

NOTE: THIS LSC EXPIRES ON May 31, 2017

TECHNICAL INSTRUCTIONS
FOR
LSC G0K
ENGINE COOLANT INSPECTION AND ADJUSTMENT
OF COOLANT CONCENTRATION
CERTAIN 2016 MODEL YEAR SCION iA

Updated 05/23/16

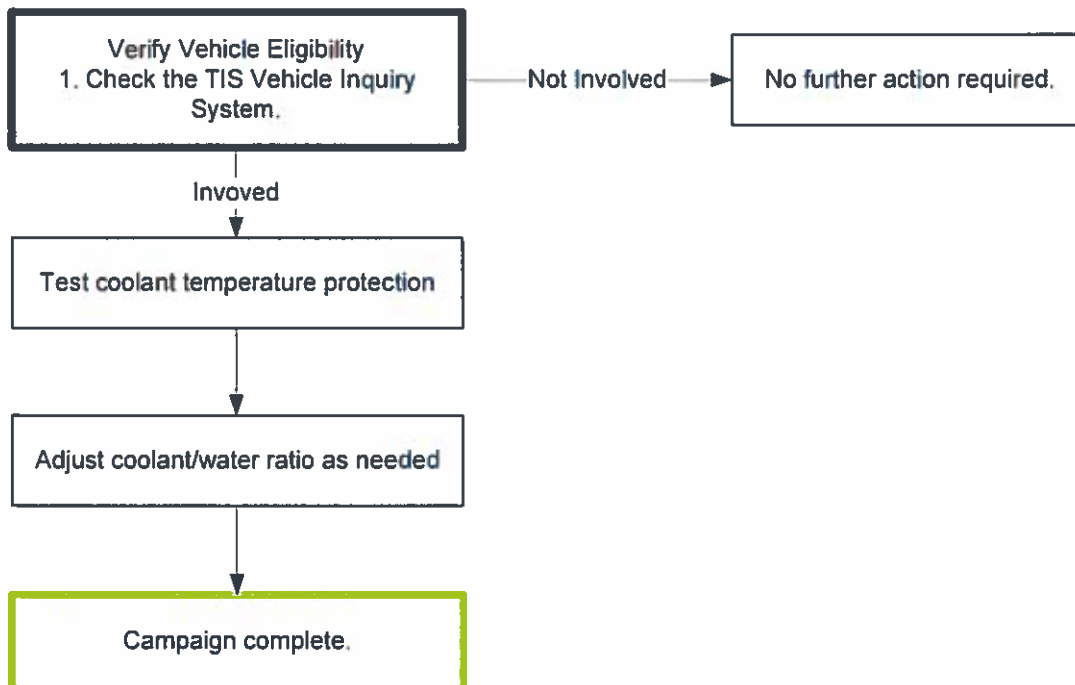
- Replaced coolant concentration calculation with coolant temperature calculation.

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this repair are required to successfully complete the most current version of the E-Learning course "Safety Recall and Service Campaign Essentials". To ensure that all vehicles have the repair performed correctly; technicians performing this repair are required to currently hold at least one of the following certification levels:

- Certified Technician (Any specialty)
- Expert Technician (Any specialty)
- Master Technician
- Master Diagnostic Technician

Always check which technicians can perform the recall remedy by logging on to <https://www.uotdealerreports.com>. It is the dealership's responsibility to select technicians with the above certification level or greater to perform this repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. COVERED VIN RANGE

- 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

No parts are needed to complete this repair.

NOTE: The Scion iA uses a specific type of coolant compared to other Toyota vehicles

B. TOOLS & EQUIPMENT

- Standard hand tools



*A refractometer was sent to each dealership at the start of the program.

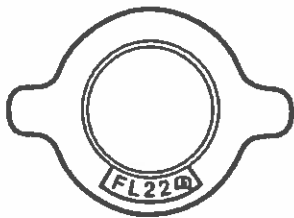
IV. BACKGROUND

The subject vehicles may have been filled with an improper concentration of coolant and water. Under high load driving conditions this could cause the high engine coolant temperature warning light to flash or illuminate and the engine to overheat.

V. WORK PROCEDURE



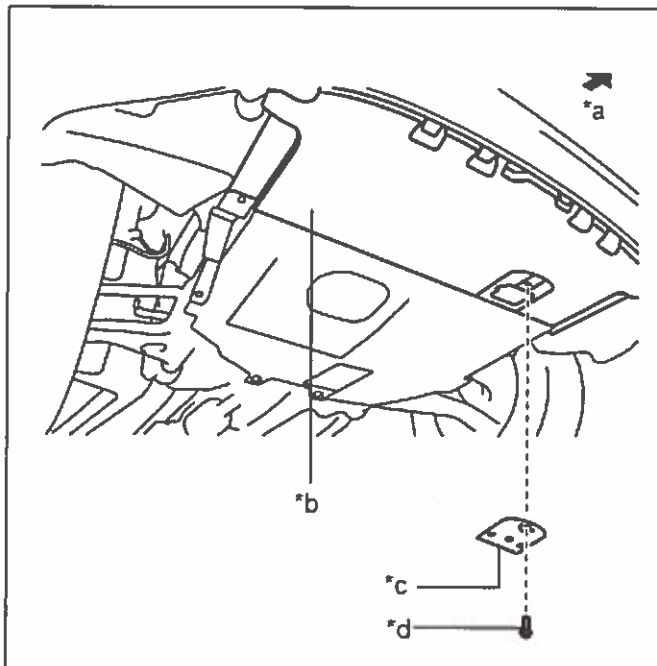
- Never remove the cooling system cap or loosen the radiator drain plug while the engine is running, or when the engine and radiator are hot. Scalding engine coolant and steam may shoot out and cause serious injury. It may also damage the engine and cooling system.
- Turn off the engine and wait until it is cool. Even then, be very careful when removing the cap. Wrap a thick cloth around it and slowly turn it counterclockwise to the first stop. Step back while the pressure escapes.
- When you are sure all the pressure is gone, press down on the cap using the cloth, turn it, and remove it.



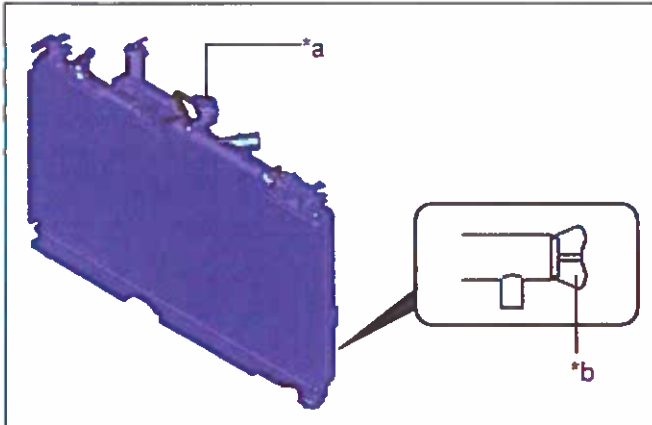
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1. INSPECT COOLANT TEMPERATURE PROTECTION

- a) Remove the coolant system cap.



- b) Remove the service hole cover.



- c) Loosen the radiator drain plug and drain 100ml (3.4 oz) of coolant into a clean container.
- d) Tighten the radiator drain plug.



- e) Add 100ml (3.4oz) of distilled water into the drained coolant.
- f) Mix the 2 fluids and allow to settle.
- g) Using a refractometer measure the temperature reading in °C.

NOTE: Refer to the refractometer use instructions from the manufacturer (also in the Appendix).
A refractometer was provided to the dealer at the start of the program.

- h) Refer to the chart below for the additional amount of coolant to be drained from the system.

Temperature Reading °C	Drain this amount of coolant	Add this amount of distilled water
-37 to -34	2 Liters or 68 Ounces	2 Liters or 68 Ounces
-33 to -27	1.5 Liters or 51 Ounces	1.5 Liters or 51 Ounces
-27 to -22	1 Liter or 34 Ounces	1 Liter or 34 Ounces
-22 to -20	0.5 Liter or 17 Ounces	0.5 Liter or 17 Ounces
-19 to -15	Correct coolant/water ratio	Correct coolant/water ratio

- i) Refer to the chart above and add the specified amount of distilled water to the system via the filler neck.
- j) Reinstall the coolant cap.
- k) Start engine and run at idle until it reaches operating temperature.
- l) Stop engine and check coolant level after vehicle has cooled down.
- m) Check for any coolant leaks.

◀ VERIFY REPAIR QUALITY ▶

If you have any questions regarding this repair, please contact your regional representative.

VI. APPENDIX

A. Refractometer



ROBINAIR

SPX Corporation
655 Eisenhower Drive
Owatonna, MN 55060-0995 U.S.A.
Tech Serv: 1-800-822-3561
Fax: 1-800-822-7805
Customer Serv: 1-800-533-6127
Fax: 1-800-283-8665
Website: www.robinair.com

Operating Instruction Sheet

75240 Hand Refractometer

WARNING! To prevent equipment failure or damage resulting in personal injury:



- Read and follow all warnings in this instruction sheet before operating this unit. If the operator cannot read English, operating instructions and safety precautions must be read and discussed in the operator's native language.

- *Si el operador no puede leer el inglés, las instrucciones de operación y las precauciones de seguridad deberán leerse y comentarse en el idioma nativo del operador.*

- *Si l'utilisateur ne peut lire l'anglais, les instructions et les consignes de sécurité doivent lui être expliquées dans sa langue maternelle.*



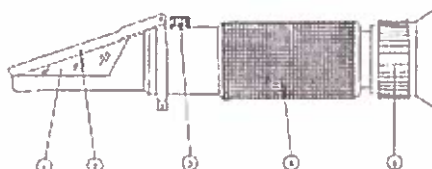
- Always wear eye protection and protective clothing when working with refrigerants and sulphuric acid. Contact with refrigerants and sulphuric acid may cause personal injury.



- Do not drink antifreeze (propylene or ethylene glycol base) or solution (sulphuric acid base). If swallowed, give two glasses of water and induce vomiting. Call a physician.

SPECIFICATIONS

Style: Battery/Coolants
Model: 75240
Range: -60°F - 32°F / -15 - 1.30 °g
Resolution: 10°F, 0.01 °g
Size: 27 x 40 x 160 mm
Weight: 176 g



1. Prism
2. Cover plate
3. Correction screw
4. Mirror tube (holds the reticle scale)
5. Eyepiece (focusing ring of diopter)

Accessories

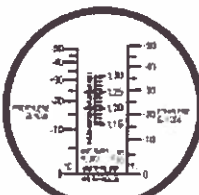
Eyeshade Screw driver Leather cover
Glass rod Soft cloth

Application

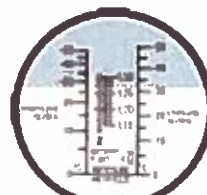
The 75240 Hand Refractometer is a portable, precision optical instrument used for measuring the freeze point of engine coolant and the operation state of battery charging liquid. It is used on transportation vehicles, such as cars, tractors, tanks, ships, etc., which use propylene or ethylene glycol for coolant and sulphuric acid for charging liquid.

When a liquid (such as coolant or charging liquid) is placed on the prism, the light passing through it is bent. The more concentrated the liquid, the more the light will bend. The refractometer contains a reticle, or scale, that is enlarged through the eyepiece to measure this bent light.

The values of the scale have been established to evaluate the coolant or charging liquid.



The reticle without any liquid on the prism.

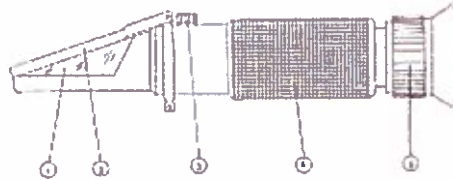


The reticle with liquid on the prism. The reading is taken at the point the shadow line crosses the scale.

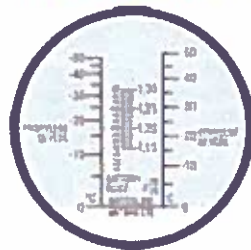
Operating Instructions

Use the following instructions to operate the 75240 Hand Refractometer.

IMPORTANT: Read and understand all Operating Instructions and Helpful Hints before operating the Refractometer.



1. Aim the front end (prism [1] and cover plate [2] end) of the refractometer toward a bright light; then adjust the focusing ring of the diopter (5) until the reticle (scale within the mirror tube) can be seen clearly.
2. To set the Hand Refractometer to a null or zero point -
 - (a) Open the cover plate.
 - (b) Place one or two drops of pure distilled water on the surface of the prism.
 - (c) Close the cover plate and press it lightly.
 - (d) Through the eyepiece, observe where the shadow line falls.
 - (e) If necessary, adjust the correction screw (3) with the screw driver provided to make the shadow line coincide with the water line.



The Hand Refractometer should now have a null point, and you are ready to begin measuring.

3. Open the cover plate, and wipe the water off the surfaces of the prism and cover plate with the soft cloth that is provided.
4. Then place one or two drops of the liquid needed to be measured on the prism surface.

WARNING: To prevent personal injury, use glass rod provided when measuring battery liquid.

Close the cover plate and press it lightly. The reticle reading on the shadowline is the freeze point of the liquid, or an indication of the operation state of the battery liquid.

5. After measurements are taken, wipe the liquid completely from the prism surface with the soft cloth and let dry.

CAUTION: To prevent damage to the refractometer, do NOT use water to wash the instrument.

6. Replace the refractometer in its case, and store it in a dry, clean area.

Helpful Hints and Maintenance

- The distilled water and the liquid to be measured should be at the same temperature.
- Null point should be adjusted once every 30 minutes.
- Clean prism completely to prevent residual impurities, which could cause error during measuring.
- The refractometer is a precision optical instrument; handle with care. Do NOT touch the optical surfaces.
- Avoid strong shock during transportation.

B. CAMPAIGN DESIGNATION DECODER

