

GROUP	NUMBER
Body Electrical	20-BE-001H
DATE	MODEL(S)
January, 2020	ALL

SUBJECT: USB MULTI-BOX DIAGNOSTIC GUIDELINES

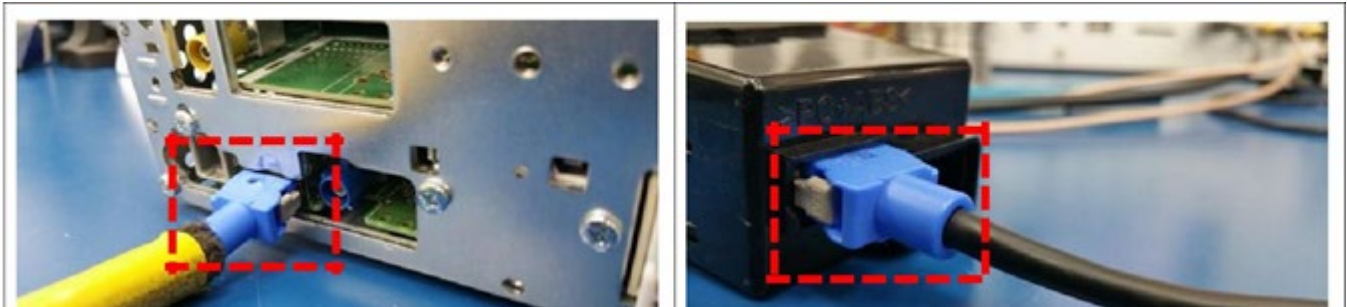
Description:

1. This bulletin provides guidelines to inspect the USB, head unit, and multi-box for common connection conditions.
2. This bulletin presents guidelines to inspect for common Android Auto and Apple CarPlay connection conditions.
3. This bulletin provides physical differences between the USB 2.0 port and USB 3.0 port.

Applicable Vehicles: All Hyundai Models.

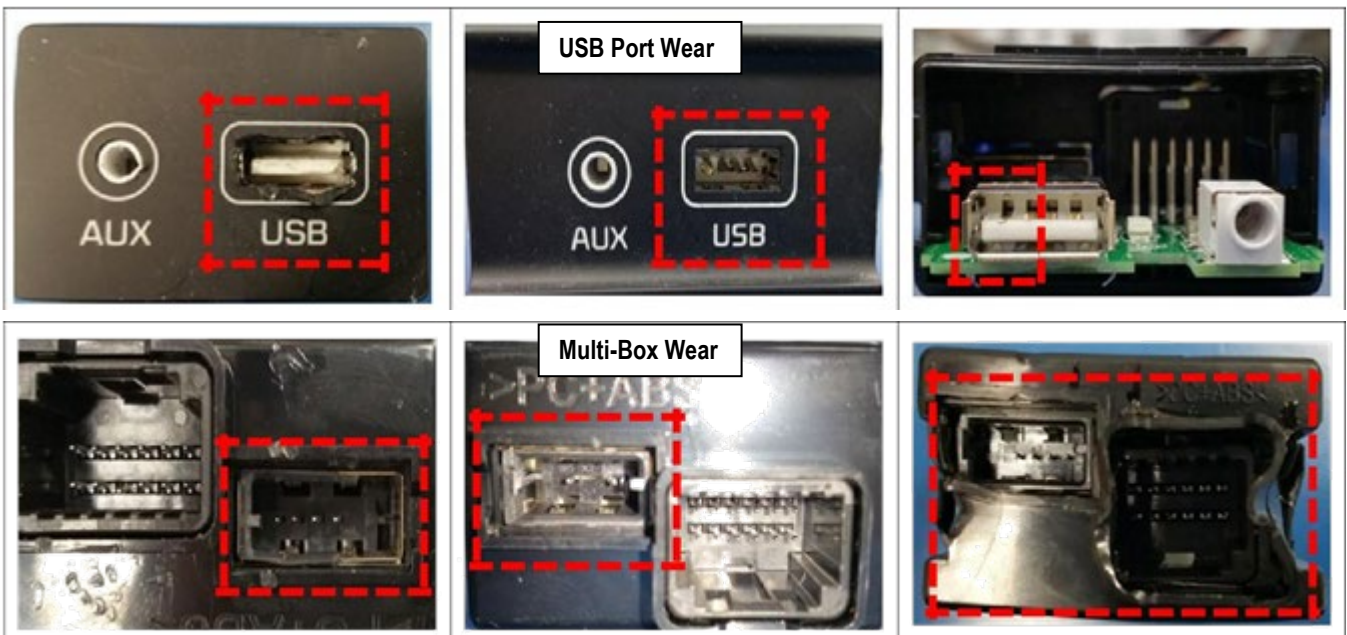
USB and Head Unit Connection Inspection

Perform this inspection before replacing the head unit. Inspect the USB cable/harness for any loose connections occurring at the back of the head unit and multi-box. Disconnecting and reconnecting the USB cable/harness can sometimes restore multi-box functionality.



Multi-box Wear Indicators:

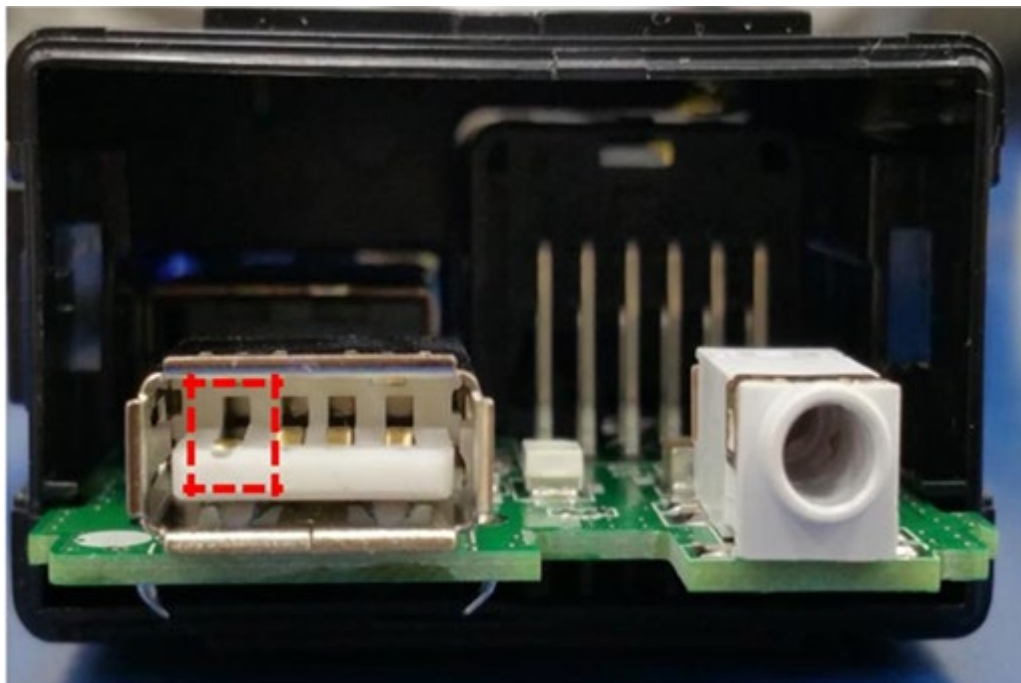
If the multi-box displays signs of wear, replace the multi-box.



Android Auto and Apple CarPlay Multi-box Guidelines

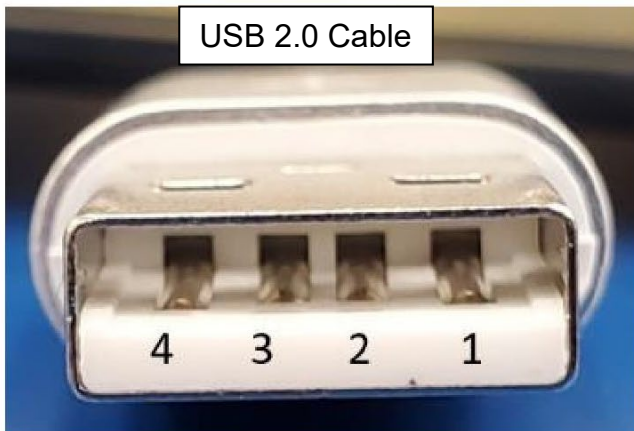
Android Auto and Apple CarPlay rely on the connection between the customer's phone and the vehicle head unit. Use the guidelines below to help prevent Android Auto/Apple CarPlay "No Trouble Found" (NTF) warranty claims:

- Have a known, good OEM phone cord (Android and Apple) to test connection between the multi-box and phone.
- Examine the customer's phone cord (ex. Micro-USB) for wear and tear.
- Examine the phone's connection for excess lint, corrosion or debris.
- Verify that the cable harness that attaches from the back of the multi-box and the head unit is securely connected.
- Inspect the vehicle's USB port for signs of wear. See reference photo below.



- If the customer's phone and USB cable connect properly in a known, good vehicle, replace the multi-box and not the head unit.

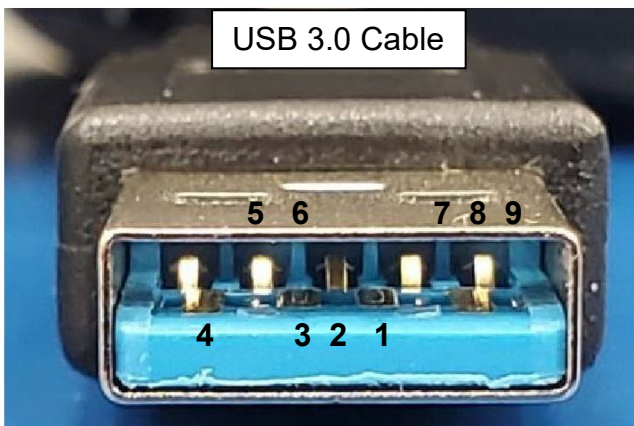
USB 2.0 and USB 3.0 Port Differences and Pin Configuration



1. VCC (pwr)
2. D- (data-)
3. D+ (data+)
4. GND



1. VCC (pwr)
2. D- (data-)
3. D+ (data+)
4. GND



1. VCC (pwr)
2. D- (data-)
3. D+ (data+)
4. GND
5. SSRX-
6. SSRX+
7. GND Drain
8. SSTX-
9. SSTX+