

<b>Last Modified:</b> 12-04-2024	6.11:8.1.0	<b>Doc ID:</b> RM1000000029YCJ
<b>Model Year Start:</b> 2023	<b>Model:</b> Prius	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> M20A-FXS (ENGINE MECHANICAL): ENGINE UNIT (for HEV Model): INSTALLATION; 2023 - 2024 MY Prius [12/2022 - ]		

## INSTALLATION

### CAUTION / NOTICE / HINT

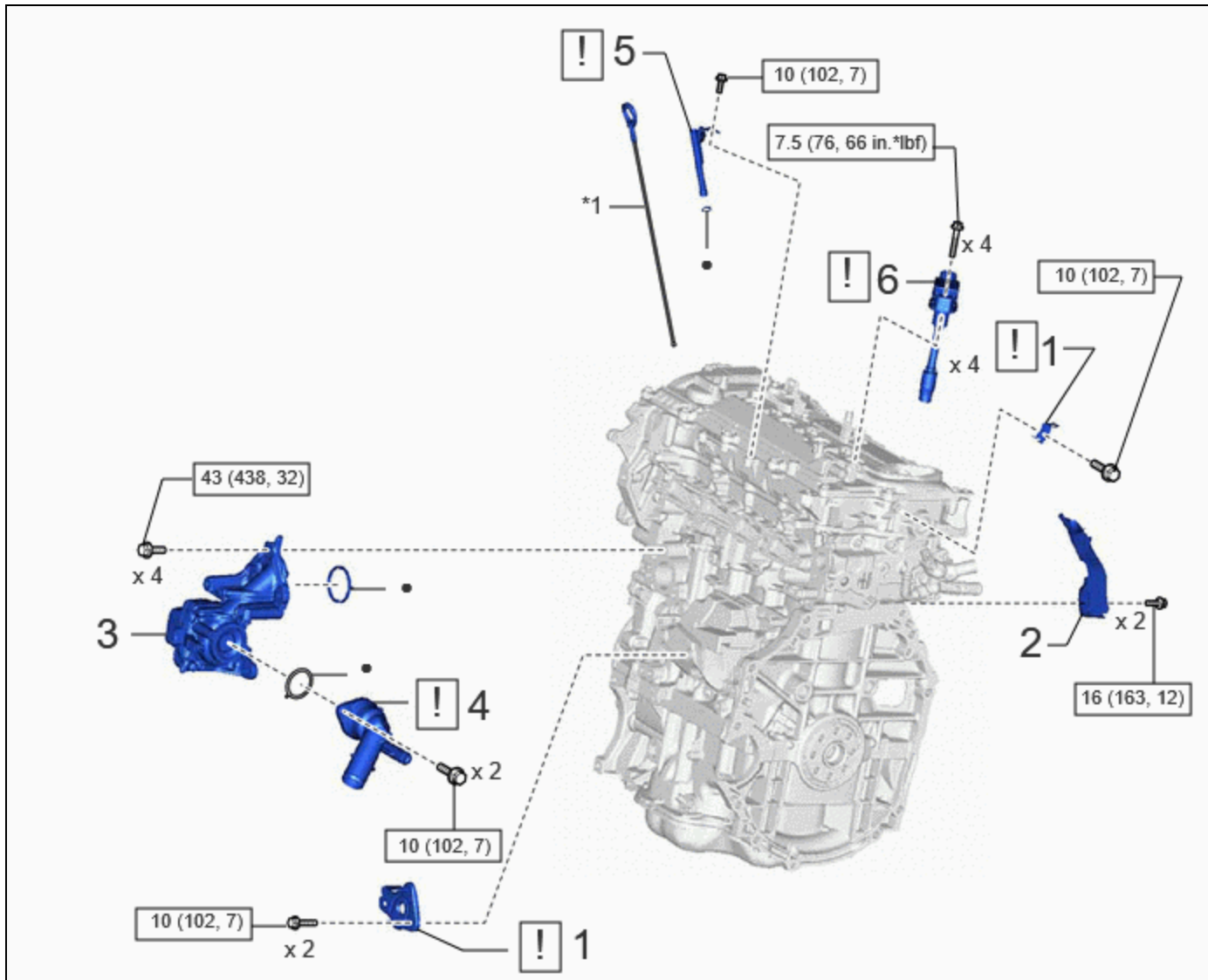
**NOTICE:**




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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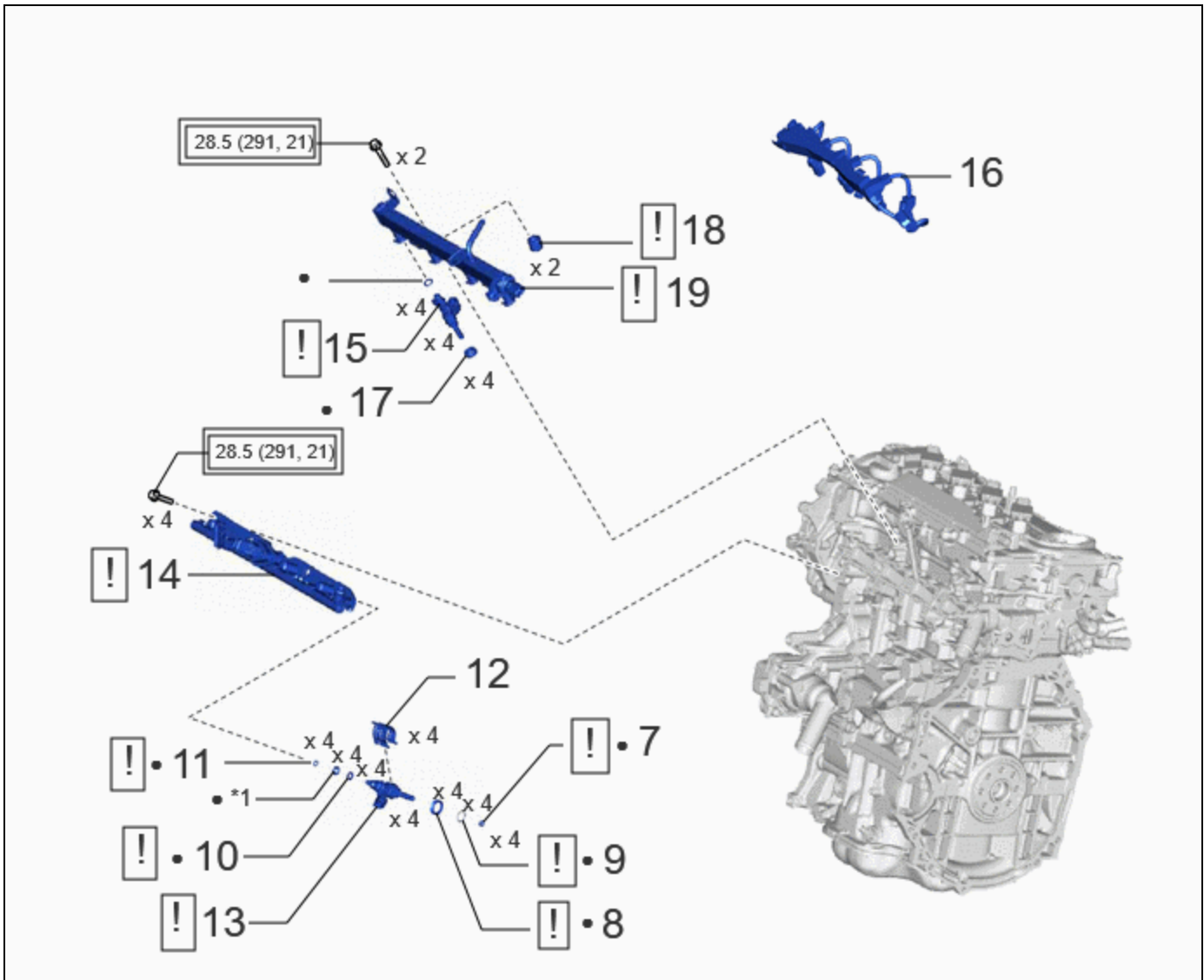
### CAUTION / NOTICE / HINT




#### COMPONENTS (INSTALLATION)









	PROCEDURE	PART NAME CODE			
1	WIRE HARNESS CLAMP BRACKET	-	INFO	-	-
2	NO. 3 EXHAUST MANIFOLD HEAT INSULATOR	17169A	-	-	-
3	ENGINE WATER PUMP ASSEMBLY (WATER INLET HOUSING)	16032	-	-	-
4	WATER INLET WITH THERMOSTAT SUB-ASSEMBLY	16031	INFO	-	-
5	ENGINE OIL LEVEL DIPSTICK GUIDE	11452D	INFO	-	-
6	IGNITION COIL ASSEMBLY	19500	INFO	-	-

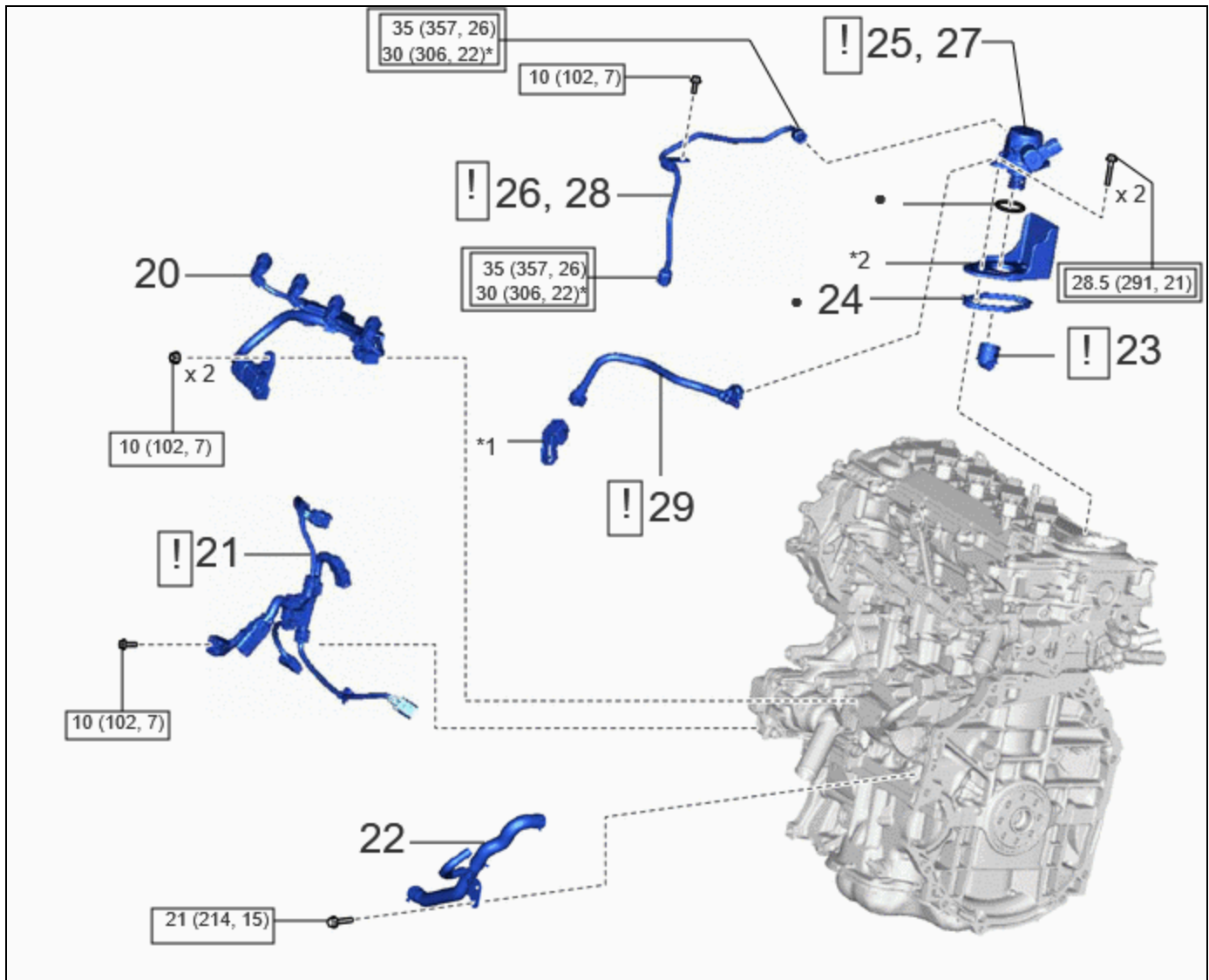
*1	ENGINE OIL LEVEL DIPSTICK	-	-
	N*m (kgf*cm, ft.*lbf): Specified torque	-	<ul style="list-style-type: none"> <li>Non-reusable part</li> </ul>








PROCEDURE		PART NAME CODE			
7	FUEL INJECTOR SEAL	23255A	<a href="#">INFO</a>	-	-
8	INJECTOR VIBRATION INSULATOR	23291A	<a href="#">INFO</a>	-	-
9	C-RING	-	<a href="#">INFO</a>	-	-
10	NO. 1 FUEL INJECTOR BACK-UP RING	23256	<a href="#">INFO</a>	-	-
11	NO. 3 FUEL INJECTOR BACK-UP RING	23258	<a href="#">INFO</a>	-	-
12	NOZZLE HOLDER CLAMP	23695A	-	-	-
13	DIRECT FUEL INJECTOR ASSEMBLY	23250E	<a href="#">INFO</a>	-	-
14	FUEL DELIVERY PIPE	23814B	<a href="#">INFO</a>	-	-
15	PORT FUEL INJECTOR ASSEMBLY	23250F	<a href="#">INFO</a>	-	-
16	NO. 5 ENGINE WIRE	82125N	-	-	-
17	INJECTOR VIBRATION INSULATOR	23291	-	-	-

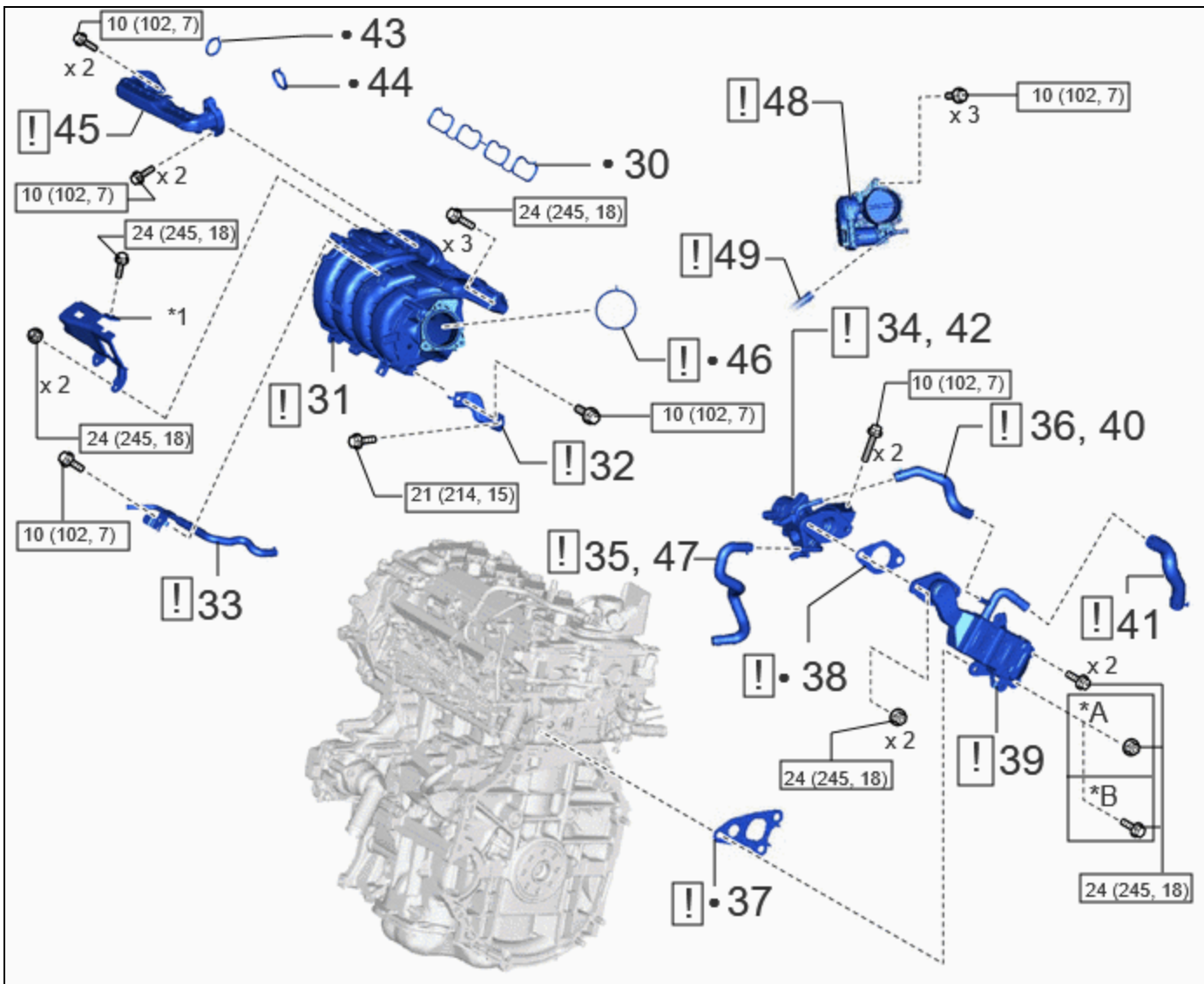
PROCEDURE		PART NAME CODE			
18	FUEL DELIVERY SPACER	23891		-	-
19	FUEL DELIVERY PIPE SUB-ASSEMBLY	23807		-	-

*1	O-RING	-	-
	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping": N*m (kgf*cm, ft.*lbf)		<ul style="list-style-type: none"> <li>Non-reusable part</li> </ul>







PROCEDURE		PART NAME CODE			
20	NO. 6 ENGINE WIRE	82126A	-	-	-
21	SENSOR WIRE	82219A	INFO	-	-
22	WATER BY-PASS HOSE ASSEMBLY	-	-	-	-
23	FUEL PUMP LIFTER ASSEMBLY	23470	INFO	-	-
24	FUEL PUMP SPACER GASKET	23224D	-	-	-
25	TEMPORARILY INSTALL FUEL (ENGINE ROOM SIDE) PUMP ASSEMBLY (for High Pressure)	23100X	INFO	-	-
26	TEMPORARILY INSTALL NO. 1 FUEL PIPE SUB-ASSEMBLY	23801P	INFO	-	-
27	INSTALL FUEL (ENGINE ROOM SIDE) PUMP ASSEMBLY (for High Pressure)	23100X	INFO	-	-
28	INSTALL NO. 1 FUEL PIPE SUB-ASSEMBLY	23801P	INFO	-	-
29	FUEL TUBE SUB-ASSEMBLY	23910A	INFO	-	-

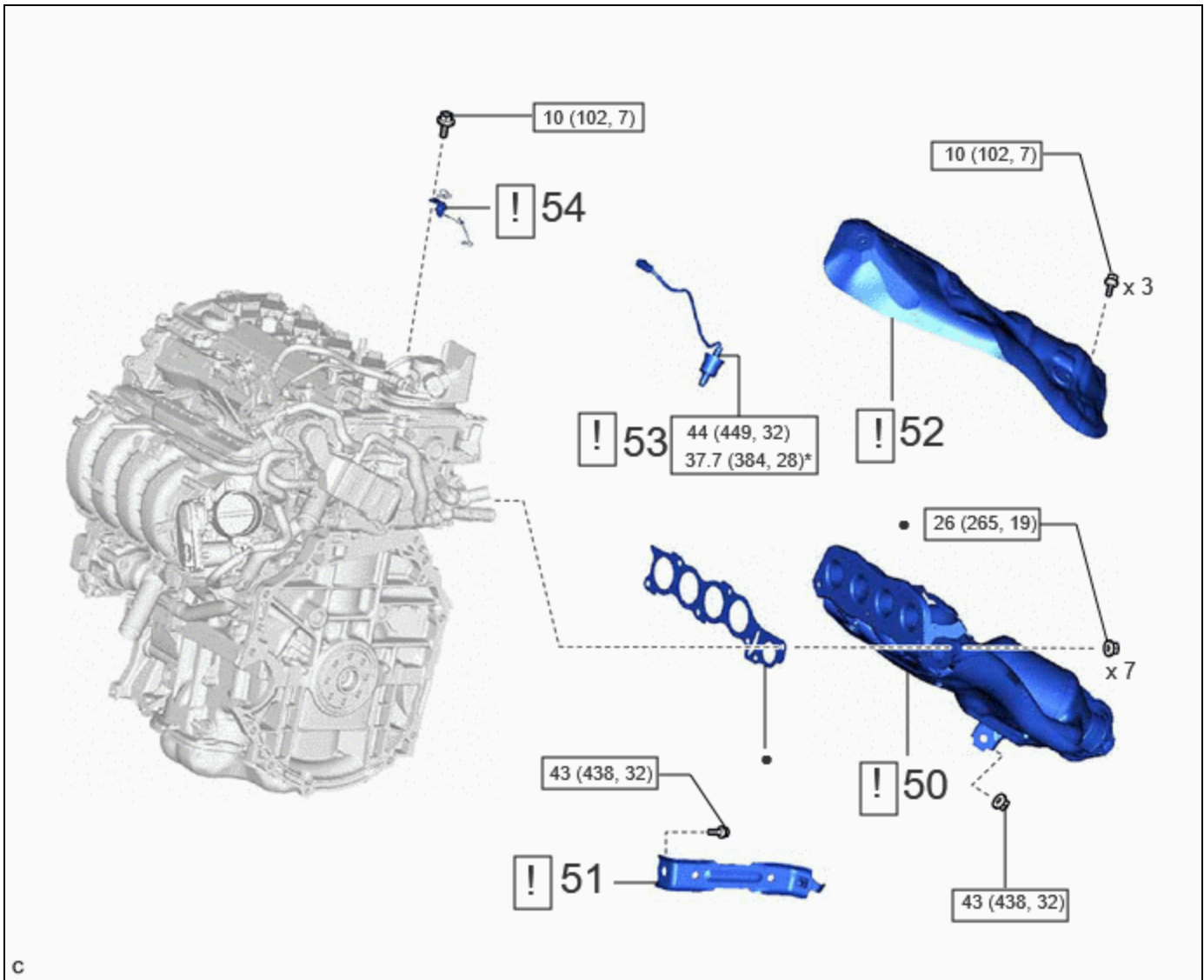
*1	FUEL PIPE CLAMP	*2	FUEL PUMP FLANGE
	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping": N*m (kgf*cm, ft.*lbf)		N*m (kgf*cm, ft.*lbf): Specified torque
*	For use with a union nut wrench	•	Non-reusable part



PROCEDURE	PART NAME CODE	!		
30 NO. 1 INTAKE MANIFOLD TO HEAD GASKET	17177	-	-	-
31 INTAKE MANIFOLD	17111	INFO	-	-
32 INTAKE MANIFOLD STAY	17138B	INFO	-	-
33 NO. 3 WATER BY-PASS PIPE	16279	INFO	-	-
34 SET EGR VALVE ASSEMBLY	25620	INFO	-	-
35 INSTALL NO. 8 WATER BY-PASS HOSE	16296	INFO	-	-
36 INSTALL NO. 4 WATER BY-PASS HOSE	16281	INFO	-	-
37 NO. 1 EGR COOLER GASKET	25685	INFO	-	-
38 EGR VALVE GASKET	25627	INFO	-	-
39 EGR COOLER ASSEMBLY	25680	INFO	-	-
40 CONNECT NO. 4 WATER BY-PASS HOSE	16281	INFO	-	-

PROCEDURE		PART NAME CODE			
41	NO. 3 WATER BY-PASS HOSE	16267	<a href="#">INFO</a>	-	-
42	INSTALL EGR VALVE ASSEMBLY	25620	<a href="#">INFO</a>	-	-
43	EGR INLET GASKET	25628	-	-	-
44	EGR VALVE ADAPTER GASKET	25629	-	-	-
45	NO. 1 EGR PIPE SUB-ASSEMBLY	25601	<a href="#">INFO</a>	-	-
46	THROTTLE BODY GASKET	22271	<a href="#">INFO</a>	-	-
47	CONNECT NO. 8 WATER BY-PASS HOSE	16296	<a href="#">INFO</a>	-	-
48	THROTTLE BODY WITH MOTOR ASSEMBLY	22030	<a href="#">INFO</a>	-	-
49	NO. 5 WATER BY-PASS HOSE	16282	<a href="#">INFO</a>	-	-

*A	for Type A	*B	for Type B
*1	NO. 2 FUEL DELIVERY GUARD	-	-
	N*m (kgf*cm, ft.*lbf): Specified torque	•	Non-reusable part



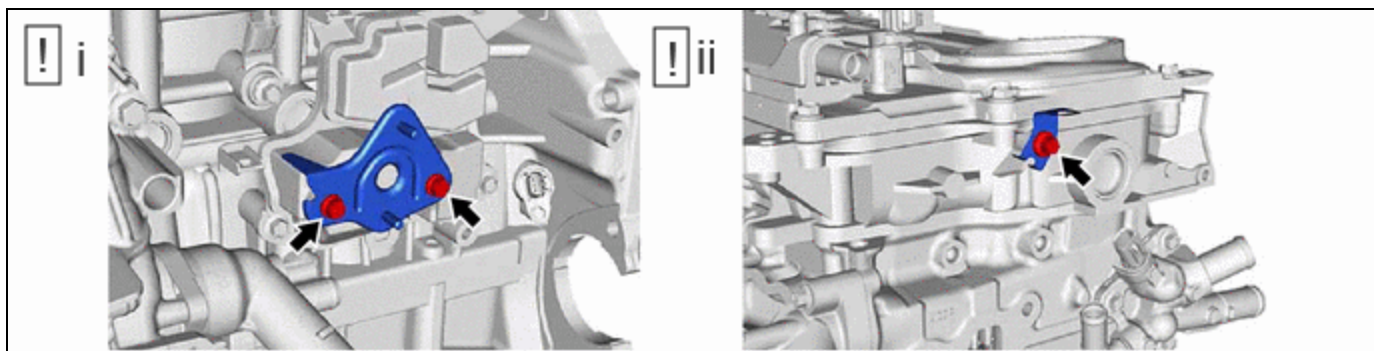
PROCEDURE		PART NAME CODE	!		
50	EXHAUST MANIFOLD	17141	<a href="#">INFO</a>	-	-
51	MANIFOLD STAY	17118	<a href="#">INFO</a>	-	-
52	NO. 1 EXHAUST MANIFOLD HEAT INSULATOR	17167	<a href="#">INFO</a>	-	-
53	AIR FUEL RATIO SENSOR	89467B	<a href="#">INFO</a>	-	-
54	WIRE HARNESS CLAMP BRACKET	-	<a href="#">INFO</a>	-	-

	N*m (kgf*cm, ft.*lbf): Specified torque	*	For use with SST
•	Non-reusable part	-	-

## PROCEDURE



## 1. INSTALL WIRE HARNESS CLAMP BRACKET



- (1) Using an 8 mm socket wrench, install the wire harness clamp bracket to the No. 1 ventilation case with the 2 bolts.

### Torque:

**10 N·m {102 kgf·cm, 7 ft·lbf}**

- (2) Using an 8 mm socket wrench, install the wire harness clamp bracket to the camshaft housing sub-assembly with the bolt.

### Torque:

**10 N·m {102 kgf·cm, 7 ft·lbf}**

## 2. INSTALL NO. 3 EXHAUST MANIFOLD HEAT INSULATOR

### Torque:

**16 N·m {163 kgf·cm, 12 ft·lbf}**

## 3. INSTALL ENGINE WATER PUMP ASSEMBLY (WATER INLET HOUSING)

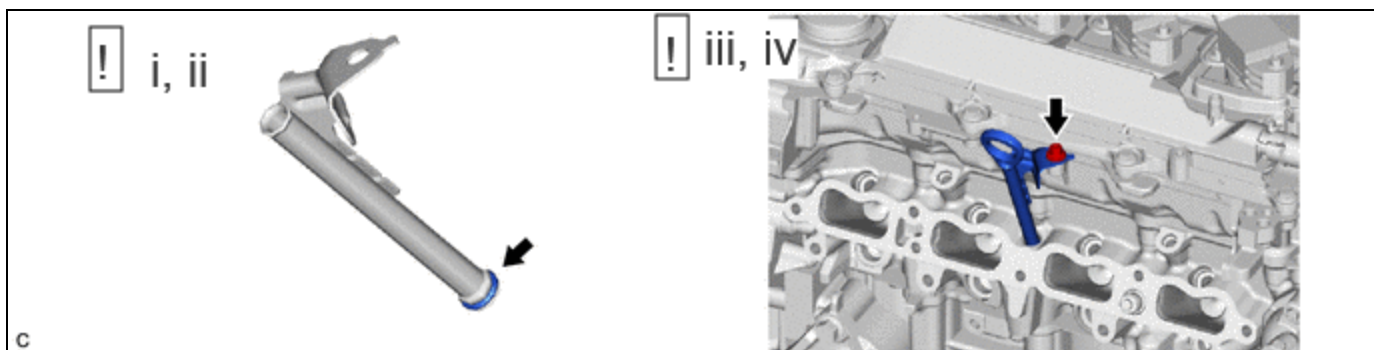
### Torque:

**43 N·m {438 kgf·cm, 32 ft·lbf}**

## 4. INSTALL WATER INLET WITH THERMOSTAT SUB-ASSEMBLY



## 5. INSTALL ENGINE OIL LEVEL DIPSTICK GUIDE



- (1) Apply a light coat of engine oil to a new O-ring.
- (2) Install the O-ring to the engine oil level dipstick guide.
- (3) Using an 8 mm socket wrench, install the engine oil level dipstick guide to the camshaft housing sub-assembly with the bolt.

**Torque:**


**10 N·m {102 kgf·cm, 7 ft·lbf}**

(4) Install the engine oil level dipstick.


**6. INSTALL IGNITION COIL ASSEMBLY**

	Click here <a href="#">INFO</a>
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**7. INSTALL FUEL INJECTOR SEAL**

	Click here <a href="#">INFO</a>
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**8. INSTALL INJECTOR VIBRATION INSULATOR**

	Click here <a href="#">INFO</a>
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**9. INSTALL C-RING**

	Click here <a href="#">INFO</a>
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**10. INSTALL NO. 1 FUEL INJECTOR BACK-UP RING**


	Click here <a href="#">INFO</a>
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**11. INSTALL NO. 3 FUEL INJECTOR BACK-UP RING**

	Click here <a href="#">INFO</a>
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**12. INSTALL NOZZLE HOLDER CLAMP**

**13. INSTALL DIRECT FUEL INJECTOR ASSEMBLY**

	Click here <a href="#">INFO</a>
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#### 14. INSTALL FUEL DELIVERY PIPE



Click here [INFO](#)

#### 15. INSTALL PORT FUEL INJECTOR ASSEMBLY



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#### 16. INSTALL NO. 5 ENGINE WIRE

#### 17. INSTALL INJECTOR VIBRATION INSULATOR

#### 18. INSTALL FUEL DELIVERY SPACER



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#### 19. INSTALL FUEL DELIVERY PIPE SUB-ASSEMBLY



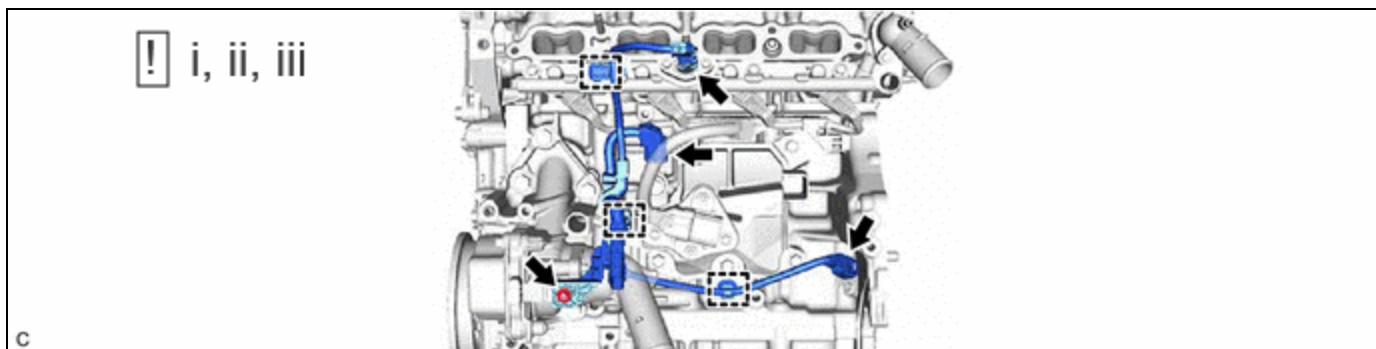
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#### 20. INSTALL NO. 6 ENGINE WIRE

**Torque:**

**10 N·m {102 kgf·cm, 7 ft·lbf}**

#### 21. INSTALL SENSOR WIRE



- (1) Using an 8 mm socket wrench, install the sensor wire to the water inlet with thermostat sub-assembly with the bolt.

**Torque:**

**10 N·m {102 kgf·cm, 7 ft·lbf}**

- (2) Engage the 3 clamps.


(3) Connect the 3 connectors.

## 22. INSTALL WATER BY-PASS HOSE ASSEMBLY

**Torque:**


**21 N·m {214 kgf·cm, 15 ft·lbf}**

## 23. INSTALL FUEL PUMP LIFTER ASSEMBLY


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## 24. INSTALL FUEL PUMP SPACER GASKET


## 25. TEMPORARILY INSTALL FUEL (ENGINE ROOM SIDE) PUMP ASSEMBLY (for High Pressure)

	Click here <a href="#">INFO</a>
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## 26. TEMPORARILY INSTALL NO. 1 FUEL PIPE SUB-ASSEMBLY

	Click here <a href="#">INFO</a>
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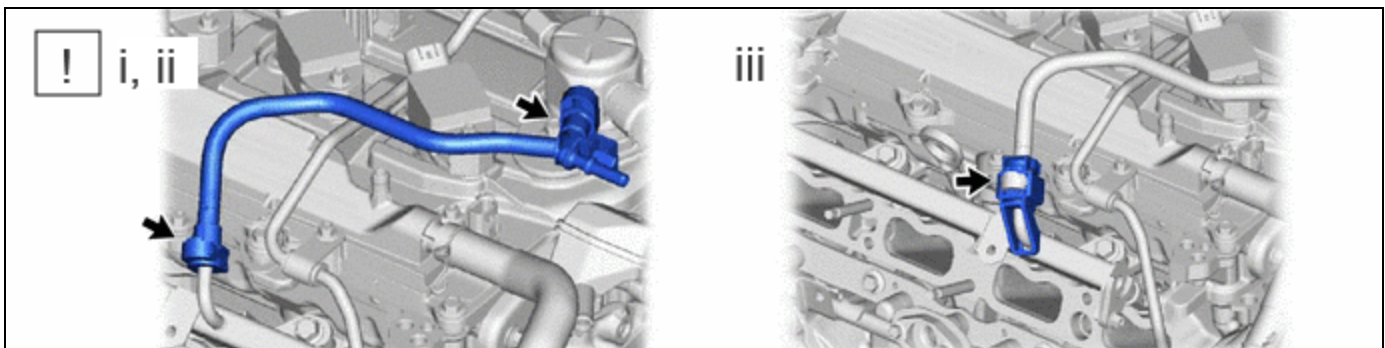
## 27. INSTALL FUEL (ENGINE ROOM SIDE) PUMP ASSEMBLY (for High Pressure)

	Click here <a href="#">INFO</a>
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## 28. INSTALL NO. 1 FUEL PIPE SUB-ASSEMBLY

	Click here <a href="#">INFO</a>
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## 29. CONNECT FUEL TUBE SUB-ASSEMBLY



(1) Connect the fuel tube sub-assembly to the fuel delivery pipe sub-assembly.

Click here [INFO](#)

(2) Connect the fuel tube sub-assembly to the fuel (engine room side) pump assembly.

Click here [INFO](#)

(3) Install the fuel pipe clamp to the fuel tube connector.

### 30. INSTALL NO. 1 INTAKE MANIFOLD TO HEAD GASKET

### 31. INSTALL INTAKE MANIFOLD



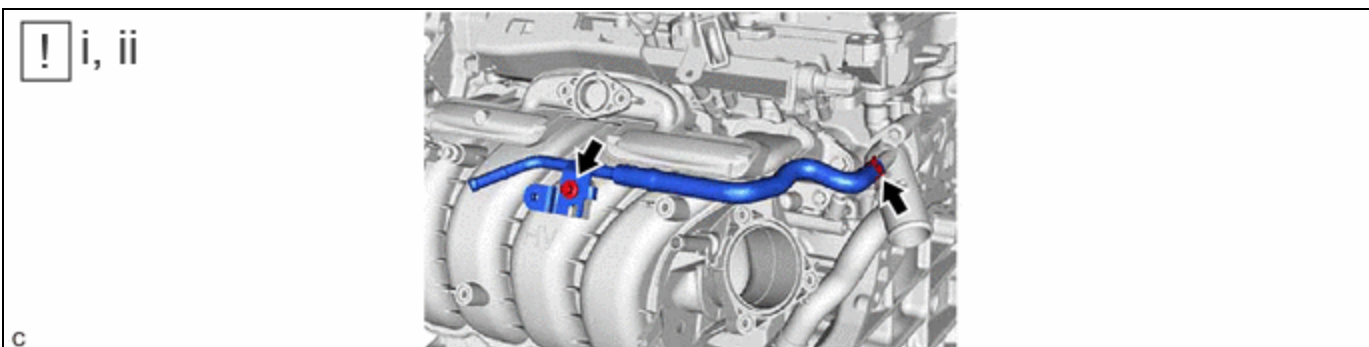
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### 32. INSTALL INTAKE MANIFOLD STAY



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### 33. INSTALL NO. 3 WATER BY-PASS PIPE



(1) Using an 8 mm socket wrench, install the No. 3 water by-pass pipe to the intake manifold with the bolt.

#### Torque:

**10 N·m {102 kgf·cm, 7 ft·lbf}**

(2) Connect the No. 3 water by-pass pipe to the water outlet sub-assembly and slide the clip to secure it.

### 34. SET EGR VALVE ASSEMBLY




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### 35. INSTALL NO. 8 WATER BY-PASS HOSE



Click here [INFO](#)


**36. INSTALL NO. 4 WATER BY-PASS HOSE**

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**37. INSTALL NO. 1 EGR COOLER GASKET**

	Click here <a href="#">INFO</a>
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**38. INSTALL EGR VALVE GASKET**

	Click here <a href="#">INFO</a>
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**39. INSTALL EGR COOLER ASSEMBLY**

	Click here <a href="#">INFO</a>
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**40. CONNECT NO. 4 WATER BY-PASS HOSE**

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**41. CONNECT NO. 3 WATER BY-PASS HOSE**

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**42. INSTALL EGR VALVE ASSEMBLY**

	Click here <a href="#">INFO</a>
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**43. INSTALL EGR INLET GASKET**

**44. INSTALL EGR VALVE ADAPTER GASKET**

**45. INSTALL NO. 1 EGR PIPE SUB-ASSEMBLY**



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**46. INSTALL THROTTLE BODY GASKET**



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**47. CONNECT NO. 8 WATER BY-PASS HOSE**



Click here [INFO](#)

**48. INSTALL THROTTLE BODY WITH MOTOR ASSEMBLY**



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**49. CONNECT NO. 5 WATER BY-PASS HOSE**



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**50. INSTALL EXHAUST MANIFOLD**



Click here [INFO](#)

**51. INSTALL MANIFOLD STAY**



Click here [INFO](#)

**52. INSTALL NO. 1 EXHAUST MANIFOLD HEAT INSULATOR**



Click here [INFO](#)

### 53. INSTALL AIR FUEL RATIO SENSOR



Click here [INFO](#)

### 54. INSTALL WIRE HARNESS CLAMP BRACKET



Click here [INFO](#)

