REPLACEMENT

1. REMOVE FRONT SPOILER COVER (w/ Front Spoiler)

2. REMOVE ENGINE UNDER COVER (w/ Cover)

3. DRAIN COOLANT (for Engine)

NOTICE:

Do not remove the reservoir tank cap, cylinder block drain cock plugs and radiator drain cock plug while the engine and radiator are still hot. Pressurized, hot engine coolant and steam may be released and cause serious burns.

(a) Loosen the radiator drain cock plug and drain the coolant.

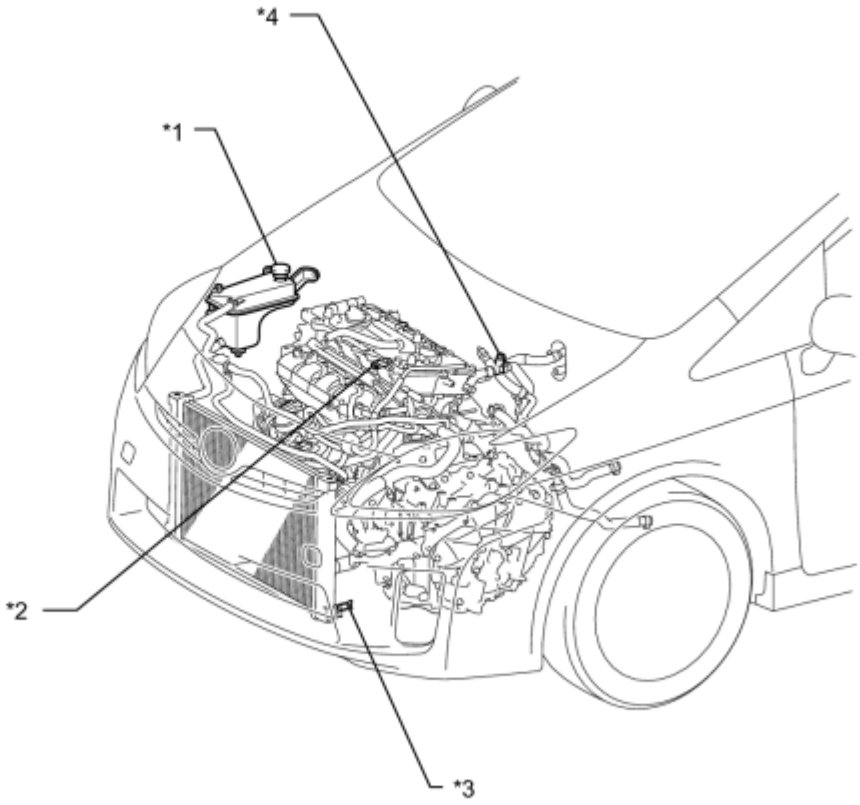
HINT:

Collect the coolant in a container and dispose of it according to the local regulations.

(b) Loosen the cylinder block drain cock plug.

HINT:

The plug is on the back of the generator on the exhaust manifold side.



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Text in Illustration

*1	Reservoir Tank Cap	*2	Cylinder Block Drain Cock Plug
*3	Radiator Drain Cock Plug	*4	Air Release Valve

4. ADD COOLANT (for Engine)

(a) Tighten the radiator drain cock plug.

(b) Tighten the cylinder block drain cock plug.

Torque: **13 N·m (130 kgf·cm, 9ft·lbf)**

(c) Remove the reservoir tank cap.

(d) Connect the hose to the air release valve.

(e) Loosen the air release valve.

(f) Add TOYOTA Super Long Life Coolant (SLLC) to the reservoir tank filler opening until coolant overflows from the air release valve. Then tighten the air release valve.

Standard Capacity:

Item	Capacity
Engine coolant	w/ Exhaust Heat Recirculation System: 7.3 liters (7.7 US qts, 6.4 lmp. qts)
	w/o Exhaust Heat Recirculation System: 6.5 liters (6.8 US qts, 5.7 lmp. qts)

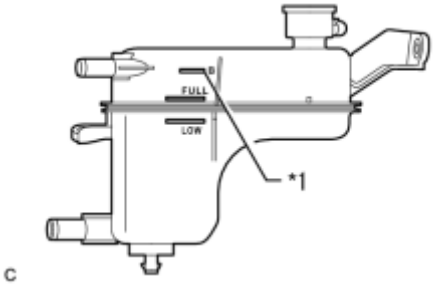
HINT:

- TOYOTA vehicles are filled with TOYOTA SLLC at the factory. In order to avoid damage to the engine cooling system and other technical problems, only use TOYOTA SLLC or similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite, non-borate coolant with long-life hybrid organic acid technology (coolant with long-life hybrid organic acid technology is a combination of low phosphates and organic acids).
- Contact your TOYOTA dealer for further details.

NOTICE:

Never use water as a substitute for engine coolant.

(g) Disconnect the hose from the air release valve.



(h) Add coolant to B line of the reservoir tank.

Text in Illustration

*1	B Line

(i) Squeeze the inlet and outlet radiator hoses several times by hand, and then check the level of the coolant.

If the coolant level is low, add coolant.

(j) Put the engine in inspection mode INFO.

(k) Install the reservoir tank cap, and warm up the engine sufficiently.

(l) Bleed air from the cooling system.

NOTICE:

- Before starting the engine, turn the A/C switch off.
- Adjust the heater control to the maximum hot setting.

- Adjust the blower speed to low setting.

(1) Warm up the engine until the thermostat opens. While the thermostat is open, allow the coolant to circulate for several minutes.

HINT:

The thermostat opening timing can be confirmed by squeezing the inlet radiator hose by hand, and sensing vibrations when the engine coolant starts to flow inside the hose.

When squeezing the radiator hose:

- Wear protective gloves.
- Be careful as the radiator hoses are hot.
- Keep your hands away from the radiator fan.

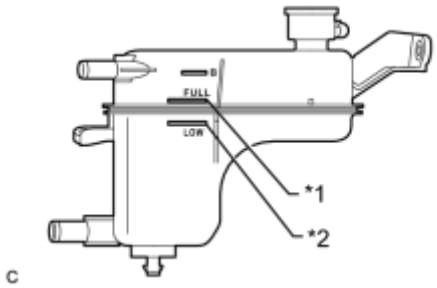
(2) After the engine is warmed up, let it idle for 7 minutes or more.

(3) Squeeze the inlet and outlet radiator hoses several times by hand to bleed air from the system.

When squeezing the radiator hose:

- Wear protective gloves.
- Be careful as the radiator hoses are hot.
- Keep your hands away from the radiator fan.

(m) After the engine has cooled down, check that the coolant level is between full and low.



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*1	Full Line
*2	Low Line

If the coolant level is low, add coolant to the full line on the reservoir tank.

5. INSPECT FOR COOLANT LEAK (for Engine) INFO

6. INSTALL ENGINE UNDER COVER (w/ Cover)

7. INSTALL FRONT SPOILER COVER (w/ Front Spoiler)

INSPECTION MODE PROCEDURE

1. INSPECTION MODE

NOTICE:

When the vehicle is run in inspection mode for an operation such as a speedometer test, a DTC may be set. Therefore, if the warning light comes on, after canceling inspection mode, check for DTCs using the Techstream and clear the DTCs.

HINT:

If the engine is warmed up and the battery is charged, the engine of the vehicle will stop after the vehicle stops. For example, if the engine is required to run continuously even after the vehicle stops, such as for an ignition timing check, switch to maintenance mode.

(a) The following table shows the types of inspection mode that are available, their purpose and the control that occurs in each mode.

Mode (Display)	Purpose	Control
MAINTENANCE MODE (2WD for measuring Exhaust Gas)	• Inspection of ignition timing etc. when performing engine maintenance, idle speed exhaust emissions testing (CO, HC), etc. • Tests using a speedometer tester, two-wheel chassis dynamometer, etc.	• Keeps the engine idling when park (P) is selected • Cancels traction control
CERTIFICATION MODE (2WD for cutting TRC)	Tests using a speedometer tester, two-wheel chassis dynamometer, etc.	Cancels traction control

(b) Vehicle conditions

(1) Before activating inspection mode, turn the air conditioning off, start the hybrid system with park (P) selected, and check that the engine stops within several seconds after starting (engine warm up check).

(2) Activate the appropriate inspection mode and inspect the vehicle. The shift state for each test is as follows:

Test Item	Mode	Shift State
1. Vehicle straight travelling test (side slip inspection)	Maintenance mode or normal mode	D
2. Braking force test	Maintenance mode	N
3. Speedometer test	Maintenance mode	D
4. Exhaust gas test (idling)	Maintenance mode	P
5. Headlight test	Maintenance mode or normal mode	P

(3) Cancel inspection mode immediately after completion of inspection.

NOTICE:

Driving the vehicle without canceling inspection mode may damage the transaxle.

(c) Special notes for speedometer test

CAUTION:

Be sure to perform the test in maintenance mode.

NOTICE:

Do not perform rapid starting or quick acceleration on a speedometer tester. If rapid starting or quick acceleration is performed on a speedometer tester, damage may occur to the transaxle.

(1) Depress the accelerator pedal slowly and gradually accelerate the vehicle. Make a measurement.

(2) After the measurement, use the brakes to gradually decelerate the vehicle.

(d) Special notes for using a chassis dynamometer

(1) Always set an appropriate load before starting the test.

NOTICE:

Sudden acceleration or deceleration of the vehicle on a chassis dynamometer under minimal load may damage the transaxle.

(e) Activating maintenance mode (Not using the Techstream)

Perform the following steps from (1) through (4) in 60 seconds.

(1) Turn the power switch on (IG).

(2) Fully depress the accelerator pedal twice with park (P) selected.

(3) Fully depress the accelerator pedal twice with neutral (N) selected.

(4) Fully depress the accelerator pedal twice with park (P) selected.

(5) Check that "MAINTENANCE MODE" is displayed on the multi-information display.

(6) Start the engine by turning the power switch on (READY) while depressing the brake pedal.

HINT:

The idle speed in maintenance mode is approximately 1000 rpm with park (P) selected. The engine speed increases to 1500 rpm when the accelerator pedal is depressed midway with park (P) selected. When the accelerator pedal is depressed more than midway, or when the accelerator pedal is fully depressed, the engine speed increases to approximately 2500 rpm.

(f) Activating maintenance mode (Using the Techstream)

(1) Connect the Techstream to the DLC3.

(2) Turn the power switch on (IG).

(3) Turn the Techstream on.

(4) Enter following menus: Powertrain / Hybrid Control / Utility / Inspection Mode - 2WD for measuring Exhaust Gas.

(5) Check that "MAINTENANCE MODE" is displayed on the multi-information display.

(6) Start the engine by turning the power switch on (READY) while depressing the brake pedal.

HINT:

The idle speed in maintenance mode is approximately 1000 rpm with park (P) selected. The engine speed increases to 1500 rpm when the accelerator pedal is depressed midway with park (P) selected. When the accelerator pedal is depressed more than midway, or when the accelerator pedal is fully depressed, the engine speed increases to approximately 2500 rpm.

(g) Activating certification mode (Not using the Techstream)

Perform the following steps from (1) through (4) in 60 seconds.

(1) Turn the power switch on (IG).

(2) Fully depress the accelerator pedal three times with park (P) selected.

(3) Fully depress the accelerator pedal three times with neutral (N) selected.

(4) Fully depress the accelerator pedal three times with park (P) selected.

(5) Check that "CERTIFICATION MODE" is displayed on the multi-information display.

(6) Start the engine by turning the power switch on (READY) while depressing the brake pedal.

(h) Activating certification mode (Using the Techstream)

(1) Connect the Techstream to the DLC3.

(2) Turn the power switch on (IG).

(3) Turn the Techstream on.

(4) Enter following menus: Powertrain / Hybrid Control / Utility / Inspection Mode - 2WD for cutting TRC.

(5) Check that "CERTIFICATION MODE" is displayed on the multi-information display.

(6) Start the engine by turning the power switch on (READY) while depressing the brake pedal.

(i) Deactivating inspection mode

(1) Turn the power switch off. The HV system turns off simultaneously.

NOTICE:

- If a DTC is set during inspection mode, the master warning light will illuminate and a warning message will appear on the multi-information display.
- When the master warning light and the warning message illuminate during inspection mode, cancel inspection mode, and check for DTC(s).
- Driving the vehicle without canceling inspection mode may damage the transaxle.