

**TECHNICAL INSTRUCTIONS
FOR
SAFETY RECALL 25LA01
VEHICLE MAY STALL DURING DRIVING AT HIGHER SPEED
CERTAIN 2019 MODEL YEAR NX300
CENTAIN 2019 MODEL YEAR RX350L**

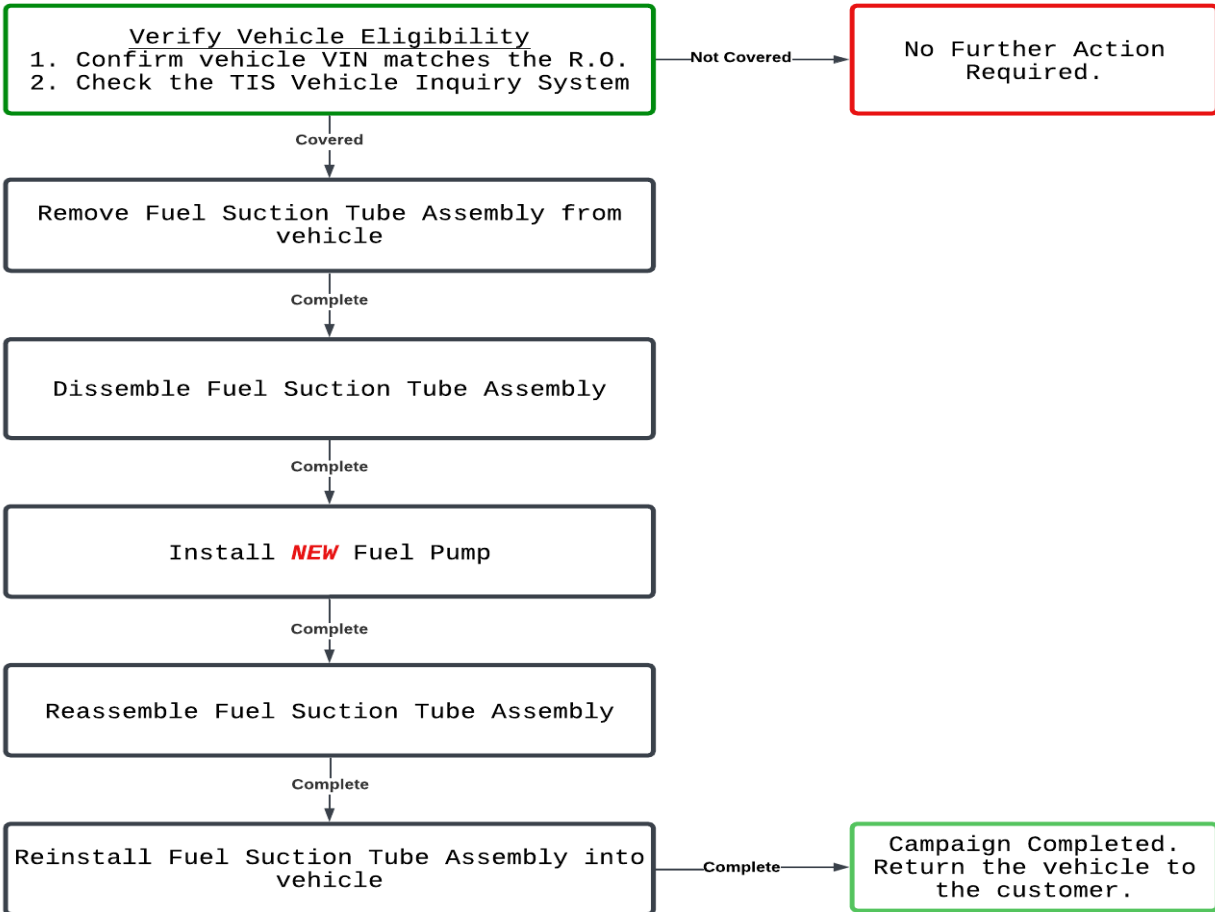
The repair quality of covered vehicles is extremely important to Lexus. All dealership technicians performing this repair are required to successfully complete the most current version of the E-Learning course “Safety Recall and Service Campaign Essentials”. To ensure that all vehicles have the repair performed correctly; technicians performing this repair are required to currently have completed the following course:

- LIC206A - Electrical Repair 1

It is the dealership’s responsibility to select technicians that have completed the above courses 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

The flowchart is for reference only. DO NOT use it in place of the full technical instructions. Follow ALL steps as outlined in the full technical instructions to confirm the campaign is completed correctly.



II. IDENTIFICATION OF AFFECTED VEHICLES

1. CHECK VEHICLE FOR CAMPAIGN ELIGIBILITY

- Compare the vehicle's VIN to the VIN listed on the Repair Order to ensure they match.
- Check the TIS Vehicle Inquiry System or Service Lane to verify this vehicle is eligible for Safety Recall 25LA01.

Note: Warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were previously completed, even by another dealer.

III. PREPARATION

A. PARTS

Parts for this campaign can be ordered in Campaign Part Order Request (CPOR) on Service Lane, due to potential limited part availability. Please check the MAC report on Dealer Daily for the most up-to-date parts ordering information as part controls can be adjusted throughout the life of the campaign.

Dealers can identify which parts ordering method to use by reviewing the parts information section of Dealer Daily and checking for a MAC code on the part numbers below. For MAC code C, order through CPOR. For MAC code D, refer to the MAC report for further instructions.

NX300 Parts		
Part Number	Description	Quantity
04009-86136	NX300 Fuel Pump Kit	1
04009-80253	NX300 Fuel Pump Gasket Kit	1

RX350L Parts		
Part Number	Description	Quantity
04009-86531	RX350L Fuel Pump Kit	1
04009-9520C	RX350L Fuel Pump Gasket Kit	1

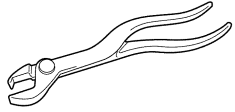
B. TOOLS & EQUIPMENT

- Standard Hand Tools
- Torque Wrench
- Air Blow gun
- Gas Caddy (minimum 25 gallon capacity)

C. MATERIALS

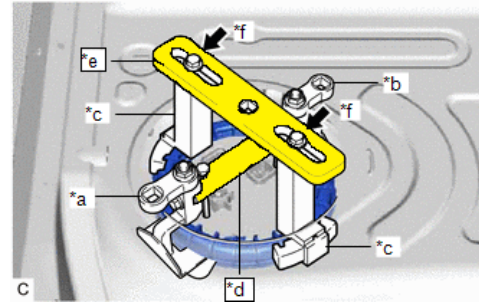
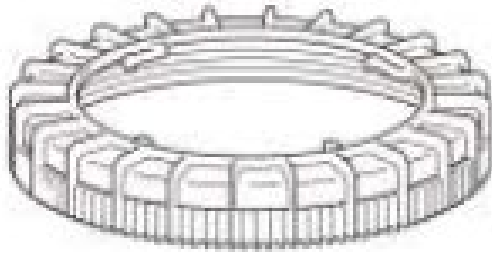
- Brake Cleaner

D. CAMPAIGN TOOLS

Campaign Tools		
	Retainer Ring Pliers	These pliers were shipped to each dealership in early February 2021.

E. SPECIAL SERVICE TOOLS

The RX350L uses a plastic ring w/holding tool retainer type as shown below.



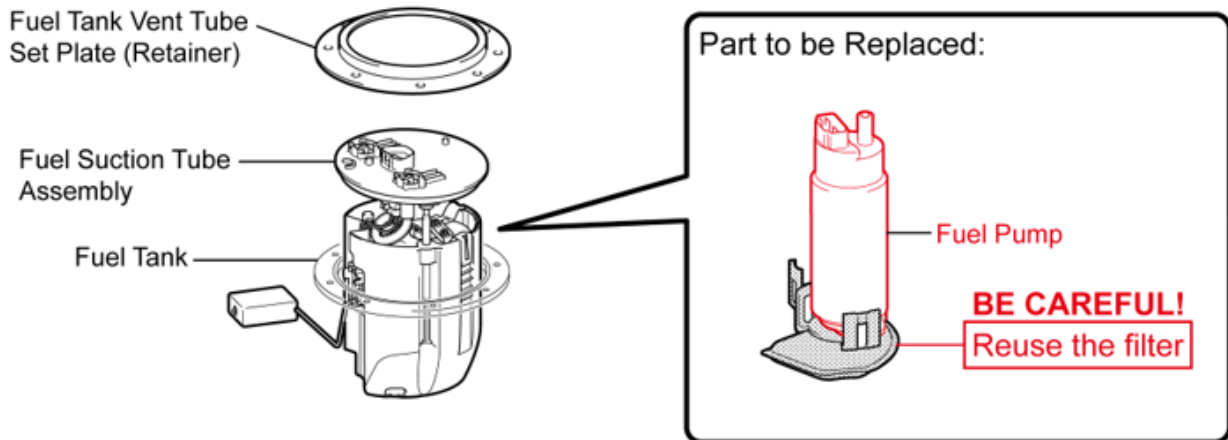
This retainer type requires two different Special Service Tools in addition to the ones listed above.

Special Service Tools		
Plate - Fuel Pump Retainer Tool (*e)	Bridge - Fuel Pump Holding Tool (*d)	Additional SST's can be purchased from the Lexus Special Service Tools (SST) website
(09808-14040)	(09808-01070)	Lexus Special Service Tools

The NX300 uses the bolt in style retainer and does not require any SSTs.

IV. BACKGROUND

The subject vehicles are equipped with a low-pressure fuel pump which may stop operating. If this were to occur, warning lights and messages may be displayed on the instrument panel, and the engine may run rough. This may result in a vehicle stall, and the vehicle may be unable to be restarted. If a vehicle stall occurs while driving at higher speeds, this could increase the risk of a crash.



*The configuration of the parts will differ depending on the specification.

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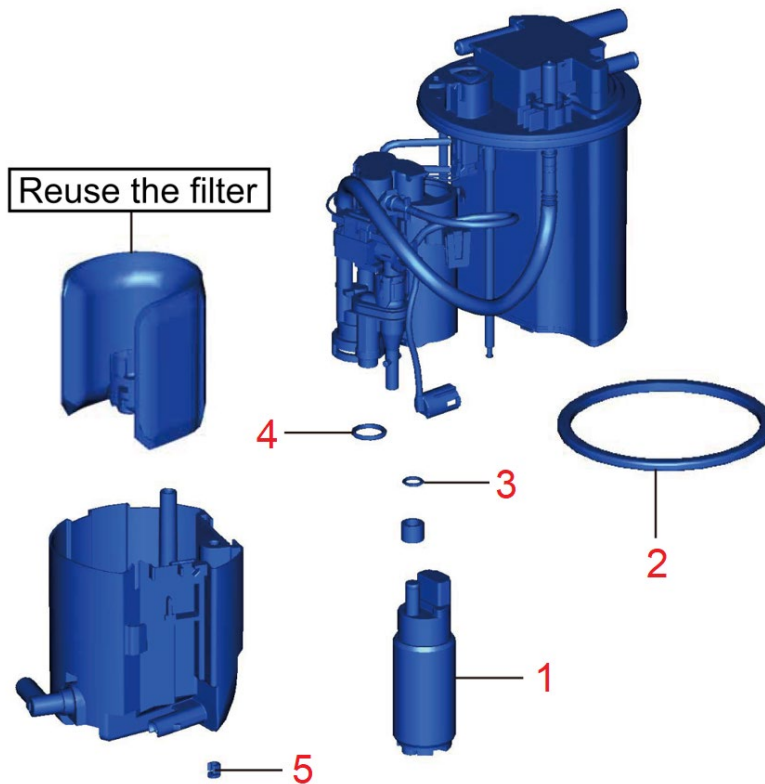
V. SAFETY PRECAUTIONS

CAUTION:

- When installing/uninstalling the fuel system components, keep safety first in mind and carefully observe the following instructions to avoid accidents:
 - a. When working on the fuel system, display a Flammable - Keep Fire Away sign.
 - b. Smoking is prohibited nearby.
 - c. Perform this work in an area where there are no sparks nearby from the operation of welders, grinders, drills, electric motors, stoves, etc.
 - d. **DO NOT** use electrical devices nearby because they can become hot and the operation of power switches can generate sparks.
 - e. **DO NOT** use iron or steel hammers while working, because they may generate sparks.
 - f. **DO NOT** start engines even in adjacent stalls.
 - g. Prepare fire extinguishers before starting any work.
 - h. Perform this work in a well-ventilated area (natural ventilation). **DO NOT** use exhaust fans or electric fans, because their motors might generate sparks.
 - i. Since it is possible for fuel vapor to build up, **DO NOT** work in or near a pit.
 - j. If fuel is spilled, use shop towels or similar material to quickly wipe it up and then use compressed air to diffuse the fuel vapor.
 - k. Shop towels and other materials that have come into contact with fuel should be dried in a well-ventilated area and then disposed of as appropriate.

VI. COMPONENTS

NX 300

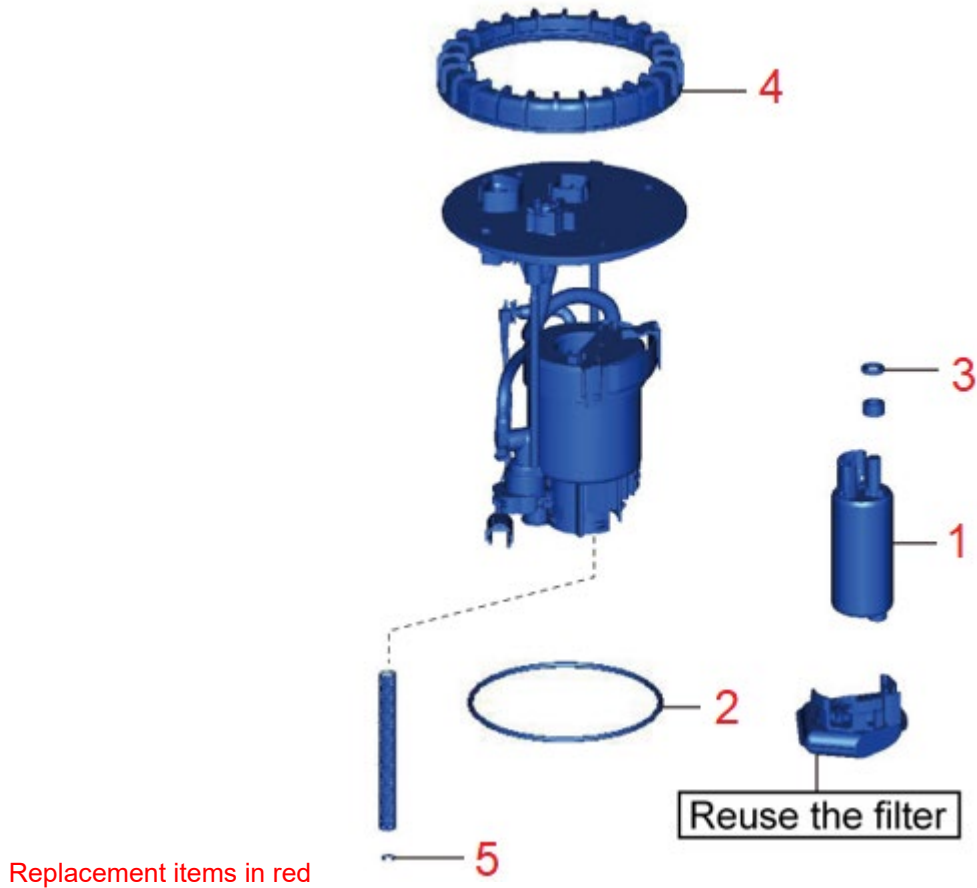


Replacement items in red

No.	Contents of Part Kit's	Quantity	Tape Color	Remarks
1	FUEL PUMP	1		
2	FUEL SUCTION TUBE SET GASKET	1		
3	O-RING	1	Yellow	Approx. OD 15.2 mm
4	O-RING	1	Green	Approx. OD 16.4 mm
5	FUEL TANK PIPE SETTING HOLDER	1	White	

DO NOT order the individual parts listed here. It is provided as a reference to assist in the correct installation. Order the parts kit's specific to each VIN, as detailed in CPOR on Service Lane. Warranty will only reimburse dealers for the part numbers listed on the website. Any other part numbers will not be accepted on the campaign claim.

RX 350 / RX 350L



No.	Contents of Part Kit's	Quantity	Tape Color	Remarks
1	FUEL PUMP	1		
2	FUEL SUCTION TUBE SET GASKET	1		
3	O-RING	1	Yellow	15.2mm
4	FUEL PUMP GAUGE RETAINER	1		
5	FUEL TANK PIPE SETTING HOLDER	1	White	

DO NOT order the individual parts listed here. It is provided as a reference to assist in the correct installation. Order the parts kit's specific to each VIN, as detailed in CPOR on Service Lane.

Warranty will only reimburse dealers for the part numbers listed on the website. Any other part numbers will not be accepted on the campaign claim.

VII. REMOVE FUEL TUBE ASSEMBLY



Use TIS to confirm that this vehicle is eligible for the campaign before proceeding. Warranty will not pay claims on ineligible vehicles.



1. CHECK FOR DTC'S

- a. Using a Techstream, perform a Health Check to check for Diagnostic Trouble Codes.

Note: *This Safety Recall covers only the replacement of the fuel pump and associated parts. It does not cover the diagnosis or replacement of any other parts on the vehicle.*

REMOVAL TIP: FUEL LEVEL

If the vehicle fuel tank is full, fuel may overflow from the fuel tank during the removal of the fuel suction tube assembly. If necessary, drain fuel from the tank so that it is less than full.

Model	FUEL LEVEL RECOMMENDATIONS	
	Less than full	1/3 or less
RX 350/350L	✓	
NX 200t / NX 300		✓

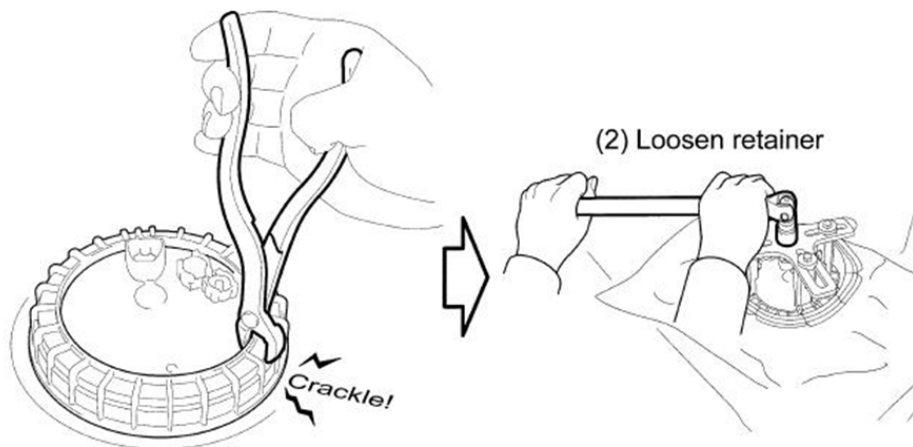
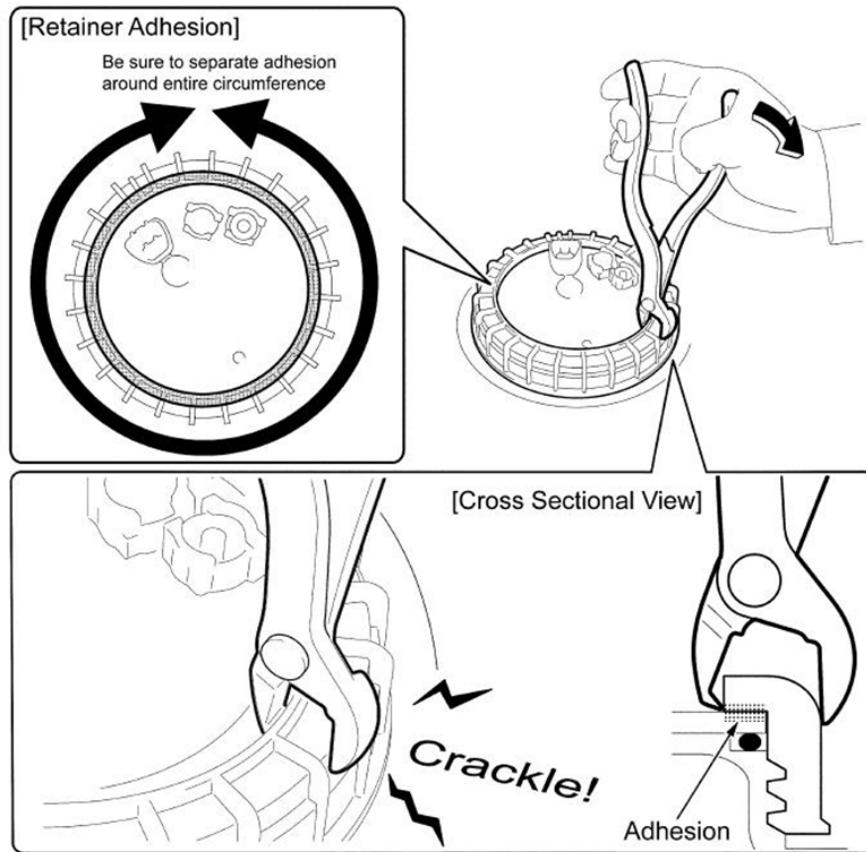
Note: If fuel needs to be removed from the tank, be sure to recover it into an approved fuel recovery system. Suitable systems are available from the [Lexus Approved Dealer Equipment](#) website.

REMOVAL TIP: RETAINER RING REMOVAL

In early February 2021, each dealership was sent one (1) pair of Retainer Ring Plier's. These tools can be used for separating the bond between the Retainer Ring and Fuel Tube Assembly if necessary.

REMOVAL PROCEDURE

1. Using the pliers provided, release the adhesion between the Retaining Ring and the Fuel Tube Assembly around the entire circumference.
2. Using the SST, loosen the Retainer Ring.



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REMOVAL TIP: FUEL LEVEL SENDER

When removing and reinstalling the Fuel Level Sender from the fuel tank, take extra care with the arm of the fuel sender. It can be easily bent. Additionally, do not touch the electric circuit of the sender assembly.

Do not touch the electric circuit of the fuel sender gauge.

Do not deform the arm of the fuel sender gauge.



REMOVAL TIP: TUBE ASSY REMOVAL

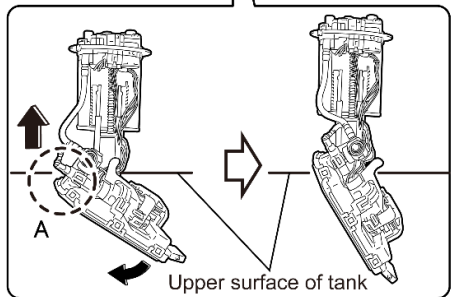
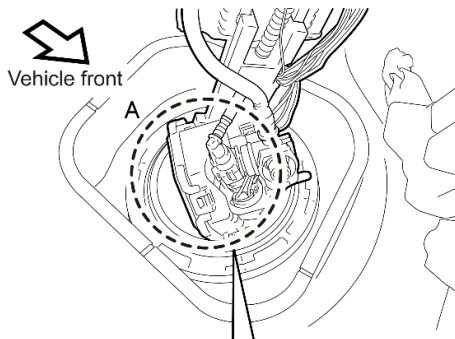


Illustration shows an image, and the shape of parts may differ with that of actual ones. S70006as

- 1) Slightly raise the fuel suction tube assembly during this operation to make sure that the sender gauge does not interfere with the inside of tank.
- 2) Pull up the fuel suction tube assembly to the position indicated in the illustration. Pull portion (A) by hand to swing the lower part of fuel suction tube assembly downward, and then remove the fuel suction tube assembly from the tank.



- **DO NOT** bend the arm of fuel sender gauge assembly.
- **DO NOT** damage the wire harness at edges of service hole when removing the fuel suction tube assembly.

1. REMOVE FUEL TUBE ASSEMBLY FROM VEHICLE

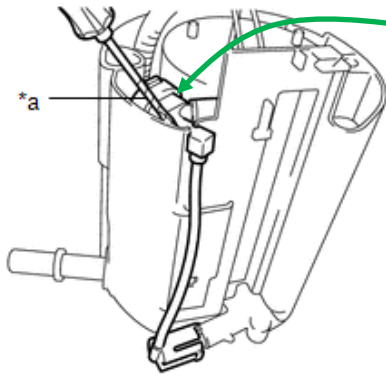
- a. Follow the Repair Manual instructions to remove the Fuel Tube Assembly from the vehicle.
- b. [NX300 - FUEL PUMP: REMOVAL - 2019](#)
- c. [RX350 - FUEL PUMP \(for TMC Made\): REMOVAL - 2019](#)

VIII. DISASSEMBLY OF FUEL TUBE

DISASSEMBLY TIP: FOLLOW THE REPAIR MANUAL

The Part's Kit contains the necessary O-Rings for reassembly, if the Repair Manual procedure is followed. If the pump components are disassembled in a manor other than as detailed in the Repair Manual, the Parts Kit may not contain the necessary O-Rings for proper reassembly. Please follow the procedure in the Repair Manual to ensure the correct O-Rings are available.

Example of Proper Disassembly:

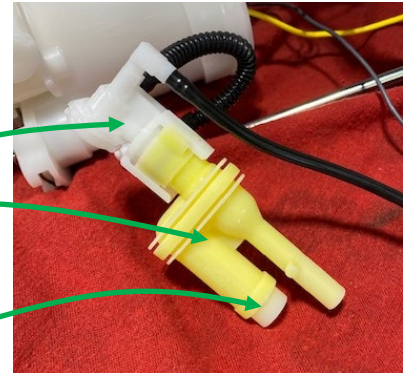


Repair Manual: Using a screwdriver (*a) with its tip wrapped in protective tape, remove the jet pump from the No. 1 fuel sub-tank.

Tube still attached

Jet pump properly removed from the No.1 fuel sub-tank.

Replacement O-Ring will be installed in this location



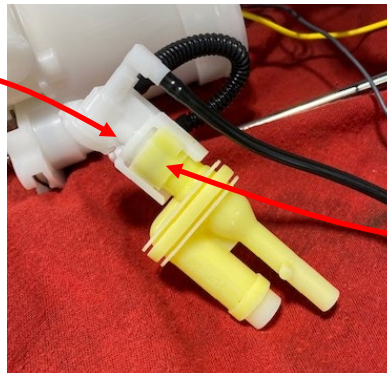
Example of Incorrect Disassembly:

Tube incorrectly removed from jet pump



Replacement O-ring is the incorrect size

DO NOT disconnect the tube from the jet pump

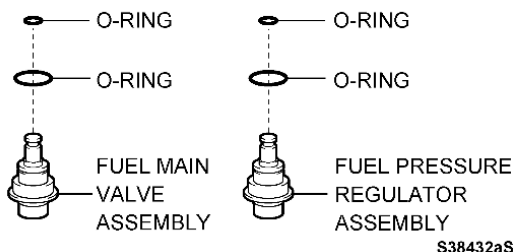


Replacement O-Ring is NOT provided for this location

DISASSEMBLY TIP: MAIN VALVE AND REGULATOR

When replacing the fuel pump, it is not necessary to remove the Fuel Main Valve or Fuel Pressure Regulator. These O-Rings are NOT included in the parts kit.

DO NOT remove



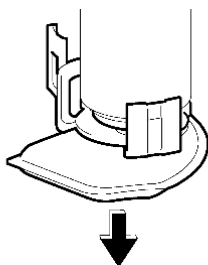
Incorrect Main Valve Assembly

Correct Main Valve Assembly



DISASSEMBLY TIPS: FUEL FILTER

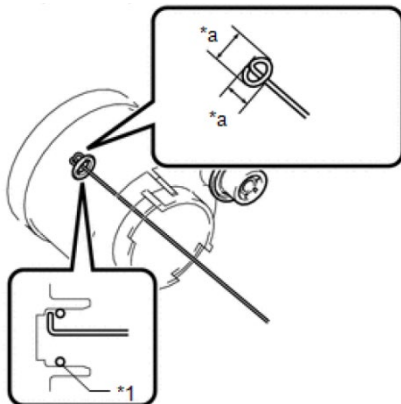
Be careful with the tabs when removing the filter from the original fuel pump as to not overextend them. When installing the filter on the **NEW** Fuel Pump, be sure that the clips have engaged properly.



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DISASSEMBLY TIPS: O-RING REMOVAL

During disassembly, the O-Ring may remain in the fuel pump housing. Be sure the inspect the housing after removing the fuel pump and remove the O-Ring if necessary.

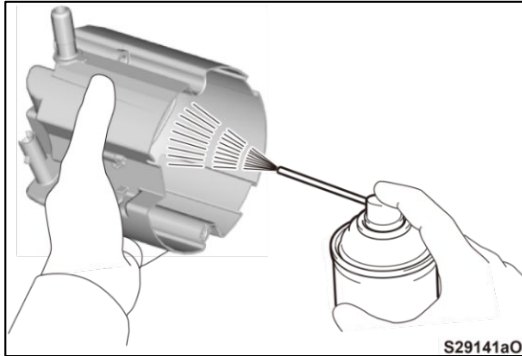


1. DISASSEMBLE FUEL SUCTION TUBE ASSEMBLY

- Follow the Repair Manual instructions to disassemble the Fuel Suction Tube Assembly.
- [NX300 - FUEL PUMP: DISASSEMBLE - 2019](#)
- [RX350 - FUEL PUMP \(for TMC Made\): DISASSEMBLE - 2019](#)

2. CLEAN SUB TANK ASSEMBLY

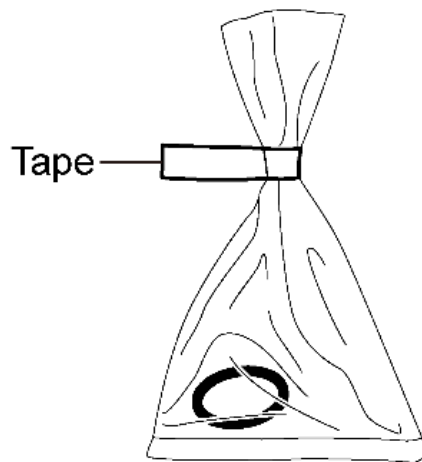
- Using brake cleaner, clean the sub-tank assembly.



IX. REASSEMBLE FUEL TUBE ASSEMBLY

REASSEMBLY TIPS: O-RINGS

The part kits may come with O-Rings of different sizes. They are very difficult to tell apart visually. To identify the different size O-Rings, they will be wrapped in individual plastic bags with a piece of **COLORED TAPE** sealing it. The **COLOR OF THE TAPE** will identify the O-Ring size. **REFER TO THE COMPONENT DIAGRAM TO DETERMINE TO CORRECT O-RING**, as identified by the tape color.

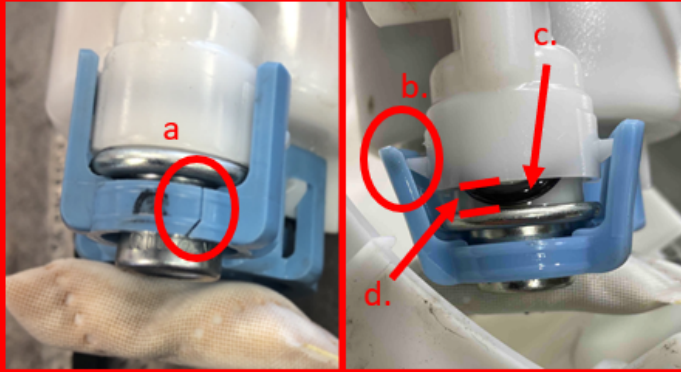


REASSEMBLY TIPS: FUEL FILTER INSTALLATION

When assembling the fuel filter retainer to pump housing on some models, there is a possibility that the main valve will unseat itself from the housing. Be sure to inspect the complete assembly for the following issues:

- Crack in the retainer
- Claws are properly engaged
- O-Ring is properly seated
- No gap between the housing and main valve

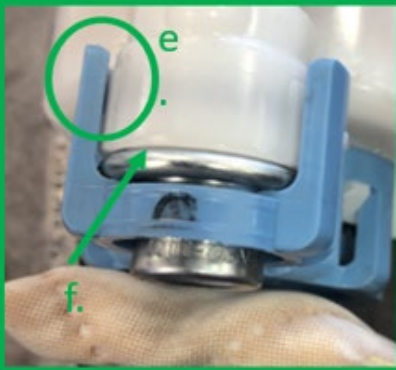
Filter Retainer Installation – Incorrect Assembly



Incorrect Conditions:

- a. Crack in retainer
- b. Retainer claw below attachment point
- c. Incorrect position of O-Ring
- d. Gap visible between housing and valve

Filter Retainer Installation – Correct Assembly



Good Condition

- e. Retainer claw secured above attachment point
- f. No visible gap or O-Ring between valve and housing

REASSEMBLY TIPS: FUEL TUBE

When assembling the upper and lower sections of the fuel pump assembly, be certain to correctly align the upper and lower sections as to not twist the fuel tube.



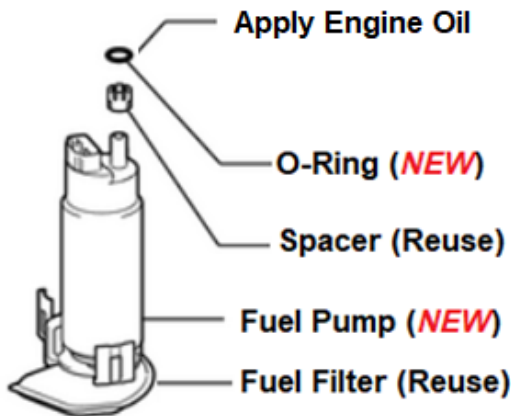
1. REASSEMBLE FUEL SUCTION TUBE ASSEMBLY WITH **NEW** FUEL PUMP

- a. Follow the Repair Manual instructions to reassemble the Fuel Suction Tube Assembly with a **NEW** Fuel Pump.



Refer to the component diagram at the beginning of these Technical Instructions to confirm the location of each replacement part.

Example Procedure:



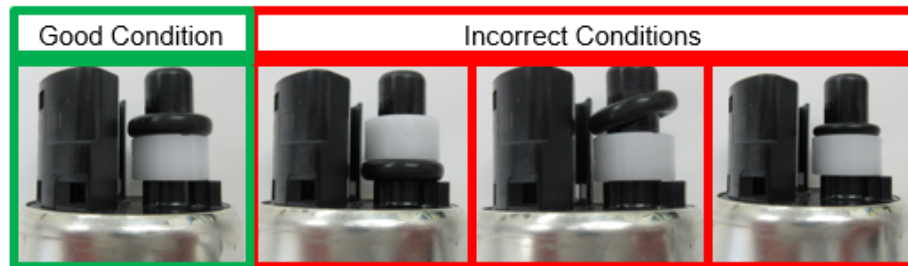
HINT:

The reused filter may be discolored.

- Remove the original O-Ring, Spacer and Fuel Filter from the original Fuel Pump.
- Discard the original O-Ring and Fuel Pump, saving the Spacer and Fuel Filter.
- Install the original Spacer onto the **NEW** Fuel Pump.
- Install the **NEW** O-Ring onto the **NEW** Fuel Pump. Refer to the Component Diagram to determine to proper O-Ring, as identified by the colored tape on the bag.
- Apply a small amount of engine oil to the **NEW** O-Ring to assure correct installation into the Tube Assembly.
- Install the original Fuel Filter onto the **NEW** Fuel Pump.
- Refer to the Components diagrams to review the other **NEW** parts to install.

- Apply engine oil to the **NEW** O-ring before assembly to assure correct installation into the Fuel Suction Tube.

Note: Fuel Pump O-Ring installation is critical to this repair. A visual inspection of the final assembly will confirm the correct installation.



The O-ring and spacer assembly is in the reverse order.

The O-ring is tilted.

The thin O-ring of the jet pump was used.

2. REASSEMBLE FUEL SUCTION TUBE ASSEMBLY

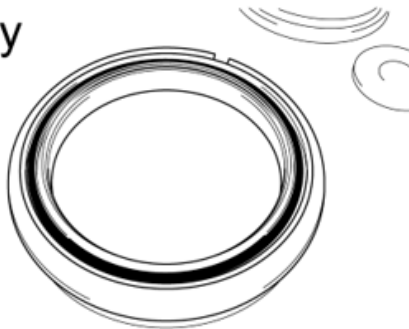
- b. Follow the Repair Manual instructions to reassemble the Fuel Suction Tube Assembly.
- c. [NX300 - FUEL PUMP: REASSEMBLE - 2019](#)
- d. [RX350 - FUEL PUMP \(for TMC Made\): REASSEMBLE - 2019](#)

X. INSTALL FUEL TUBE ASSEMBLY

INSTALLATION TIP: PLASTIC RETAINER

Set **NEW** gasket properly

DO NOT apply
silicon grease



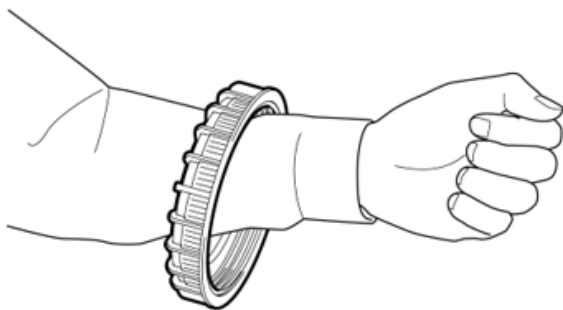
OK



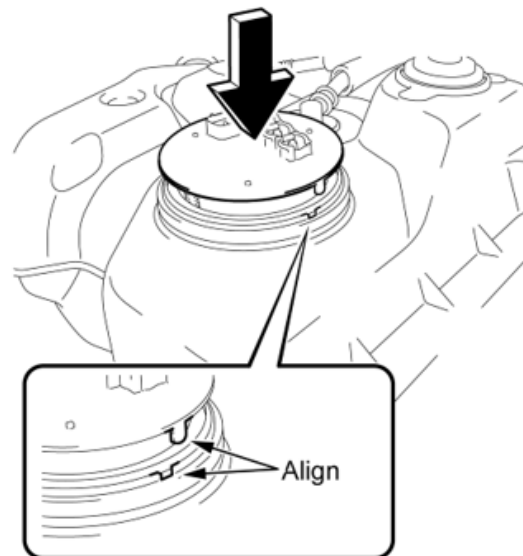
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Put the retainer around the arm so that it is not necessary to change hands to keep pressing down the fuel suction tube.
(Plastic Retainer)



Keep pressing down the fuel suction tube while installing the retainer.



1. INSTALL THE FUEL SUCTION TUBE ASSEMBLY INTO VEHICLE

- a. Follow the Repair Manual instructions to reinstall the Fuel Suction Tube into the vehicle.
- b. [NX300 - FUEL PUMP: INSTALLATION - 2019](#)
- c. [RX350 - FUEL PUMP \(for TMC Made\): INSTALLATION - 2019](#)



Refer to the Component diagrams at the beginning of these Technical Instructions to confirm the location of each replacement part.

2. INSTALL REMOVED FUEL

- a. If fuel was removed from the tank prior to disassembly, reinstall the originally recovered fuel into the tank.



3. CHECK FOR DTC'S

- a. Using a Techstream, perform a Health Check to check for Diagnostic Trouble Codes.

Note: This Safety Recall covers only the replacement of the fuel pump and associated parts. It does not cover the diagnosis or replacement of any other parts on the vehicle.

4. Emissions Repair Procedures for California Dealers

As this Safety Recall includes emission related parts, California dealers are requested to fill out the Vehicle Emissions Recall – Proof of Correction form and affix an Authorized Modification Label to the vehicle after repairs have been completed.

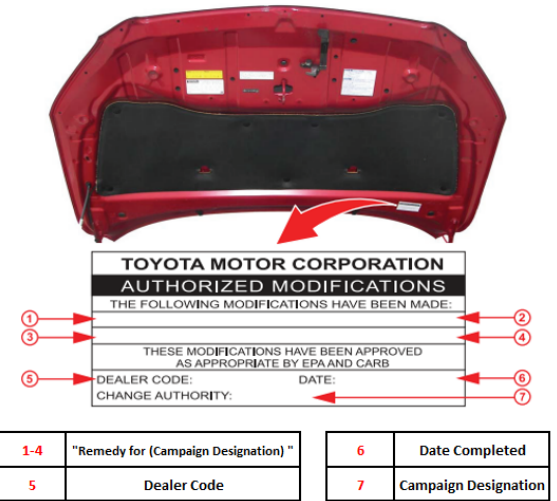
The vehicle owner may require the Proof of Correction form for vehicle registration renewal. ***It is important to note that the forms are an official state document, and blank forms must be secured to prevent misuse.***

Please complete the form and provide it to the owner. The first non-completed VINs will be submitted to the California state DMV by early September 2025. If the vehicle owner's warranty claim will not be processed and paid prior to this date, please be sure to complete a form and provide it to a California owner.

A form titled "Vehicle Emission Recall - Proof of Correction" with fields for License Number, Make, Year Model, Body Type, Vehicle Identification Number, Manufacturer, Recall Number, Dealer's Name, Address, City, State and Zip, Date, and Dealership's Authorized Signature. It includes a statement: "The above described vehicle has been repaired, modified and/or equipped with new emission control devices to meet applicable California Emission Control Laws." and a footer: "Return this certificate to DMV only when required - otherwise retain for your records." and the website "www.cars.com".

Install the Authorized Modifications Label after the repairs have been completed. Using a permanent marker, fill out the label and affix it to the location under the hood as indicted.

Form booklets and Authorization Labels can be ordered from the MDC (Booklet material number 00410-92007, Label material number 00451-00001-LBL).



◀ VERIFY REPAIR QUALITY ▶

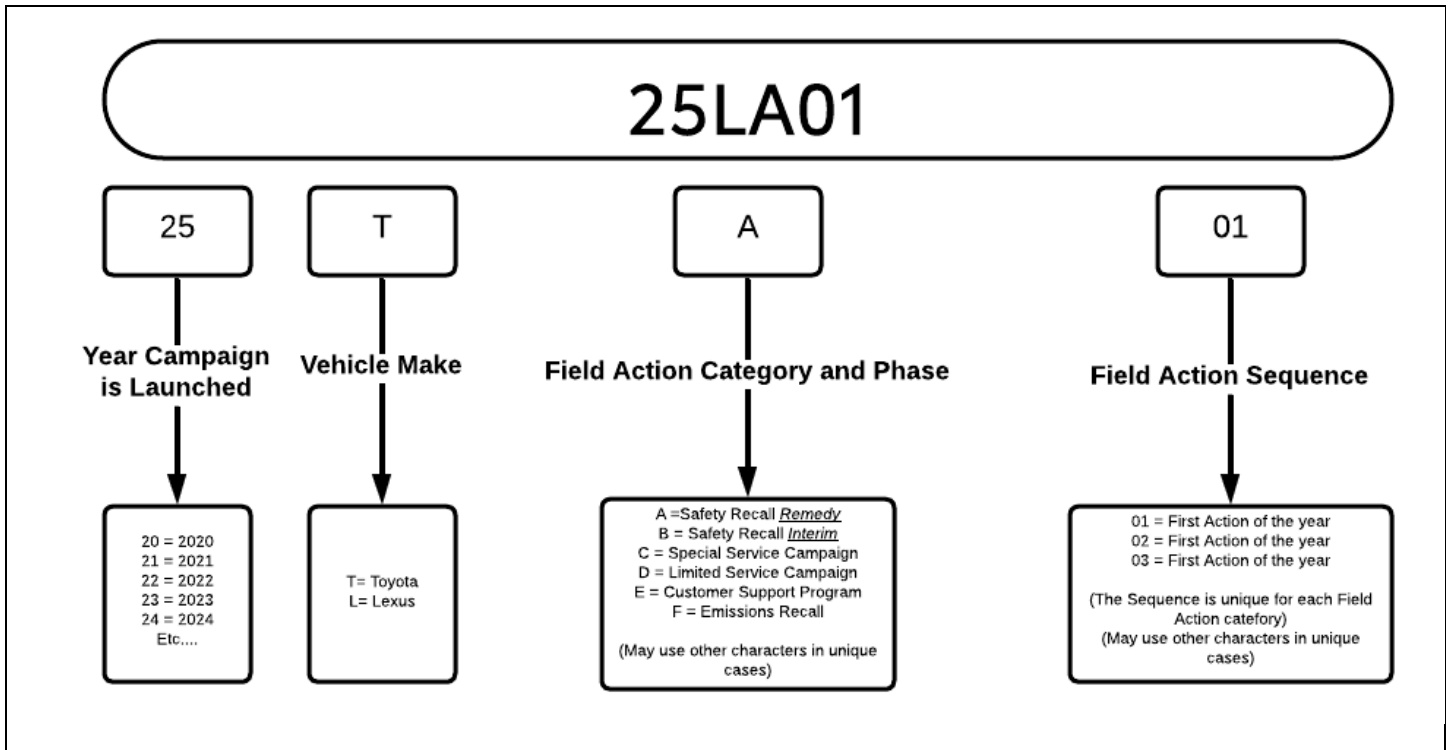
- Confirm no fuel leaks from vehicle
- Confirm any fuel drained from the vehicle has been reinstalled
- Test drive to confirm normal operation while under load
- Confirm no DTC's are present
- Confirm that all parts listed in the Components Diagram have been properly installed on the vehicle.

XI. APPENDIX

A. PARTS DISPOSAL

In accordance with Federal law, please make sure all recalled 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.***

B. CAMPAIGN DESIGNATION DECORDER



Examples:

19TA01 = Launched in 2019, Toyota, Safety Recall Remedy Phase, 1st Safety Recall Launched in 2019
20TC02 = Launched in 2020, Special Service Campaign, 2nd Special Service Campaign Launched in 2020
21TE05 = Launched in 2021, Customer Support Program, 5th Customer Support Program Launched in 2021