

AfterSales Diagnostic Sheet



MAS002381

(BOL 20-16)

From: Aftersales - TSO
To: Maserati Network
Auburn Hills, MI | November 20, 2020

USB HUB port Anomalies Diagnostic Guide

Issue: USB HUB port Anomalies Diagnostic Guide

Models: M157/M156/M161 starting from MY17

Issue Description:

- USB PEN/SD CARD NOT DETECTED;
- CARPLAY ANOMALIES;
- AUX IN ANOMALIES

Conditions: during the use of external devices (USB keys, mobile phones, music players) connect to the USB HUB

Troubleshooting: Suggested checks:

➤ STEP 1: Component Integrity Preliminary Check

- Perform a visual inspection to verify there are no internal or external damage to the ports such as:
 - Missing, broken or bent Pins,



Figure 1: example of Missing or broken Pins

- cuts or breaks in the plastic frame,



Figure 2: example of cuts or breaks of the plastic frame

- traces of solid or liquid residue

b) Check Results / Operation:

- yes -> The malfunction is caused by clear external damage and/or improper usage of the component..
- no -> go to step 2

NOTE: If the anomaly is related to a Carplay connection or to a phone not charging, make sure the USB cable used to connect the phone to the HUB is original, that it does not show any sign of twisted or pinched wires, and that the two plugs ends are intact and clean.
If any of the above is present, perform the test with an original and intact cable..



Figura 3:example of damaged cable

➤ STEP 2: HUB Wiring Check Depending on the Symptom

a) Pen Drive/SD Card and/or Phone are not being detected?

- Verify that Power Supply to Pin 1 of the 8-way gray connector is stable at 12V, and that there is good continuity to ground on Pin 3 and Pin 4 (see figure 4)

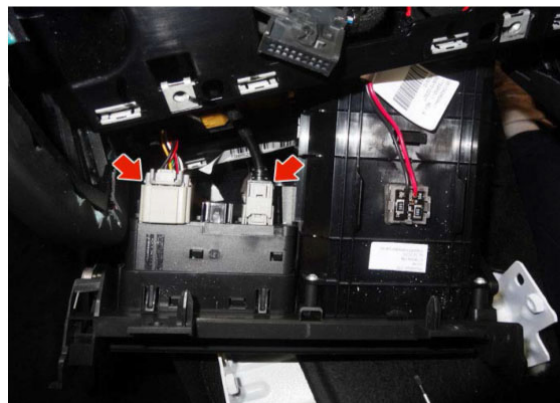


Figure 4: the 8-ways gray connector

- Check the connection of the black cable connecting the Radio to the HUB.
 - Are there any problems found with connectors or the wiring?
 - yes -> repair the wiring anomaly.
 - no -> go to Step 3
- b) Does the Led light of the USB HUB fail to illuminate?
- Verify there is power supply voltage on Pin 2 (dimmer) and that the wiring is intact
 - Are there any problems found with connectors or the wiring?
 - yes -> repair the wiring anomaly
 - no -> submit a Blue on Line as Request for Authorisation to claim (for M161 open a BOL as support request) selecting the USB HUB component, attach the ETM DTC Report..
- c) Are any of the following AUX IN anomalies found (Audio signal garbled/fuzzy, Audio coming only from one side, Aux In connection not operating)?
- Verify that power supply to Pin 1 of the 8-way gray square connector is stable at 12V and that there is good continuity to ground on pin 3 and pin 4.
 - Verify the integrity of the wiring between the Hub and Radio at Pins: 5 (Aux_L), 6 (Aux_R) 7 (Aux Audio Reference) and 8 (Aux Connection Detect).
 - Were any anomalies found related to the wiring?
 - yes -> repair the wiring anomaly..
 - no -> submit a Blue on Line as Request for Authorisation to claim (for M161 open a BOL as support request) selecting the USB HUB component, attaching the ETM DTC Report.
- STEP 3: In Vehicle Functionality Check
- a) Connect to the USB HUB to a Pen Drive/SD Card containing musical files or a Cellular Phone (It Is strongly advised to use a different brand of device than the customer's to rule out that the anomaly could be due to a possible incompatibility/defect of the device in question). Does the Radio recognize the inserted device?.
- yes -> If the radio
 - i) detects the presence of the inserted device..
 - ii) is playing musical content correctly

The USB HUB is working properly.

- no -> If you are in possession of a Laptop Computer and of a USB_A to mini_B cable (as shown figure 5) go to Step 4. Otherwise, submit a Blue on Line as Request for Authorization to claim (for M161 open a BOL as support request) selecting the USB HUB component, attaching the ETM DTC Report.



Figure 5: USB_A to mini_B

➤ STEP 4: PC Recognition Check

- 1) Turn off the vehicle(Key Off);
 - 2) Remove the USB HUB;
 - 3) Disconnect the cable installed in the gray port. Leave the 8-way square connector in.
 - 4) Insert the USB cable shown above putting the A plug in the PC port, and the mini B plug in the USB HUB port:
- Does a pop up message come on the PC screen showing it as a new Removable Disk (as shown in figure 6)?

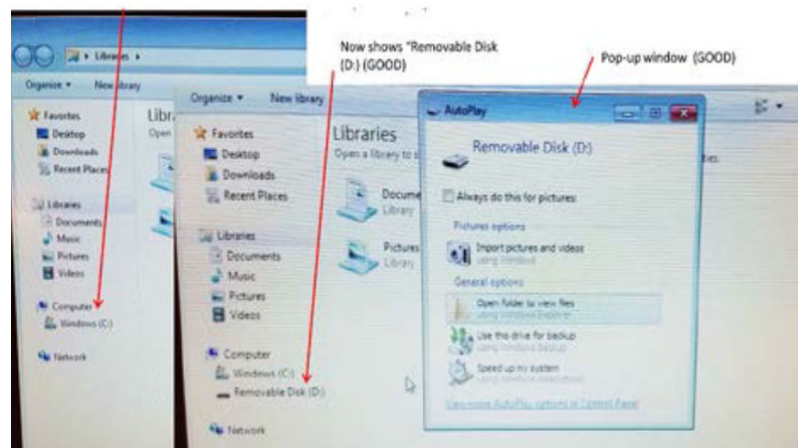


Figure 6

- yes -> Using the PC select the device, then select music to play and if the music plays correctly, the USB HUB is working properly. The anomaly might be caused by the black cable that links the USB HUB to the Radio, or by the Radio itself (as figure 7)

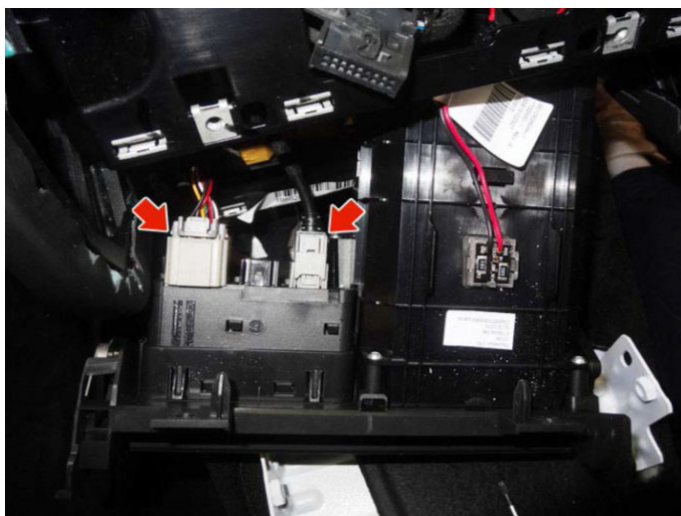


Figure 7:: connection cables

- no -> If the anomaly reported by the customer still cannot be identified or replicated, submit a Blue on Line as Request for Authorisation to claim (for M161 open a BOL as support request) selecting the HUB component, attaching the ETM DTC Report
- 5) Re-connect the black cable, turn the ignition key to on, then connect the Pen Drive/SD Card to the HUB so that the HUB is identified.

Conclusions: Attach to the BOL photos of the evidence found in the required checks.