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Model Year: 2008	Model: LS460	Doc ID: RM000002MCW007X
Title: BRAKE: BRAKE FLUID: REPLACEMENT (2008 LS460)		

REPLACEMENT


CAUTION:

The Techstream must be used with air bleeding and fluid replacement. If not used, the air bleeding and fluid replacement will be incomplete, which is hazardous and may lead to an accident.

NOTICE:

- When replacing the brake fluid, replace the front and rear brake fluid as a set.
- Perform fluid replacement with the shift lever on P and the parking brake set.
- Perform fluid replacement while maintaining the brake fluid level between the MIN/MAX level on the brake fluid reservoir.
- As brake fluid may overflow when bleeding air, do not place the fluid can on the reservoir filler opening.
- Air bleeding will be difficult if the following occurs: 1) the brake fluid reservoir's No. 2 brake actuator hose (the hose between the brake accumulator pump and brake fluid reservoir) is lowered into the fluid and air enters the hose; and 2) during the fluid replacement procedure, air enters the brake accumulator pump while operating the pump motor.
- While performing fluid replacement, the accumulator pressure drop may cause a buzzer to sound. As there is no problem, continue with the fluid replacement.
- During fluid replacement, DTCs for pressure sensor malfunctions, etc. may be stored. After fluid replacement and if instructed in the procedures, clear the DTCs.
- Do not allow brake fluid to contact the vehicle's paint surfaces. If contact occurs, clean it off immediately.

HINT:

- For air bleeding, refer to the PRECAUTION .
- Air bleeding with the Techstream cannot be performed when the engine switch is on (IG) or when the parking brake is not operating (electric parking brake operation signal is not input into skid control ECU).
- While performing air bleeding, a display and navigation assembly (with HDD navigation system) or multi-display (without HDD navigation system) malfunction warning is displayed. However, there is no malfunction. After performing air bleeding, erase the warning using the screen's menus.

1. FILL RESERVOIR WITH BRAKE FLUID

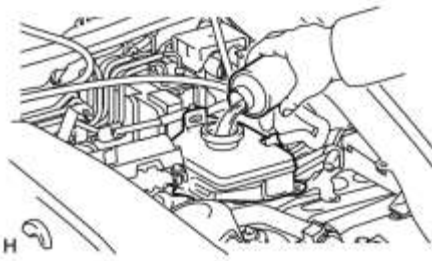
NOTICE:

- As brake fluid may overflow when bleeding air, do not place the fluid can on the reservoir filler opening.
- If brake fluid leaks onto any painted surface, clean it off completely.

(a) Add brake fluid into the reservoir.

Fluid:

SAE J1703 or FMVSS No. 116 DOT 3



2. REPLACE BRAKE FLUID

CAUTION:

The Techstream must be used during fluid replacement. If not used, the fluid replacement will be incomplete, which is hazardous and may lead to an accident.

NOTICE:

- Perform fluid replacement while maintaining the brake fluid level between the MIN/MAX level on the brake fluid reservoir.
- As brake fluid may overflow, do not place the fluid can on the reservoir filler opening.

- (a) Connect the Techstream to the DLC3 with the engine switch off.
- (b) Check that the parking brake is set, and turn the engine switch on (IG).
- (c) Enter the following menus: Chassis / ABS/VSC/TRC / Air Bleeding.
- (d) Select the menu on the Techstream display based on the following list.

Bleeding work list

<ul style="list-style-type: none"> • Brake fluid (replacement) • Front brake (removal, installation or replacement) • Front brake flexible hose (removal, installation or replacement) • Rear brake (removal, installation or replacement) • Rear brake flexible hose (removal, installation or replacement) 	<p>Select "Usual air bleeding" on the Techstream display.</p>
<p>Air bleeding (no part replacement)</p>	<p>Select "Actuator has been removed" on the Techstream display.</p>
<ul style="list-style-type: none"> • Brake master cylinder (removal, installation or replacement) • Stroke Simulator (removal, installation or replacement) 	<ul style="list-style-type: none"> • Work to be performed before replacement <ol style="list-style-type: none"> a. Disconnect the 2 brake booster pump connectors. b. Using the Techstream, perform accumulator zero down. • Select "Master Cylinder or Stroke Simulator has been

	removed" on the Techstream display.
Brake master cylinder reservoir (removal, installation or replacement)	<ul style="list-style-type: none"> • Work to be performed before replacement <ul style="list-style-type: none"> a. Disconnect the 2 brake booster pump connectors. b. Using the Techstream, perform accumulator zero down. • Work to be performed before air bleeding <ul style="list-style-type: none"> a. Using the Techstream, perform accumulator zero down. • Select "Master Cylinder or Stroke Simulator has been removed" on the Techstream display.
<ul style="list-style-type: none"> • Brake actuator (removal, installation or replacement) • Brake booster pump (removal, installation or replacement) 	<ul style="list-style-type: none"> • Work to be performed before replacement <ul style="list-style-type: none"> a. Disconnect the 2 brake booster pump connectors. b. Using the Techstream, perform accumulator zero down. • Work to be performed before air bleeding <ul style="list-style-type: none"> a. Using the Techstream, perform accumulator zero down. • Select "Actuator has been removed" on the Techstream display.

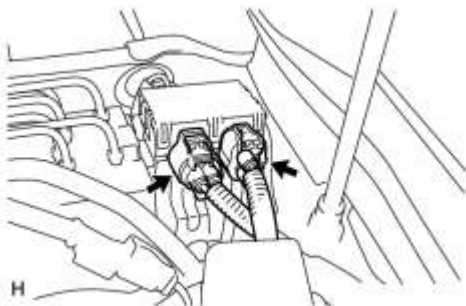
(e) After air bleeding or replacement, tighten the bleeder plug.

Torque: **11 N·m (110 kgf·cm, 8ft·lbf)**

3. DISCONNECT AND CONNECT BRAKE ACCUMULATOR PUMP CONNECTORS

NOTICE:

- If the brake accumulator pump operates while air remains inside the No. 2 brake actuator hose, air will enter the brake accumulator pump, resulting in difficulty in bleeding. Keep the 2 brake accumulator pump connectors disconnected before bleeding.
- When disconnecting or connecting the brake accumulator pump connector, turn the engine switch off.



(a) Disconnect or connect the 2 brake accumulator pump connectors as shown in the illustration.

4. PERFORM ACCUMULATOR ZERO DOWN

HINT:

Using the Techstream to perform accumulator zero down causes the pressurized fluid in the actuator's accumulator to be returned to the brake fluid reservoir.

- (a) Drain the brake fluid in the reservoir tank near the MIN line.
- (b) Connect the Techstream to the DLC3 with the engine switch off.
- (c) Check that the parking brake is set, and turn the engine switch on (IG).
- (d) Enter the following menus: Chassis / ABS/VSC/TRC / Utility / Electronically Controlled Brake system Utility / Zero Down.
- (e) When the buzzer sounds, turn the engine switch off.

5. DISABLE BRAKE CONTROL

HINT:

Using the Techstream to disable brake control causes the master pressure cut solenoid to turn OFF and the line from the master cylinder to the front disc brake caliper to open.

- (a) Check that the parking brake is set.
- (b) Connect the Techstream to the DLC3 with the engine switch off.
- (c) Turn the engine switch on (IG).

NOTICE:

Do not start the engine.

- (d) Enter the following menus: Chassis / ABS/VSC/TRC / Utility / Electronically Controlled Brake system Utility / Electronically Controlled Brake system Invalid. Then brake control is disabled.

