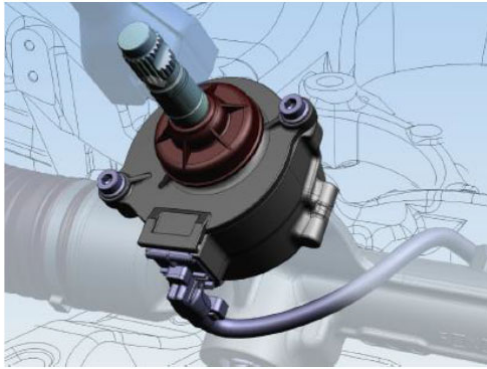


Figure 3: SWAS connection



Figure 4: EPS connector

1) After running the EPS calibration via MD EVO (EPS Calibration procedure in EPS module) are the DTCs or anomalies still present?

C) Customer complaint; EPS Light coming ON in the Instrument Panel.

- 1) Under which conditions does the light come ON?
 - Autostart from Stop&Start ?
 - After extended usage ?
 - When cold or warm ?
- 2) Are any warning lights on in the Instrument Panel ? (attach the DTC's and parameters to the BOL report)
- 3) Are there any other malfunctions to report when the warning lights are ON ?
- 4) After running the EPS calibration via MD EVO (EPS Calibration procedure in EPS module) are still there DTCs or anomalies present?