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2020.0 DEFENDER (LE), 206-00

BRAKE SYSTEM – GENERAL INFORMATION

BRAKE SYSTEM BLEEDING FIXED CALIPER (G2344702)

GENERAL PROCEDURES

MATERIALS

NAME	SPECIFICATION
Brake Cleaner	3U7J-2C410-AA

GENERAL EQUIPMENT

EQUIPMENT NAME
Brake/clutch system pressure bleeder/filler
Jaguar Land Rover approved diagnostic equipment

CHECK

⚠ CAUTION:

Brake fluid will damage paint finished surfaces. If spilled, immediately remove the fluid and clean the area with water.

△ NOTE:

- This procedure contains some variation in the illustrations depending on the vehicle specification, but the essential information is always correct.
- This procedure contains illustrations showing certain components removed to provide extra clarity.
- The assistance of another technician will be required during the bleed procedure.

1. Connect the Jaguar Land Rover (JLR) approved diagnostic equipment and set the Integrated Power Brake module to the assembly mode.

General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

2. Raise and support the vehicle on a suitable 2 post lift.
Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).

3. Check that the brake fluid lines are secure and that there are no signs of a brake fluid leak. If a brake fluid leak is detected, investigate and rectify the cause of the leak before bleeding the brakes.

4. Remove the brake fluid reservoir cover from the cowl panel.

5.
 - Clean the brake fluid reservoir cap and surrounding area.
Material: [Brake Cleaner \(3U7J-2C410-AA\)](#)
 - Remove the brake fluid reservoir cap and top up the fluid as required.
Refer to: [Specifications](#) (206-00 Brake System - General Information, Specifications).

ADJUSTMENT

⚠ CAUTION:

Brake fluid will damage paint finished surfaces. If spilled, immediately remove the fluid and clean the area with water.

NOTE:

- This procedure contains some variation in the illustrations depending on the vehicle specification, but the essential information is always correct.
- This procedure contains illustrations showing certain components removed to provide extra clarity.
- The assistance of another technician will be required during the bleed procedure.

1.

CAUTION:

- Make sure that the operating pressure of the equipment does not exceed 3 Bar (43.5 psi).
- It is imperative that the brake fluid level does not drop below the minimum mark on the brake fluid reservoir during the bleed procedure.

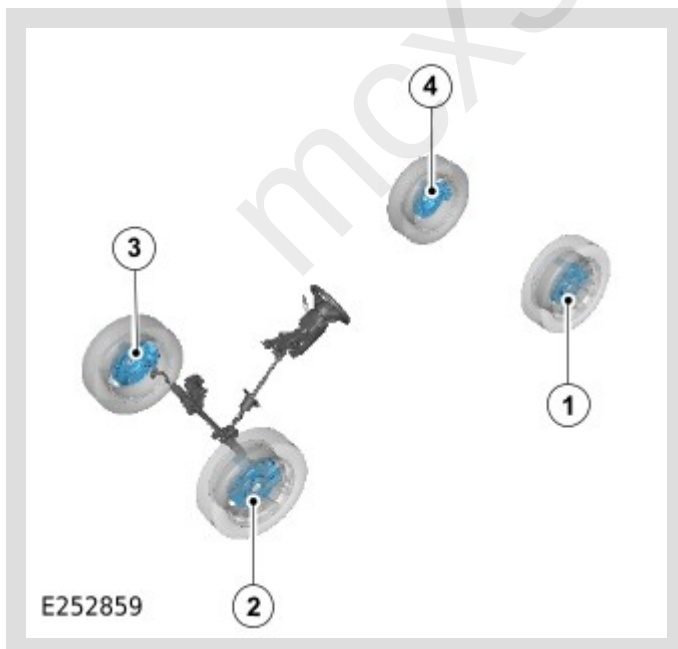
Install the pressure bleed equipment to the brake fluid reservoir.

General Equipment: [Brake/clutch system pressure bleeder/filler](#)

2.

WARNING:

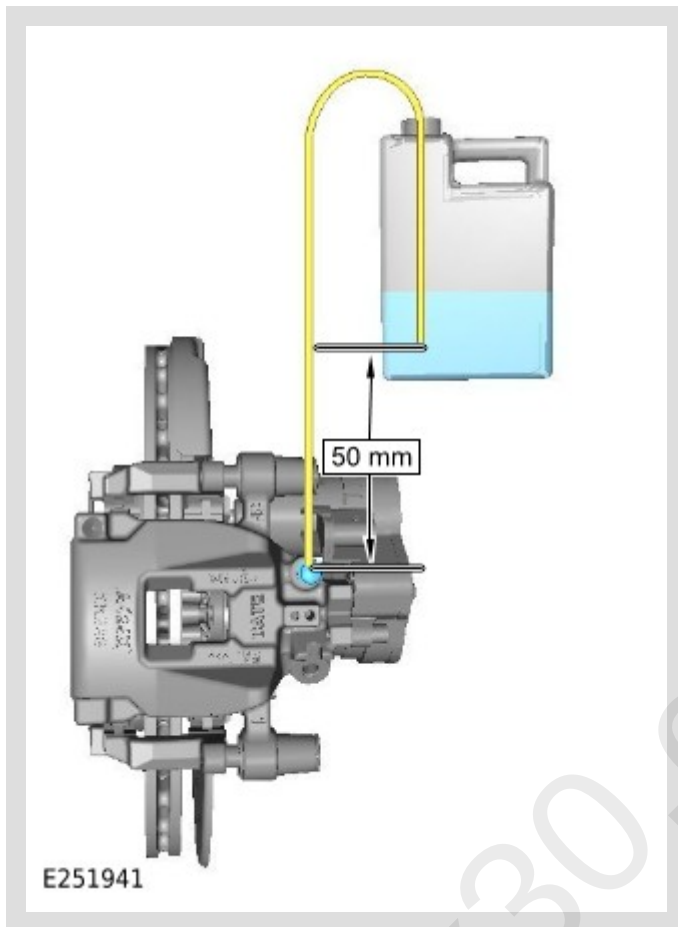
- The shown bleed sequence must be followed if the vehicle is Left Hand Drive (LHD) or Right Hand Drive (RHD).



- Remove all the brake caliper bleed screw caps and clean the surrounding area.

NOTE:

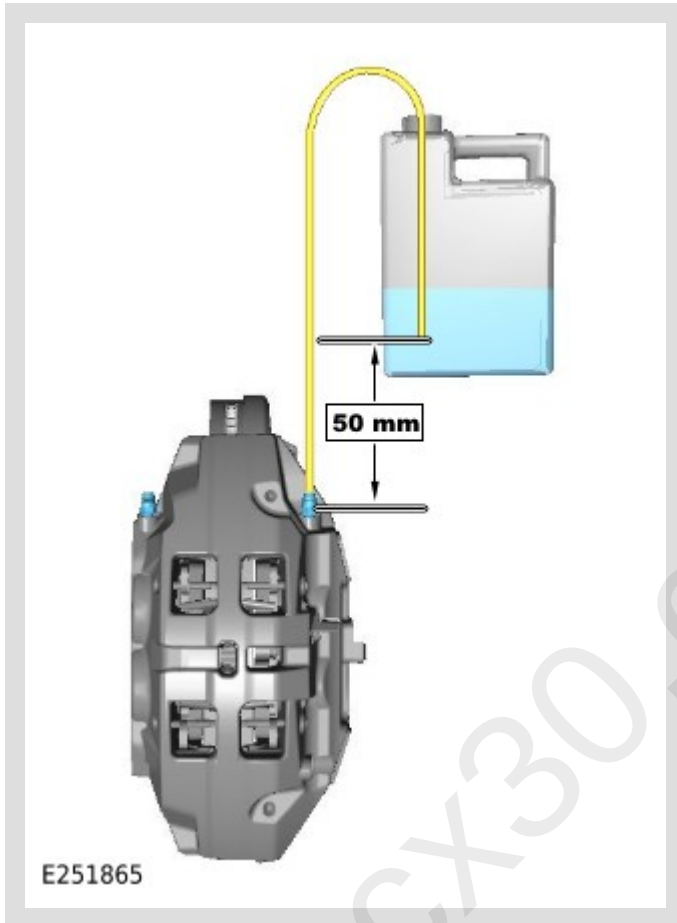
The assistance of another technician will required during the bleed procedure.



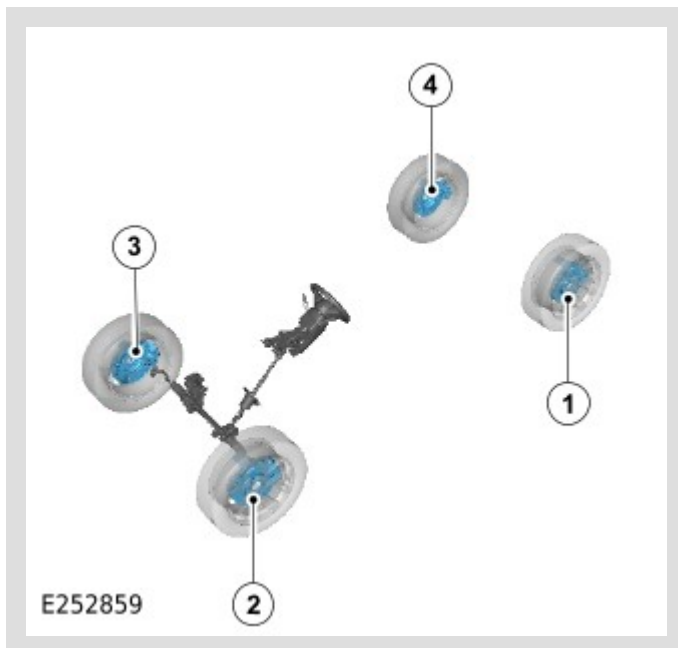
- Connect the bleed hose to the bleed screw of caliper **number 1** shown above in the illustration.
- Immerse the free end of the bleed hose into the bleed bottle containing a small amount of fresh brake fluid.
- Support the bleed bottle so that the free end of the bleed hose is a minimum of 50 mm above the bleed screw during the bleed procedure.
- Apply light pressure to the brake pedal and open the bleed screw.
- Press the brake pedal at a rate of approximately 3 seconds to fully pressed.
- Close the bleed screw.
- Release the brake pedal.
- Wait approximately 4 seconds.
- Repeat this procedure until all the air has been expelled and fresh brake fluid can be seen in the bleed hose.

 NOTE:

- The assistance of another technician will required during the bleed procedure.
- High performance brake calipers have 2 bleed screws, in this instance the inner bleed screw should always be bled first.



- Connect the bleed hose to the bleed screw of brake caliper **number 2** shown above in the illustration.
- Immerse the free end of the bleed hose into the bleed bottle containing a small amount of fresh brake fluid.
- Support the bleed bottle so that the free end of the bleed hose is a minimum of 50 mm above the bleed screw during the bleed procedure.
- Apply light pressure to the brake pedal and open the bleed screw.
- Press the brake pedal at a rate of approximately 3 seconds to fully press.
- Close the bleed screw.
- Release the brake pedal.
- Wait approximately 4 seconds.
- Repeat this procedure until all the air has been expelled and fresh brake fluid can be seen in the bleed hose.



- Repeat **step 4** on brake caliper **number 3** shown in the illustration.
- Repeat **step 3** on brake caliper **number 4** shown in the illustration.

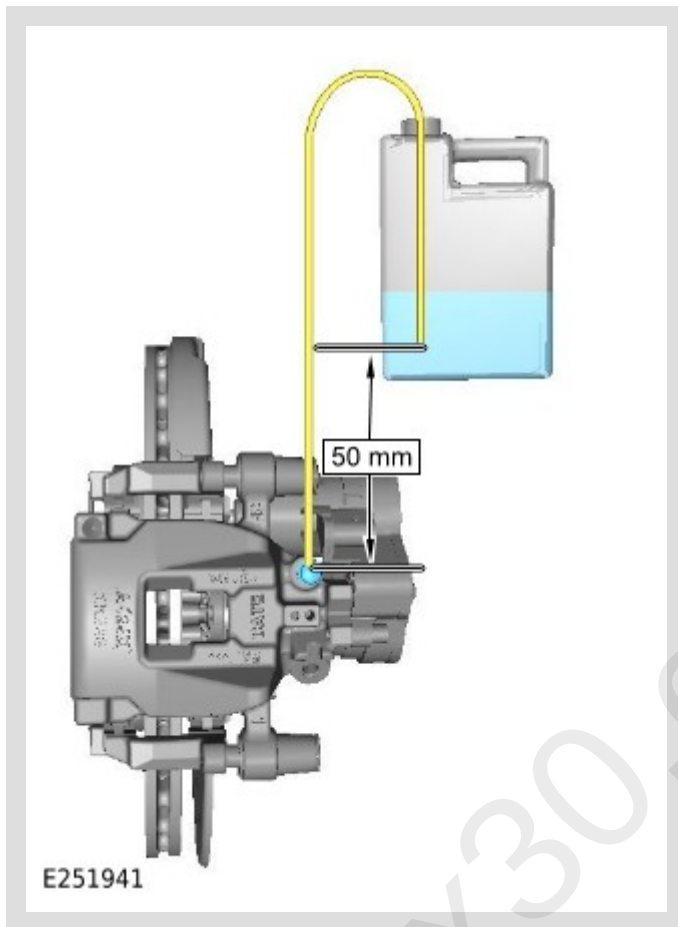
**WARNING:**

- The shown bleed sequence must be followed if the vehicle is Left Hand Drive (LHD) or Right Hand Drive (RHD).

Connect the bleed hose again to the bleed screw of caliper **number 1** shown in the illustration.

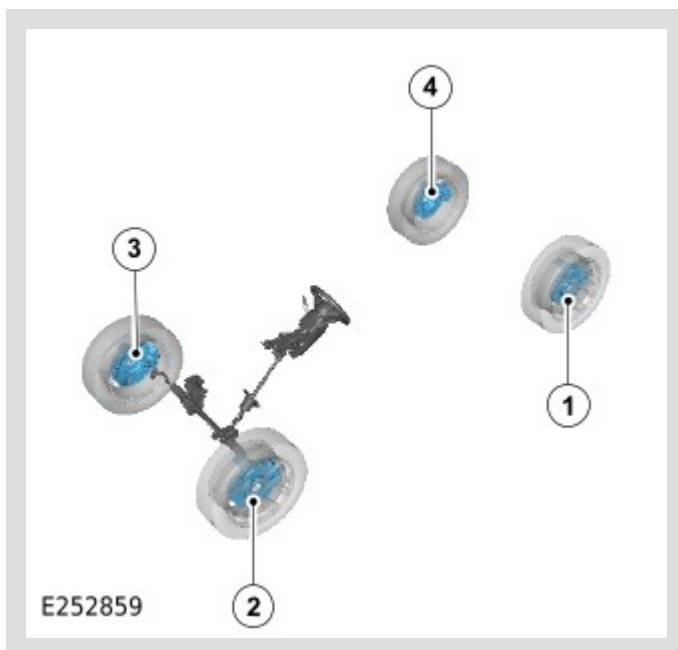
⚠ CAUTION:

The following sequence must be completed a minimum of 5 times for each of the Electric Park Brake (EPB) calipers.



- Immerse the free end of the bleed hose into the bleed bottle containing a small amount of fresh brake fluid.
- Support the bleed bottle so that the free end of the bleed hose is a minimum of 50 mm above the bleed screw during the bleed procedure.
- Open the bleed screw and turn the EPB on with the EPB switch.
- Close the bleed screw and turn the EPB off with the EPB switch.
- Repeat the EPB bleed cycle.
- Wait approximately 4 seconds.

7.



Repeat **step 6** on brake caliper **number 4** shown in the illustration.

8.

- Tighten all the bleed screws.
Torque: 15Nm
- Install all the bleed screw caps.

9.

- Remove the pressure bleed equipment from the brake fluid reservoir.
- Top up the fluid as required and install the brake fluid reservoir cap.
Refer to: [Specifications](#) (206-00 Brake System - General Information, Specifications).

10.

Connect the Jaguar Land Rover (JLR) approved diagnostic equipment and complete the 'Leakage And Air Monitoring' procedure.
General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

11.

Use the JLR approved diagnostic equipment and disable the Integrated Power Brake module assembly mode.
General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)

12.

- Close the hood and all the doors and lock the vehicle.
- Wait for the hazard warning lamp switch back light to extinguish.
- Wait a further 20 seconds.

13.

- Unlock the vehicle.
- Turn the ignition on.
- Assess the brake pedal both statically and dynamically.
- If required, use the JLR approved diagnostic equipment to read and clear any Diagnostic Trouble Code (s) (DTC).
- Check the system for brake fluid leaks.

14.

Install the brake fluid reservoir cover to the cowl panel.

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