 <b>HYUNDAI</b> <b>Technical Service Bulletin</b>	GROUP <b>HVAC</b>	NUMBER <b>20-HA-003H</b>
	DATE <b>OCTOBER, 2020</b>	MODEL(S) <b>Sonata (DN8)</b>
<b>SUBJECT: A/C INOPERATIVE - ENGINE ROOM JUNCTION BOX REPAIR</b>		

**Description:** Certain 2020MY Sonata vehicles (DN8A) may experience an inoperative air conditioning system with cold air not blowing from the vents. This condition may be caused by an electrical terminal connection in the engine room junction box. Follow the procedure in this bulletin to inspect and if necessary, repair the terminal in the engine room junction box.



**Applicable Vehicles:**

Model	Production Date Range
2020MY Sonata (DN8) w/ 1.6T and 2.5L engines	SOP ~ February 28, 2020

**Warranty Information:**

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL P/N	NATURE CODE	CAUSE CODE
Sonata (DN8)	91400FF0	Engine Room J/box Terminal Pull Out	<b>0.8 M/H</b>	<b>91400-L00**</b>	<b>IB1</b>	<b>ZZ3</b>

**NOTES:**

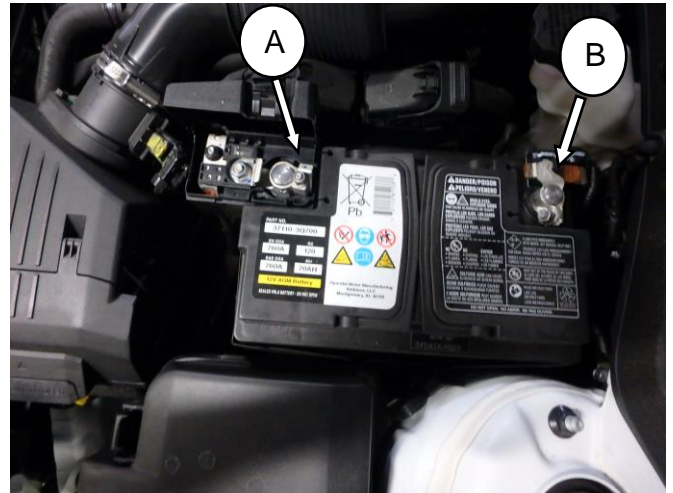
- Use the applicable Control Wiring Assembly Causal P/N according to the parts catalog.
- Normal Warranty Applies.

**Service Procedure:**

1. Open the hood to gain access to the fastening bolts and clips, and disconnect the positive (A) and negative (B) battery cables.
  - Be sure to record all radio presets prior to disconnecting the battery.

**\* NOTE**

Secure battery cable terminals after removal to avoid damages.



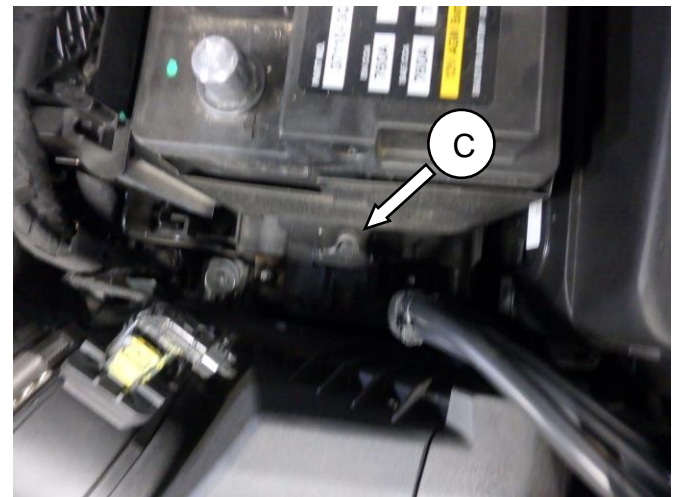
2. Remove the 14mm battery bracket bolt (C) and remove the battery from the vehicle.

**Tightening Torque:**

**lb-ft** • 37.6 - 50.6

**kgf.m** • 5.2 - 7.0

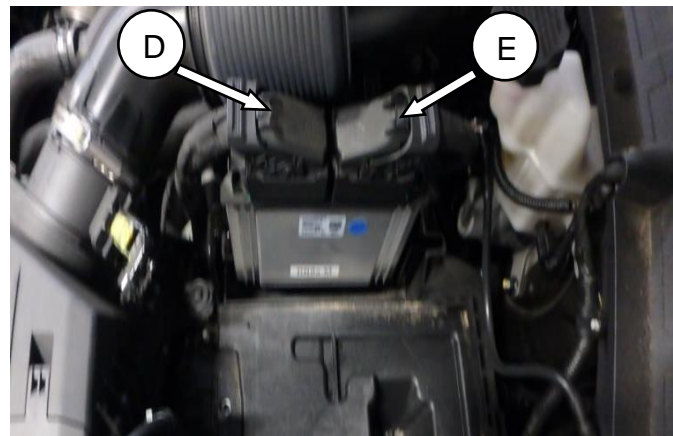
**N.m** • 51.0 - 68.6



3. Disconnect the Engine Control Module (ECM) connectors (D) and (E). After disconnection, remove the connector (E) clip from the back of the ECM.

**CAUTION**

Use of excessive force can cause bent pins. Secure wiring once disconnected.



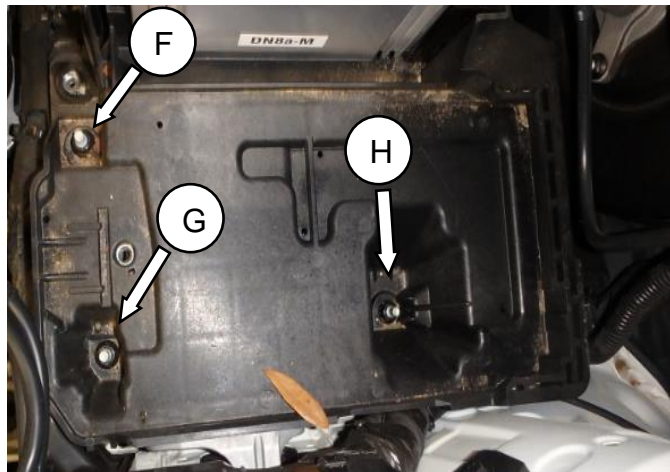
4. Remove the (F) 12mm bolt, and (G)(H) 10mm bolts to remove the battery tray from the vehicle.

**Tightening Torque:**

**lb-ft** • 13.0 - 18.1

**kgf.m** • 1.8 - 2.5

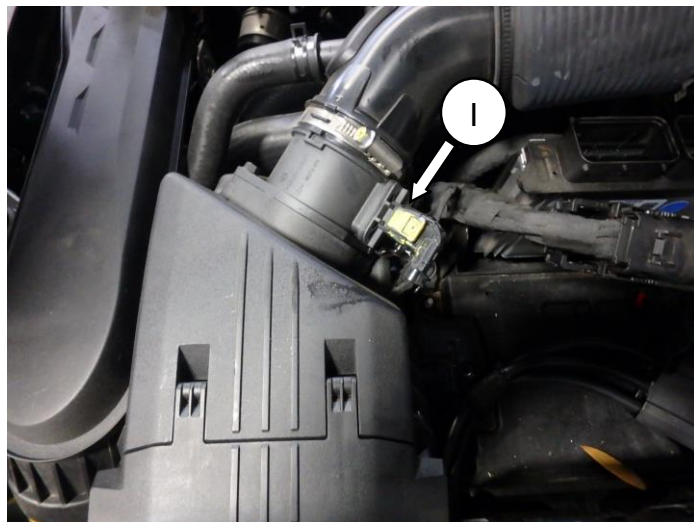
**N.m** • 17.7 - 24.5



5. Disconnect Mass Airflow Sensor (MAF) connector (I) and remove the clip.

**\* NOTE**

Secure connector to avoid damage.



6. Remove the air duct from the air cleaner box.





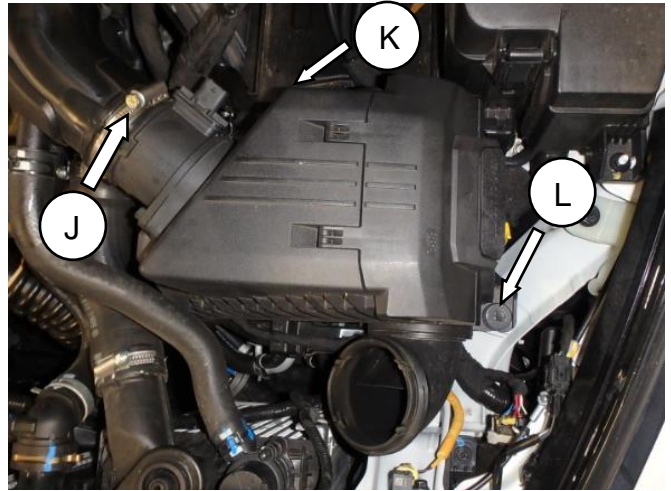
7. Loosen the 10mm clamp bolt (J), then remove the two additional 10 mm bolts (K)(L) to remove the air cleaner box.

**Tightening Torque:**

**lb-ft** • 13.0 - 18.1

**kgf.m** • 1.8 - 2.5

**N.m** • 17.7 - 24.5



8. Remove the two (2) 10mm bolts (M)(N) that secure the engine room junction box to the body of the vehicle.

**\* NOTE**

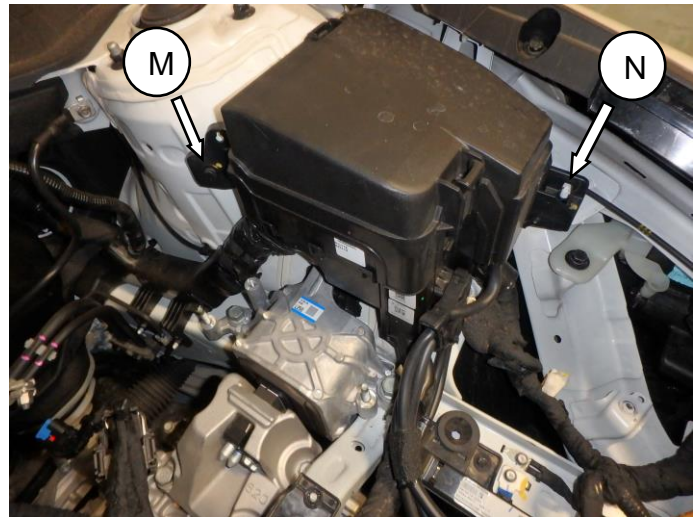
The junction box is not being removed completely from the vehicle. The bolts are removed for easier workability.

**Tightening Torque:**

**lb-ft** • 13.0 - 18.1

**kgf.m** • 1.8 - 2.5

**N.m** • 17.7 - 24.5



9. Split the electrical tape until the tie-down strap is visible to ease the tension on the wires. Remove the junction box cover.

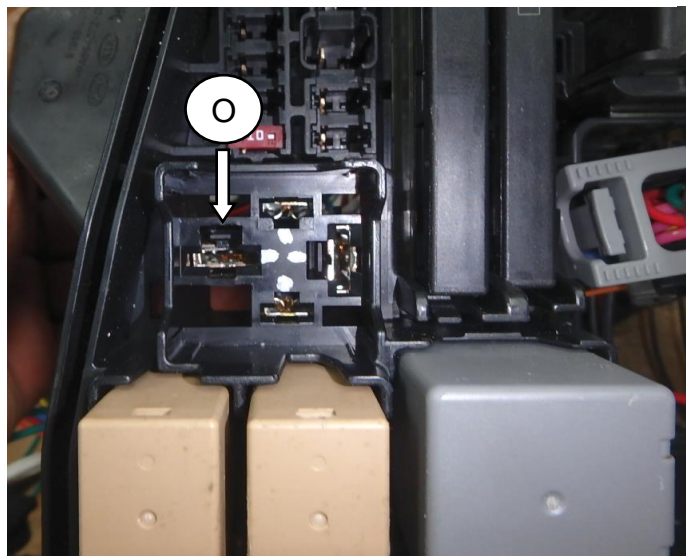
**\* NOTE**

Be sure to resecure the tie-down strap and use additional electrical tape to wrap that portion of the wire loom after repair.



10. In order to identify which terminal has the terminal pull out (TPO) condition, remove the A/C relay and then inspect each terminal. The terminal that is not secured by the locking tab is not fully inserted.

As an example, (O) in the picture shows the unseated terminal.

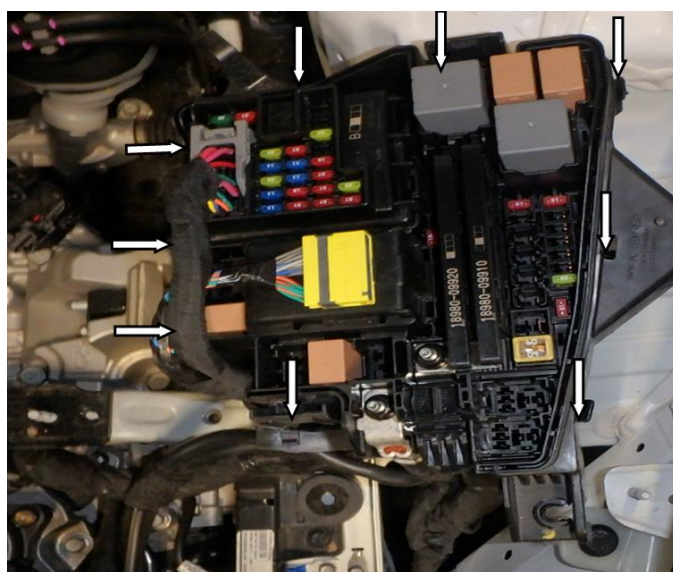


11. Release all 9 locking fingers around the junction box. Afterwards, pull apart the junction box.



**Caution**

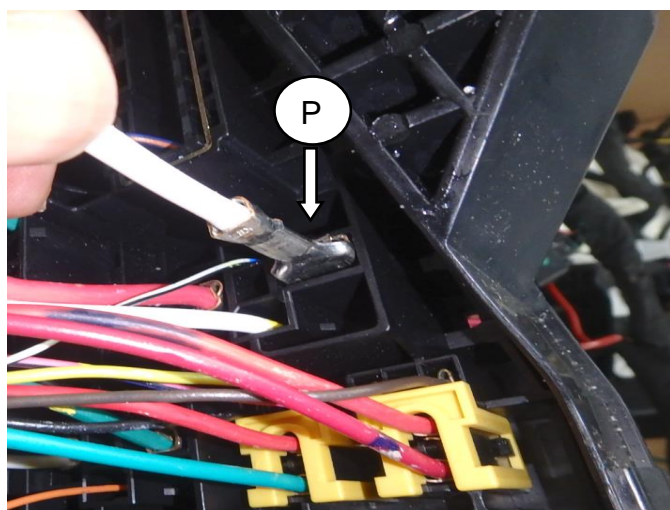
**Too much force applied on the locking fingers will cause breakage.**



12. Re-insert the unsecured terminal (P) and ensure it is fully secured in the cavity inside the junction box.

**\* Note**

**Vehicles from the affected production range will not have a secondary lock on the wiring.**



13. Reassemble vehicle in reverse order.
- Reprogram all radio presets noted in Step 1.



**Caution**

**Secure exposed wires before closing the junction box to avoid wire damages.**