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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [03/2023 -]
Title: M20A-FXS (FUEL): FUEL INJECTOR (for Direct Injection): REMOVAL; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

REMOVAL

CAUTION / NOTICE / HINT

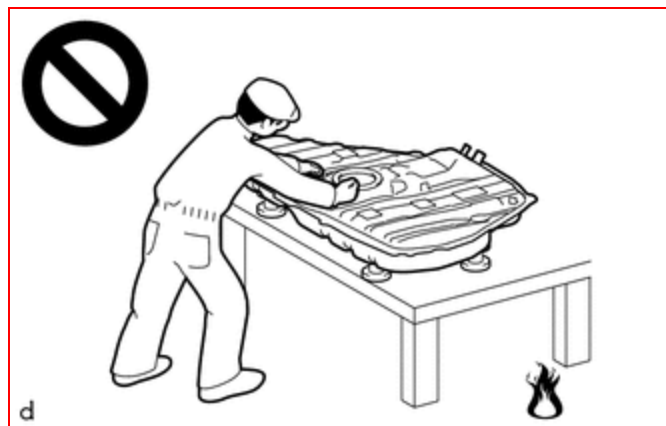
The necessary procedures (adjustment, calibration, initialization or registration) that must be performed after parts are removed and installed, or replaced during direct fuel injector assembly removal/installation are shown below.

Necessary Procedures After Parts Removed/Installed/Replaced

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	LINK
Replacement of inverter with converter assembly	ECU configuration	-	INFO
	Resolver learning	<ul style="list-style-type: none"> DTCs are stored Slight vibration at a vehicle speed of 5 km/h (3 mph) or less Shock or vibration during acceleration 	for M20A-FXS HEV model: INFO for M20A-FXS PHEV model: INFO
Replacement of ECM	Update ECU security key	Vehicle Control History (RoB) are stored	INFO
	ECU configuration	-	INFO
	Perform Vehicle Identification Number (VIN) registration	DTC is output	INFO
<ul style="list-style-type: none"> Replacement of direct fuel injector assembly Replacement of fuel (engine room side) pump assembly Replacement of throttle body with motor assembly Cleaning the deposits from the throttle body with motor assembly Replacement of EGR valve assembly Gas leak from exhaust system is repaired 	Inspection after repair	<ul style="list-style-type: none"> Poor idle, etc. Engine start function, etc. 	INFO

CAUTION:

- Never perform work on fuel system components near any possible ignition sources.

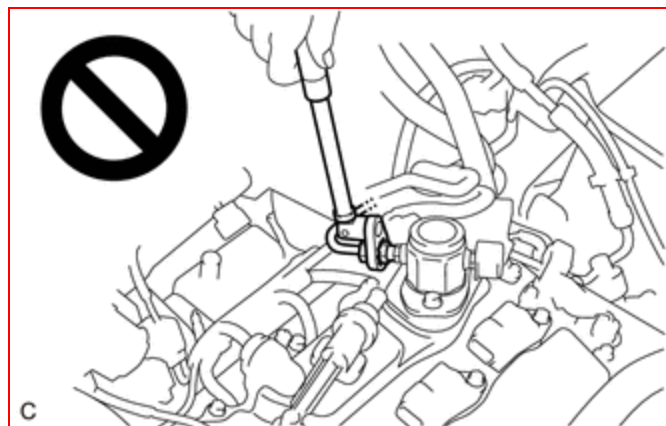


- Vaporized fuel could ignite, resulting in a serious accident.
- Do not perform work on fuel system components without first disconnecting the cable from the negative (-) auxiliary battery terminal.



auxiliary battery terminal.

- Sparks could cause vaporized fuel to ignite, resulting in a serious accident.
- To prevent serious injury due to fuel spray from the high-pressure fuel lines, always discharge fuel system pressure before removing any fuel system components.

**NOTICE:**

- After the ignition switch is turned off, there may be a waiting time before disconnecting the negative (-) auxiliary battery terminal.

[Click here](#) INFO

- This procedure includes the removal of small-head bolts. Refer to Small-Head Bolts of Basic Repair Hint to identify the small-head bolts.

[Click here](#) INFO

HINT:

When the cable is disconnected / reconnected to the auxiliary battery terminal, systems temporarily stop operating. However, each system has a function that completes learning the first time the system is used.

Learning completes when vehicle is driven

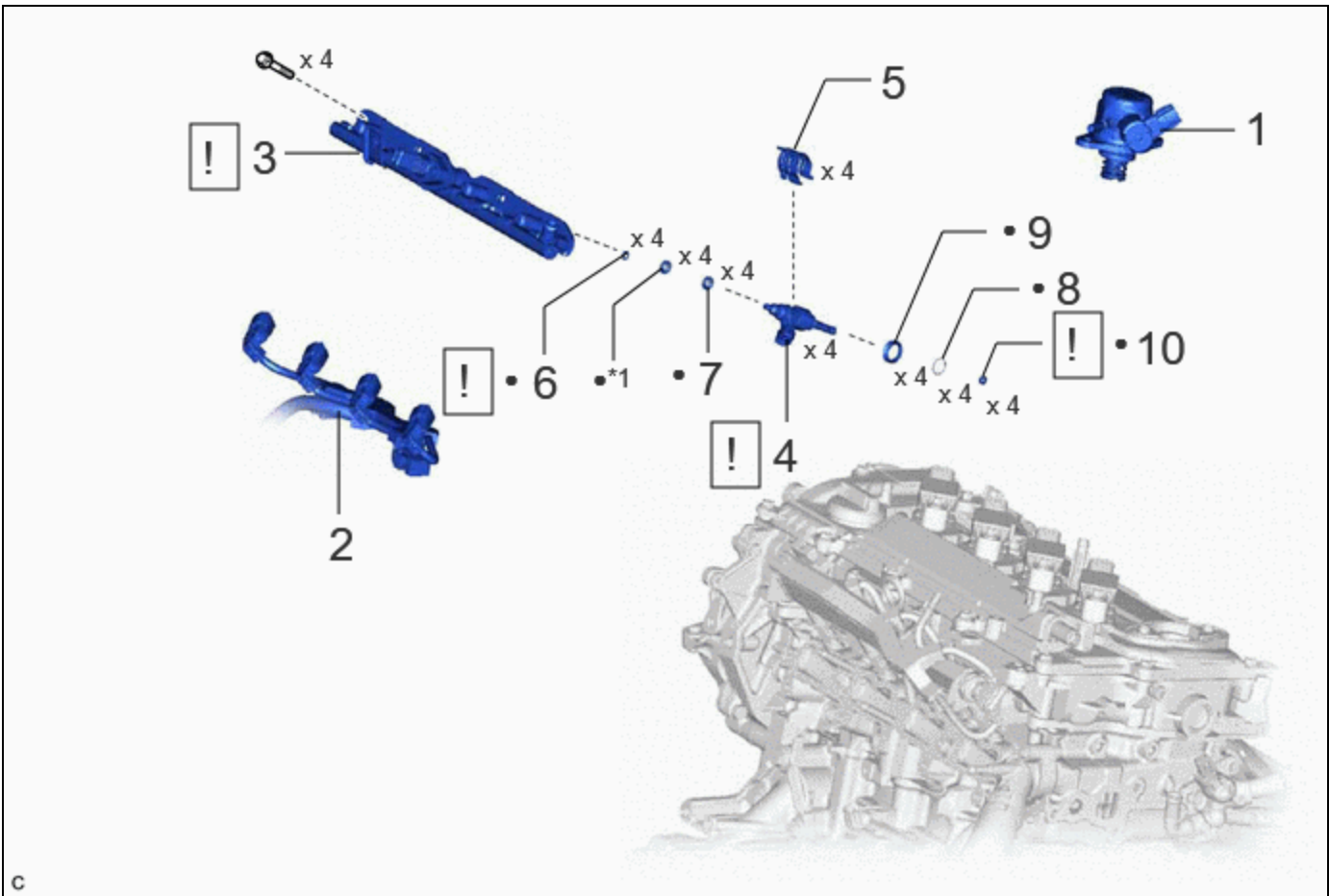
EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	NECESSARY PROCEDURE	LINK
Front Camera System	Drive the vehicle straight ahead at 35 km/h (22 mph) or more for 5 seconds or more.	INFO

Learning completes when vehicle is operated normally

EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	NECESSARY PROCEDURE	LINK
Power Door Lock Control System*1 <ul style="list-style-type: none"> • Back door opener 	Perform door unlock operation with door control switch or electrical key transmitter sub-assembly switch.	INFO
Power Back Door System*2	Reset back door close position	INFO
Air Conditioning System	<p>for HEV Model:</p> <p>After the ignition switch is turned to ON, the servo motor standard position is recognized.</p> <p>for PHEV Model:</p> <p>After the ignition switch is turned to ON, the servo motor and expansion valve standard position is recognized.</p>	-
<p>*1: w/o Power Back Door System</p> <p>*2: w/ Power Back Door System</p>		

CAUTION / NOTICE / HINT

COMPONENTS (REMOVAL)



PROCEDURE	PART NAME CODE			
1 FUEL (ENGINE ROOM SIDE) PUMP ASSEMBLY	23100X	-	-	-
2 WIRE HARNESS	-	-	-	-
3 FUEL DELIVERY PIPE	23814B	INFO	-	-
4 DIRECT FUEL INJECTOR ASSEMBLY	23250E	INFO	-	-
5 NOZZLE HOLDER CLAMP	23695A	-	-	-
6 NO. 3 FUEL INJECTOR BACK-UP RING	23258	INFO	-	-
7 NO. 1 FUEL INJECTOR BACK-UP RING	23256	-	-	-
8 C-RING	-	-	-	-
9 INJECTOR VIBRATION INSULATOR	23291A	-	-	-
10 FUEL INJECTOR SEAL	23255A	INFO	-	-

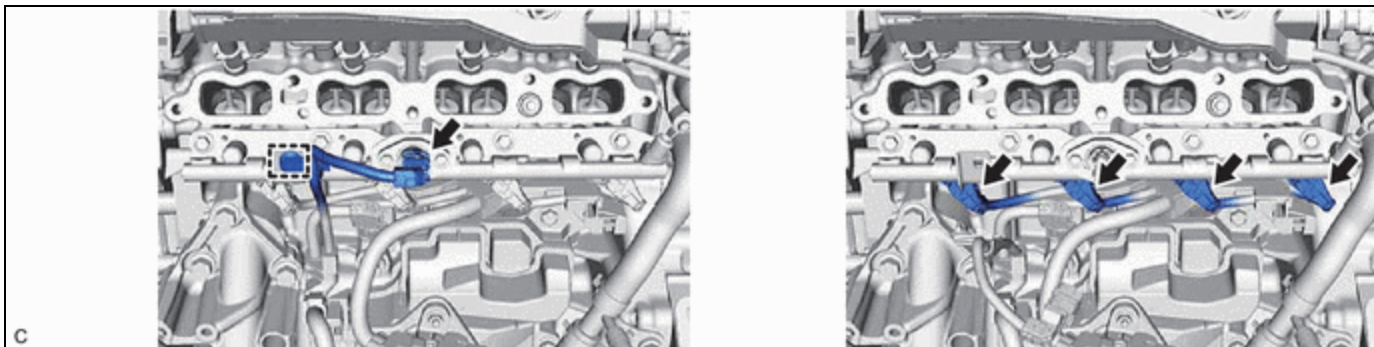
*1	O-RING	-	-
•	Non-reusable part	-	-

PROCEDURE

1. REMOVE FUEL (ENGINE ROOM SIDE) PUMP ASSEMBLY

Click here [INFO](#)

2. DISCONNECT WIRE HARNESS

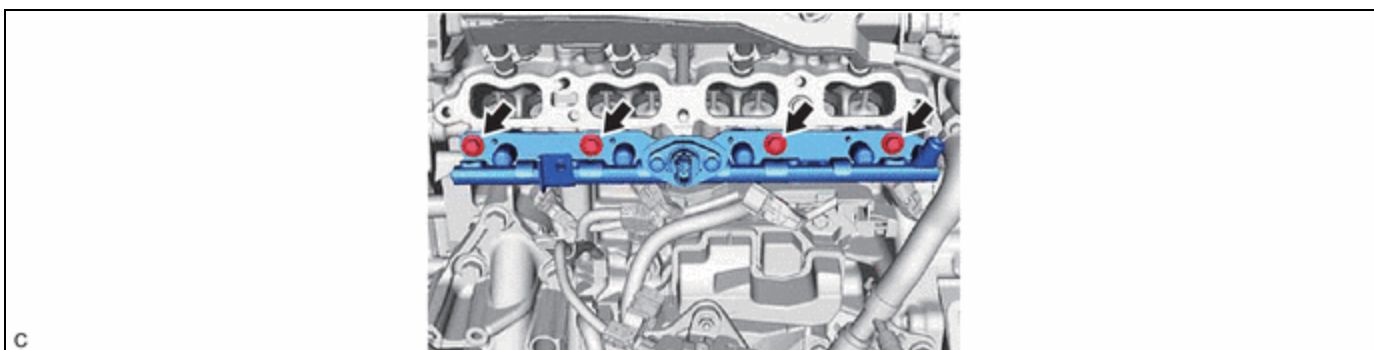


3. REMOVE FUEL DELIVERY PIPE



NOTICE:

- If fuel intrudes into the combustion chamber, there may be adverse effects to the engine main body.
- When replacing the fuel delivery pipe, it is necessary to replace the No. 1 fuel pipe sub-assembly with a new one.
- Make sure not to touch or strike the tips of the direct fuel injector assemblies.
- Pull and remove the fuel delivery pipe in a straight line without tilting it.



4. REMOVE DIRECT FUEL INJECTOR ASSEMBLY

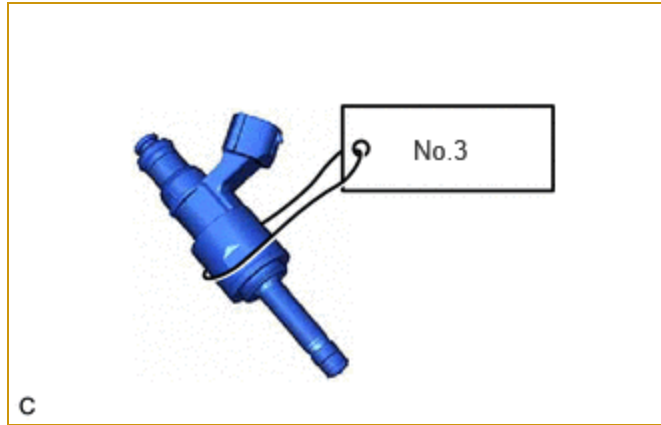


(1) Secure the fuel delivery pipe in a vise between aluminum plates.

(2) Pull out the 4 direct fuel injector assemblies.

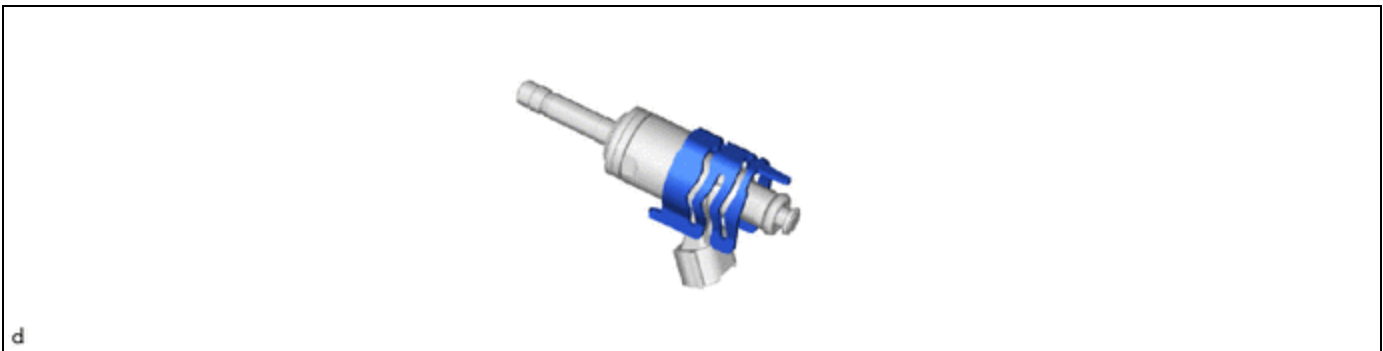
NOTICE:

- Pull and remove each direct fuel injector assembly in a straight line to avoid damaging the seal surface of the fuel delivery pipe O-ring.
- After removing the direct fuel injector assemblies, remove any O-rings, No. 1 fuel injector back-up rings and No. 3 fuel injector back-up rings remaining on the fuel delivery pipe side.
- Attach a tag or label with the corresponding cylinder number to each direct fuel injector assembly so that they



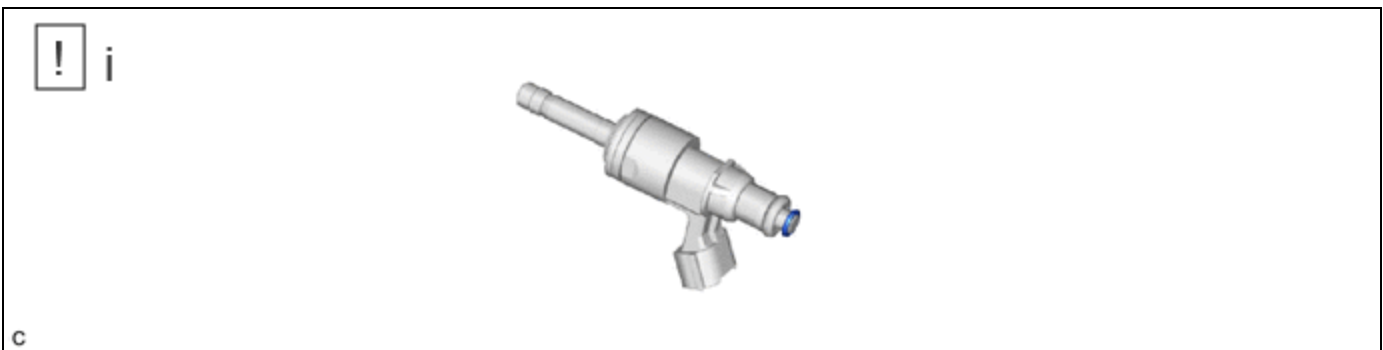
- can be installed to their original locations.
- Cover the tip of each direct fuel injector assembly to prevent it from being damaged.

5. REMOVE NOZZLE HOLDER CLAMP



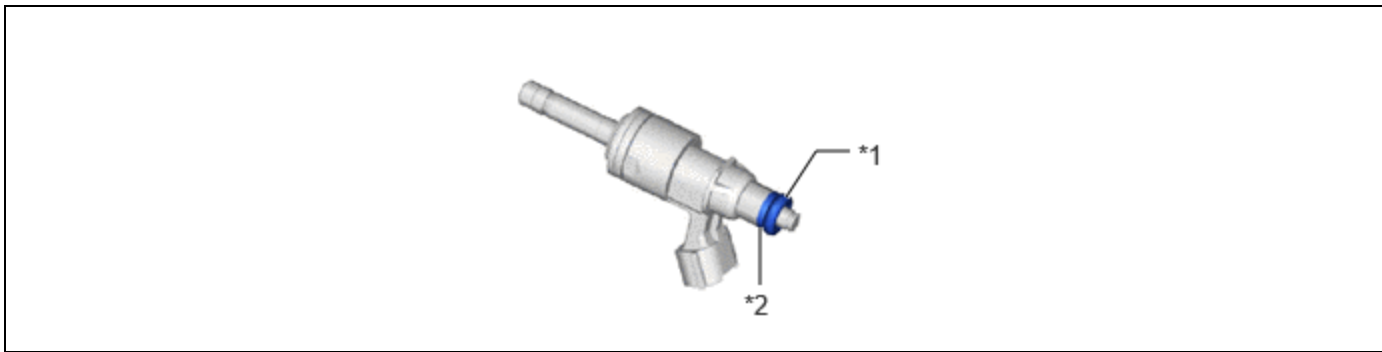
6. REMOVE NO. 3 FUEL INJECTOR BACK-UP RING

	<p>NOTICE: Do not damage the area that contacts the O-ring.</p>
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(1) Using needle nose pliers, remove the No. 3 fuel injector back-up ring from each direct fuel injector assembly.

7. REMOVE NO. 1 FUEL INJECTOR BACK-UP RING

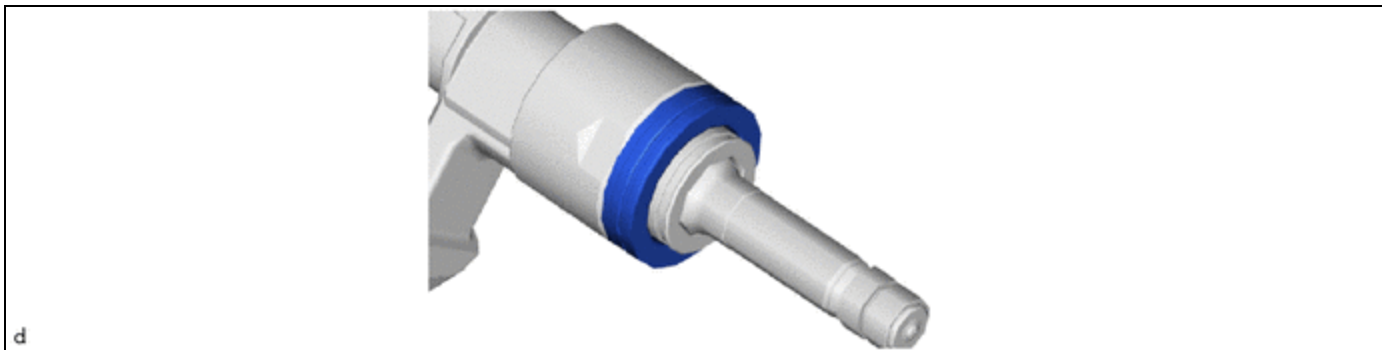


*1	O-ring	*2	No. 1 Fuel Injector Back-up Ring
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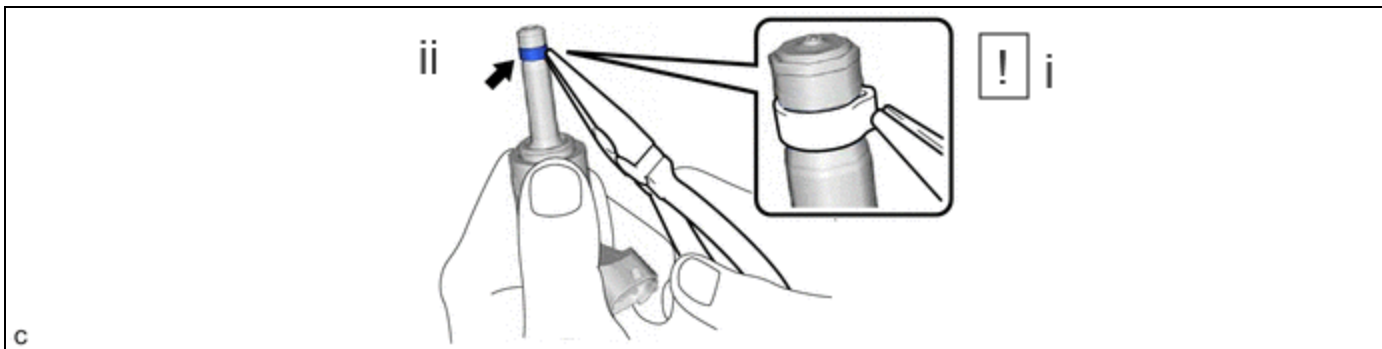
8. REMOVE C-RING



9. REMOVE INJECTOR VIBRATION INSULATOR



10. REMOVE FUEL INJECTOR SEAL



(1) Using the tip of needle nose pliers, pinch and pull the fuel injector seal at several points to stretch it.

NOTICE:

- Excessively pinching the fuel injector seal may damage the groove of the direct fuel injector assembly.

- If a direct fuel injector assembly is dropped or the tip of the direct fuel injector assembly is struck, replace it with a new one.

(2) Remove the fuel injector seal from each direct fuel injector assembly.

