HYUNDAI Technical Service Bulletin	GROUP **RECALL**	NUMBER **21-01-081H**
	DATE **DECEMBER, 2021**	MODEL(S) **PALISADE (LX2)**

SUBJECT: PALISADE BRAKE MASTER CYLINDER (RECALL CAMPAIGN 212)

✶ IMPORTANT

***** Dealer Stock and Retail Vehicles *****

As required by federal law, dealer must not deliver new vehicles for sale or for lease to customers until all open recalls have been performed. Dealers must also perform all open recalls on used vehicles, demo, and rental vehicles prior to placing them into customer use and whenever an affected vehicle is in the shop for any maintenance or repair.

When a vehicle arrives at the service department, access Hyundai Motor America's "Vehicle Information" screen via WEBDCS to identify open Campaigns.

Description: This bulletin describes the procedure to drain brake fluid and replace the brake master cylinder on certain 21MY Palisade (LX2) models. The brake fluid in the subject vehicles may be contaminated with mineral oil causing the brake master cylinder inner cup seals to expand. Expanded brake master cylinder inner cup seals could reduce hydraulic pressure applied by the master cylinder resulting in reduced braking function at the wheels. The driver may experience longer brake pedal travel, change in pedal feel, and extended stopping distance, increasing the risk of a crash.

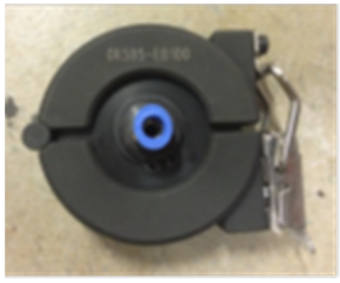
Applicable Vehicles: 21MY Palisade (LX2) vehicles produced from March 9, 2021 through March 31, 2021.

Circulate To: General Manager, Service Manager, Parts Manager, Warranty Manager, Service Advisors, Technicians, Body Shop Manager, Fleet Repair

Parts Information:

PART NAME / IMAGE	PART NUMBER	REMARKS
 Brake Master Cylinder	58510-C5070-QQH	
 DOT 4 Brake Fluid	00232-19053	12 bottles per QTY 1 of P/N 00232-19053 12 oz. / 355 mL per bottle 2 liters (6 bottles) required per vehicle

SST Information

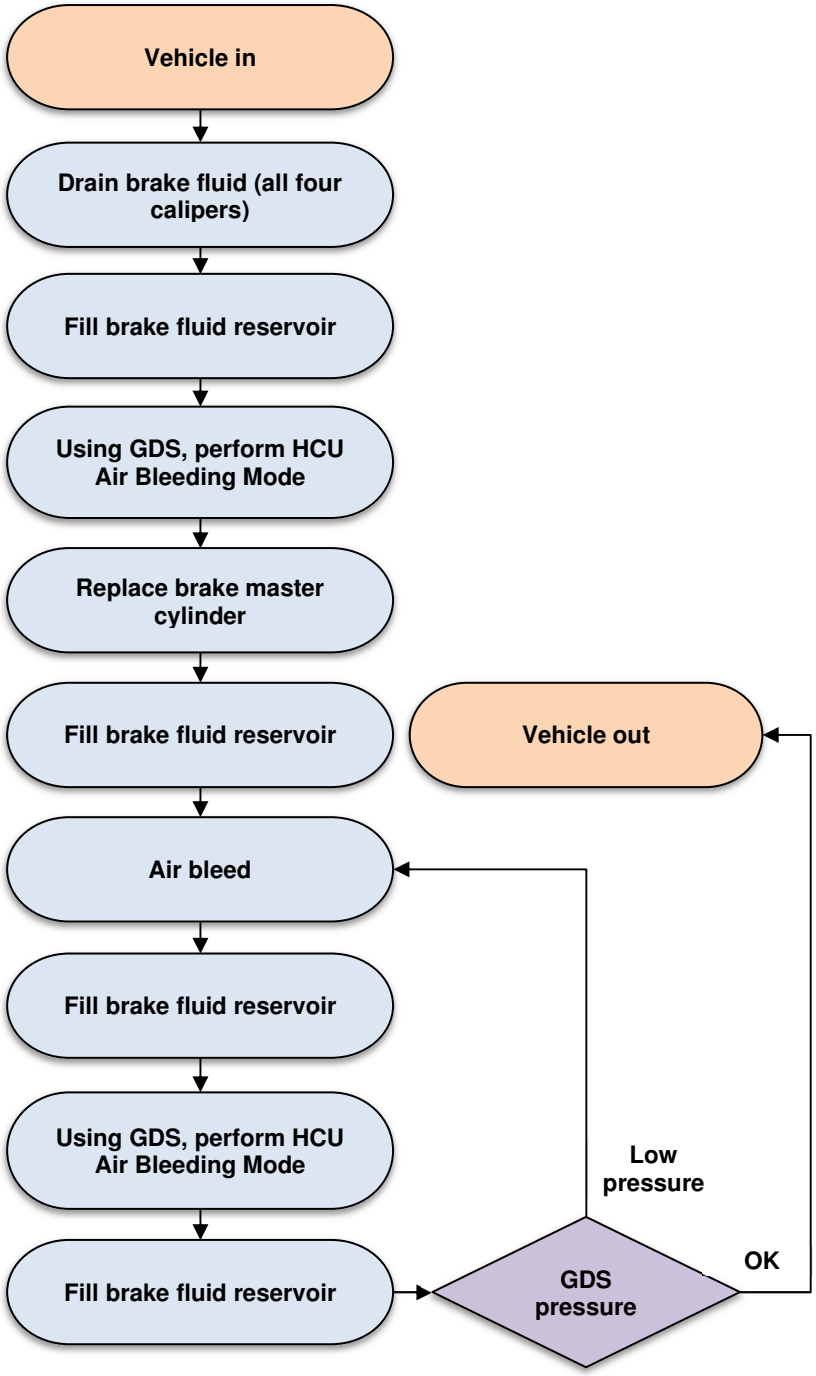
NAME	PART NUMBER	PHOTO	REMARKS
Air Bleeding Tool	09580-3D100		• Use as directed in the vehicle's shop manual or TSB(s). • Previously provided to all dealers as essential tools. • To order a replacement contact Bosch: 1-866-539-4248
Active Hydraulic Boost (AHB) Brake Air Bleeding Tool Adapter	09580-3D200		

Warranty Information:

MODEL	OP. CODE	OPERATION	OP. TIME	CAUSAL PART	NATURE	CAUSE
Palisade (LX2)	11D189R0	Brake oil and master cylinder replacement	1.4 M/H	58510-C5070-QQH	D75	ZZ3

NOTE 1: Submit Claim on Campaign Claim Entry Screen
NOTE 2: If a part that is not covered by Recall 212 is found in need of replacement while performing Recall 212 and the affected part is still under warranty, submit a separate claim using the same Repair Order. If the affected part is out of warranty submit a Prior Approval Request for goodwill consideration prior to performing the work.
NOTE 3: The incident part may be subject to callback through the normal Warranty Technical Center (WTC) parts return process.

Service Procedure: Flowchart Overview



Service Procedure: (Refer to the QR link for additional video information)

Hyundai Service Learning - Recall 212 Service Procedure

1. Place the vehicle on a lift with an assistant seated in the driver's seat.

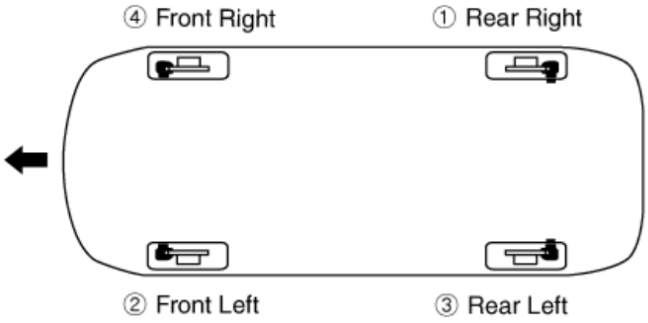
   Open the hood.

2. Discharge as much brake fluid as possible from the system according to the steps below.

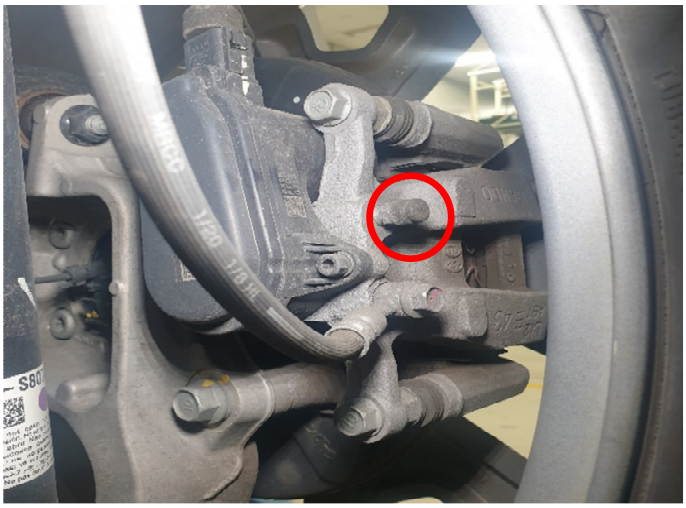
NOTICE

Perform this operation in this order:

1) **Rear Right**
2) **Front Left**
3) **Rear Left**
4) **Front Right**



3. Starting at the rear right caliper, remove the bleed screw cover.



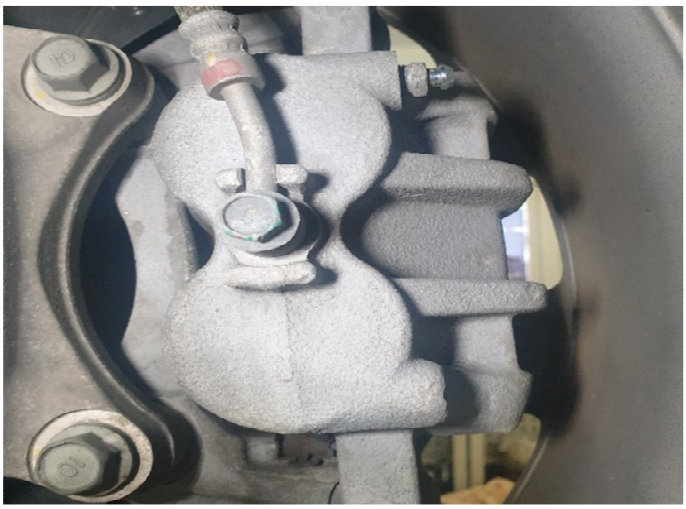
4. Connect one end of a bleed line to the bleeder screw, and the other end into a container to collect the brake fluid.

   Open the bleed screw and have the assistant inside the vehicle pump the brake pedal to discharge the brake fluid.

   Continue until the caliper is completely discharged of brake fluid.

   Close the bleeder screw.

5. Move to the next caliper (front left) and repeat step #4 to discharge the brake fluid.

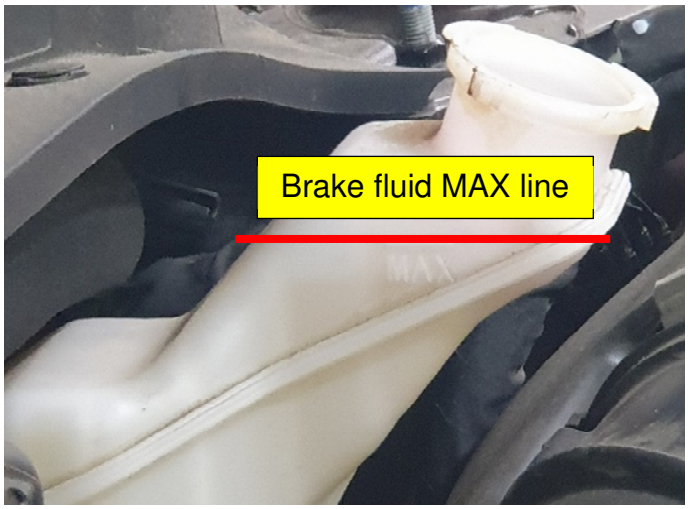


6. Repeat step #4 on the rear left caliper, then the front right.

7. Lower the vehicle and fill the brake fluid reservoir to the MAX line with DOT 4 brake fluid.

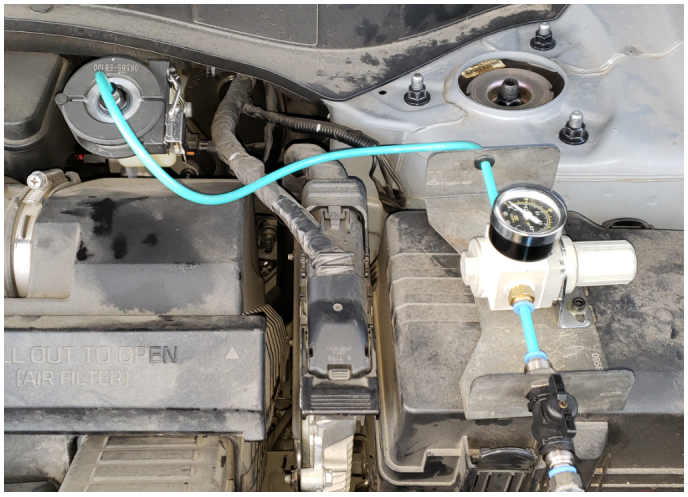
⚠ CAUTION

- ***Clean the area around the reservoir cap of any foreign substances before removing the cap.***
- ***Be careful not to contaminate brake fluid with dust or other foreign substances.***
- ***Do not allow brake fluid to come into contact with the vehicle body/paint. Immediately wipe any spills and flush with water if contact does occur.***



8. Connect the air bleeding tool and adapter SST to the master cylinder.

   Apply compressed air, and set the pressure to 3 bar (43.5 psi).



9. Connect a GDS to the vehicle and perform the HCU Air Bleeding Mode (under S/W Management → ABS/ESP).

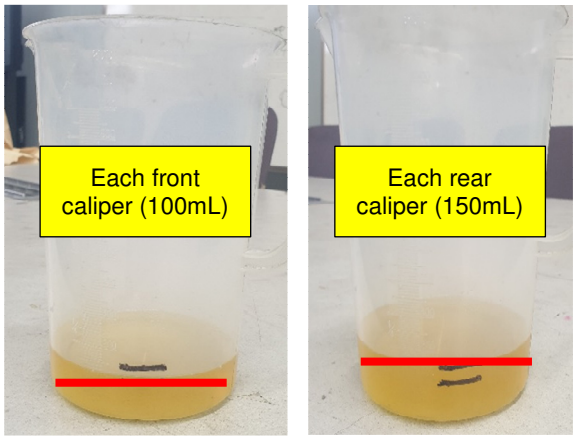
10. Follow the directions for the HCU Air Bleeding Mode procedure on the GDS.

By the completion of the procedure, each caliper should have discharged fluid in these amounts:

Each front caliper: 100 mL
Each rear caliper: 150 mL

By the completion of the procedure, the master cylinder reservoir should be completely emptied of any brake fluid.

If any brake fluid remains, repeat the HCU Air Bleeding Mode procedure until completely empty.



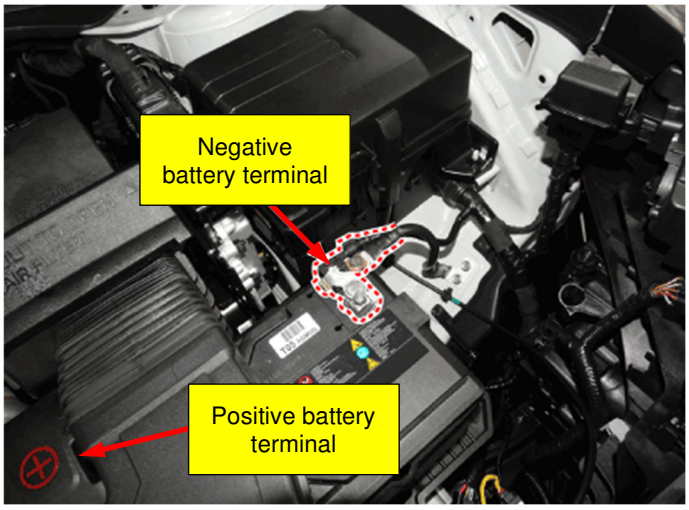
11. Record the customer's AM/FM/satellite radio station presets.

Turn the vehicle's ignition to OFF.

Remove the battery by disconnecting the negative battery terminal, then the positive terminal, then the tie-down clamp.

Remove the air cleaner assembly according to the service manual procedures:

Engine Mechanical System → Intake and Exhaust System → Air Cleaner



12. Disconnect the brake fluid level sensor connector.

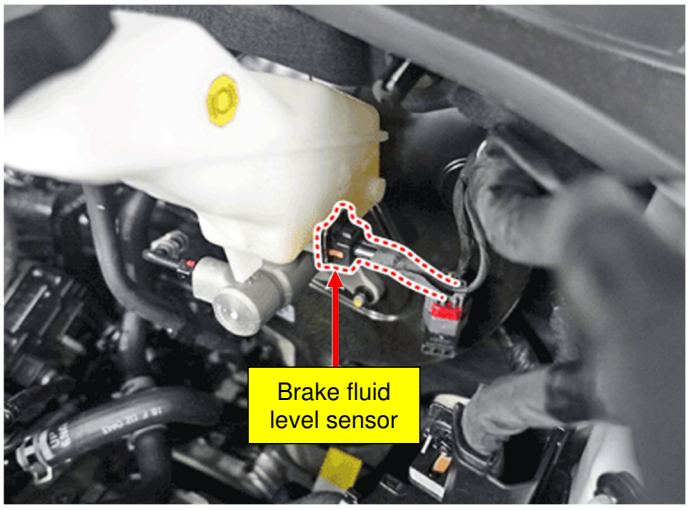
Remove and replace the brake master cylinder according to the service manual procedures:

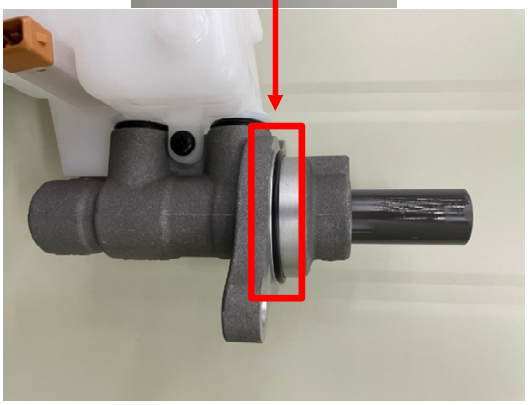
Brake System → Brake System → Master Cylinder

NOTICE

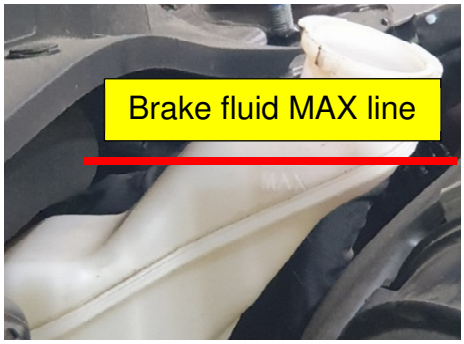
The replacement master cylinder includes a new, pre-installed O-ring.

Before installing the new master cylinder, be sure to remove the original O-ring if it is left attached to the brake booster.



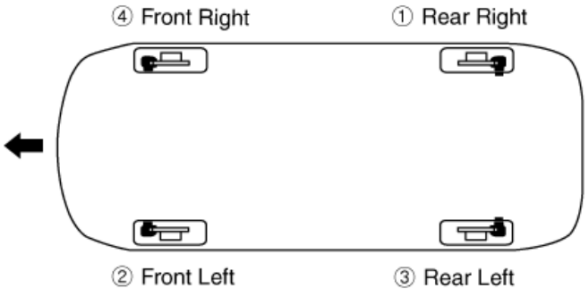


13. After installing the new master cylinder, fill the reservoir with DOT 4 brake fluid to the MAX line.



14. Bleed all four calipers starting with the rear right caliper. Connect a bleeding tube to the caliper bleed screw, leading to a collection container:

1. An assistant seated in the driver's seat presses and releases the brake pedal several times, then holds the pedal depressed.
2. With the pedal depressed, open the bleeder screw to release air/fluid into the container.
3. Repeat #1 and #2 until no bubbles remain in the line.
4. Move to the next caliper and repeat the process until air is removed from all 4 lines.



NOTICE

Refer to the service manual for brake bleeding procedures:

Brake System → Brake Bleeding Procedures

15. Fill the brake fluid reservoir to the MAX line.

Connect the air bleeding tool and adapter SST to the master cylinder.

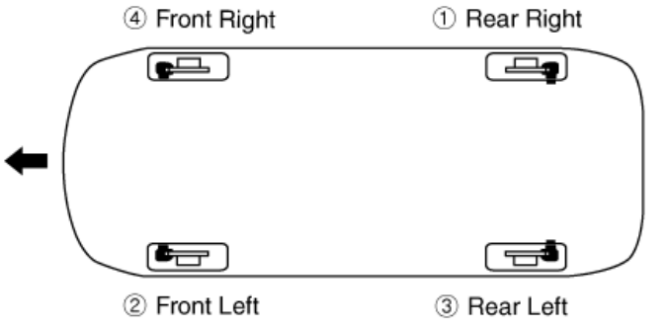
Apply compressed air and set the pressure to 3 bar (43.5 psi).

Connect a GDS to the vehicle and perform the HCU Air Bleeding Mode (under S/W Management → ABS/ESP).

Follow the directions for the HCU Air Bleeding Mode procedure on the GDS.

Repeat this process for all 4 calipers in the correct order.

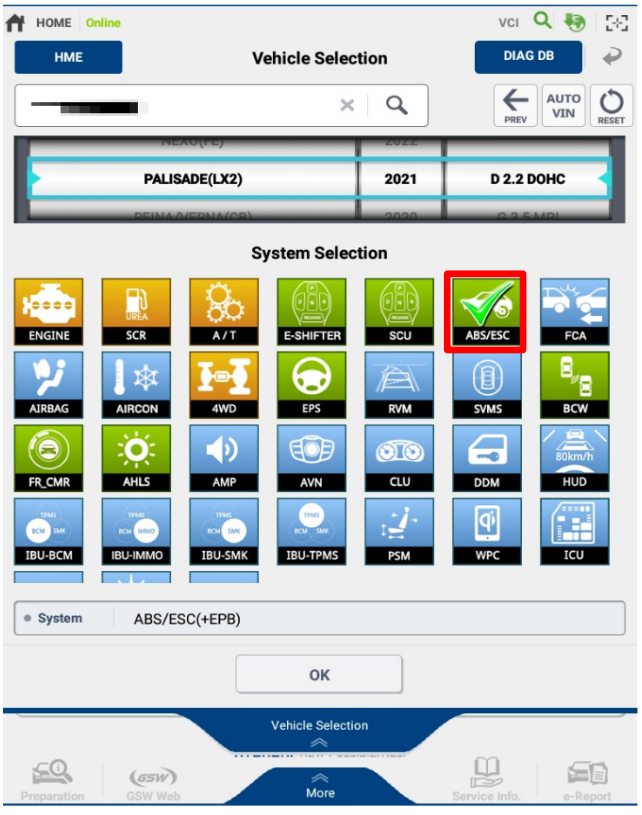
Refill the brake fluid reservoir to the MAX line.



16. Using the GDS, perform a brake system pressure check:

    From the starting screen, select **Data Analysis**.

17. Select **ABS/ESC** system.



18. Watch the three brake pressure parameters while gradually depressing the brake pedal:

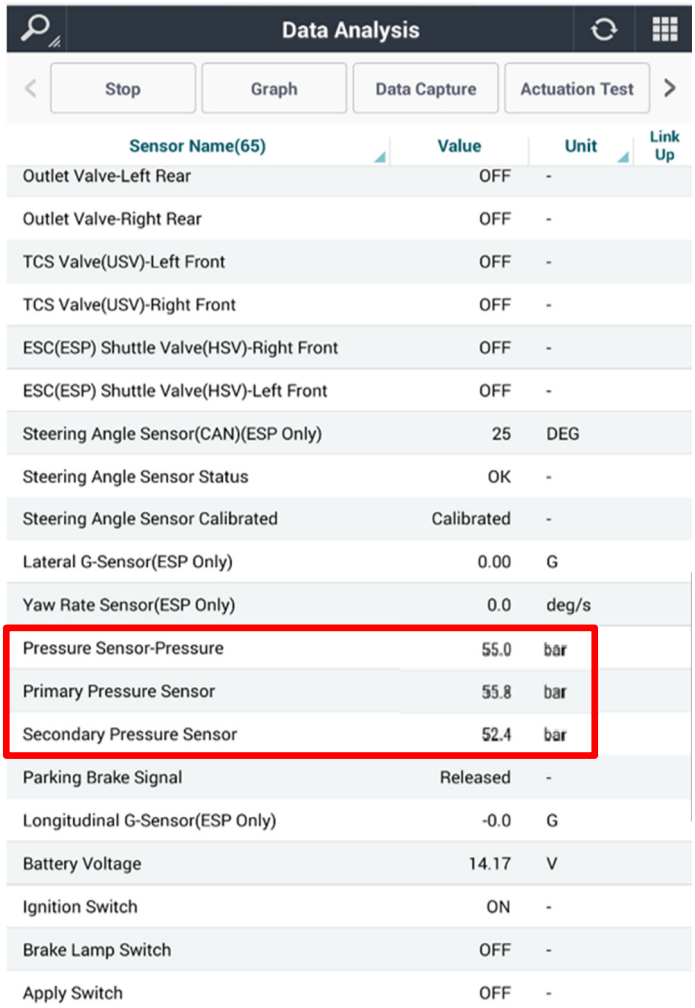
    1) *Pressure Sensor – Pressure*
    2) *Primary Pressure Sensor*
    3) *Secondary Pressure Sensor*

    This operation should take about 20 seconds. Be sure to press the pedal very firmly to reach full braking pressure.

    Confirm that the brake pressure values rise when gradually depressing the brake pedal.

    The service procedure is complete after verification of brake pressure.

    Reconnect the negative battery terminal and re-program the customer's AM/FM/satellite radio station presets.



NOTICE

If proper brake pressure/operation is not achieved, perform the brake bleeding process again for both Normal Brake System and ESC Brake System.

Refer to the service manual for brake bleeding procedures:

Brake System → Brake Bleeding Procedures