

2014 Kia Optima SX

2014 BRAKES Brake System - Optima HEV

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REPAIR PROCEDURES

OPERATION AND LEAKAGE CHECK

Check all of the following items:

Component	Procedure
Integrated Brake Actuation Unit (IBAU) (A) and Pressure Source Unit (PSU) (B)	Check brake operation by applying the brakes during a test drive. If the brakes do not work properly, check the IBAU and PSU. Replace IBAU and PSU as an assembly if it does not work properly or if there are signs of leakage.
Piston cup and pressure cup inspection (B)	Check brake operation by applying the brakes. Look for damage or signs of fluid leakage. Replace the IBAU as an assembly if the pedal does not work properly or if there is damage or signs of fluid leakage.
Brake hoses (C)	Look for damage or signs of fluid leakage. Replace the brake hose with a new one if it is damaged or leaking.
Caliper piston seal and piston boots (D)	Check brake operation by applying the brakes. Look for damage or signs of fluid leakage. If the pedal does not work properly, the brakes drag, or there is damage or signs of fluid leakage, disassemble and inspect the brake caliper. Replace the boots and seals with new ones whenever the brake caliper is disassembled.

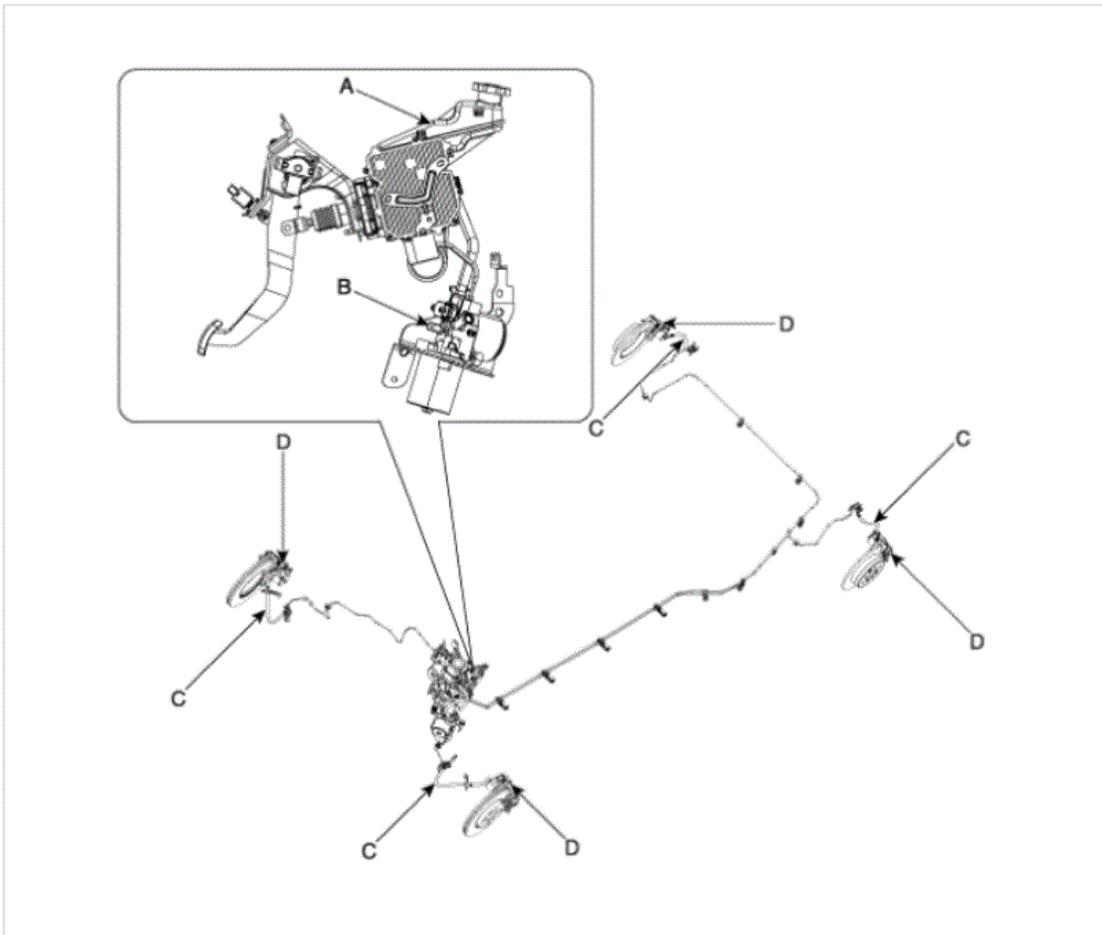


Fig. 1: Brake System Components

Courtesy of KIA MOTORS AMERICA, INC.

BLEEDING OF BRAKE SYSTEM

AHB Brake System Bleeding procedure

CAUTION:

- Do not reuse the drained fluid.
- Always use genuine DOT3/DOT4 brake Fluid. Using a non-genuine DOT3/DOT4 brake fluid can cause corrosion and decrease the life of the system.
- Make sure no dirt or other foreign matter is allowed to contaminate the brake fluid.
- Do not spill brake fluid on the vehicle, it may damage the paint; if brake fluid does contact the paint, wash it off immediately with water.
- When bleeding air, make sure the brake fluid is above 10mm starting from the "MIN" line.
- To remove the reservoir tank cap to refill the brake fluid, always

close the air shut-off valve of the SST.

Air Bleeding Tool Installation Procedure

CAUTION: To prevent the brake fluid reservoir tank from being damaged and ensure the safety of worker, set the pressure of the gauge to the standard value before installing the SST.

1. Before installing the SST on the vehicle, close the air shut-off valve (A) to adjust the pressure gauge to the standard value.

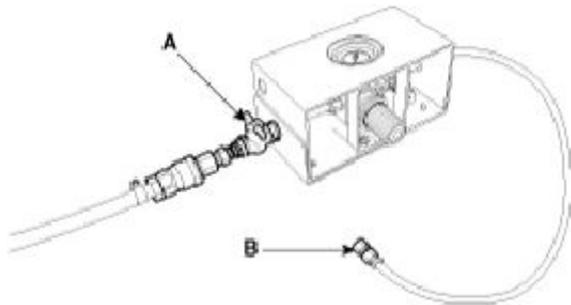


Fig. 2: Air Shut-Off Valve & Plug
Courtesy of KIA MOTORS AMERICA, INC.

CAUTION: For safety of worker and correct pressure setting, make sure that the plug (B) is installed correctly.

2. After connecting an air hose and opening the air shut-off valve (A), adjust the pressure gauge (B) with the pressure adjuster (C) to the standard value.

Standard pressure value:

0.3 ~ 0.5 MPa (43.5 ~ 72.5 psi)

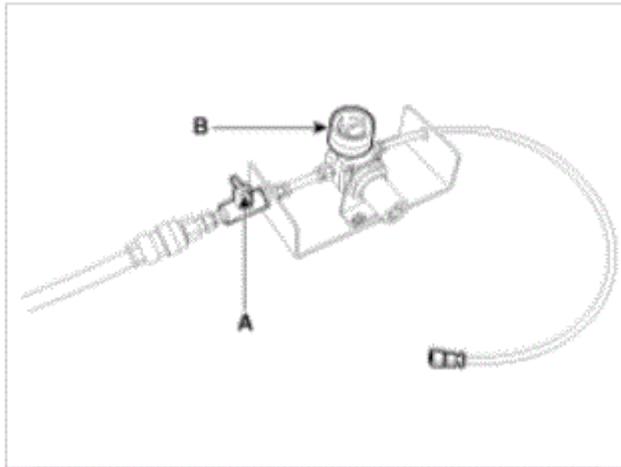


Fig. 3: Air Shut-Off Valve, Pressure Gauge & Pressure Adjuster
Courtesy of KIA MOTORS AMERICA, INC.

3. close the air shut off valve (A) and remove the plug (B).

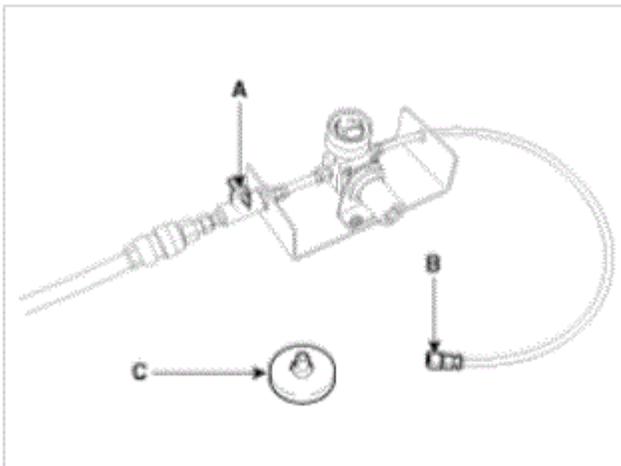


Fig. 4: Shut Off Valve & Plug
Courtesy of KIA MOTORS AMERICA, INC.

CAUTION: For safety of worker, make sure that the air shut off valve is closed and remove the plug.

4. Remove the brake reservoir tank cap.
5. Install the cap (A) of SST (0k585-E8100) on the reservoir tank.



Fig. 5: Bleeder Tool Cap
Courtesy of KIA MOTORS AMERICA, INC.

6. Make sure the check valve (A) is closed and connect SST (09580-3D100) (A) to the adapter (B).

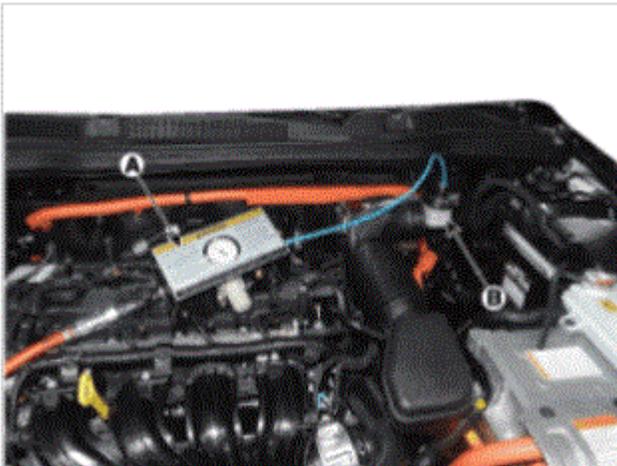


Fig. 6: Check Valve & Adapter
Courtesy of KIA MOTORS AMERICA, INC.

Air Bleeding Tool Removal Procedure

1. To remove the SST (09580-3D100) from the vehicle, close the air shut-off valve (A) first.