

TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL 21TA05

VEHICLE MAY STALL DURING DRIVING AT HIGHER SPEEDS

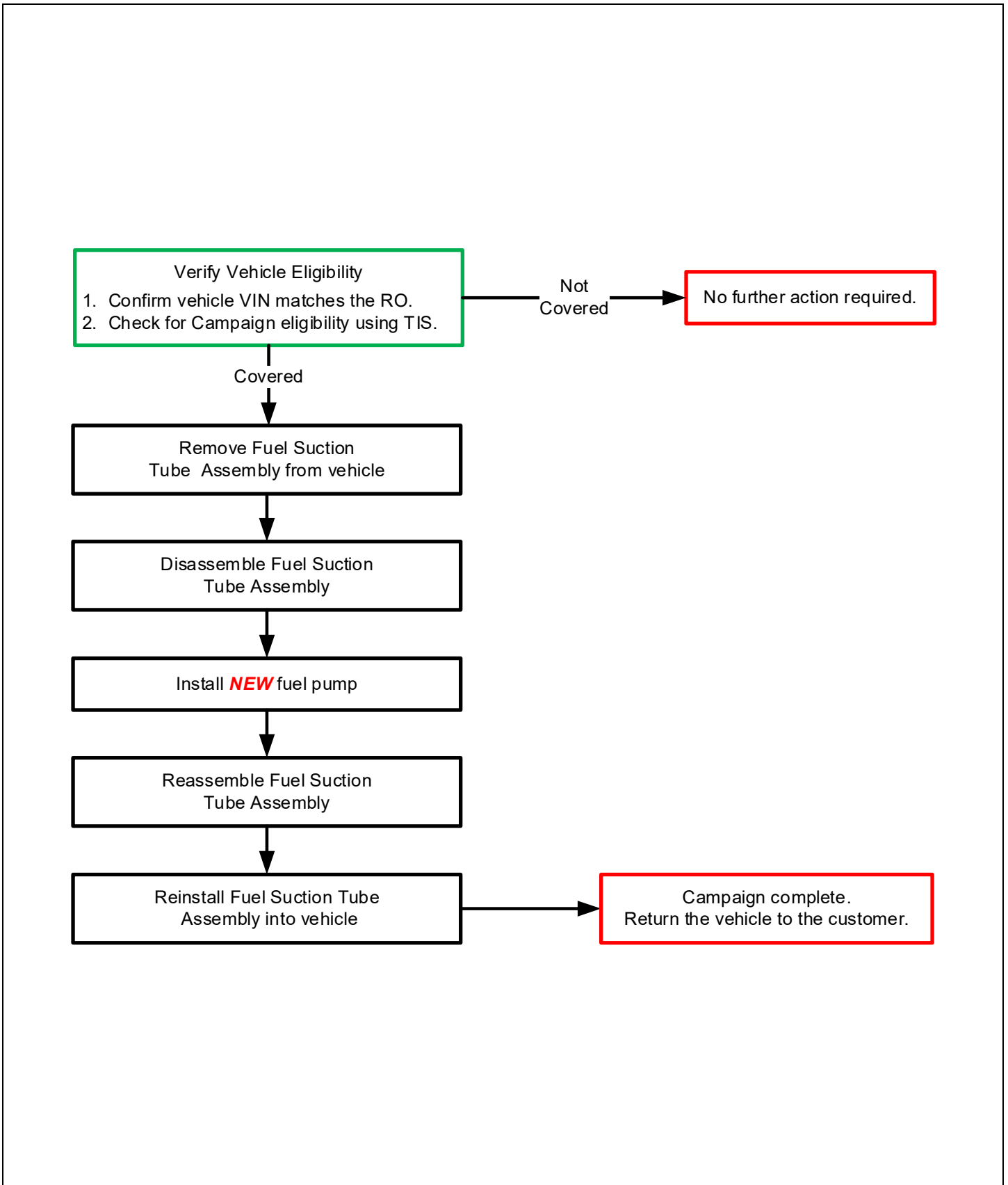
CERTAIN 2019 - 2020 MODEL YEAR YARIS SEDAN
CERTAIN 2020 MODEL YEAR YARIS HATCHBACK & YARIS R

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this recall 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 recall repair are required to currently have completed all of the following courses:

- T623 Electrical Circuit Diagnosis

It is the dealership's responsibility to select technicians that have completed the above courses to perform this recall 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

- CHECK VEHICLE FOR CAMPAIGN ELIGIBILITY
 - a. Compare the vehicles VIN to the VIN listed on the Repair Order to ensure they match.
 - b. Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Campaign, and that it has not already been completed.

Note: TMNA 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

Part Number	Part Description	Quantity
23221-WB003	PUMP YARIS	1
77169-WB001	GASKET, FUEL SUCTION TUBE SET	1

B. TOOLS & EQUIPMENT

• Techstream	• Standard Hand Tools	• Torque Wrench
• Air Blow Gun	• Vernier Calipers 150mm	• Gas Caddy (Minimum 25 gallon capacity)

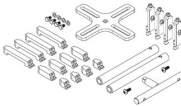
C. MATERIALS

• Brake Cleaner	• Butyl Tape	• Engine Oil
• Protective Gloves	• Protective Glasses	• Protective Tape
• Plastic Bag	• Tray	• Cloth
• Marker Pen		

D. SPECIAL SERVICE TOOLS

Additional SST's can be purchased through the Toyota Special Service Tools (SST) website

SST – These Special Service Tools required for this repair:

Part Number	Tool Name	ILLUSTRATION	Quantity
09808-14031	Fuel Sender Lock Nut Wrench Kit		1

*The set above includes the following tools:

Part Number	Part Description	Quantity
09808-01080-01	Sliding Jaw	1
09808-01070-01	105mm Jaw Set	1
09808-01060-01	18mm Jaw Set	1
09808-01040-01	50mm Jaw Set	1
09808-01030-01	Crossbar	1
09808-01010-01	Handle	1

IV. BACKGROUND

The subject vehicles were designed and manufactured by Mazda. According to Mazda, the subject vehicles are equipped with a low-pressure fuel pump which may stop operating. If this were to occur, warning lights may be displayed on the instrument cluster, and the engine may run rough. This may result in a vehicle stall, and/or 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.

V. SAFETY PRECAUTIONS

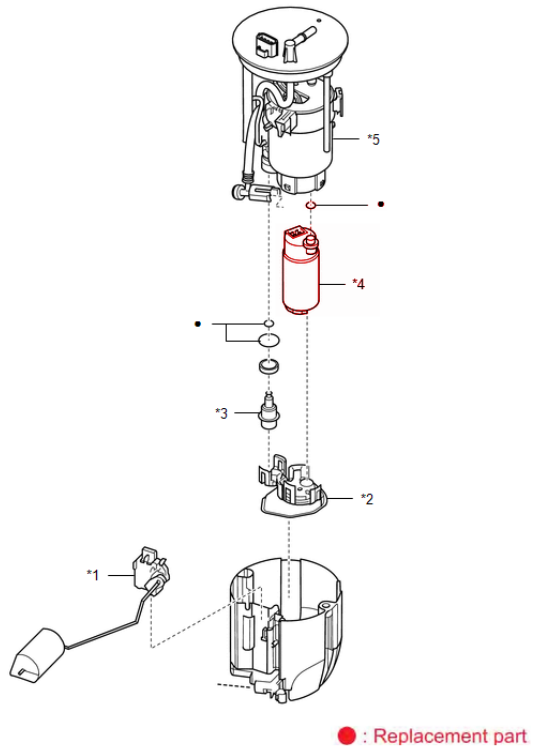
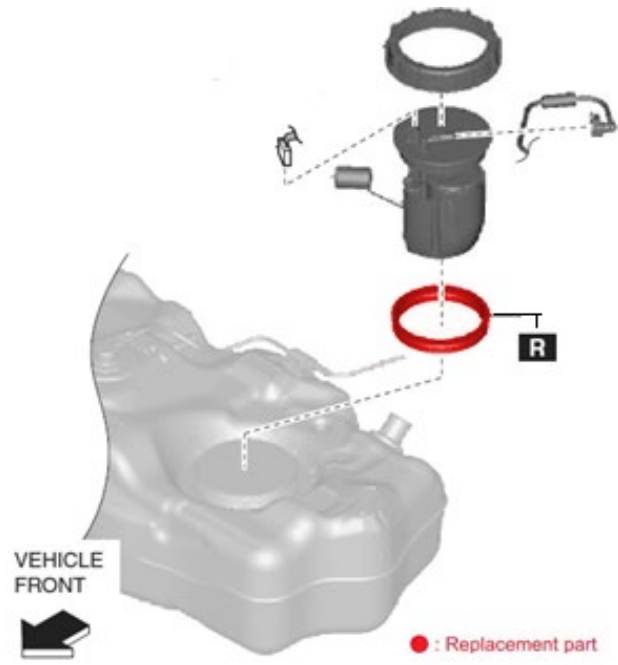


- Always remember “SAFETY FIRST”.
- When installing/uninstalling the fuel system components, keep safety first in mind and carefully observe the following instructions to avoid fire.
- Check each item in the appropriate section for each vehicle.

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



VII. FUEL PUMP REMOVAL

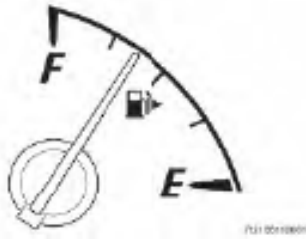


1. CHECK FOR DTC'S

- Using a Techstream, 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 fuel level inside the fuel tank is above **2/3**, fuel may overflow from the fuel tank during the removal of the fuel suction tube assembly. Confirm the fuel level in the vehicle is below **2/3** before proceeding. If necessary, drain fuel from the tank.

2. REMOVE FUEL PUMP

- Remove fuel pump following repair manual steps.

[P5 \(FUEL\): FUEL PUMP: REMOVAL; 2016 - 2020 MY Yaris HB MEX-Prod Yaris R Yaris SD MEX-Prod \[07/2015 - \]](#)

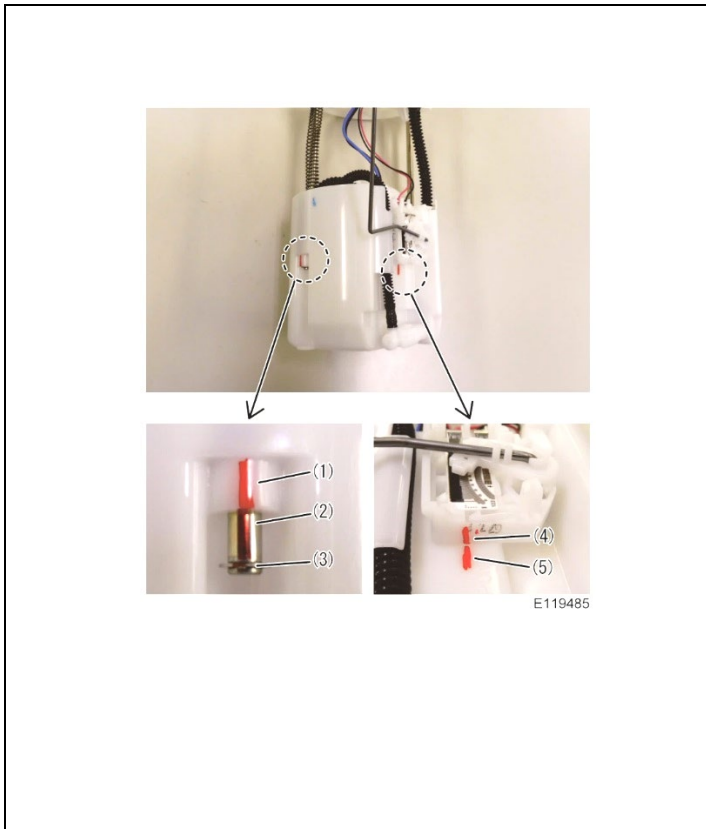
REAR SEAT REMOVAL TIP



Release the lock lever in the direction of the arrow shown. The lever is located under the seat. There will be no audible noise once the rear seat has been released.

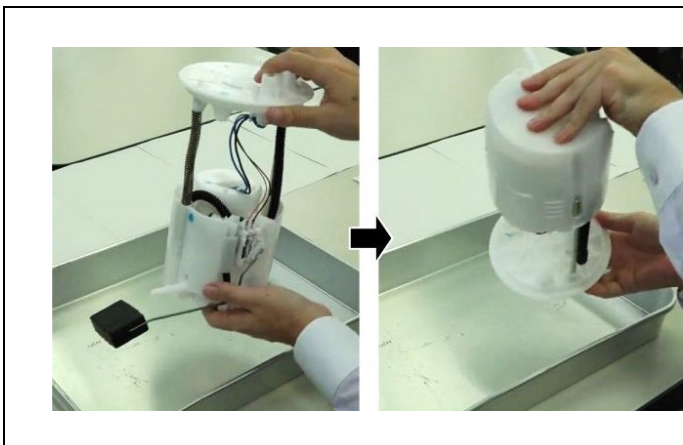
VIII. FUEL PUMP DISASSEMBLY

[VIDEO: Disassembly/Reassembly](#)



1. MARK FUEL PUMP COMPONENTS

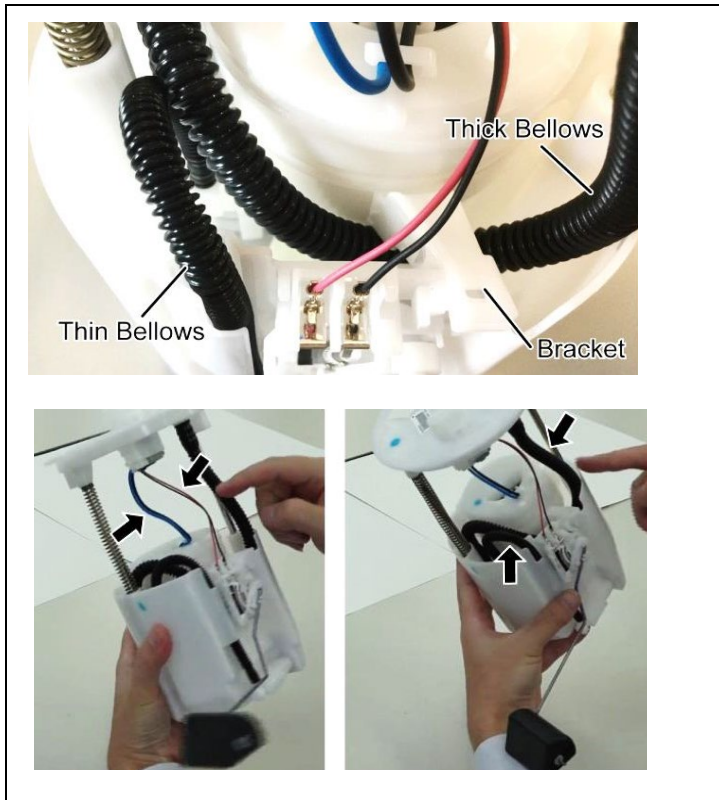
- a. Mark the following components to ensure they are assembled in correct location:
 - (1) rod guide
 - (2) rod
 - (3) E-ring
 - (4) fuel gauge sender
 - (5) reservoir cup



2. DISCHARGE THE FUEL PUMP

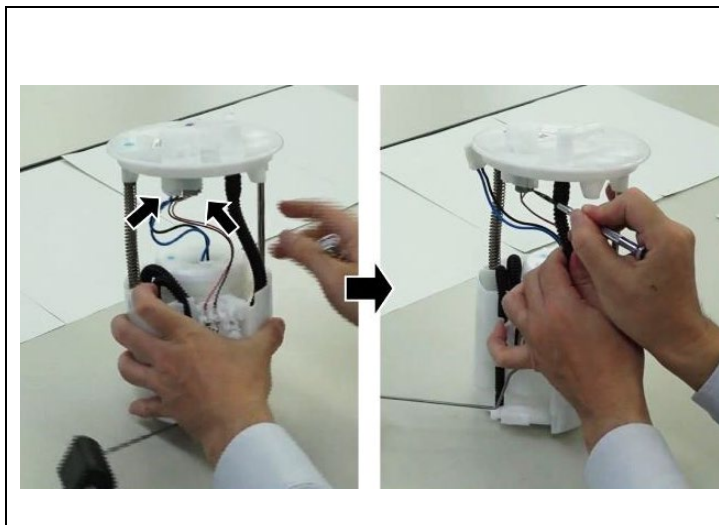
- a. Discharge the fuel inside of the fuel pump by turning the pump assembly upside down over a catch pan. Repeat up to 3 times.

NOTE: Fuel that remains in the filter or pump may spill, always discharge the fuel over a tray or other container.



3. CONFIRM THE ROUTING CONDITION OF THE WIRE HARNESS AND TUBE.

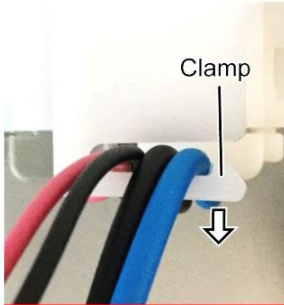
- Thick bellows – under the bracket
- Thin bellows – bend position
- Wire harness routing – in clamp position



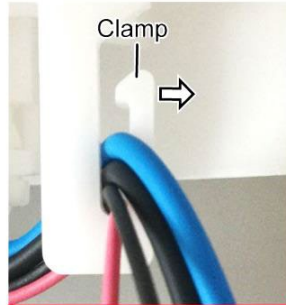
4. REMOVE THE CONNECTOR FROM THE WIRE HARNESS

- a. While pushing the connector lock with a screwdriver pull the connector straight down to remove it.
- b. Do not grasp the wire harness to pull out.

	Be aware that if the wire harness is pulled out, the harness may be disconnected, and the fuel pump or fuel gauge sender may not run.
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Horizontal Clamp



Vertical Clamp

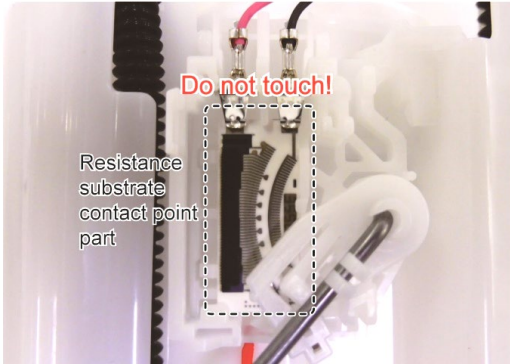
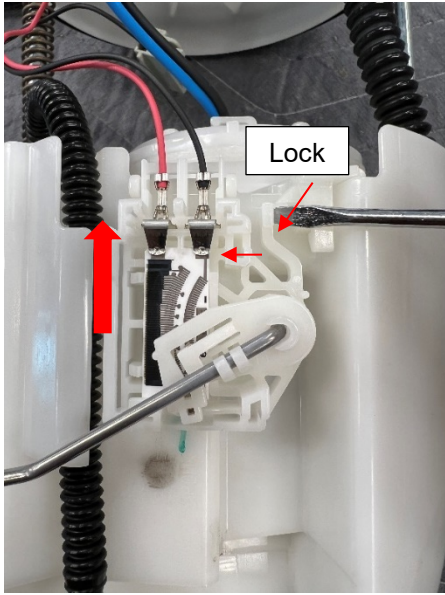
5. REMOVE THE WIRE HARNESS

- a. Remove the wire harness on the underside of the suction plate from the clamp by spreading the clamp carefully and removing the wires.



The clamp may be damaged if spread too wide.





6. REMOVE THE FUEL GAUGE SENDER

- a. Use a flathead screwdriver to release the lock. Push the sender from the bottom to remove.

NOTE: Do not bend the arm of the fuel gauge sender and do not touch the resistance substrates or contacts.

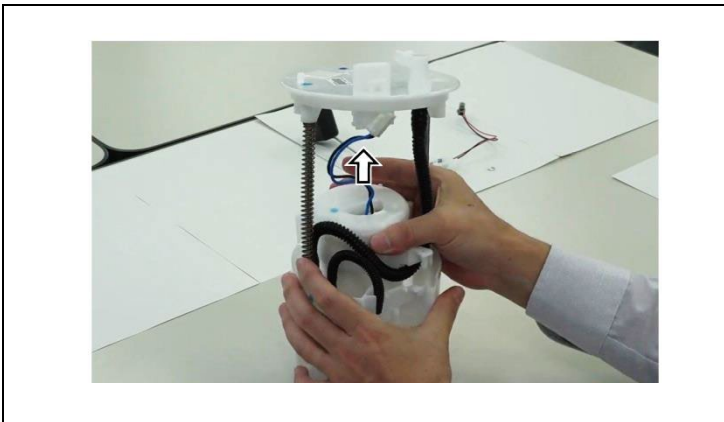
7. REMOVE THE BRACKET

- a. Use a flathead screwdriver wrapped in tape and disengage the 3 locking tabs



The clamp may be damaged if spread too wide.

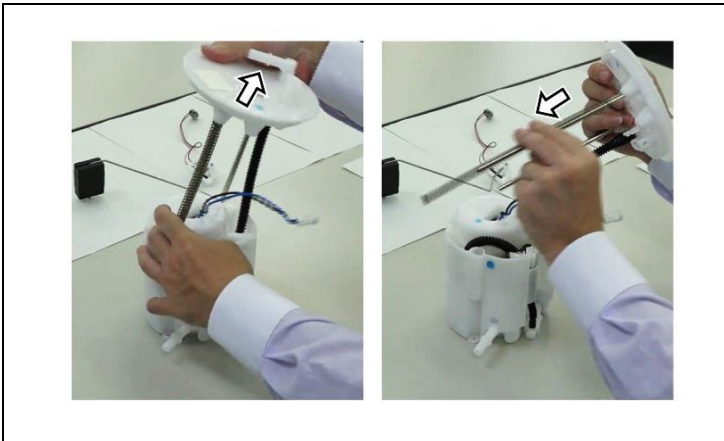




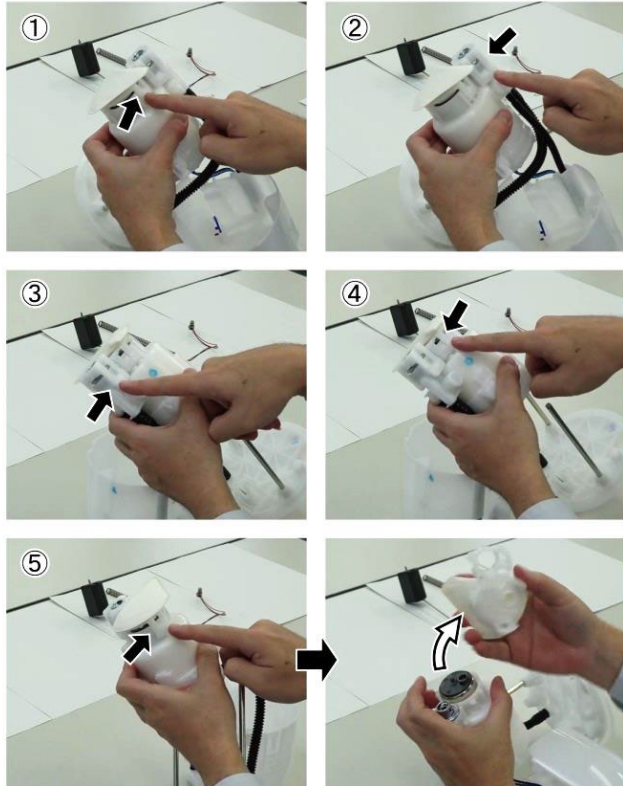
8. PULL OUT THE HIGH-PRESSURE PUMP FROM THE RESERVOIR CUP



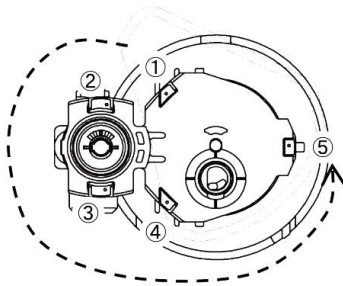
9. REMOVE THE E RING



10. REMOVE THE SPRING FROM THE ROD



One-valve type

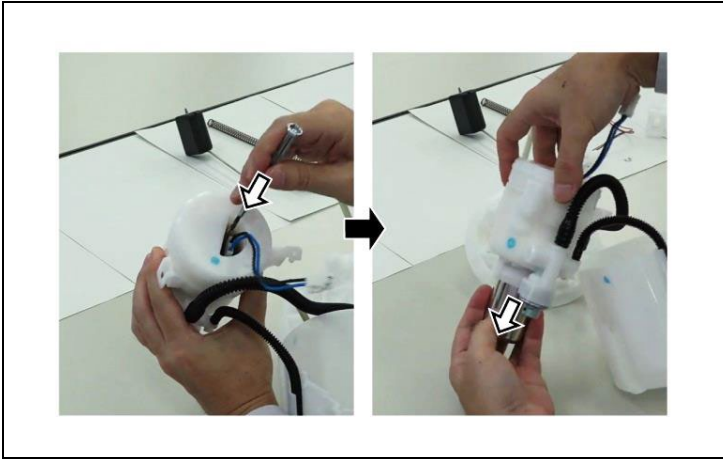


11. REMOVE THE SUCTION FILTER

- a. Use a flathead screwdriver wrapped in tape to release from the five locations.
- b. Inspect suction filter for damage
Ensure the filter is stored in a safe area and cannot become contaminated



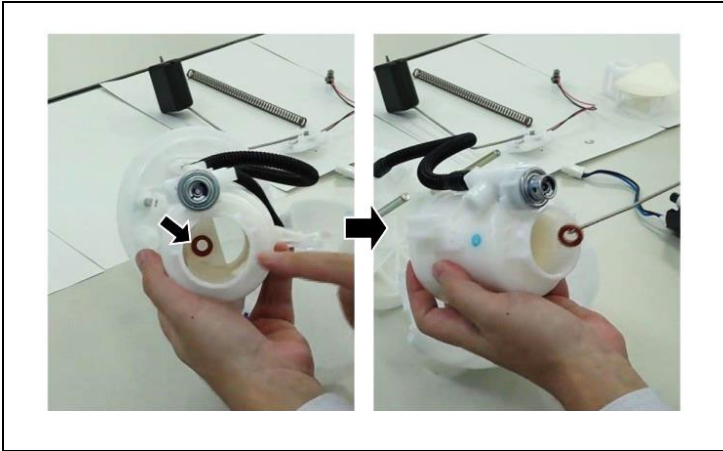
The clamp may be damaged if spread too wide.



12. REMOVE THE FUEL PUMP

- a. Push out the fuel pump using a flat head screwdriver wrapped in tape.
- b. The suction filter will be used again, ensure the filter is not contaminated.
- c. Ensure the connector is not damaged upon removal

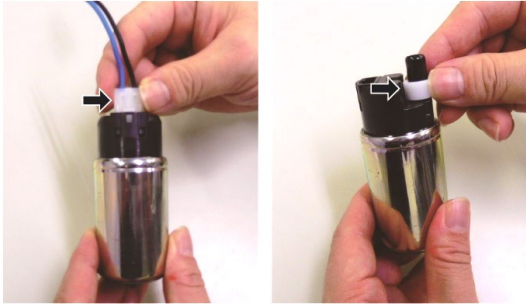
NOTE: Fuel may spill when removing the pump



13. REMOVE O-RING

- a. Ensure the O-ring is removed from the high-pressure pump
- b. Use a long hook-like rod to remove it while ensuring the O-ring seal is not damaged

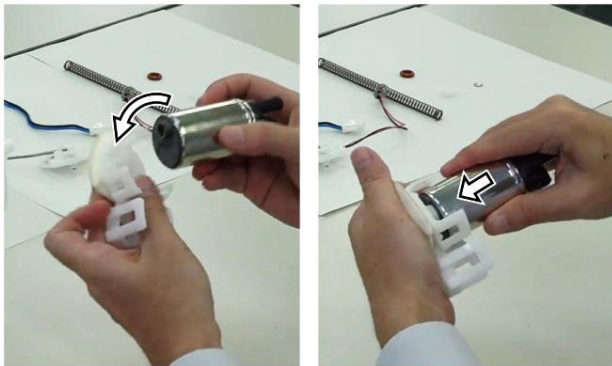
NOTE: O-rings cannot be reused



14. REMOVE THE WIRE HARNESS AND SPACER FROM THE FUEL PUMP

- a. Remove the wire harness and spacer from the fuel pump.
- b. Discard the old spacer to ensure it is not reused.

IX. FUEL PUMP REASSEMBLY

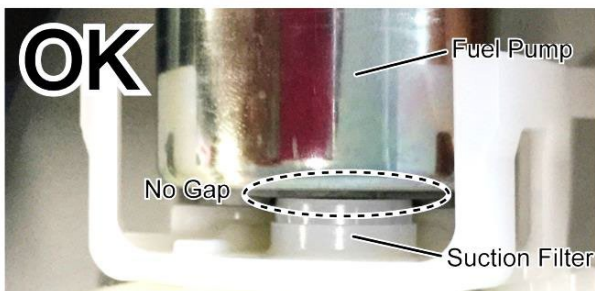


1. INSTALL THE FUEL PUMP SUCTION FILTER

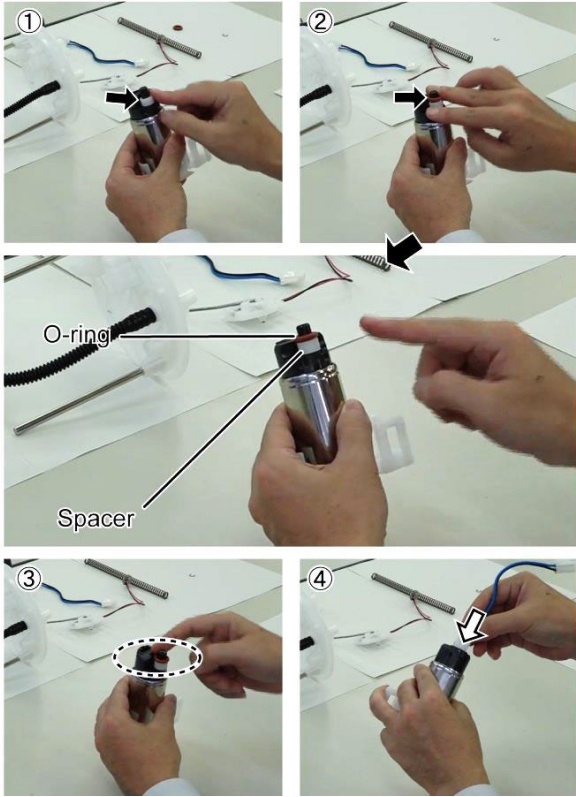
- a. Install the suction filter on the fuel pump and ensure it is completely seated with no gap.



DO NOT DROP the fuel pump or cause external damage



2. INSTALL THE NEW SPACER, O-RING, AND WIRE HARNESS TO THE NEW FUEL PUMP

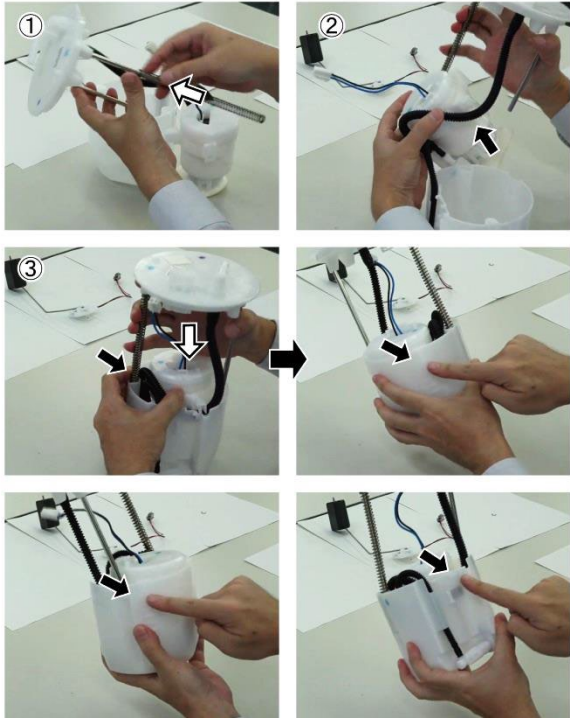


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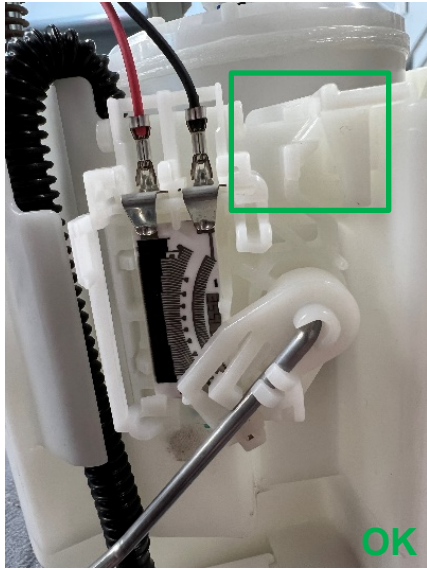
3. REINSTALL HIGH PRESSURE

- a. Reinstall high pressure pump to the reservoir ensuring the bellow is routed correctly under the clamp.
- b. Use the marking to confirm the rod is installed on the correct side



4. INSTALL THE E-RING

- a. Use combination pliers or a similar tool for installation.
- b. Ensure the E-ring can rotate after installation.

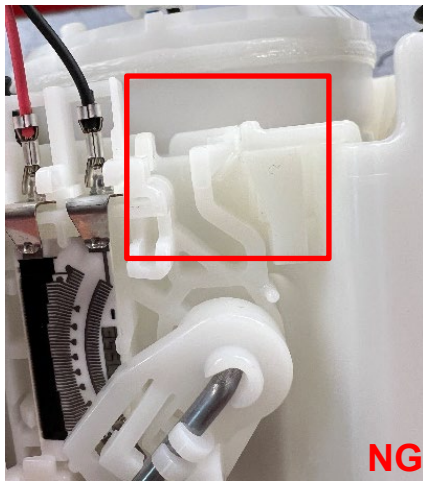


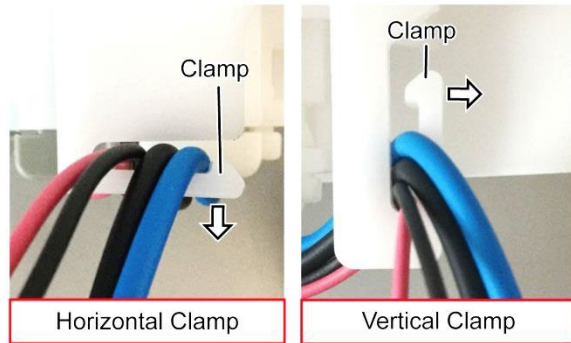
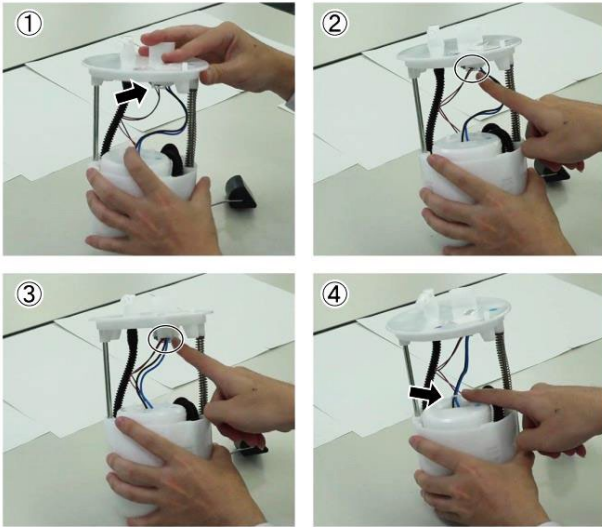
5. INSTALL THE FUEL GAUGE SENDER IN THE RESERVOIR CUP

- a. Push the resin part in and down ensuring not to bend the arm of the fuel gauge sender.
- b. Make sure the lock has been checked and verified.



Do not touch the resistance substrates or contacts.





6. INSTALL THE WIRE HARNESS IN THE CLAMP



The clamp may be damaged if spread too wide.

7. INSTALL THE WIRE HARNESS CONNECTOR

- a. Ensure the lock has been checked and verified.



8. FUEL PUMP INSTALLATION

- a. Refer to repair manual [P5 \(FUEL\): FUEL PUMP: INSTALLATION; 2016 - 2020 MY Yaris HB MEX-Prod Yaris R Yaris SD MEX-Prod \[07/2015 - \]](#)

◀ 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 Diagrams have been properly installed on the vehicle

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

X. 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

