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<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> M20A-FXS (FUEL): FUEL INJECTOR (for Direct Injection): INSTALLATION; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

## INSTALLATION

### CAUTION / NOTICE / HINT

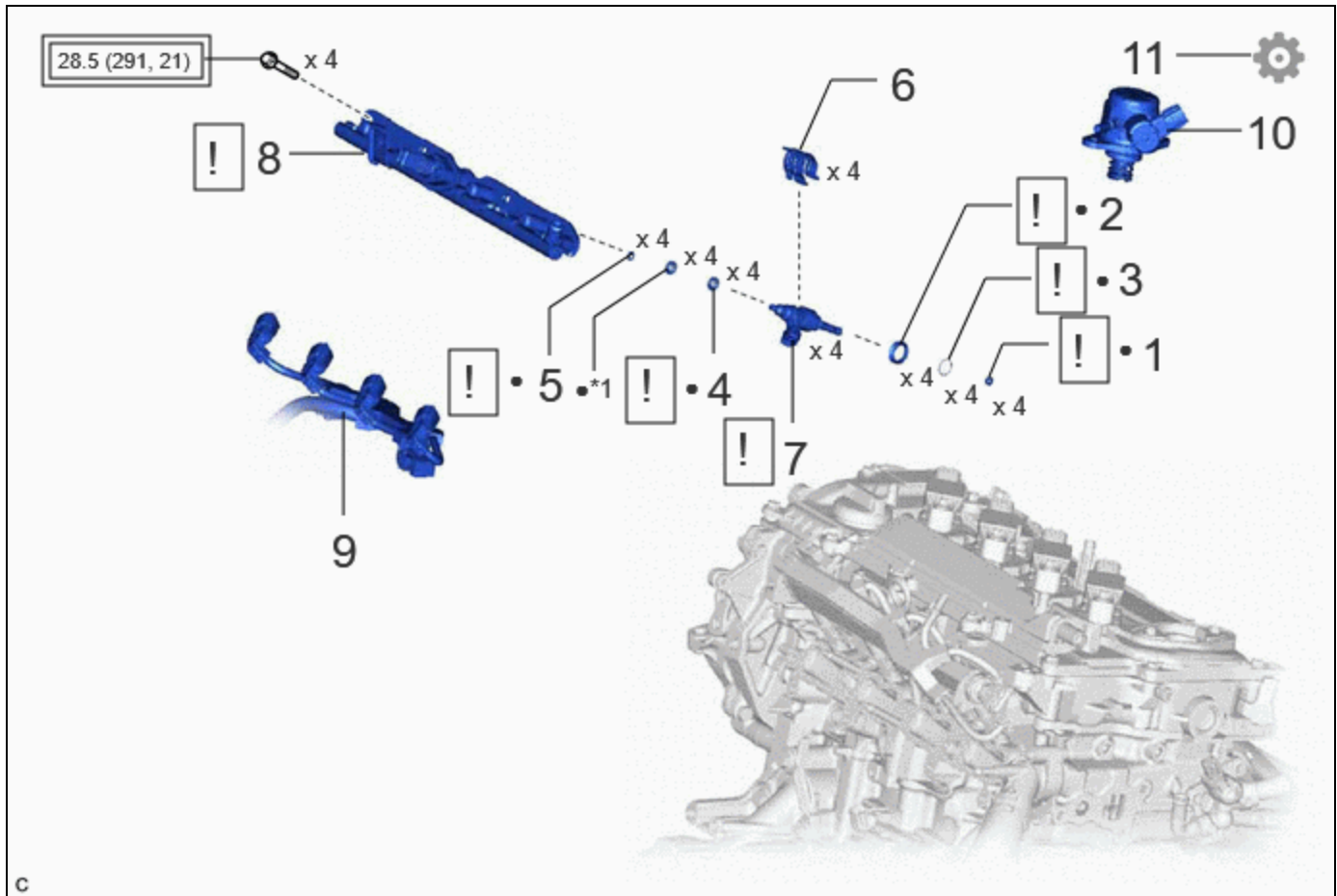
**NOTICE:**

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











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### CAUTION / NOTICE / HINT

#### COMPONENTS (INSTALLATION)



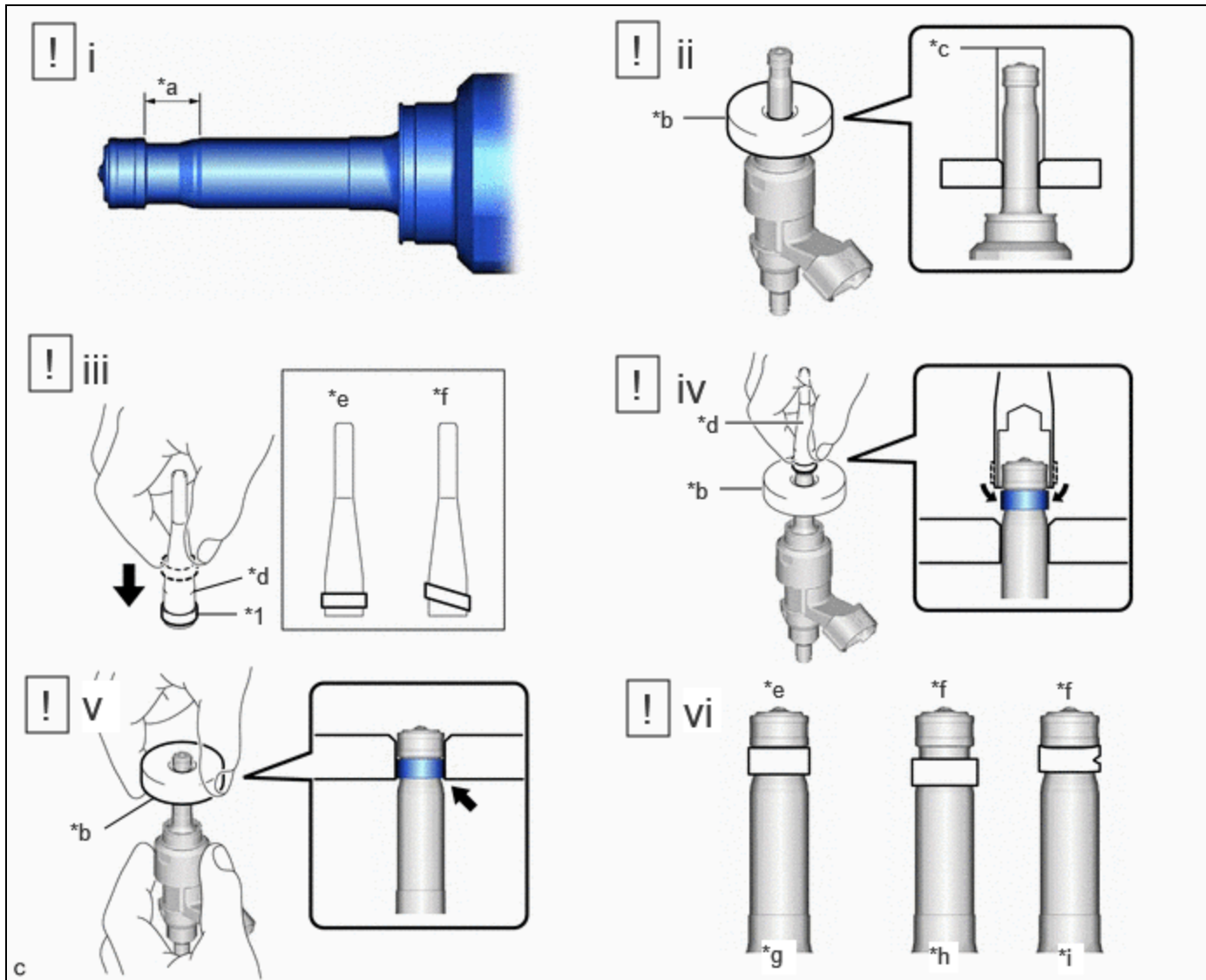
PROCEDURE		PART NAME CODE			
1	FUEL INJECTOR SEAL	23255A	<a href="#">INFO</a>	-	-

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

*1	O-RING	-	-
	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping": N*m (kgf*cm, ft.*lbf)	-	• Non-reusable part

## PROCEDURE

### 1. INSTALL FUEL INJECTOR SEAL



*1	Fuel Injector Seal	-	-
*a	Area to be Cleaned	*b	SST (Guide)
*c	Chamfer	*d	SST (Holder)
*e	Correct	*f	Incorrect
*g	Normal	*h	Protruding
*j	Deformed	-	-

(1) Apply engine conditioner to the area shown in the illustration. Using a piece of cloth, clean carbon deposits from the direct fuel injector assembly and its grooves.

**NOTICE:**

- Do not clean the tip of the direct fuel injector assembly.
- Do not use a wire brush to clean 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) Apply engine oil to the direct fuel injector assembly contact surface of SST (guide), then attach SST (guide) to the direct fuel injector assembly with the chamfer facing the tip of the direct fuel injector assembly as shown in the illustration.

**SST: 09260-39030**

09261-03030

(3) Install a new fuel injector seal to SST (holder).

**SST: 09260-39030**

09261-03011

**NOTICE:**

Be careful not to install the fuel injector seal to SST (holder) at an angle. Doing so will stretch the fuel injector seal.

(4) Install SST (holder) with the fuel injector seal to the tip of the direct fuel injector assembly. Slide the fuel injector seal downward into the direct fuel injector assembly groove with your fingers as shown in the illustration.

**SST: 09260-39030**

09261-03011

09261-03030

**HINT:**

Check that the fuel injector seal is seated in the direct fuel injector assembly groove as shown in the illustration.

(5) Slowly slide SST (guide) toward the tip of the direct fuel injector assembly. When the direct fuel injector assembly contact surface of SST (guide) aligns with the fuel injector seal as shown in the illustration, hold the position for 10 seconds or more to fully seat the fuel injector seal into the direct fuel injector assembly groove.

**SST: 09260-39030**

09261-03030

**NOTICE:**

Make sure the fuel injector seal is not pinched between SST (guide) and the edge of the direct fuel injector assembly groove. Replace the fuel injector seal if it becomes damaged.

**HINT:**

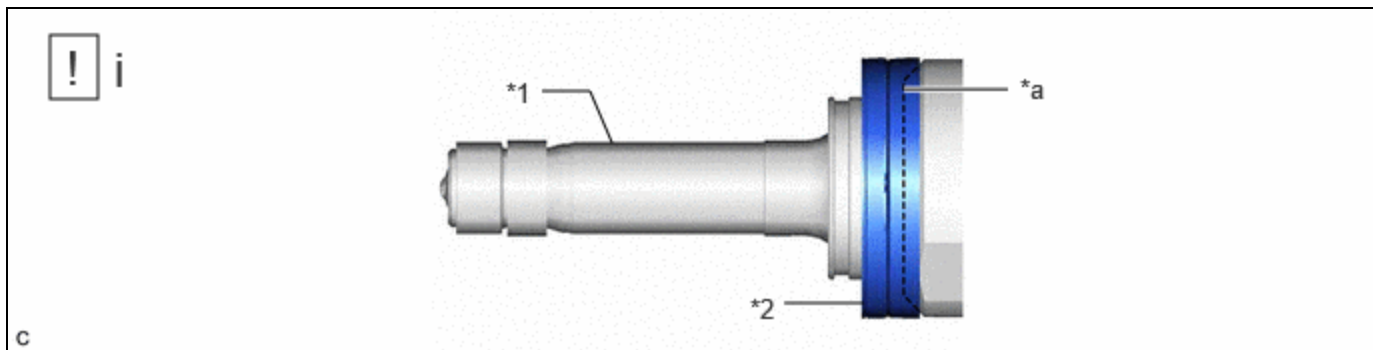
- Set SST (guide) so that its bottom surface is flush with the fuel injector seal.
- If it is difficult to slide SST (guide) upward, slowly wiggle it from side to side while sliding it up the direct fuel injector assembly little by little.

(6) After installing the fuel injector seals, check that they are not scratched, deformed or protruding from the direct fuel injector assembly groove.

**NOTICE:**

If a fuel injector seal is scratched, deformed or protruding from the groove, replace it with a new one.

**2. INSTALL INJECTOR VIBRATION INSULATOR**



*1	Direct Fuel Injector Assembly	*2	Injector Vibration Insulator
*a	Taper	-	-

(1) Install a new injector vibration insulator to each direct fuel injector assembly.

**NOTICE:**

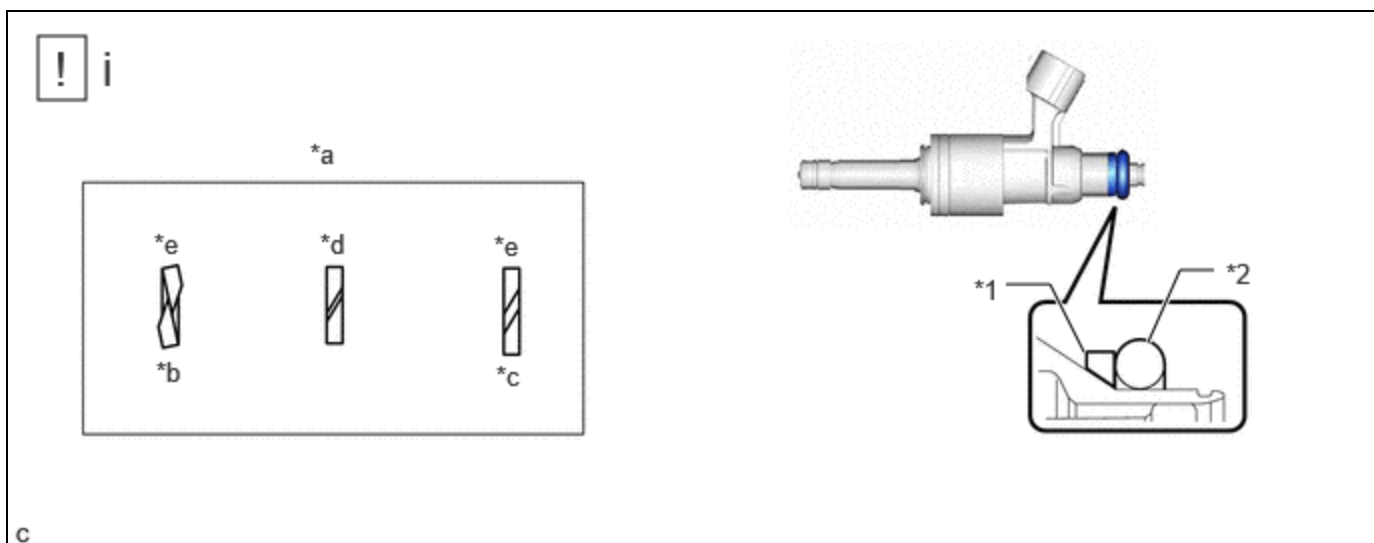
Install the taper of the injector vibration insulator by aligning it with the taper of the direct fuel injector assembly.

**3. INSTALL C-RING**

(1) Install a new C-ring to each direct fuel injector assembly.

**NOTICE:**

Check that the C-ring is securely seated in the groove of the direct fuel injector assembly.

**4. INSTALL NO. 1 FUEL INJECTOR BACK-UP RING**

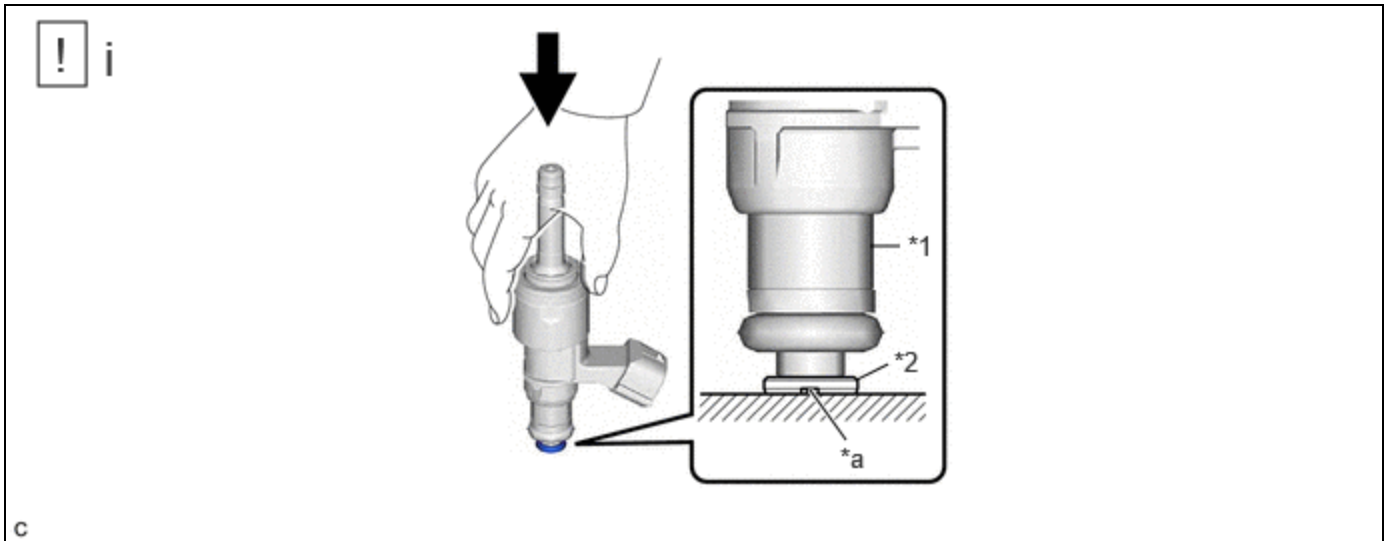
*1	No. 1 Fuel Injector Back-up Ring	*2	O-ring
*a	No. 1 Fuel Injector Back-up Ring Opening	*b	Overlapped
*c	Stretched	*d	Correct
*e	Incorrect	-	-

(1) Install a new O-ring and No. 1 fuel injector back-up ring to each direct fuel injector assembly as shown in the illustration.

**NOTICE:**

- Check that there is no foreign matter or damage on the O-ring groove of the direct fuel injector assembly.
- Make sure that the No. 1 fuel injector back-up ring is installed in the correct orientation.
- Make sure that the No. 1 fuel injector back-up ring and O-ring are installed in the correct order.
- Check that the opening of the No. 1 fuel injector back-up ring is not overlapped or stretched as shown in the illustration.
- After installing the O-ring, check that it is not contaminated with foreign matter and is not damaged.

**5. INSTALL NO. 3 FUEL INJECTOR BACK-UP RING**



*1	Direct Fuel Injector Assembly	*2	No. 3 Fuel Injector Back-up Ring
*a	Notch	-	-

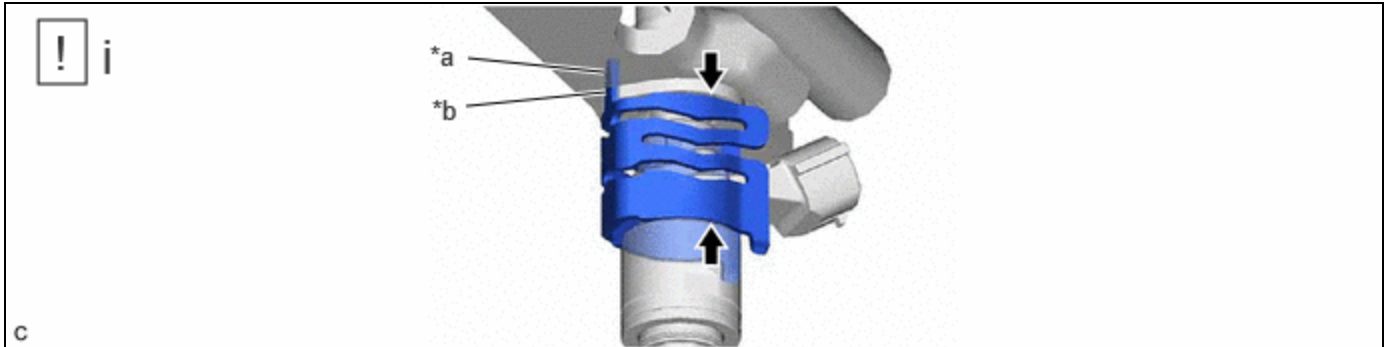
(1) With the notch of a new No. 3 fuel injector back-up ring facing downward, install the No. 3 fuel injector back-up ring to each direct fuel injector assembly as shown in the illustration.

**NOTICE:**

- Make sure that the No. 3 fuel injector back-up ring is installed in the correct orientation.
- After installing the No. 3 fuel injector back-up ring, make sure there is no damage or foreign matter.

**6. INSTALL NOZZLE HOLDER CLAMP**

**7. INSTALL DIRECT FUEL INJECTOR ASSEMBLY**



*a	Protrusion	*b	Positioning Hole
	No Gap	-	-

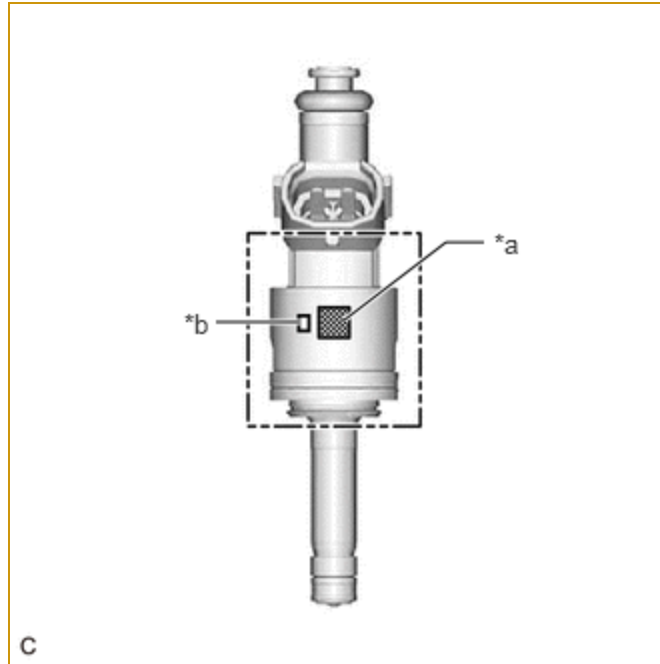
(1) Align the protrusion of the nozzle holder clamp with the positioning hole of the fuel delivery pipe and insert the direct fuel injector assembly.

**NOTICE:**

- Make sure that there is no foreign matter or damage inside the direct fuel injector assembly installation holes (fuel delivery pipe).
- Do not allow gasoline to get on the O-rings or inside the installation holes.
- If it is difficult to insert the direct fuel injector assembly, apply new engine oil to the chamfer of the direct fuel injector assembly installation hole of the fuel delivery pipe. Be careful not to allow the direct fuel injector

assembly to fall out of the fuel delivery pipe.

- Do not tilt the direct fuel injector assembly when inserting it into the fuel delivery pipe.
- Check that there is no gap between the fuel delivery pipe and the nozzle holder clamp.
- As direct fuel injector assemblies with different flow classification numbers are incompatible, make sure the 4 direct fuel injector assemblies have the same flow classification number (the number to the left of the QR code




(1, 2, 3, 4, 5, 6, 7, 8 or 9)).

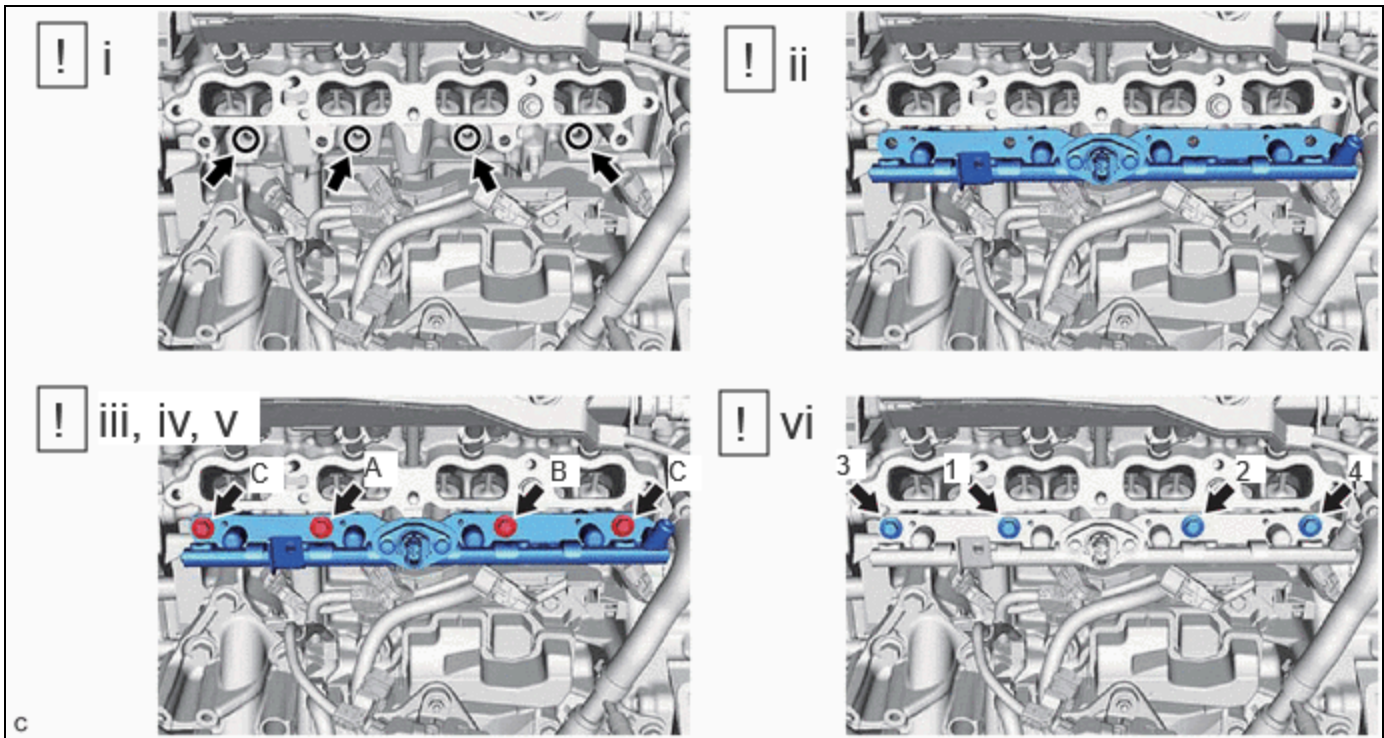
*a	QR Code
*b	Flow Classification Number

**HINT:**

When replacing the direct fuel injector assemblies for all cylinders, it is not necessary to use the same flow classification number as those currently installed to the vehicle. However, make sure to replace the direct fuel injector assemblies with new ones that all have the same flow classification number (1, 2, 3, 4, 5, 6, 7, 8 or 9).

**8. INSTALL FUEL DELIVERY PIPE**

	<p><b>NOTICE:</b></p> <p>When replacing the fuel delivery pipe, it is necessary to replace the No. 1 fuel pipe sub-assembly with a new one.</p>
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- (1) Apply lubricant to the direct fuel injector assembly installation holes of the cylinder head sub-assembly.
- (2) Temporarily install the fuel delivery pipe to the cylinder head sub-assembly.

#### NOTICE:

- If a direct fuel injector assembly is dropped or the tip of a direct fuel injector assembly is struck, replace it with a new one.
- Check that there is no foreign matter or damage on the direct fuel injector assembly installation holes of the cylinder head sub-assembly.
- When installing the fuel delivery pipe, push it in evenly without tilting it.

- (3) Temporarily install the bolt (A).
- (4) Temporarily install the bolt (B).
- (5) Temporarily install the 2 bolts (C).
- (6) Install the fuel delivery pipe by uniformly tightening the 4 bolts in the order shown in the illustration.

#### Torque:

**28.5 N·m {291 kgf·cm, 21 ft·lbf}**

### 9. CONNECT WIRE HARNESS

### 10. INSTALL FUEL (ENGINE ROOM SIDE) PUMP ASSEMBLY

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### 11. PERFORM INITIALIZATION

- (a) Perform "Inspection After Repair" after replacing a direct fuel injector assembly.

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