

Diagnostic Sheet

FROM: Maserati TSO

TO: Maserati Network



PERSONAL SERVICE LAB

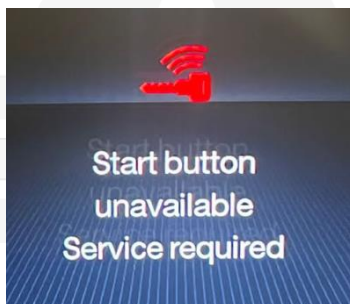
MASTERS OF CARE

Grecale – Failure of the Keyless Start system – DTC 9A7D01

ATTENTION! This document replaces MAS003665 BOL 23-07. Please discard any paper copy of the previous bulletin

DATE: AUGUST 14 2023

This document serves as a technical guide for diagnosing keyless starting system anomalies. Its purpose is to provide comprehensive guidance and support in identifying and troubleshooting issues related to the keyless starting system. Please follow the checklist below.

MODEL: Grecale M182 (All MY)**SUBJECT:** Keyless start system failure warning light (image below).

DTCs that may be stored: RFHM Module: "9A7D01 - Start Button - Generic Electrical Failure".

CHECKLIST:

- 1) Save a complete scan report of all modules (DTCs and Parameters) in PDF format.
- 2) Document the conditions under which the problem appeared to the customer.
- 3) Check if the concern can be reproduced. If possible, record a video of the problem.

- 4) Clear all DTCs from the RFHM module and see if the symptom can be duplicated under the following conditions. Fill in the results in the table below:

Start/Stop button press test	OK	NOT OK
Press in the side area of the "Start/Stop" button		
Pressing and holding the "Start/Stop" button (2-3 seconds)		
Quick press of the "Start/Stop" button (almost instantaneous)		
Incomplete touch/press of the "Start/Stop" button		

- 5) Proceed to the following Steps:

- **If the anomaly is not duplicated:** We believe that the problem is caused by an incorrect diagnosis performed by the RFHM control unit, which will be corrected by a software release expected to be released soon. In this case, there is no need to continue with diagnosis/repair.
 - **If the anomaly can be duplicated:** Continue and complete all checks starting with **step 6**:
- 6) Check the RFHM (E083-A) and SCCM (D072-A) module connectors. Make sure that there are no damaged/corroded pins. (Continue with the checklist regardless and document the condition of the connectors with photos.
- 7) With the Ignition in the OFF position (KOEO) disconnect the E083-A connector and perform resistance measurements ► Document the results in the table below:

Position of the multimeter probes	"Start/Stop" button pressed	"start/stop" button not pressed
E083-A Pin 22 <-> E083-A Pin 19		
E083-A Pin 9 <-> E083-A Pin 19		

The following table shows the expected resistance values for the required measurements:

Position of the multimeter probes	"Start/Stop" button pressed	"start/stop" button not pressed
E083-A Pin 22 <-> E083-A Pin 19	1.88 kOhm < R < 1.99 kOhm	49.47 kOhm < R < 52.53 kOhm
E083-A Pin 9 <-> E083-A Pin 19	1.88 kOhm < R < 1.99 kOhm	49.47 kOhm < R < 52.53 kOhm

Warning: Never front probe female pin terminals using the multimeter lead probes. Doing so will damage or open the female pins causing unintended issues as a result.

- 8) Perform resistance measurements and document the results in the table below.

NOTE: These measurements are used to verify the correct functionality of the clock spring.

Position of the multimeter probes	Stopped Steering Wheel	During full steering wheel rotation
D072-A Pin 3 (stator) <-> pin 8 Rotor		
D072-A Pin 8 (stator) <-> 3 pin Rotor		

- 9) Perform resistance measurements and report the values below.

NOTE: These measurements are used to verify the electrical continuity between SCCM and RFHM.

Position of the Tips	resistance
D072-A Pin 3 <-> E083-A Pin 22	
D072-A Pin 8 <-> E083-A Pin 9	

NOTE: If one or both measurements provide abnormal results and electrical continuity is compromised, check the intermediate connection X028/Y028.

- 10) Wiggle test the wire at ground point G037 while checking the continuity between D072-A pin 4 and ground G037 eyelet terminal.

- 11) **Take close clear and detailed pictures** of the RFHM ECU Connectors (male side) as shown below to check male pin integrity and verify if any are missing.

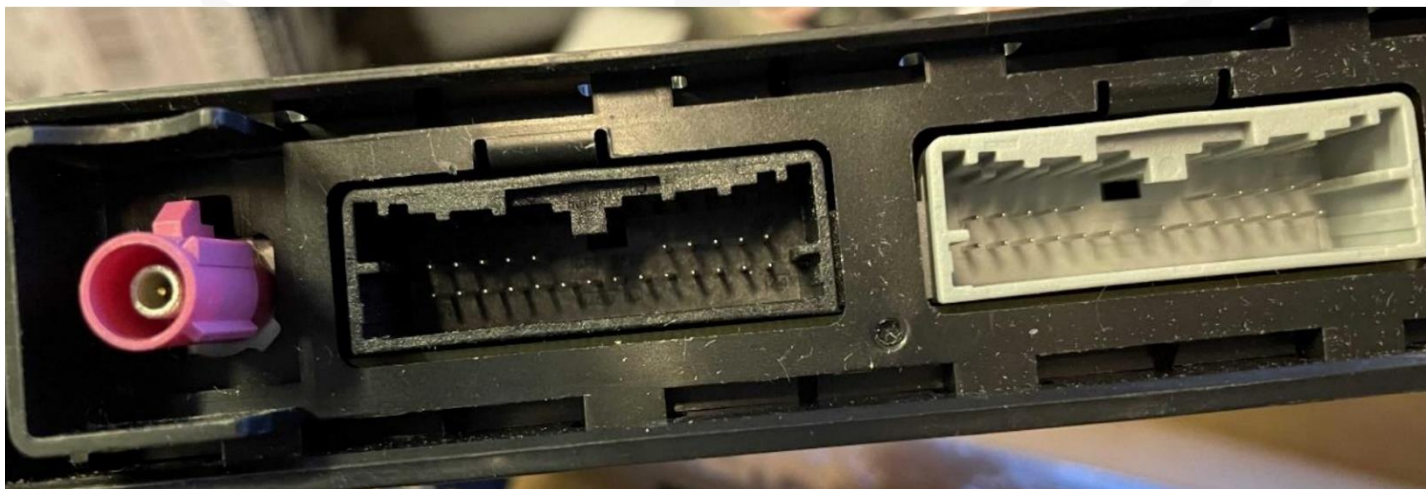


Figure 1: **OK** ▶ All male pins present and accounted for.



Figure 2: **NOT OK** ▶ pin 22 is missing.

- 12) **Open a BOL as "support request"** and attach this checklist (completed entirely) and **ALL** details collected during diagnosis (photos, videos, scan reports etc.).

Contact the Technical Support Helpdesk if you have any questions.
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