

AfterSales Diagnostic Sheet

MAS002757
(BOL 21-24)



From: AfterSales – TSO
To: Maserati Network
Auburn Hills, MI.
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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.

Crank and Intermittant No Start start of the engine - RFH- (Radio Frequency Hub) ESCL connectors

Section: 08.60-1 MAIN WIRING

Models: M156/M157 with Electronic Shaft Block OPT

Problem: No start of the engine. The Vehicle doesn't start: the engine cranks but won't start or it starts and immediately shuts off. Engine Warning Light may switch ON on in the Cluster. The problem could be intermittent and may not be there each time the vehicle is cranked.

Errors in ECUs:

1. Possible DTCs in the RFH (Radio Frequency Hub) module:

- a. DTC B1A80-00 (9A8000)- Electronic Steering Column Lock Communication Performance (Type 2-3)
- b. DTC B1A7F-00 (9A7F00) - Electronic Steering Column Lock Communication Performance (Type 1)
- c. DTC U0037-00 (C03700) - LIN Bus

The errors may be not permanent and may not necessarily set all at the same time.

After erasing them, they might not re-set again right after cranking.

2. Possible DTCs in ECM (Engine Control Module) module:

- a. DTC P0513 (051300) - Invalid Sentry Key Immobilizer Module (SKIM) Key-
- b. DTC P068A-00 (068A00) – Engine Control Module Power De-Energized Performance - Too Early
- c. U0415-00 (C41500) - Implausible Data Received from ABS

Checks:

Preliminary checks to be carried out:

1. Verify the Battery Charge Status of the Vehicle Battery, possibly via PicoScope test.
If needed, fully recharge the battery and verify the Battery Charge Status again 12 hours after the completion of the battery recharge.
2. Verify whether the symptom is there with both keyfobs and verify that the status of charge of the keyfob batteries are good.
3. Verify the Part Number of the Battery Positive Wiring (i.e. the cable from the Battery Positive Pole to the Engine Firewall junction, see Figure 1) and the Part Number of the Recharge Wiring, as shown in Figure 1.

Examples of the Traceability Labels that can be found are shown in Figure 2.

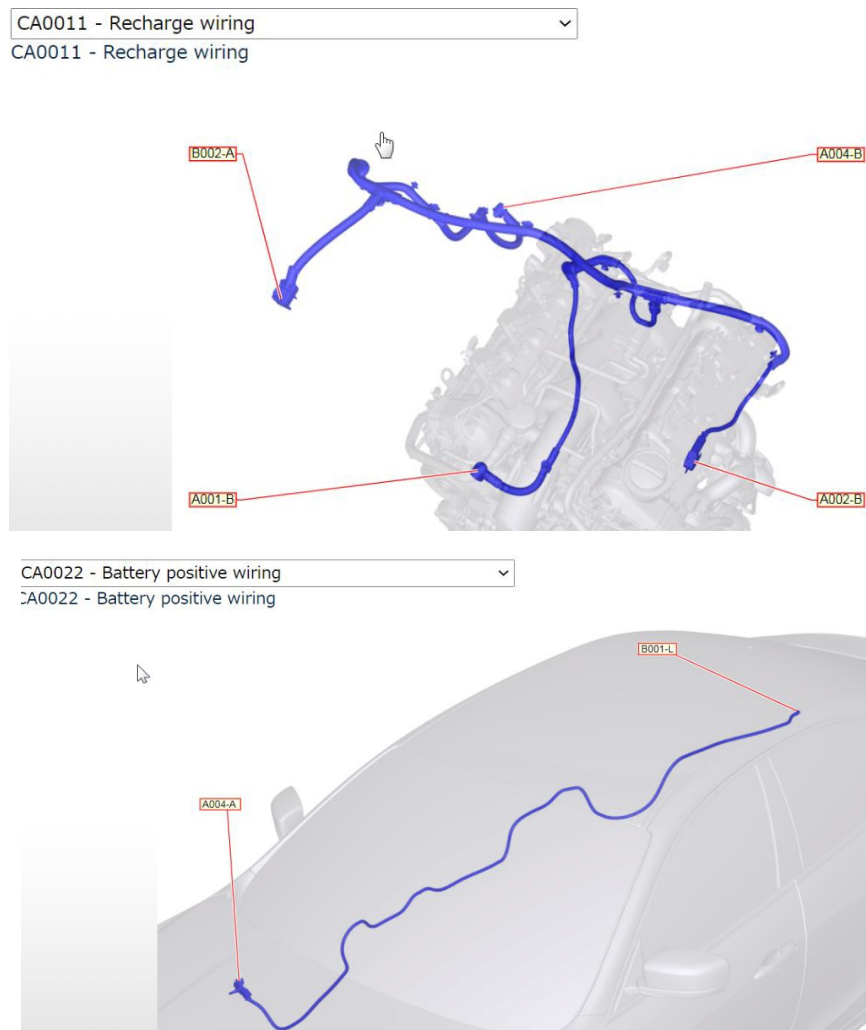


Figure 1: Position of the Recharge Wiring (upper picture) and of the Battery Positive Wiring (lower picture)



Figure 2: Examples of the Traceability Labels of the Battery Positive Wiring (left) and the Recharge Wiring (right).

If there is the DTC P068A-00 (068A00) in the ECM module, please perform step 4, if not, proceed to step 5.

4. Perform the following checks:

- a. Switch KIN to RUN without cranking the engine.
- b. Delete DTCs in the ECM module.
- c. Repeatedly switch KIN OFF and RUN, with a time span interval of at least 1 minute between two consecutive activations.
- d. Verify whether the DTC P068A-00 (068A00) is again stored in the ECM module.
- e. Verify the correct functionality of the T63 relay in the FDU (Front Distribution Unit), reference FE0001 – Page 2).
- f. Verify the integrity of the fuses F50/F49/F34/F36/F39 (Front Distribution Unit), reference FE0001 – Page 2).
- g. Verify the correct tightness and cleanliness of the ECM ground, C005 (reference FE0002 – Page 9).
- h. verify the integrity of the pin 28 of the A connector of the ECM (reference FE0001 – Page

5. Verify the electrical integrity of the wiring harness between the Electronic Steering Column Lock (ESCL, Electronic Steering Column Lock) and the RFH module (Radio Frequency Hub).

Important: the above mentioned connection refers to the LIN bus between RFH and ESCL modules.

Figure 3: Connection between RFH and ESCL modules (page 2 of FE0505).

Connector A of the RFH module is not available as a Spare Parts connector. For the most up-to-date information, please refer to following sources:



Figure 4: Example of connector and resistor for the drag test.

If there are no problems with the RFH connector(s) when performing step 6, the problem could then be related to the RFH module itself.

Before replacing the RFH module, it is required to submit a BOL report as a Support Request as explained in the **Considerations** section below.

Considerations:

When submitting the BOL report as a Support Request, please attach the full Vehicle scan report, including DTCs and Parameters from All Modules.

Also attach pictures of the Traceability Information Labels of the Battery Positive Wiring and of the Recharge Wiring.

Be sure to pay attention to the correct tightness of the connectors pins, loose pins could cause faulty contacts and possible sporadic issues difficult to be diagnosed and not identifiable by means of an electrical continuity test.

If you have any questions, contact the Maserati Technical Support Helpdesk.