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Model Year Start: 2014	Model: Highlander HV	Prod Date Range: [02/2014 -]
Title: BRAKE SYSTEM (OTHER): BRAKE FLUID: REPLACEMENT; 2014 - 2018 MY Highlander HV [02/2014 -]		

REPLACEMENT

CAUTION / NOTICE / HINT

NOTICE:

- The brake fluid level must always be adjusted to the MAX line.
- Adjust the brake fluid level so that the brake fluid level is at the MAX line with the power switch on (IG).
- Perform brake fluid replacement with the shift lever in P and the parking brake applied.
- As brake fluid may overflow when replacing brake fluid, do not place the brake fluid can on the brake master cylinder reservoir assembly filler opening.
- Perform brake fluid replacement while maintaining the brake fluid level between the MAX and MIN lines on the brake master cylinder reservoir assembly.
- Replacing brake fluid will be difficult if the following occurs:
 - a. The No. 2 brake actuator hose (the hose between the brake booster pump assembly and brake master cylinder reservoir assembly) is higher than the brake fluid level and air enters the No. 2 brake actuator hose.
 - b. During the brake fluid replacement procedure, air enters the brake booster pump assembly while it is operating.
- While performing brake fluid replacement, the accumulator pressure drop may cause a buzzer to sound. As there is no problem, continue with brake fluid replacement.
- During brake fluid replacement, DTCs for pressure sensor malfunctions, etc. may be stored. After brake fluid replacement and if instructed in the procedures, clear the DTCs.
- Do not allow brake fluid on any painted vehicle body surface. If brake fluid leaks onto any painted surface, immediately wash it off.

HINT:

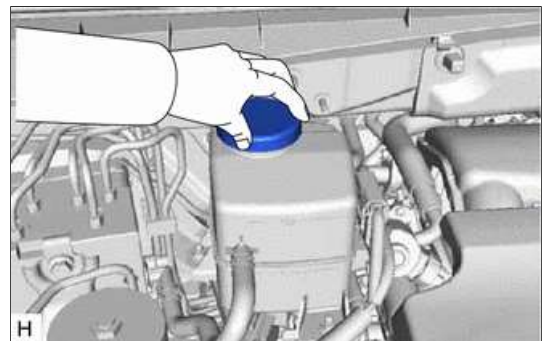
There are 2 ways of brake fluid replacement: using the Techstream or not using the Techstream.

PROCEDURE

1. REPLACE BRAKE FLUID (When Using the Techstream)

NOTICE:

- Add brake fluid carefully and check that the brake fluid level remains between the MIN and MAX lines on the brake master cylinder reservoir assembly.
- As brake fluid may overflow when replacing brake fluid, do not place the brake fluid can on the brake master cylinder reservoir assembly filler opening.
- When replacing the brake fluid from the rear disc brake cylinder assembly, do not depress the brake pedal more than 30 seconds.



(a) Remove the brake master cylinder reservoir filler cap assembly.

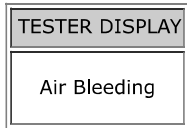
(b) Add brake fluid to the brake master cylinder reservoir assembly until the brake fluid level is between the MAX and MIN lines on the brake master cylinder reservoir assembly.

Brake Fluid:

SAE J1703 or FMVSS No. 116 DOT3

NOTICE:

- Make sure that there is sufficient brake fluid in the brake master cylinder reservoir assembly.
 - Do not remove the filter from the brake master cylinder reservoir assembly and be sure to fill the brake master cylinder reservoir assembly with new brake fluid to avoid any potential contamination of the brake system. Contamination, for example by dirt particles or mineral oil, could lead to functional brake problems.
- (c) Connect the Techstream to the DLC3 with the power switch off.
- (d) Turn the power switch on (IG).
- (e) Turn the Techstream on and enter the following menus: Chassis / ABS/VSC/TRAC / Utility / Air Bleeding.

Chassis > ABS/VSC/TRAC > Utility

(f) Select "Usual air bleeding / All Line" and bleed the brake line by following the instructions on the Techstream.

NOTICE:

Add brake fluid so that the brake fluid level does not drop below the MIN line on the brake master cylinder reservoir assembly.

(g) After air bleeding, tighten each bleeder plug.

Torque:**Front Brake :**

8.3 N·m {85 kgf·cm, 73 in·lbf}

Rear Brake :

10.8 N·m {110 kgf·cm, 8 ft·lbf}

(h) Clear the DTCs.

Click here 

(i) Turn the Techstream off and turn the power switch off.

(j) Disconnect the Techstream from the DLC3.

(k) Inspect for brake fluid leaks.

(l) Inspect and adjust the brake fluid level in the brake master cylinder reservoir assembly.

Click here 

(m) Install the brake master cylinder reservoir filler cap.

2. REPLACE BRAKE FLUID (When Not Using the Techstream)**NOTICE:**

- Performing the following procedure will select ECB (Electronically Controlled Brake System) Invalid Mode without using the Techstream.
- ECB (Electronically Controlled Brake System) Invalid Mode allows the brake fluid to be replaced without using the Techstream.
- The brake warning light (yellow) will blink to indicate when ECB (Electronically Controlled Brake System) Invalid Mode is selected.
- Be sure to check that the brake warning light (yellow) is blinking while replacing the brake fluid.
- Do not rotate the brake disc rotor while ECB (Electronically Controlled Brake System) Invalid Mode is selected.
- When replacing the brake fluid from the rear disc brake cylinder assembly, do not depress the brake pedal more than 30 seconds.
- While replacing brake fluid, the accumulator pressure drop may cause a buzzer to sound. As there is no problem, continue with brake fluid replacement.
- Add brake fluid carefully and check that the brake fluid level remains between the MIN and MAX lines on the brake master cylinder reservoir assembly.
- As brake fluid may overflow when replacing brake fluid, do not place the brake fluid can on the brake master cylinder reservoir assembly filler opening.

(a) Remove all 4 wheels.

(b) Select ECB (Electronically Controlled Brake System) Invalid Mode.

(1) Perform the procedure listed below within 1 minute.

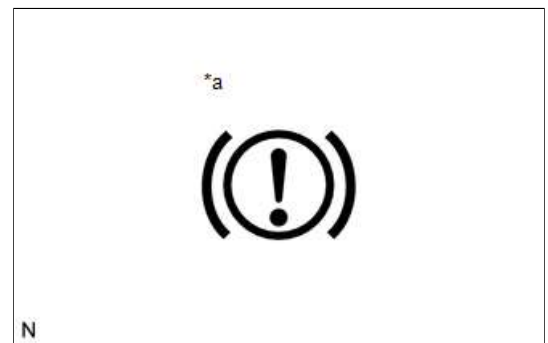
1. Turn the power switch on (IG) with the shift lever in P and parking brake applied.
2. Move the shift lever to N and then depress the brake pedal more than 8 times within 5 seconds.
3. Move the shift lever to P and then depress the brake pedal more than 8 times within 5 seconds.
4. Move the shift lever to N and then depress the brake pedal more than 8 times within 5 seconds.
5. Move the shift lever to P.

(2) Check that the brake warning light (yellow) is blinking.

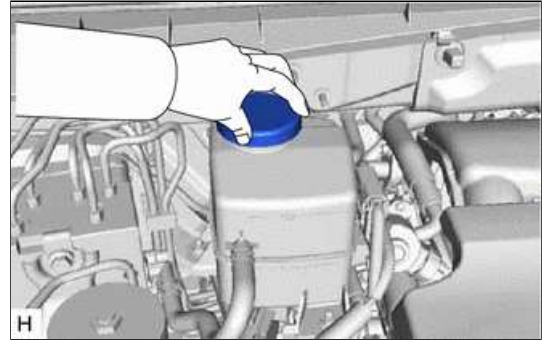
NOTICE:

When one of the following conditions is met, ECB (Electronically Controlled Brake System) Invalid Mode is canceled, and DTCs may be stored. Therefore, do not cancel ECB (Electronically Controlled Brake System) Invalid Mode while replacing brake fluid.

- The shift lever is moved from P to any other position.
- The power switch is turned on (READY).
- The power switch is turned off.
- The parking brake is released.
- The vehicle speed is not 0 km/h (0 mph).



(c) Remove the brake master cylinder reservoir filler cap assembly.



(d) Add brake fluid to the brake master cylinder reservoir assembly until the brake fluid level is between the MAX and MIN lines on the brake master cylinder reservoir assembly.

Brake Fluid:

SAE J1703 or FMVSS No. 116 DOT3

NOTICE:

- Make sure that there is sufficient brake fluid in the brake master cylinder reservoir assembly.
- Do not remove the filter from the brake master cylinder reservoir assembly and be sure to fill the brake master cylinder reservoir assembly with new brake fluid to avoid any potential contamination of the brake system. Contamination, for example by dirt particles or mineral oil, could lead to functional brake problems.

(e) Repeatedly depress the brake pedal to drain the brake fluid from the bleeder plug of the front disc brake cylinder assembly RH.

NOTICE:

Add brake fluid so that the brake fluid level does not drop below the MIN line on the brake master cylinder reservoir assembly.

(f) After all the air in the brake fluid is completely bled out and new brake fluid comes out, tighten the bleeder plug while depressing the brake pedal.

Torque:

8.3 N·m {85 kgf·cm, 73 in·lbf}

(g) Replace the brake fluid from the front disc brake cylinder assembly LH using the same procedure as for the RH side.

(h) While depressing the brake pedal, loosen the bleeder plug of the rear disc brake cylinder assembly LH, and expel the brake fluid while the pump motor and solenoid are operating.

NOTICE:

Do not depress the brake pedal more than 30 seconds. When performing this procedure continuously, an interval of at least 20 seconds is required.

(i) After all the air in the brake fluid is completely bled out and new brake fluid comes out, tighten the bleeder plug while depressing the brake pedal.

Torque:

10.8 N·m {110 kgf·cm, 8 ft·lbf}

(j) Replace the brake fluid from the rear disc brake cylinder assembly RH using the same procedure as for the LH side.

(k) Turn the power switch off to finish ECB (Electronically Controlled Brake System) Invalid Mode.

(l) Inspect for brake fluid leaks.

(m) Adjust the brake fluid level in the brake master cylinder reservoir assembly.

Click here [INFO](#)

(n) Install the brake master cylinder reservoir filler cap.

(o) Install the 4 wheels.

Torque:

103 N·m {1050 kgf·cm, 76 ft·lbf}