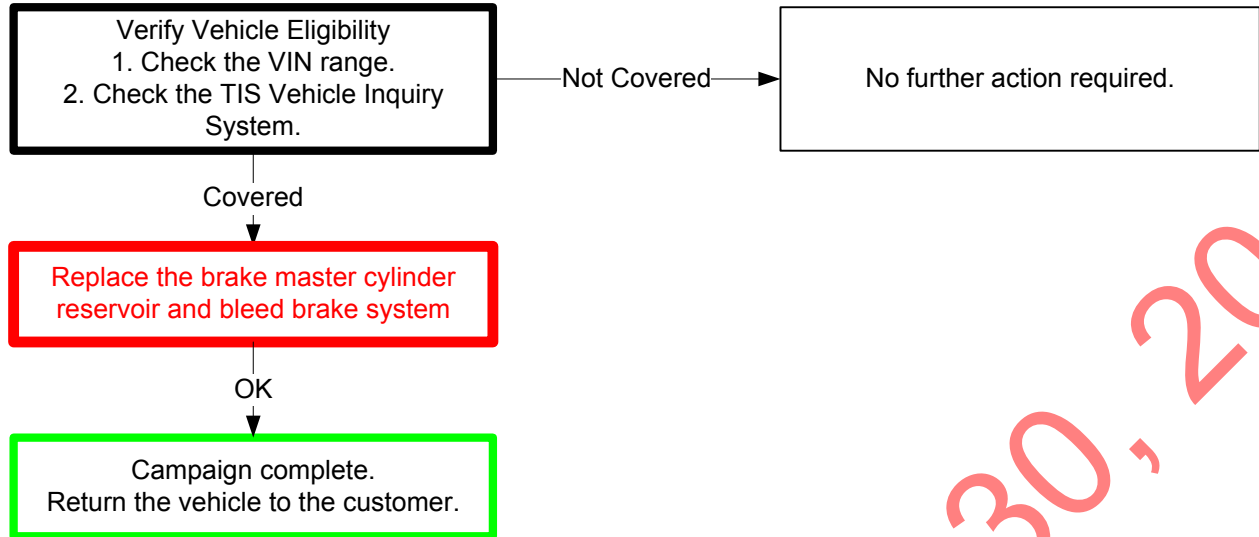


**TECHNICAL INSTRUCTIONS
FOR
LIMITED SERVICE CAMPAIGN E0U
2007 – 2011 MODEL YEAR CAMRY HV
BRAKE RESERVOIR REPLACEMENT**

All dealership associates involved in the campaign process are required to successfully complete E-Learning course SC13A. To ensure that all vehicles have the repair performed correctly; technicians performing this recall repair are required to currently hold at least one of the following certifications levels:

- Expert Chassis
- Master
- Master Diagnostic Technician

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. COVERED VIN RANGE

WMI	Year	VIN Range	
		VDS	Range
4T1	2007	BB46K	U001012-U0307
	2008	BB46K	U024787-U0625
	2009	BB46K	U061175-U1114
	2010	BB3EK	U089187-U1262
	2011	BB3EK	U125695-U1439

WMI	Year	VIN Range	
		VDS	Range
JTN	2007	BB46K	3000160-30448
	2008	BB46K	3044111-30490
	2009	BB46K	3048659-30535
	2010	BB3EK	3053459-30538
	2011	BB3EK	3053902-30544

NOTE:

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this LSC and that the campaign has not already been completed prior to dealer shipment or by another dealer.
- **TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected or were completed by another dealer.**

III. PREPARATION

A. PARTS

Part Number	Part Description	Quantity
04004-32133	RESERVOIR SUB-ASSY, MASTER CYLINDER	1
00475-1BF03	Brake Fluid	5

B. TOOLS & EQUIPMENT

- Standard Hand Tools
- Techstream
- Torque Wrench
- Tray
- Fluid Extractor

SST – This is an essential special service tool that the dealership should have.

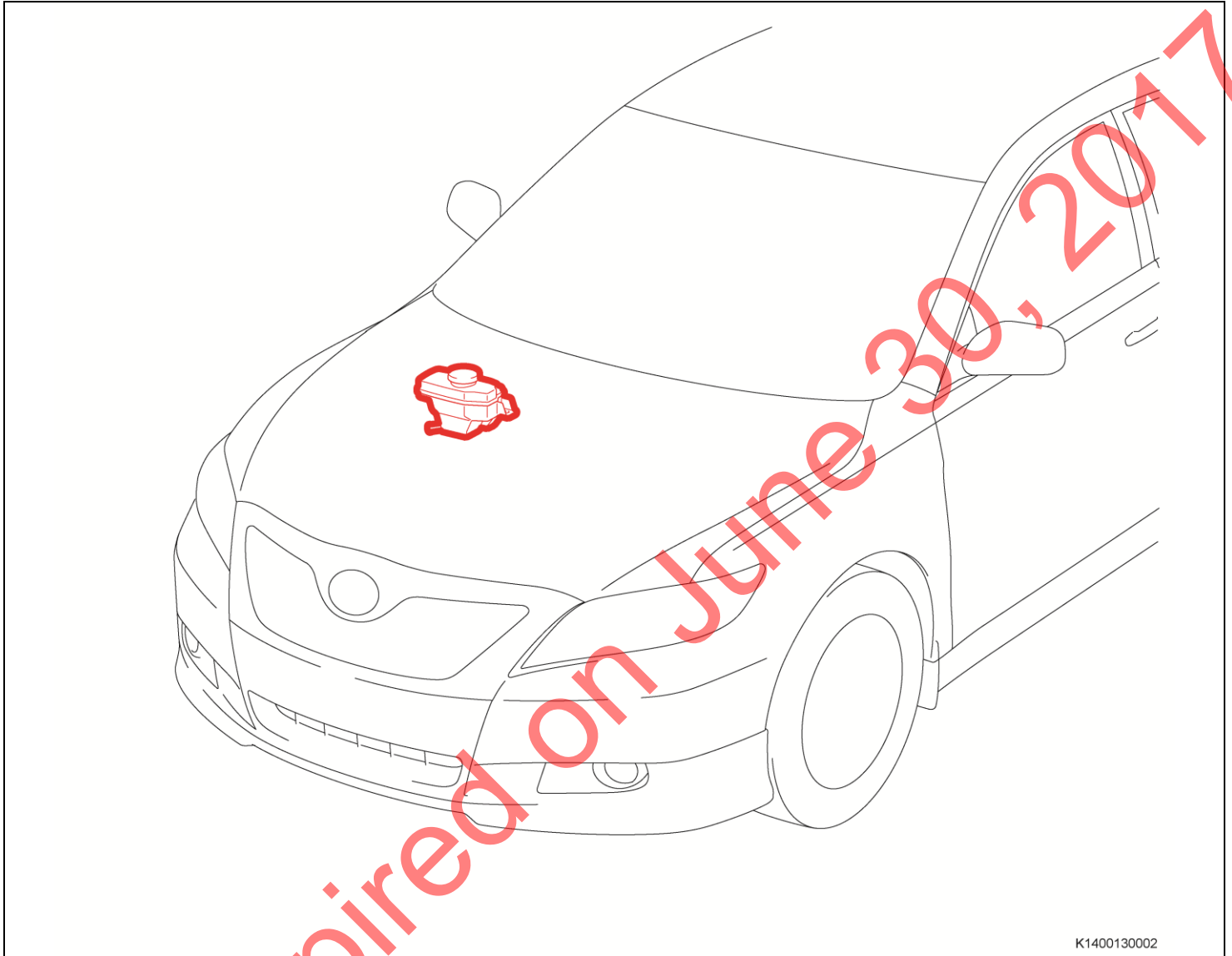
Part Number	Part Name	Quantity
09992-00242	Turbocharger Pressure Gauge	1
09992-00350	Brake Reservoir Pressure Adapter	1
09053-1C220	Hose Plug No.2	3

C. MATERIALS

- Shop Cloth
- Protective Eyewear
- Vinyl Tube

EOU Expired on June 30, 2017

IV. BACKGROUND

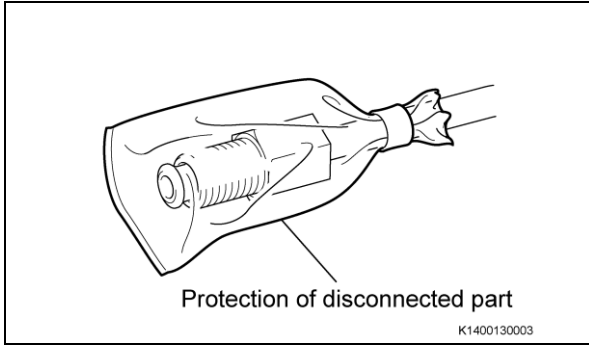


In 2007 through 2011 model year Toyota Camry hybrid vehicles, the front brake assist may be lost while the rear brake continues to be operated with normal assist. In that situation some warnings appear as below.

1. The Brake system warning lights in yellow and red
2. ABS warning light
3. Master warning light
4. Slip indicator
5. "CHECK VSC SYSTEM" in the Multi-information display

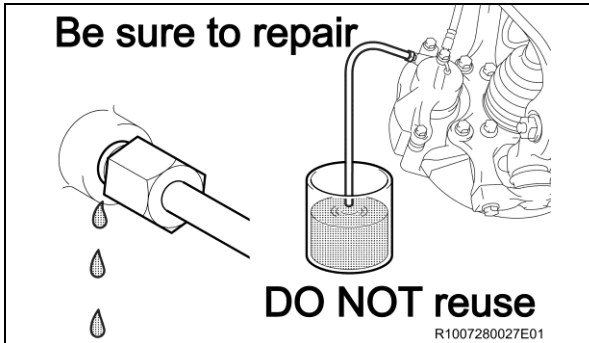
After these warning lights illuminating for 10 seconds, the brake assist for the front brake would be lost as described at the top of this paragraph.

V. PRECAUTIONS FOR HANDLING BRAKE PARTS AND BRAKE FLUID



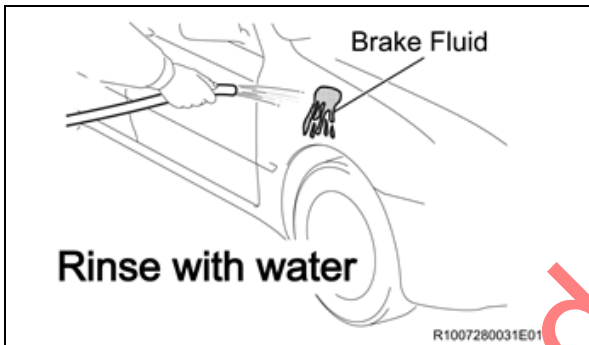
1. PREVENTION OF FOREIGN MATTER FROM GETTING INTO BRAKE SYSTEM

- After disconnecting the brake system parts, use a cover to prevent intrusion of foreign matters.



2. HANDLING OF BRAKE FLUID

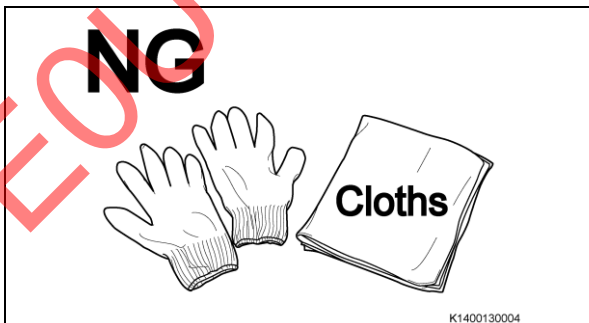
- DO NOT** reuse brake fluid. Brake fluid is hygroscopic and will absorb moisture that could cause a brake failure and cause an accident.



- Brake fluid damages paint. **DO NOT** allow brake fluid to contact any painted surface. If brake fluid adheres to a painted surface, immediately rinse it off with water.



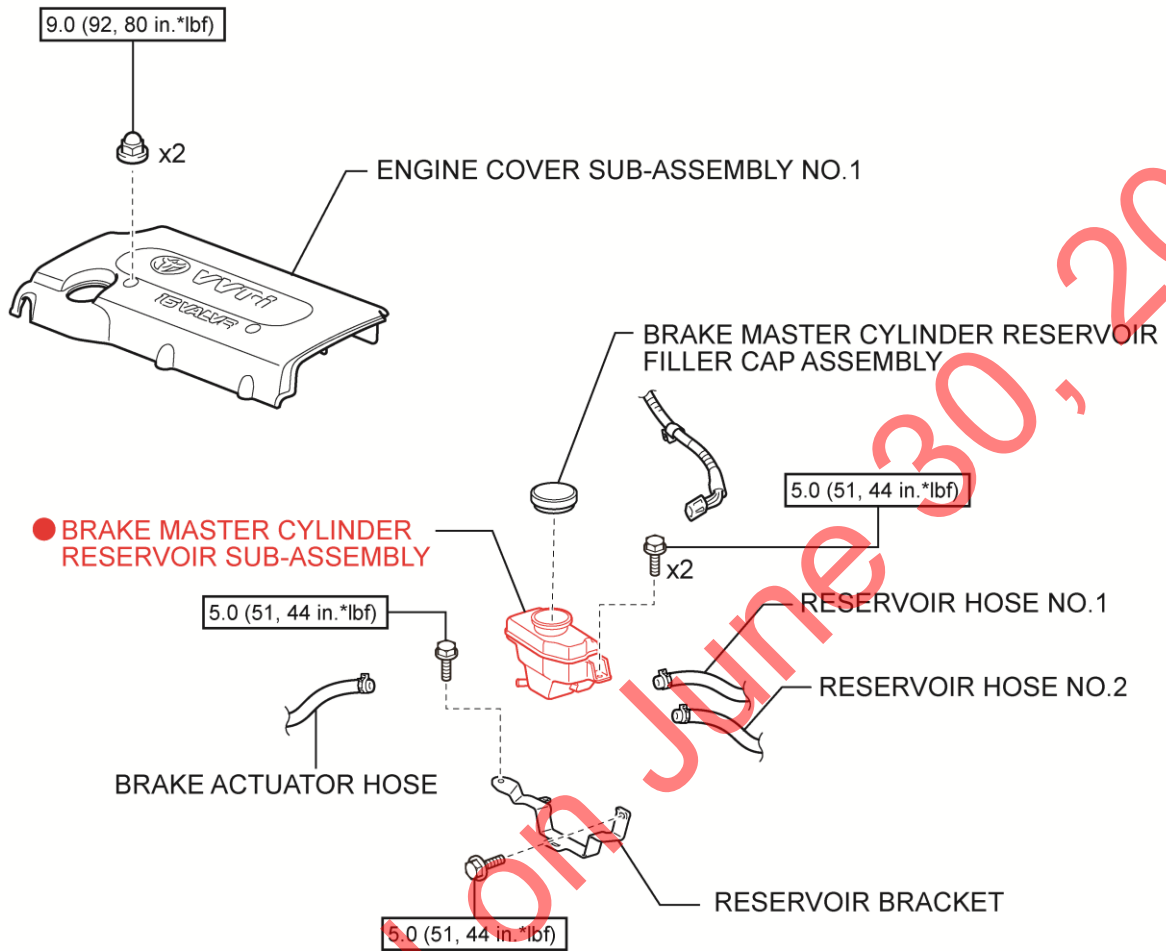
- Brake bleeding may cause brake fluid to spray outwards. Wear protective eyewear when bleeding the brakes.



3. DO NOT USE CLOTH RAGS OR GLOVES

- DO NOT** use any fabric near open brake system components, to avoid threads and fibers from entering the braking system.

VI. COMPONENTS



● : Replacement part

$\boxed{\text{N*m (kgf*cm, ft.*lbf)}}$: Specified torque

K1400130025A

VII. REMOVE THE BRAKE MASTER CYLINDER RESERVOIR

1. CHECK FOR DTCs

- a) Perform a Health Check.
- b) Check for any DTC's



If any DTC's are Pending, Current, and/or History. Verify warranty coverage and refer to the appropriate repair manual on TIS for proper diagnosis and repair. If vehicle is not covered under warranty, advise the customer prior to diagnosing or repairing the vehicle.

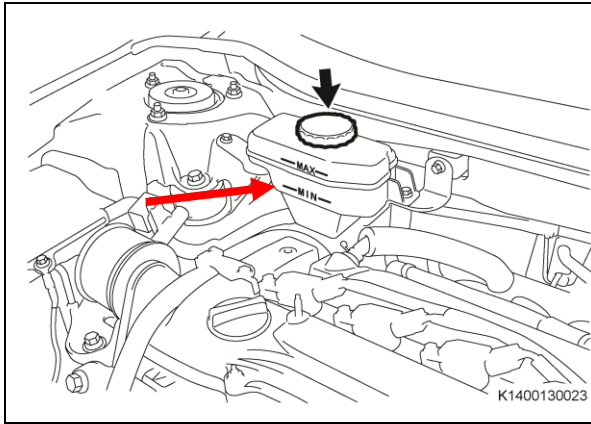
2. LOWER THE BRAKE FLUID LEVEL

- a) Remove the brake reservoir filler cap.
- b) Lower the brake fluid level to MIN.



- **DO NOT** use a fluid extractor that has been used on anything other than brake fluid to avoid contamination.
- **DO NOT** allow brake fluid to come into contact with any painted surfaces.

- c) Reinstall the brake reservoir filler cap.



3. PERFORM ACCUMULATOR PRESSURE ZERO DOWN

NOTE: Perform accumulator zero down by following the steps displayed on the Techstream.

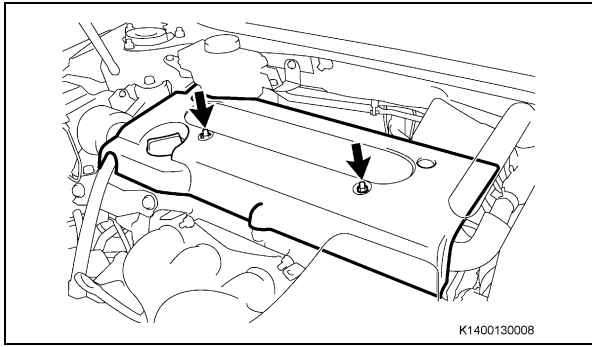
- a) Move the shift lever to the P position and apply the parking brake.
- b) Connect the Techstream to the DLC3 with the IG in the "OFF" position.
- c) Switch the IG to the "ON" position.

NOTE: Do not start the engine.

- d) Turn Techstream on and select "Chassis / ABS/VSC/TRC / Utility / ECB Utility / ZERO DOWN"
- e) When the buzzer sounds, turn the IG to the "OFF" position.

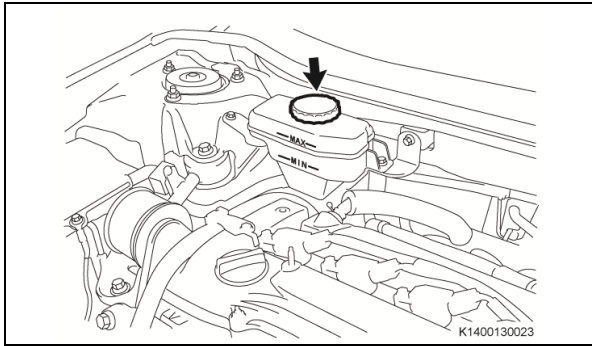


- **DO NOT** turn the IG to the "ON" position until instructed.
- Wait at least 120 seconds after turning the IG to the "OFF" position before moving on to the next step.
- **DO NOT** open or close a door and operate the brake pedal until the actuator hose has fully been bled.



4. REMOVE THE ENGINE COVER SUB-ASSEMBLY NO.1

- a) Remove the 2 nuts
- b) Remove engine cover sub-assembly No.1.

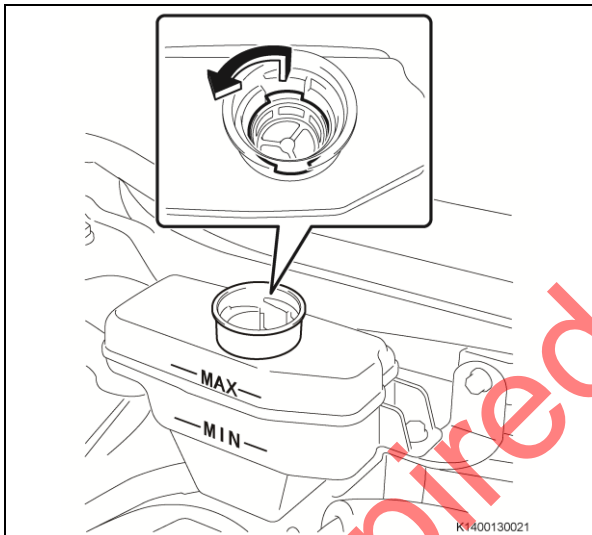


5. DRAIN BRAKE FLUID

- a) Remove the brake reservoir filler cap.

STOP

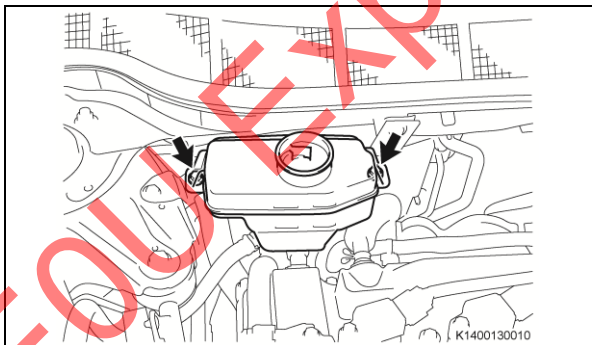
The brake reservoir filler cap will be re-used.



- b) Remove the brake reservoir strainer, and drain the brake fluid from the reservoir to prevent spillage.
- c) Mark the removed brake reservoir strainer so it is not reused.

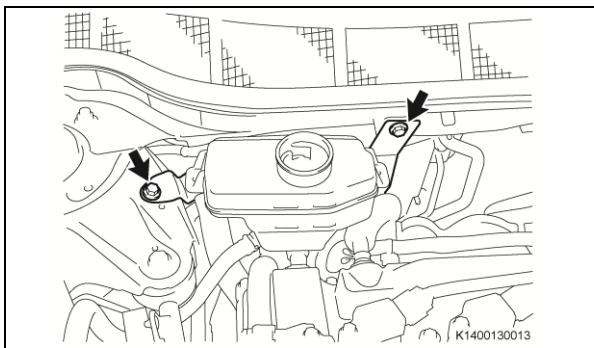
STOP

- **DO NOT** use a fluid extractor that has been used on anything other than brake fluid to avoid contamination.
- **DO NOT** allow brake fluid to contact any painted surfaces.

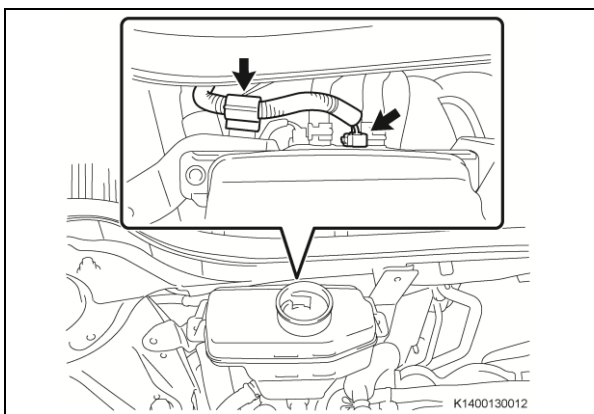


6. REMOVE THE BRAKE MASTER CYLINDER RESERVOIR

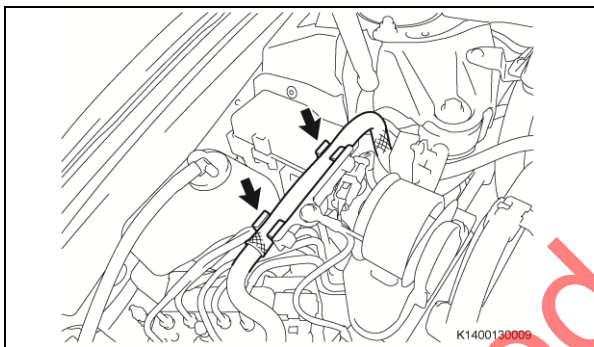
- a) Remove the 2 bolts.



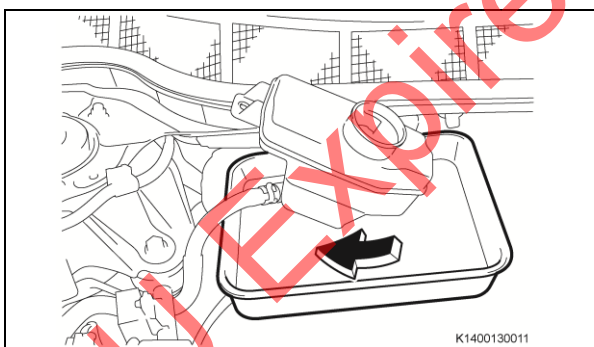
b) Remove the 2 bolts, and separate the reservoir bracket from the brake reservoir.



c) Detach the harness clamp and disconnect the connector.

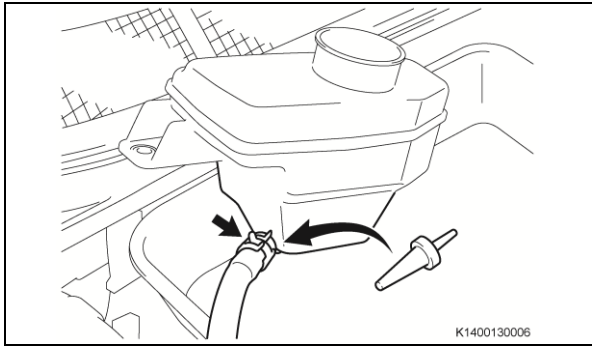


d) Detach the brake actuator hose from the 2 clamps.



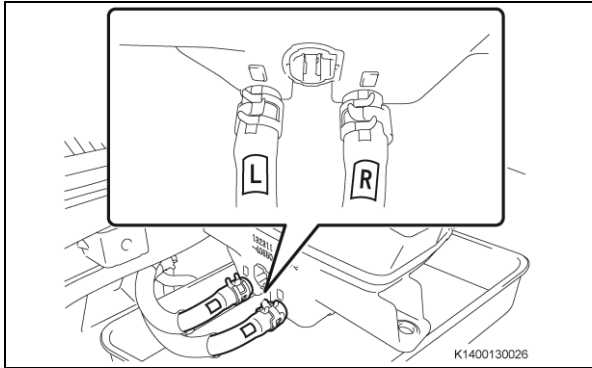
e) Place a tray under the brake reservoir.

Expired on June 30, 2017

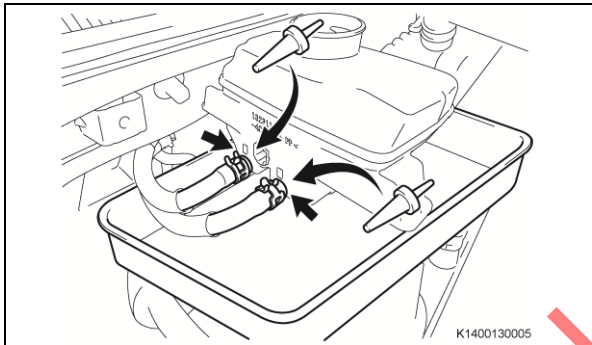


- f) Slide back the hose clip, disconnect, and immediately plug the brake actuator hose.

NOTE: Clean the surrounding area prior to disconnecting the hose



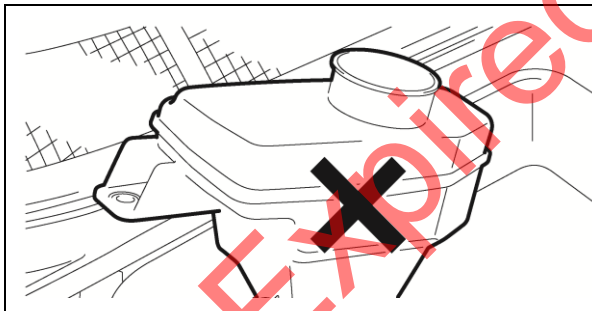
- g) Apply tape and mark the reservoir hoses to distinguish between left and right.



- h) Slide back the 2 hose clips, disconnect, and immediately plug the 2 reservoir hoses.

NOTE: Clean the surrounding area prior to disconnecting the hose.

- i) Remove the brake reservoir.



- j) Mark the brake reservoir so it is not reused.

VIII. INSTALL THE NEW BRAKE MASTER CYLINDER RESERVOIR

1. INSTALL THE NEW BRAKE RESERVOIR

- a) Reinstall the left and right side hoses, remove the 2 hose plugs and reconnect the reservoir hoses to the **NEW** brake reservoir.

- b) Align the matchmarks on the 2 reservoir hoses and the ribs on the new brake reservoir.

- c) Slide on the 2 hose clips to secure the hoses.

- d) Remove the tape identifying the left and right hoses.

NOTE: Confirm the hoses are connected to the correct location on the master cylinder reservoir.

Connect the hose immediately after removing the plug to prevent brake fluid from leaking.

Reinstall the hose clips into their original positions.

- e) Remove the hose plug and reconnect the brake actuator hose to the brake reservoir.

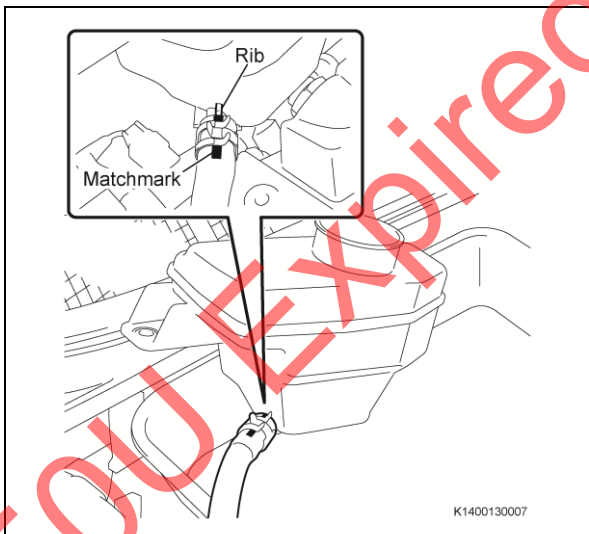
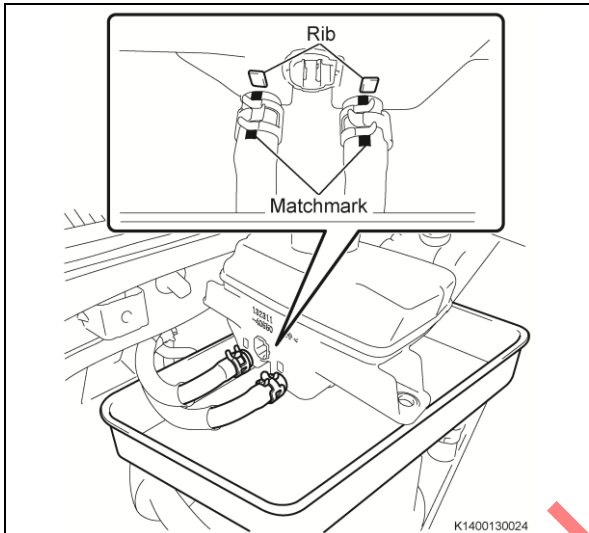
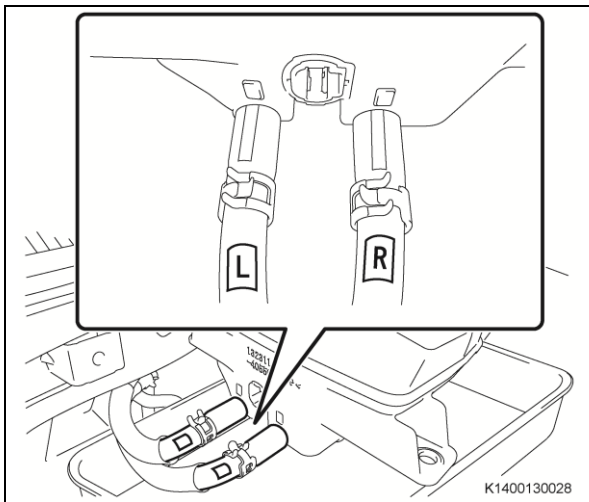
- f) Align the matchmark on the hose and the rib on the brake reservoir.

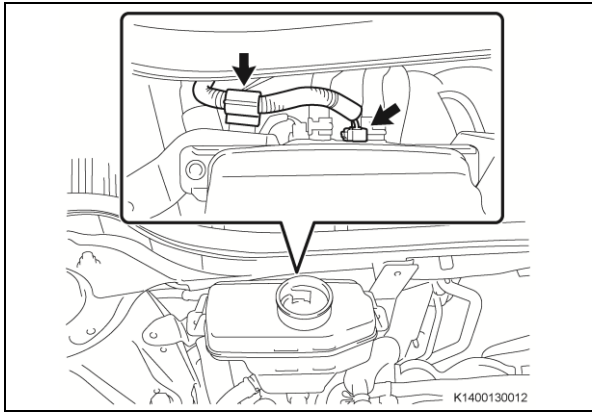
- g) Slide on the hose clip to secure the hose.

NOTE: Confirm the hoses are connected to the correct location on the master cylinder reservoir.

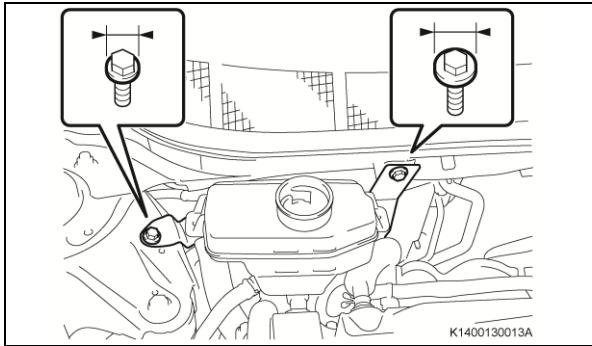
Connect the hose immediately after removing the plug to prevent brake fluid from leaking.

Install the hose clips into their original positions.





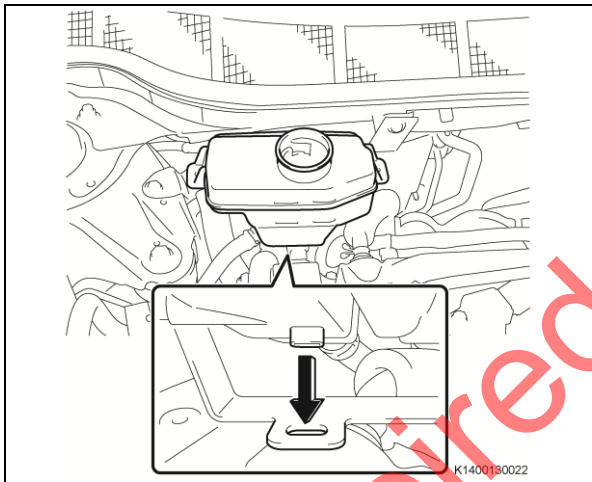
h) Reconnect the connector, and attach the harness clamp to the reservoir bracket.



i) Reinstall the reservoir bracket with the 2 bolts.

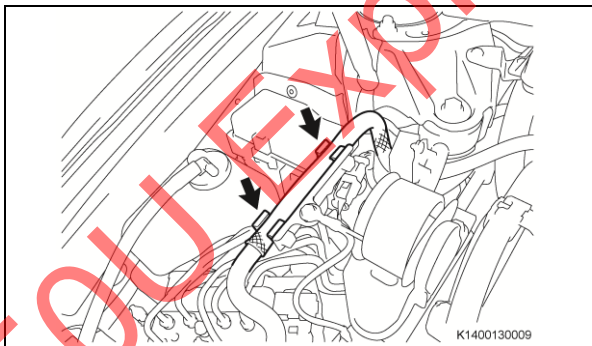
Torque: 5.0 N*m (51 kgf•cm, 44 in.•lbf)

NOTE: Each of the bolts have a different bolt head/washer design.



j) Align the guide and install the brake reservoir with the 2 bolts.

Torque: 5.0 N*m (51 kgf•cm, 44 in.•lbf)



k) Reattach the brake actuator hose to the 2 clamps.

2. REINSTALL THE ENGINE COVER SUB-ASSEMBLY NO.1

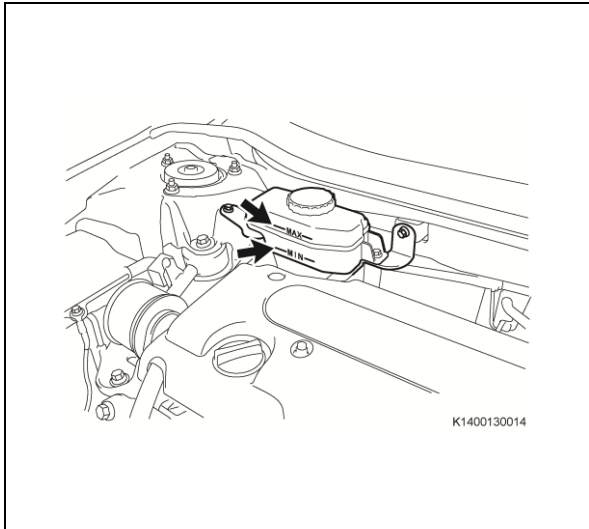
Torque: 9.0 N*m (92 kgf•cm, 80 in.•lbf)

IX. BLEED THE BRAKE SYSTEM



The brake bleeding process is an essential step to the completion of this LSC due to the following:

- To eliminate any air in the brake system
- To flush any foreign matter from the system
- Because brake fluid is hygroscopic and could have absorbed moisture over time



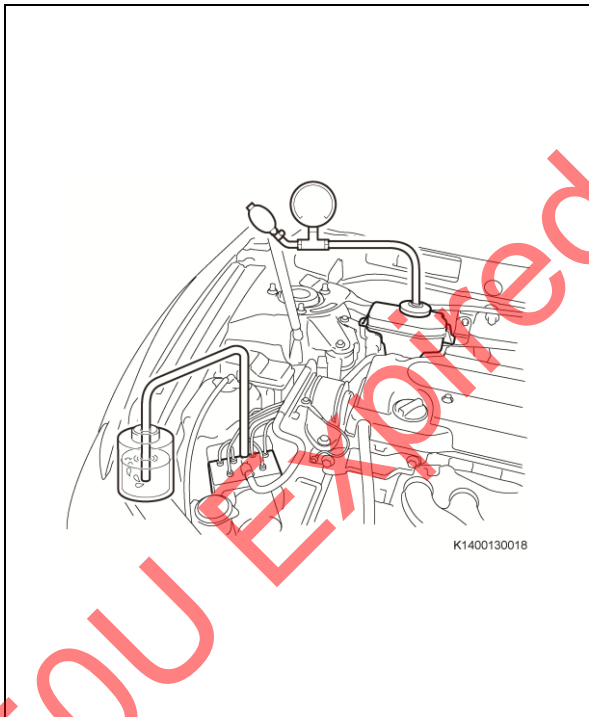
1. RAISE THE VEHICLE AND REMOVE THE WHEELS
2. ADD BRAKE FLUID TO THE RESERVOIR

a) Add brake fluid to the MAX line of the reservoir.

Brake fluid: SAE J1703 or FMVSS No.116 DOT3

NOTE: Add brake fluid carefully and check that the reservoir level remains between the MIN and MAX lines while bleeding the brakes.

DO NOT stand the fluid can on the reservoir inlet when air-bleeding the brake actuator. Doing so will cause brake fluid to overflow.



3. BLEED AIR FROM THE BRAKE ACTUATOR HOSE

a) Connect the SST to the reservoir with the brake reservoir pressure adapter.

SST: 09992-00242, 09992-00350

b) Connect a vinyl tube to the bleeder plug of the actuator.

c) Quickly loosen the bleeder plug of the actuator, then tighten it lightly to release.

d) While the bleeder plug is loosened, use the SST to boost pressure in the reservoir and drain approximately 500 cc (16.9 fl.oz.) of fluid.

NOTE: DO NOT allow the brake fluid level to drop below MIN.

e) When air is completely bled out from the hose between the reservoir and the actuator, tighten the bleeder plug.

Torque: 8.3 N*m (85 kgf•cm, 74 in.•lbf)

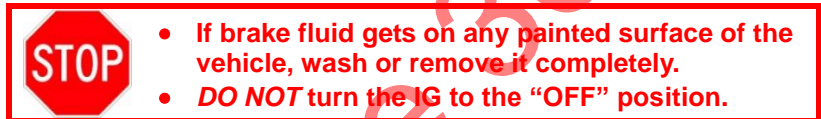
4. DISABLE BRAKE CONTROL

- Move the shift lever to the P position and apply the parking brake.
- Connect Techstream to the DLC3 with the power switch off.
- Switch the IG to the "ON" position.



- Turn Techstream on and select "Chassis / ABS/VSC/TRC / Utility / ECB Utility / ECB Invalid".

5. BLEED THE FRONT BRAKE SYSTEM



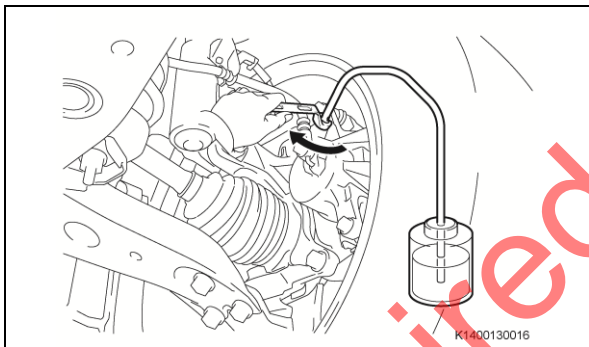
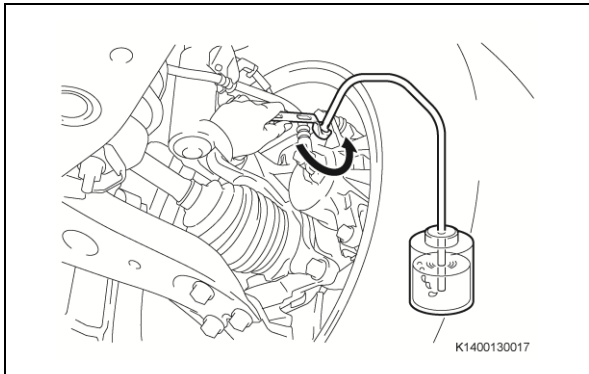
- Depress the brake pedal several times and bleed the left front brakes from the bleeder plug.

NOTE: Repeat the procedure until air is completely bled from the front brake system.

- Tighten the bleeder plugs after air-bleeding.

Torque: 8.3 N*m (85 kgf•cm, 74 in.•lbf)

- Repeat procedure on the other side.



6. BLEED THE REAR BRAKE SYSTEM



DO NOT turn the IG to the "OFF" position.

- a) Depressed the brake pedal, bleed the left rear from the bleeder plug while the pump motor and solenoid are operating.

NOTE: DO NOT allow the brake fluid level to drop below MIN.

Depress and hold the brake pedal.

After the solenoid operates for approximately 30 seconds, release the brake pedal to stop the solenoid.

Repeat the procedures until air is completely bled from the rear brake system.

The brake control warning light and buzzer will come on while air-bleeding, but they **DO NOT** indicate a malfunction.

- b) Tighten the bleeder plug after bleeding.

Torque: 8.3 N*m (85 kgf*cm, 74 in.*lbf)

- c) Repeat procedure on the other side.

NOTE: Check the brake fluid level frequently so it does not drop below MIN.

7. PERFORM ACCUMULATOR PRESSURE ZERO DOWN



Never bleed the brake system without using the Techstream. Failure to use the Techstream could cause serious injury or an accident.

NOTE: Perform accumulator zero down by following the steps displayed on the Techstream.

- a) Check the brake fluid in the reservoir tank is above the MIN line.
- b) Depressurize the accumulator.
 - 1) Check that the parking brake is applied with the IG in the "ON" position.
 - 2) Enter the following menu items on the Techstream. "Chassis / ABS/VSC/TRC / Utility / ECB Utility / ZERO DOWN"
 - 3) When the buzzer sounds, turn the IG in the "OFF" position.
- c) Circulate the fluid in the accumulator.
 - 1) Depressurize the accumulator 5 times.

NOTE: Accumulator pressure is cycled repeatedly, which circulates the fluid inside the accumulator, when repeating accumulator zero down.

The pump motor spins and the accumulator is pressurized every time the IG is switched from "OFF" to "ON".

8. CLEAR DTC FOR THE BRAKE CONTROL SYSTEM

- a) Operate Techstream to clear the codes.

9. CHECK THE BRAKE FLUID LEVEL IN THE RESERVOIR

- a) Adjust the brake fluid level in the reservoir to MAX line with the IG in the "ON" position.

NOTE: The brake fluid level must always be adjusted to the MAX line.

- b) Install the brake reservoir filler cap.

10. CHECK FOR BRAKE FLUID LEAKAGE

11. REINSTALL THE WHEELS

Torque: 103 Nm (1050 kgf·cm, 76 ft·lbf)

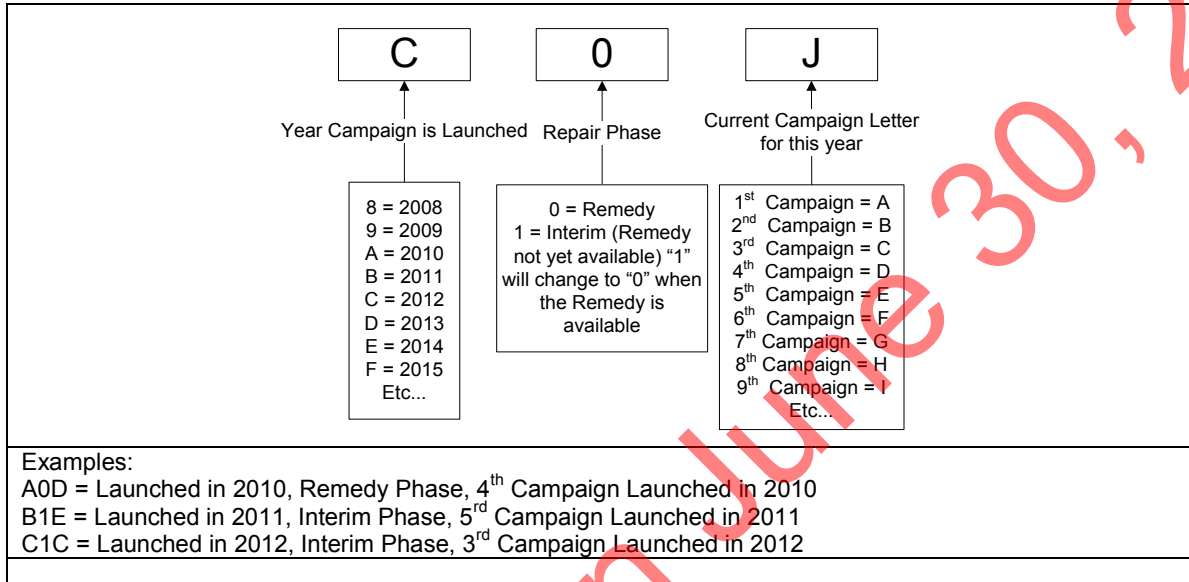
◀ VERIFY REPAIR QUALITY ▶

- No brake fluid leakage
- Brake fluid at the correct level
- No DTC's

If you have any questions regarding this update, please contact your area representative.

X. APPENDIX

A. CAMPAIGN DESIGNATION DECODER



B. CAMPAIGN PARTS DISPOSAL

As required by Federal Regulations, please make sure all campaign parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, ***unless requested for parts recovery return.***