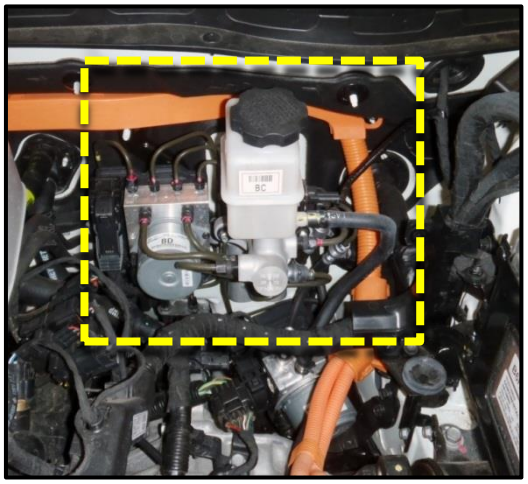
	GROUP **Chassis**	MODEL **2011-2013MY Optima Hybrid (TF HEV)**
	NUMBER **049**	DATE **December 2014**

TECHNICAL SERVICE BULLETIN

SUBJECT: OPTIMA HYBRID - NOISE DURING BRAKE ACTUATION

This bulletin provides information to address a brake noise concern on some Optima Hybrid (TF HEV) vehicles, produced from February 15, 2011 through December 8, 2013, which may exhibit a “squeaking” and/or “honking” noise when applying the brakes rapidly. Listen to the sound file below to become familiar with the particular brake noise and, if confirmed, follow the procedure outlined in this bulletin to resolve the concern.

TF HEV Brake Noise.mp3



WARNING

Caution labels are attached to all the high-voltage components. High-voltage cables and connectors are orange colored. Do not touch any of these high-voltage components, cables or connectors without proper protective gear and training.

File Under: <CHASSIS>

Circulate To: ☒ **General Manager** ☒ **Service Manager** ☒ **Parts Manager**

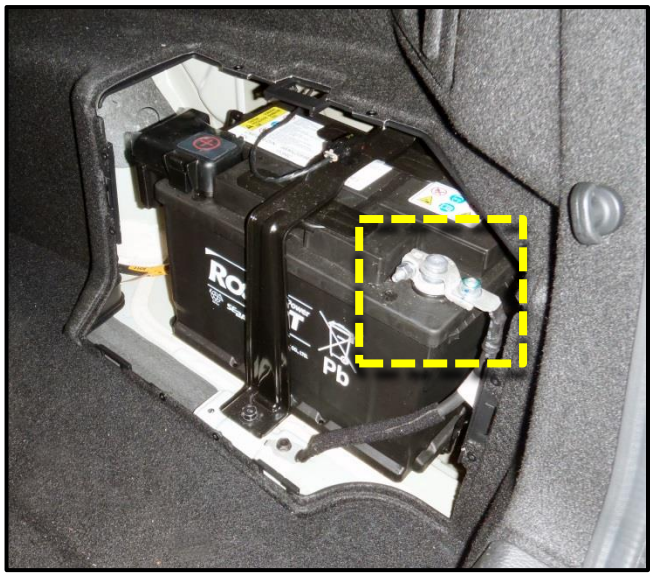
☒ **Service Advisor(s)** ☒ **Technician(s)** ☒ **Body Shop Manager** ☐ **Fleet Repair**

SUBJECT: OPTIMA HYBRID - NOISE DURING BRAKE ACTUATION

Service Procedure:

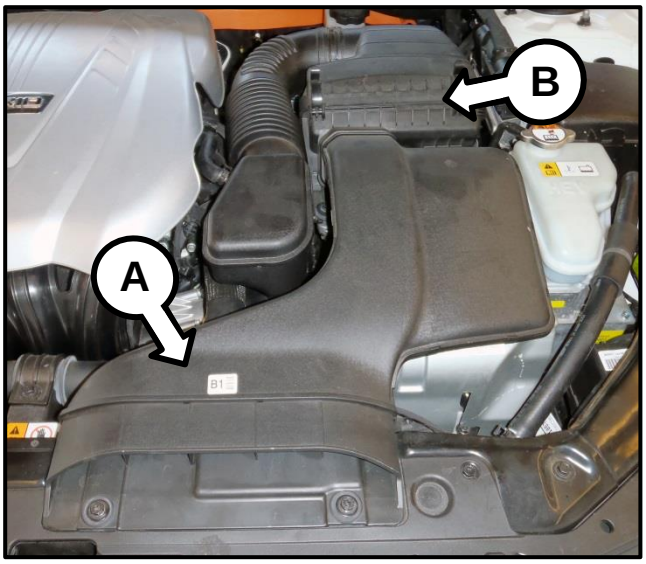
1. Record the customer's radio presets before performing the procedure.

2. Disconnect negative (-) terminal from the battery.

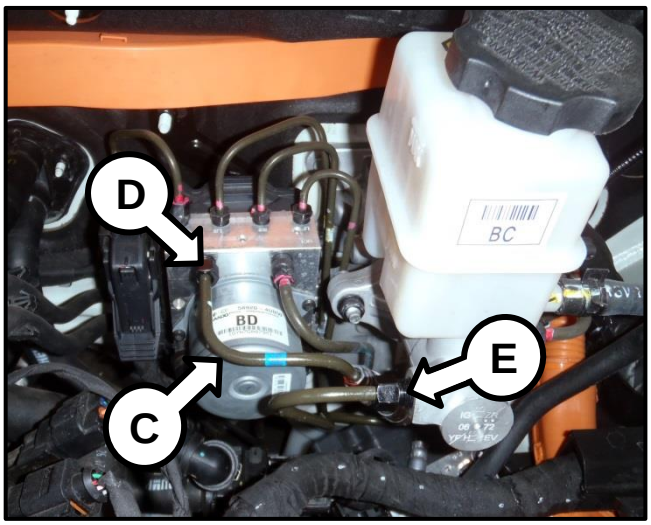


3. Use a brake pedal jack to push and hold the brake pedal down.

4. Open the hood and remove the air duct (A) and air cleaner box (B).

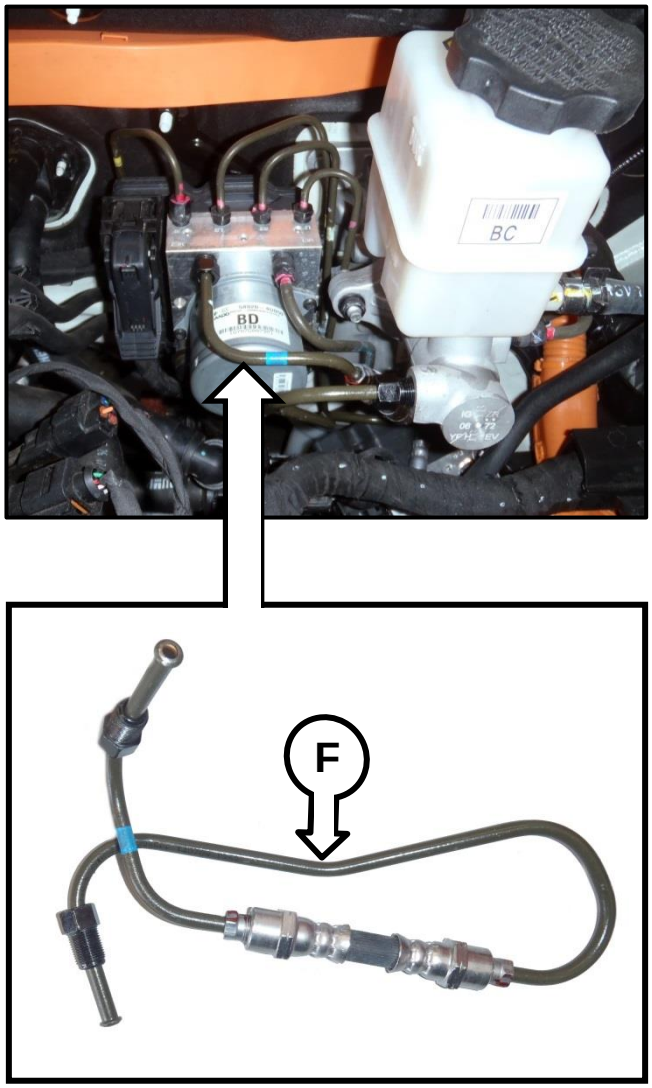


5. Remove the first brake line assembly (C) located between the the Electronic Stability Control (ESC) Module (D) and the Master Cylinder (E).

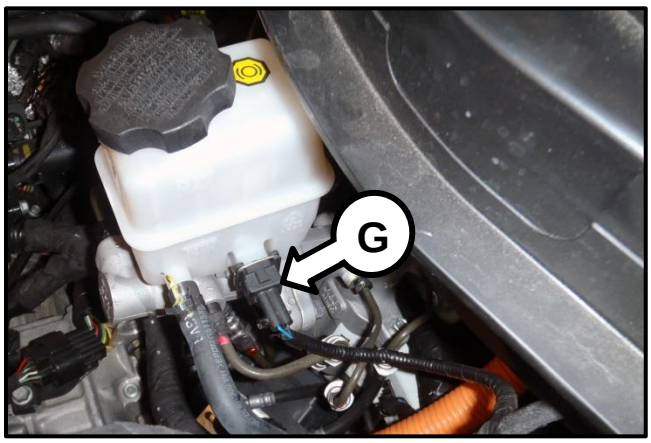


6. Install a new brake line assembly (F) between the ESC Module and the Master Cylinder, as shown.

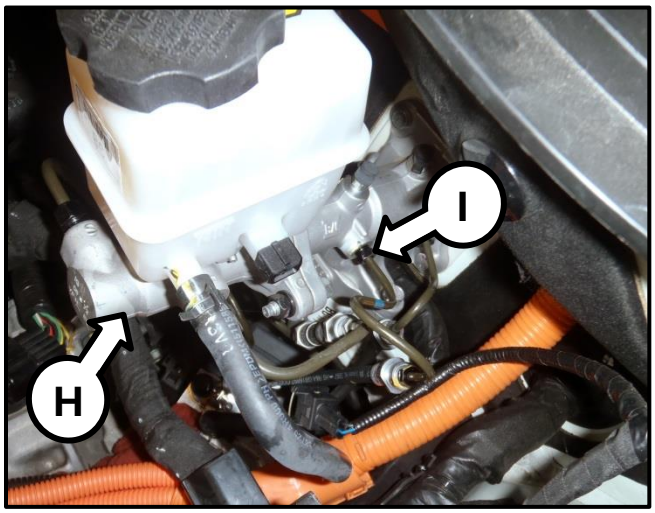
Tightening torque:
13.7 ~ 16.6 lb-ft (18.6 ~ 22.6 Nm)



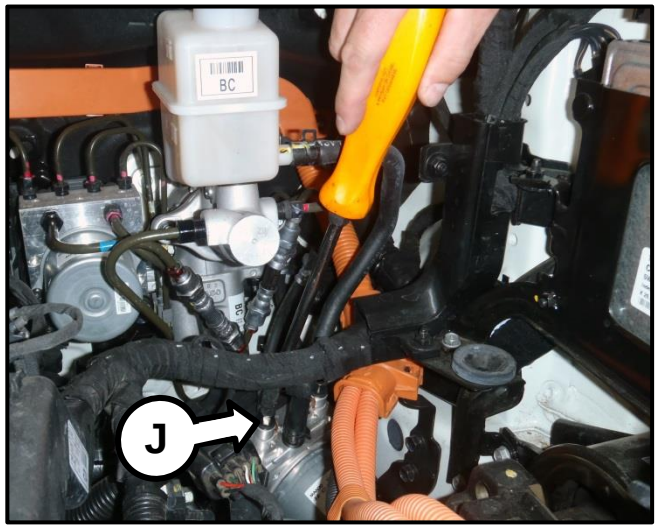
7. Disconnect the Brake Fluid Level Sensor connector (G).



8. Remove the first mounting location for the second brake line assembly (I) at the Master Cylinder (H).



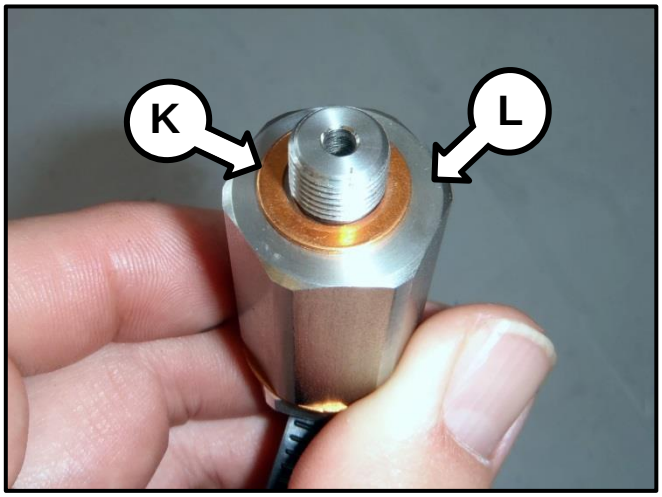
9. Continue removing the second brake line assembly at the Hydraulic Power Unit (HPU) (J).



10. Prior to installation, inspect the Damping Chamber (L) to make sure the crush washer (K) is present.

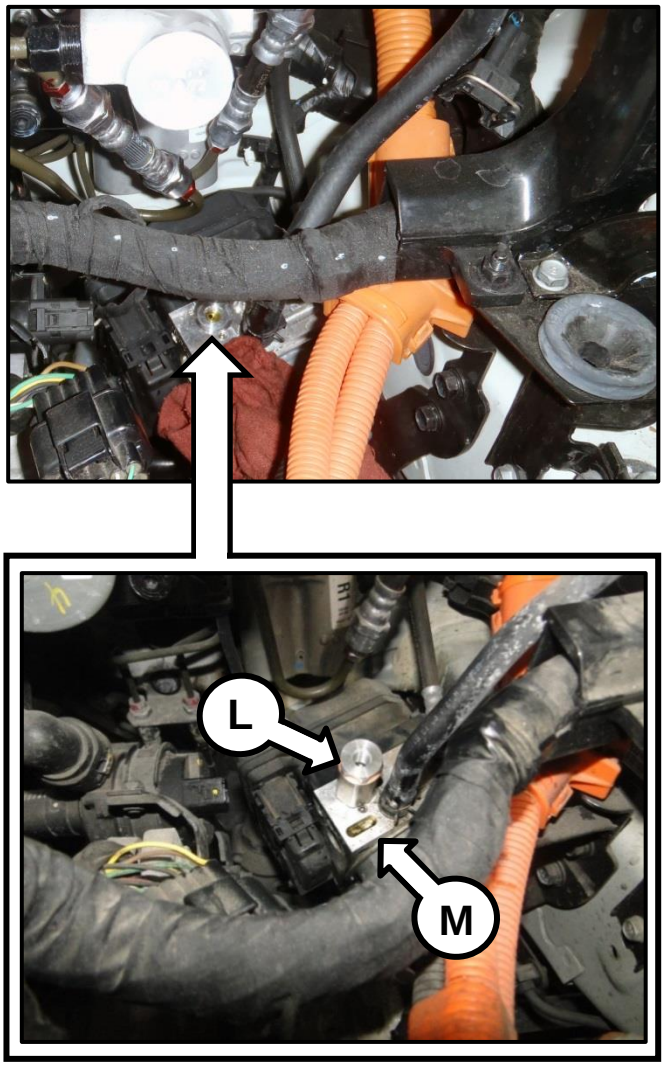
*** NOTICE**

If the crush washer (K) is misplaced, order P/N 17512-10000.



11. Install the Damping Chamber (L) onto the Hydraulic Power Unit (HPU) (M), as shown.

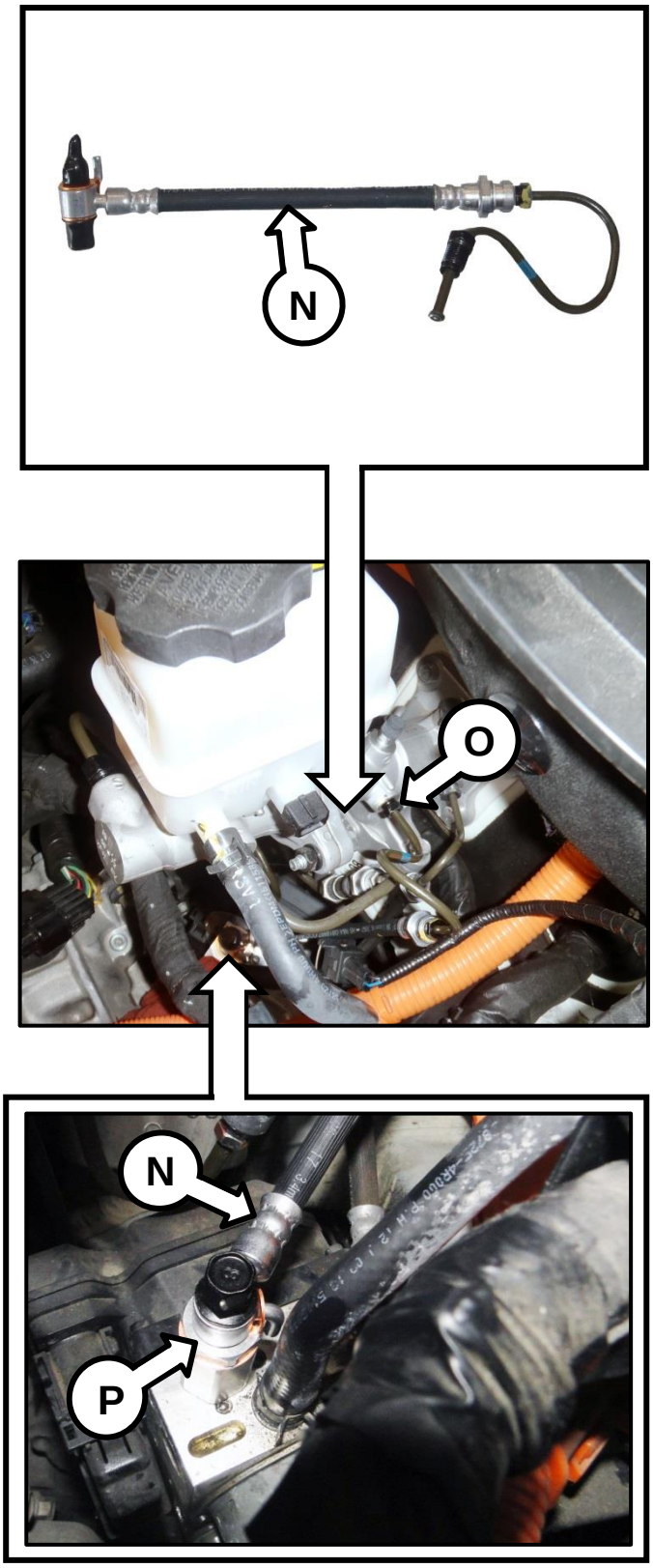
Tightening torque:
25.3 ± 3.6 lb-ft (34.3 ± 4.9 Nm)



12. Install the second brake line assembly (N) between the Master Cylinder (O) and the Damping Chamber (P) on the HPU (refer to step 9).

    Tightening Torque
    (O): 21.7 ~ 25.3 lb-ft (29.4 ~ 34.3 Nm)

    (P): 10.1 ~ 12.3 lb-ft (13.7~ 16.7 Nm)



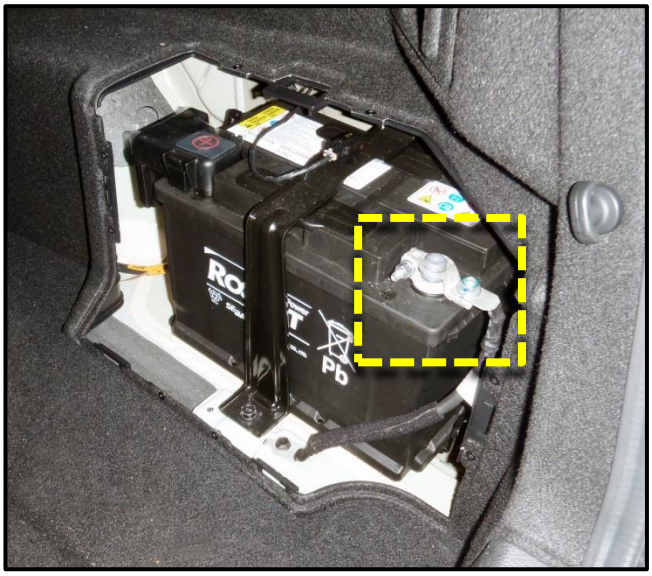
13. Reconnect the Brake Fluid Level Sensor connector (G) to the reservoir.

14. Remove the brake pedal jack (Q).

15. Perform the HEV brake bleed procedure per the applicable workshop manual on KGIS.

16. Reinstall all removed components by reversing the order of removal.

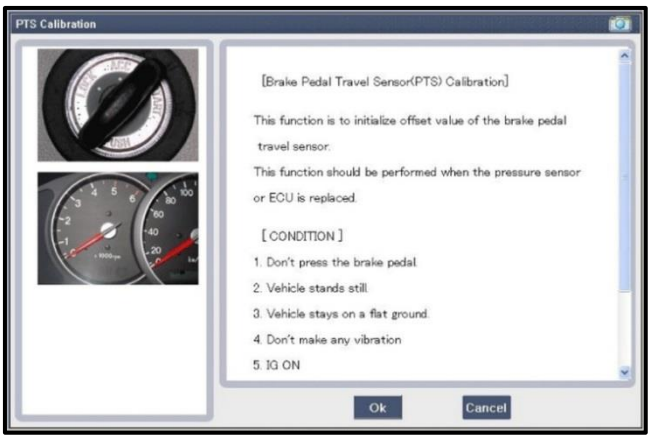
17. Reconnect the Negative (-) terminal to the battery.



18. After performing the brake bleed procedure, perform the PTS Calibration Test using GDS.

19. After calibration is complete, verify proper brake operation and confirm the noise is no longer present.

20. Restore the customer's radio presets as recorded on step 1.



SUBJECT: OPTIMA HYBRID - NOISE DURING BRAKE ACTUATION

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Optima Hybrid (TF HEV)	From February 15, 2011 through December 8, 2013

PART INFORMATION:

Part Name	Part Number	Qty.	Figure
HPU NOISE FIX KIT	58670-4R005FFF	1	
BRAKE FLUID DOT 3 HD	UM040 CH013	1	

WARRANTY INFORMATION:

Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	58718 4U000	1	N29	C99	(CHA 049) Hybrid Brake System Procedure	58670F00	1.1 M/H	58670 4R005FFF	1

Note: Use sublet code X1 for reimbursement of brake fluid ($5.11 maximum).