









LUBRICATION SYSTEM

PREPARATION

SST (SPECIAL SERVICE TOOLS)

	09032-00100 Oil Pan Seal Cutter	No.2 oil pan
	09228-07500 Oil Filter Wrench	
	09316-60010 Transmission & Transfer Bearing Replacer	
	(09316-00010) Replacer Pipe	Crankshaft front oil seal
	09816-30010 Oil Pressure Switch Socket	

RECOMMENDED TOOLS

	(09040-00010) Hexagon Wrench Set ◆	
	(09040-00020) Torx Socket E10 ◆	A/C compressor stud bolt
	09200-00010 Engine Adjust Kit ◆	

EQUIPMENT

Oil pressure gauge	
Precision straight edge	Oil pump
Torque wrench	

LUBRICANT

Item	Capacity	Classification
Engine oil (2JZ-GE) Dry fill Drain and refill w/ Oil filter change w/o Oil filter change	6.5 liters (6.9 US qts, 5.7 Imp. qts) 5.3 liters (5.6 US qts, 4.7 Imp. qts) 4.9 liters (5.2 US qts, 4.3 Imp. qts)	API grade SH, Energy-Conserving II multigrade engine oil or ILSAC multigrade engine oil and recommended viscosity oil, with SAE 5W-30 being preferred engine oil
Engine oil (2JZ-GTE) Dry fill Drain and refill w/ Oil filter change w/o Oil filter change	6.5 liters (6.9 US qts, 5.7 Imp. qts) 5.0 liters (5.3 US qts, 4.4 Imp. qts) 4.7 liters (5.0 US qts, 4.1 Imp. qts)	API grade SH, Energy-Conserving II multigrade engine oil or ILSAC multigrade engine oil and recommended viscosity oil

SSM (SPECIAL SERVICE MATERIALS)

08826-00080 Seal Packing Black or equivalent (FIPG)	Oil pump No.1 oil pan No.2 oil pan
08833-00080 Adhesive 1344, THREE BOND 1344, LOCTITE 242 or equivalent	Oil pressure switch Idler pulley pivot bolt

OIL PRESSURE CHECK

1. CHECK OIL QUALITY

Check the oil for deterioration, entry of water, discoloring or thinning.

If oil quality is visibly poor, replace the oil.

2. CHECK ENGINE OIL LEVEL

The oil level should be between the "L" and "F" marks on the dipstick.

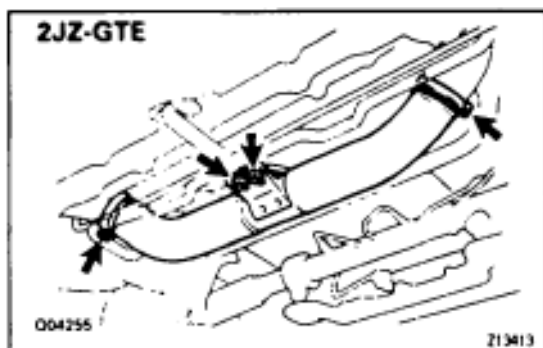
If low, check for the leakage and add oil up to "F" mark.

3. REMOVE ENGINE UNDER COVER

4. 2JZ-GTE:

REMOVE NO.2 AIR TUBE

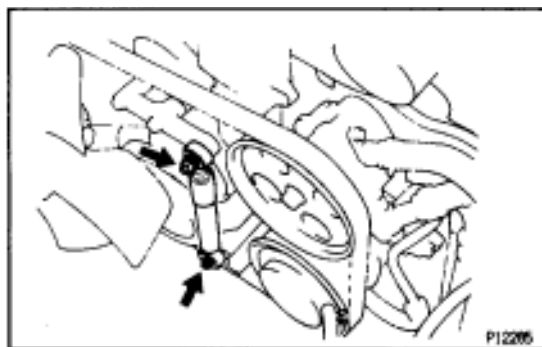
Loosen the 2 hose clamps, and remove 2 bolts and air tube.



5. 2JZ-GTE M/T:

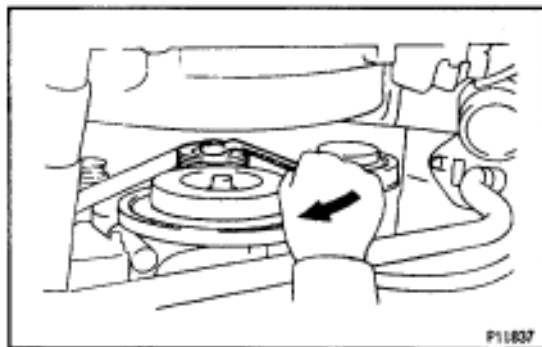
REMOVE DRIVE BELT TENSIONER DAMPER

Remove the 2 nuts and tensioner damper.



6. DISCONNECT A/C COMPRESSOR FROM ENGINE

(a) Loosen the drive belt tension by turning the drive belt tensioner clockwise, and remove the drive belt.

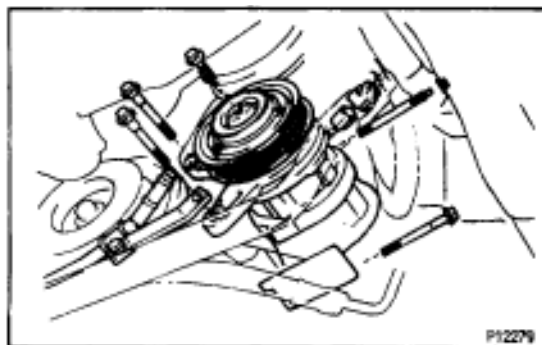


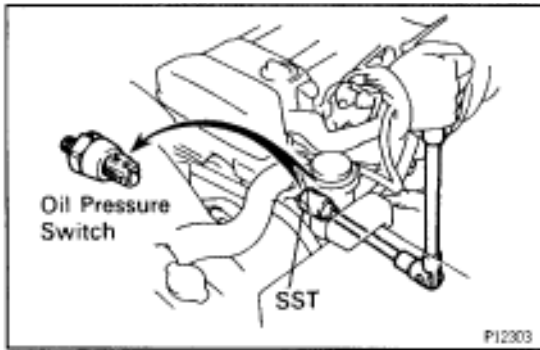
(b) Remove the 4 bolts and nut.

(c) Using a torx socket (E10), remove the stud bolt.

(d) Disconnect the compressor connector.

(e) Remove 4 bolts and pull the compressor downward.





7. REMOVE OIL PRESSURE SWITCH, AND INSTALL OIL PRESSURE GAUGE

- (a) Disconnect the oil pressure switch connector.
- (b) Using SST, remove the oil pressure switch.
SST 09816-30010

- (c) Install an oil pressure gauge.

8. REINSTALL A/C COMPRESSOR

- (a) Temporarily install the A/C compressor with the 4 bolts.
- (b) Connect the compressor connector.
- (c) Install the compressor with the stud bolt, 4 bolts and nut.

Torque:

Stud bolt

26 N·m (265 kgf·cm, 19 ft·lbf)

Bolt and nut

52 N·m (530 kgf·cm, 38 ft·lbf)

- (d) Install the drive belt.

9. WARM UP ENGINE

Allow the engine to warm up to normal operating temperature.

10. CHECK OIL PRESSURE

Oil pressure:

At idle

49 kPa (0.5 kgf/cm², 7.1 psi) or more

At 3,000 rpm (2JZ-GE) or 4,000 rpm (2JZ-GTE)

324-579 kPa

(3.3-5.9 kgf/cm², 47-84 psi)

11. DISCONNECT A/C COMPRESSOR FROM ENGINE

12. REMOVE OIL PRESSURE GAUGE, AND REINSTALL OIL PRESSURE SWITCH

- (a) Remove the oil pressure gauge.
- (b) Apply adhesive to 2 or 3 threads of the oil pressure switch.

Adhesive:

Part No. 08833-00080, THREE BOND 1344,

LOCTITE 242 or equivalent

- (c) Using SST, install the oil pressure switch.
SST 09816-30010

Torque: 14 N·m (150 kgf·cm, 11 ft·lbf)

- (d) Connect the oil pressure switch connector.

13. REINSTALL A/C COMPRESSOR

14. START ENGINE AND CHECK FOR LEAKS

15. 2JZ-GTE M/T:

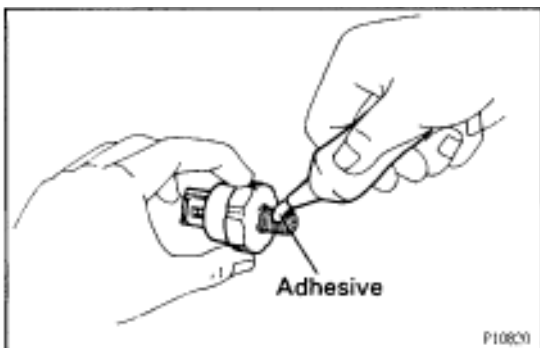
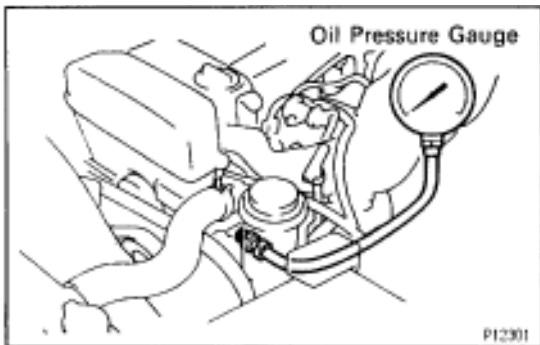
INSTALL DRIVE BELT TENSIONER DAMPER

Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

16. 2JZ-GTE:

REINSTALL NO.2 AIR TUBE

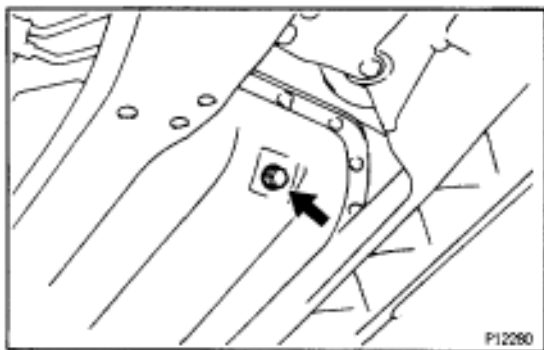
17. REINSTALL ENGINE UNDER COVER



OIL AND FILTER REPLACEMENT

CAUTION:

- Prolonged and repeated contact with mineral oil will result in the removal of natural fats from the skin, leading to dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which may cause skin cancer.
- Exercise caution in order to minimize the length and frequency of contact of your skin to used oil. Wear protective clothing and gloves. Wash your skin thoroughly with soap and water, or use waterless hand cleaner, to remove any used engine oil. Do not use gasoline, thinners, or solvents.
- In order to preserve the environment, used oil and used oil filters must be disposed of only at designated disposal sites.



1. DRAIN ENGINE OIL

- (a) Remove the oil filler cap
- (b) Remove the oil drain plug, and drain the oil into a container.

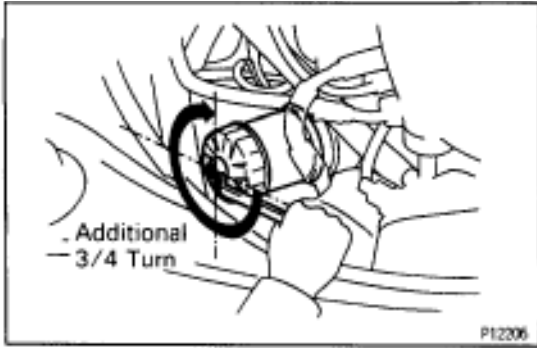


2. REPLACE OIL FILTER

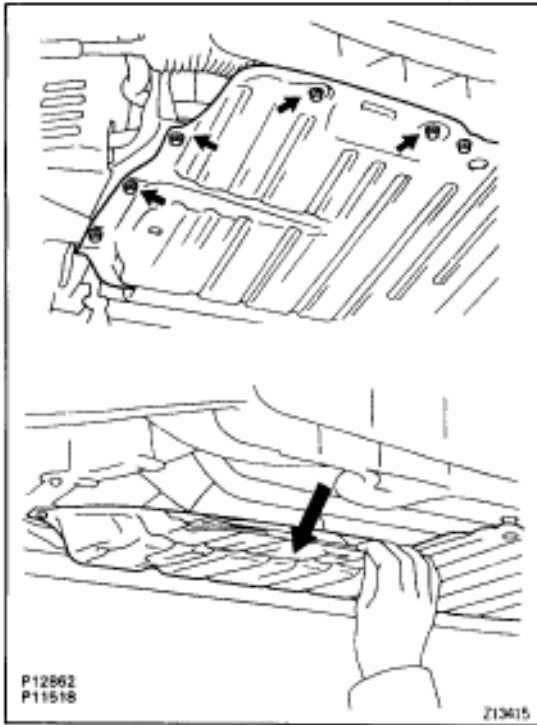
- (a) Using SST, remove the oil filter.
SST 09228-07500
- (b) Check and clean the oil filter installation surface.
- (c) Apply clean engine oil to the gasket of a new oil filter.



- (d) Lightly screw the oil filter into place, and tighten it until the gasket contacts the seat.



- (e) Using SST, tighten it an additional 3/4 turn.
SST 09228-07500



3. REFILL WITH ENGINE OIL

- (a) To wipe off oil that has dripped onto the engine under cover, remove the 4 screws and bend the under cover downward.

NOTICE:

- To avoid damaging the silencer, do not bend the engine under cover more than 150 mm.
- If oil gets on the silencer, wipe it off with a dry rag.

- (b) Clean and install the oil drain plug with a new gasket.

Torque: 38 N·m (375 kgf·cm, 27 ft·lbf)

- (c) Fill with fresh engine oil.

Capacity:

2JZ-GE

Drain and refill

w/ Oil filter change

5.3 liters (5.6 US qts, 4.7 Imp. qts)

w/o Oil filter change

4.9 liters (5.2 US qts, 4.3 Imp. qts)

Dry fill

6.5 liters (6.9 US qts, 5.7 Imp. qts)

2JZ-GTE

Drain and refill

w/ Oil filter change

5.0 liters (5.3 US qts, 4.4 Imp. qts)

w/o Oil filter change

4.7 liters (5.0 US qts, 4.1 Imp. qts)

Dry fill

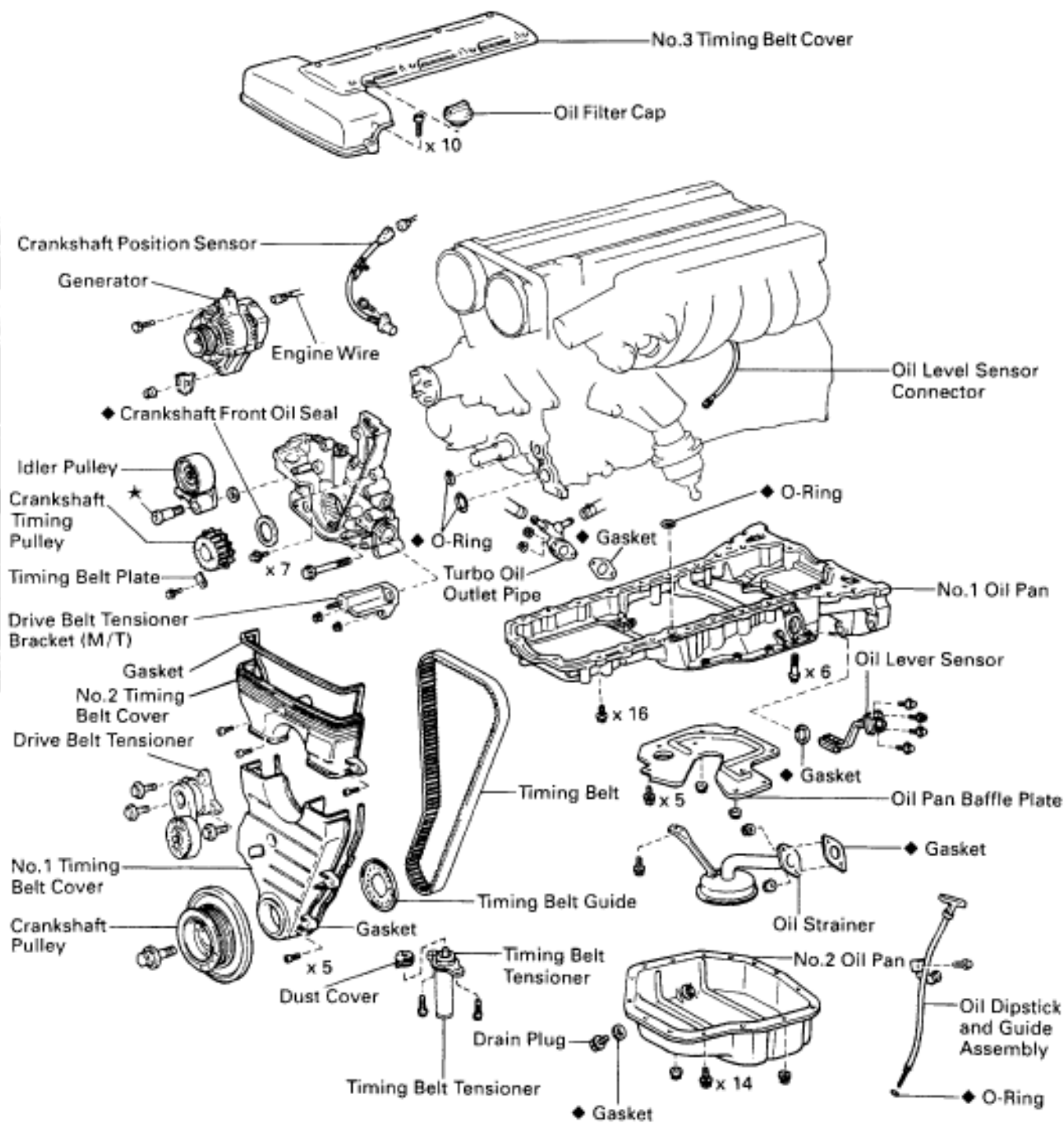
6.5 liters (6.9 US qts, 5.7 Imp. qts)

- (d) Reinstall the oil filler cap.

4. START ENGINE AND CHECK FOR OIL LEAKS

5. RECHECK ENGINE OIL LEVEL

2JZ-GTE

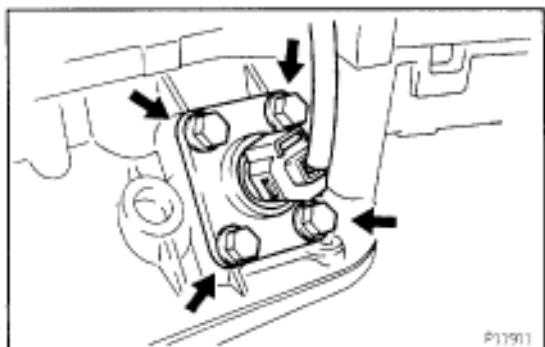
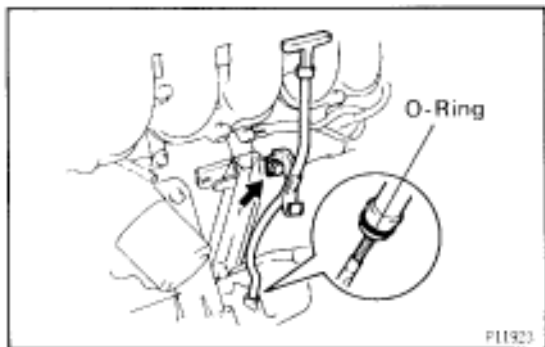
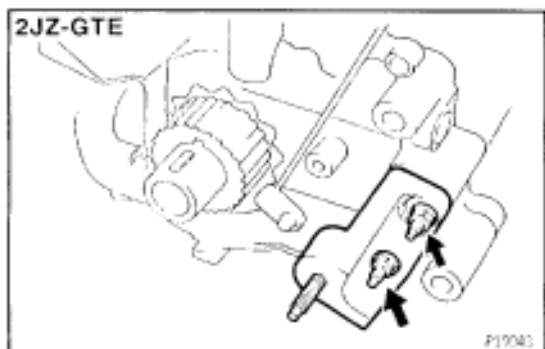
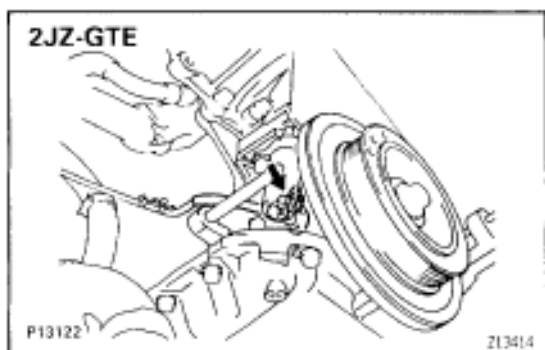


◆ Non-reusable part
 ★ Precoated part

OIL PUMP REMOVAL

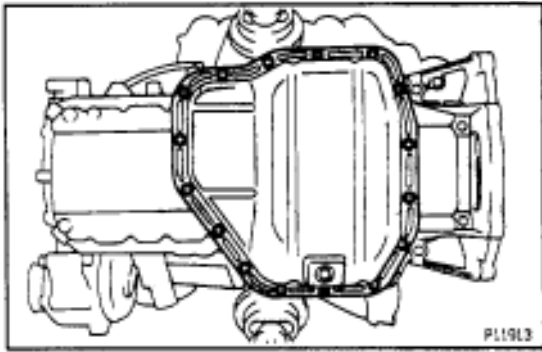
HINT: When repairing the oil pump, the oil pan and strainer should be removed and cleaned.

1. **REMOVE ENGINE WITH TRANSMISSION**
(See components for engine removal and installation)
2. **SEPARATE ENGINE AND TRANSMISSION**
(See components for engine & transmission separation and assembly)



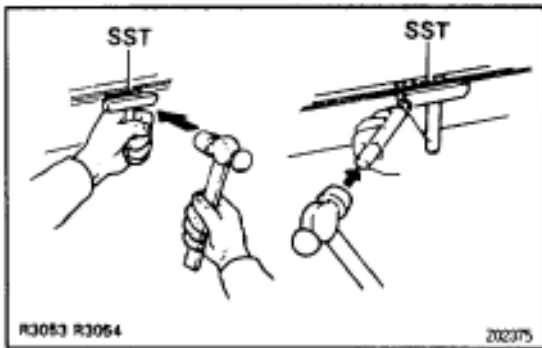
3. **INSTALL ENGINE TO ENGINE STAND FOR REMOVAL**
4. **2JZ-GTE:**
REMOVE GENERATOR
5. **2JZ-GTE:**
REMOVE CRANKSHAFT POSITION SENSOR
 - (a) Disconnect the sensor connector from the bracket.
 - (b) Disconnect the sensor connector from the wiring connector.
 - (c) Disconnect the wire clamp from the cylinder block.
 - (d) Remove the bolt and position sensor.
6. **REMOVE TIMING BELT**
(See steps 4 to 8 in timing belt removal in Engine Mechanical)
7. **2JZ-GTE M/T:**
REMOVE DRIVE BELT TENSIONER BRACKET
Remove the 2 nuts and tensioner bracket.
8. **REMOVE IDLER PULLEY**
(See step 15 in timing belt removal in Engine Mechanical)
9. **REMOVE CRANKSHAFT TIMING PULLEY**
(See step 17 in timing belt removal in Engine Mechanical)
10. **REMOVE OIL DIPSTICK AND GUIDE ASSEMBLY**
 - (a) Remove the bolt.
 - (b) Pull out the dipstick guide together with the dipstick.
 - (c) Remove the O-ring from the dipstick guide.
11. **REMOVE OIL LEVEL SENSOR**
 - (a) Disconnect the level sensor connector.
 - (b) Remove the 4 bolts and level sensor.
 - (c) Remove the gasket from the level sensor.

NOTICE: Be careful not to drop the oil level sensor when removing it.



12. REMOVE NO.2 OIL PAN

- (a) Remove the 14 bolts and 2 nuts.

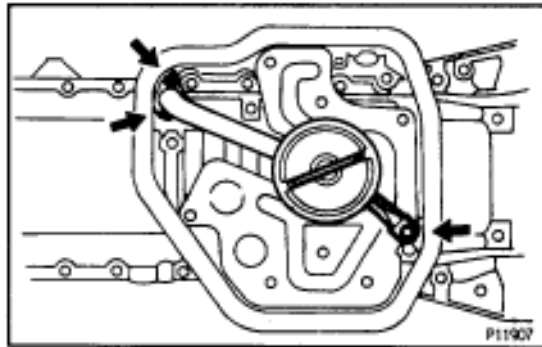


- (b) Insert the blade of SST between the No.1 and No.2 oil pan, break the seal of the applied sealer and remove the No.2 oil pan.

SST 09032-00100

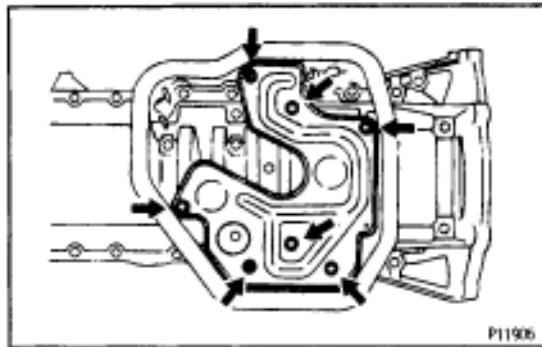
NOTICE:

- Be careful not to damage the No.2 oil pan contact surface of the No.1 oil pan.
- Be careful not to damage the oil pan flange.



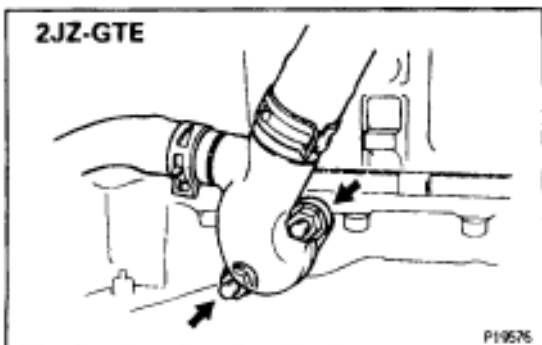
13. REMOVE OIL STRAINER

Remove the bolt, 2 nuts, oil strainer and gasket.



14. REMOVE OIL PAN Baffle PLATE

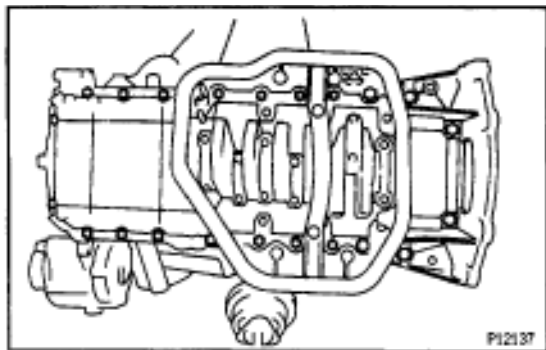
Remove the 5 bolts, 2 nuts and baffle plate.



15. 2JZ-GTE:

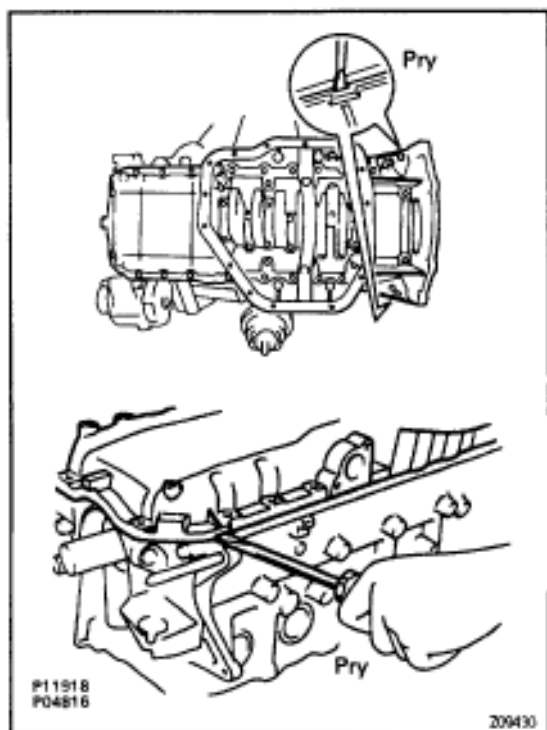
REMOVE TURBO OIL OUTLET PIPE

- (a) Disconnect the 2 turbo oil outlet hoses.
 (b) Remove the 2 nuts, oil outlet pipe and gasket.



16. REMOVE NO.1 OIL PAN

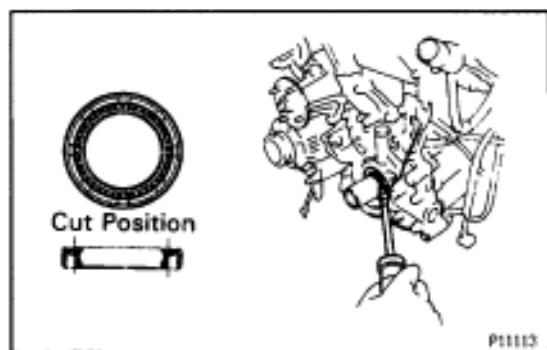
- (a) Remove the 22 bolts.



- (b) Remove the No.1 oil pan by prying the portions between the cylinder block and No.1 oil pan with a screwdriver.

NOTICE: Be careful not to damage the contact surfaces of the cylinder block and No.1 oil pan.

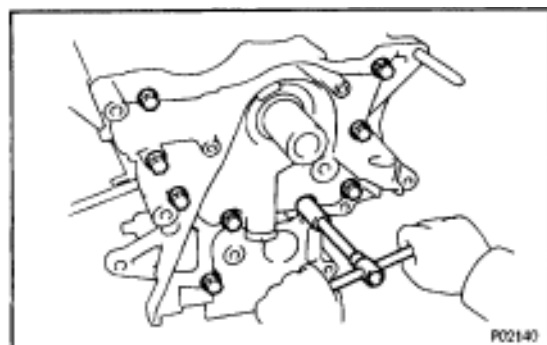
- (c) Remove the O-ring from the cylinder block.



17. REMOVE CRANKSHAFT FRONT OIL SEAL

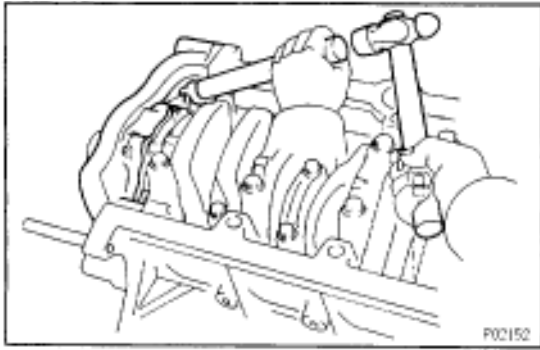
- (a) Using a knife, cut off the oil seal lip.
 (b) Using a screwdriver, pry out the oil seal.

NOTICE: Be careful not to damage the crankshaft. Tape the screwdriver tip.



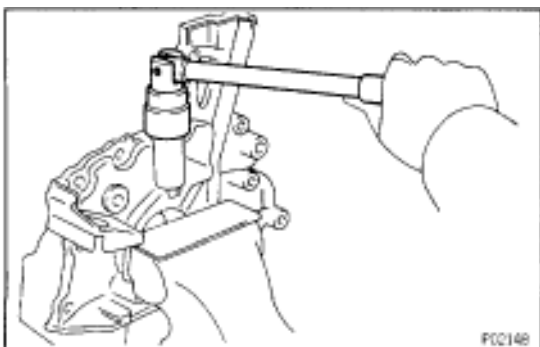
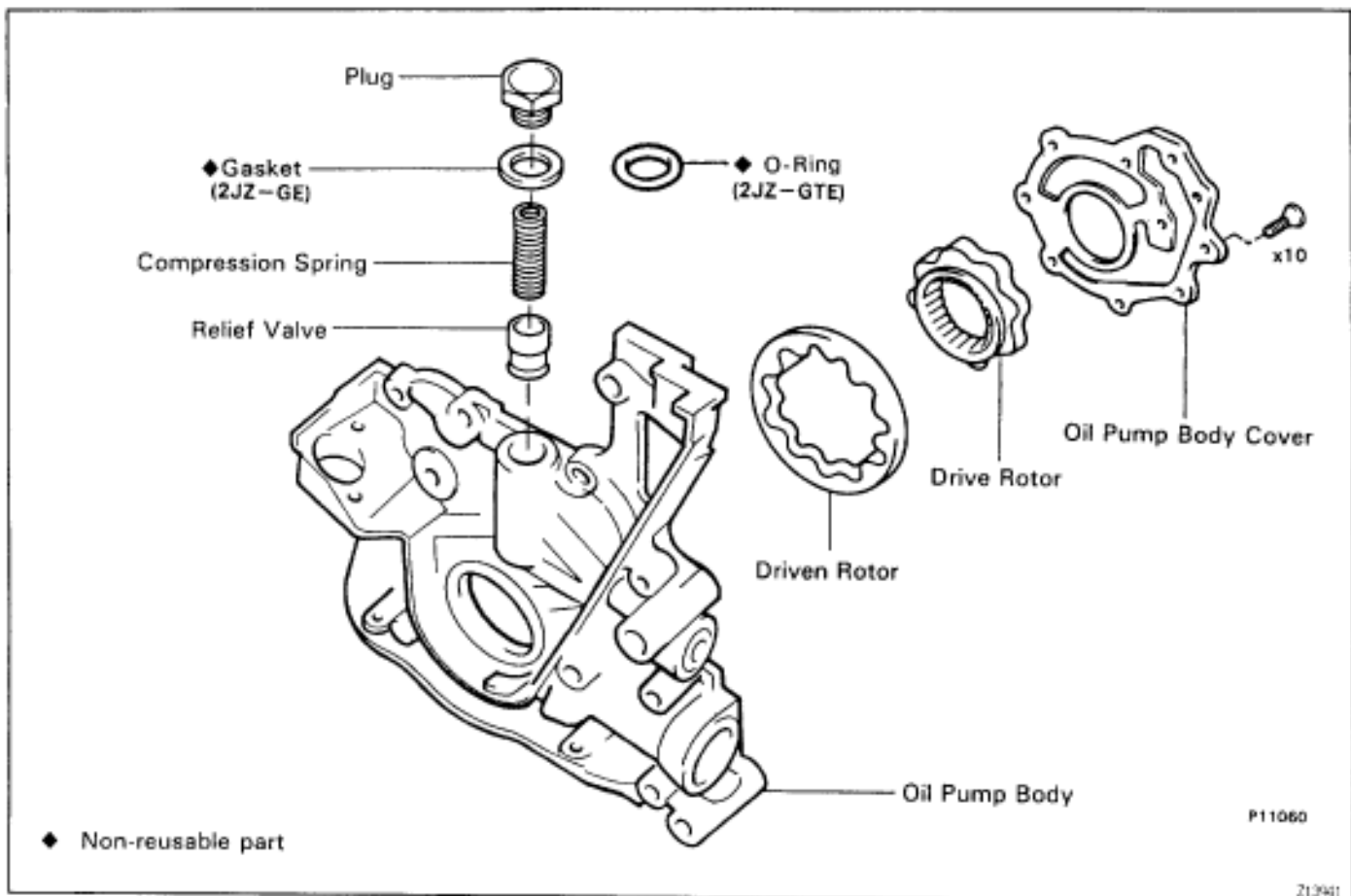
18. REMOVE OIL PUMP

- (a) Remove the 9 bolts.



- (b) Using a hammer and brass bar, remove the oil pump by carefully tapping the oil pump body.
- (c) Remove the 2 O-rings from the cylinder block.

COMPONENTS FOR DISASSEMBLY AND ASSEMBLY



OIL PUMP DISASSEMBLY

Assembly is in the reverse order of disassembly.

1. REMOVE RELIEF VALVE

- (a) Slightly mount the pump body in a vise.
NOTICE: Be careful not to damage the pump body.
- (b) Remove the plug, gasket (2JZ-GE), O-ring (2JZ-GTE), compression spring and relief valve.

INSTALLATION HINT:

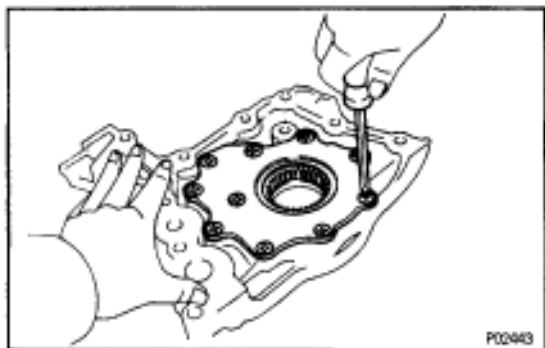
Use a new gasket (2JZ-GE) or O-ring (2JZ-GTE).

Torque:**2JZ-GE**

49 N·m (500 kgf·cm, 36 ft·lbf)

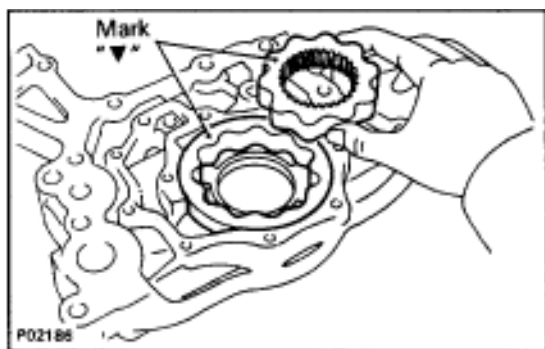
2JZ-GTE

29 N·m (300 kgf·cm, 22 ft·lbf)

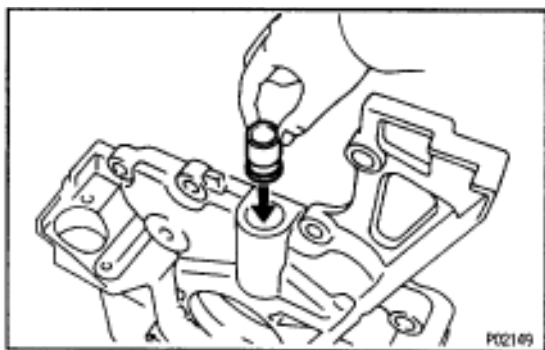
**2. REMOVE DRIVE AND DRIVEN ROTORS**

Remove the 10 screws, pump body cover, the drive and driven rotors.

Torque: 10 N·m (105 kgf·cm, 8.0 ft·lbf)

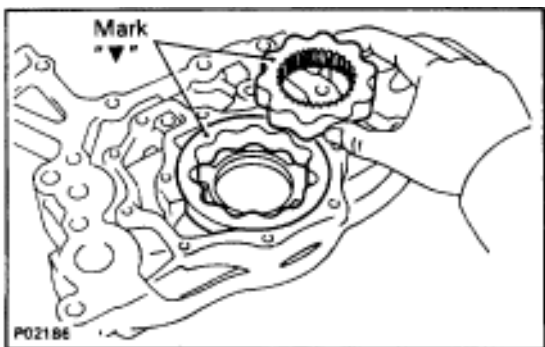


ASSEMBLY HINT: Place the drive and driven rotors into the oil pump body with the mark facing upward.

**OIL PUMP INSPECTION****1. INSPECT RELIEF VALVE**

Coat the valve with engine oil and check that it falls smoothly into the valve hole under its own weight.

If it doesn't, replace the relief valve. If necessary, replace the oil pump assembly.

**2. INSPECT DRIVE AND DRIVEN ROTORS****A. Place drive and driven rotors into oil pump body**

ASSEMBLY HINT: Place the drive and driven rotors into the oil pump body with the mark facing upward.

**B. Inspect rotor tip clearance**

Using a feeler gauge, measure the clearance between the drive and driven rotors.

Standard tip clearance:**2JZ-GE**

0.310–0.490 mm (0.0122–0.0193 in.)

2JZ-GTE

0.056–0.326 mm (0.0022–0.0128 in.)

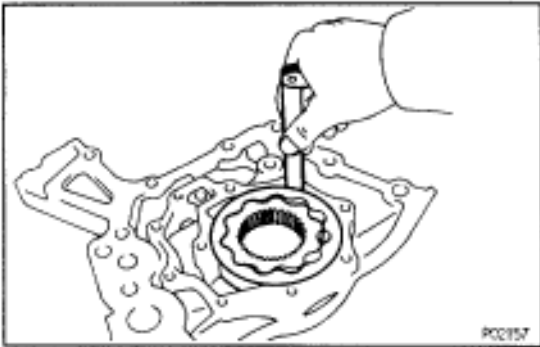
Maximum tip clearance:**2JZ-GE**

0.53 mm (0.0209 in.)

2JZ-GTE

0.40 mm (0.0157 in.)

If the tip clearance is greater than maximum, replace the rotors as a set.

**C. Inspect rotor body clearance**

Using a feeler gauge, measure the clearance between the driven rotor and pump body.

Standard body clearance:**2JZ-GE**

0.100–0.175 mm (0.0039–0.0069 in.)

2JZ-GTE

0.080–0.135 mm (0.0031–0.0053 in.)

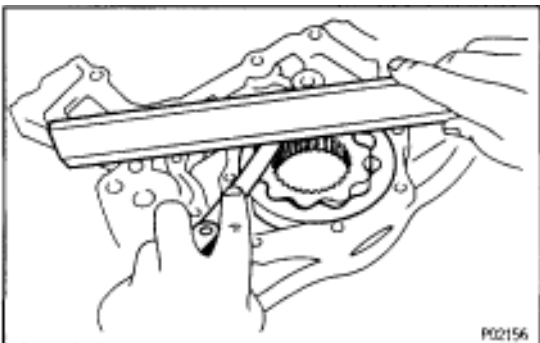
Maximum body clearance:**2JZ-GE**

0.20 mm (0.0079 in.)

2JZ-GTE

0.16 mm (0.0063 in.)

If the body clearance is greater than maximum, replace the rotors as a set. If necessary, replace the oil pump assembly.

**D. Inspect rotor side clearance**

Using a feeler gauge and precision straight edge, measure the clearance between the rotors and precision straight edge.

Standard side clearance:**2JZ-GE**

0.030–0.090 mm (0.0012–0.0035 in.)

2JZ-GTE

0.020–0.065 mm (0.0007–0.0026 in.)

Maximum side clearance:**2JZ-GE**

0.12 mm (0.0047 in.)

2JZ-GTE

0.10 mm (0.0039 in.)

If the side clearance is greater than maximum, replace the rotors as a set. If necessary, replace the oil pump assembly.

E. Remove drive and driven rotors**OIL PUMP INSTALLATION****1. INSTALL OIL PUMP**

- (a) Remove any old packing (FIPG) material and be careful not to drop any oil on the contact surfaces of the oil pump and cylinder block.

- Using a razor blade gasket scraper, remove all the old packing (FIPG) material from the gasket surfaces and sealing groove.
- Thoroughly clean all components to remove all the debris.
- Using a non-residue solvent, clean both sealing surfaces.

- (b) Apply seal packing to the oil pump as shown in the illustration.

Seal packing:**Part No. 08826-00080 or equivalent**

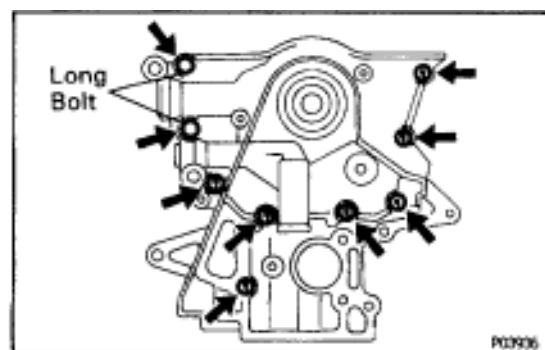
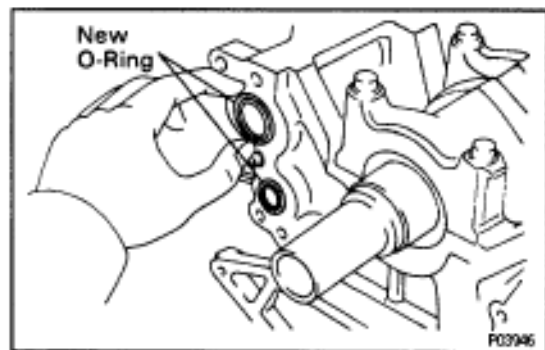
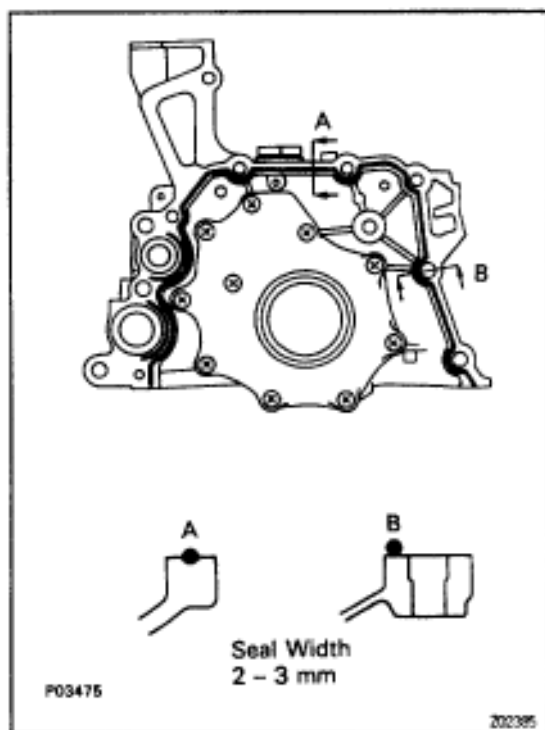
- Install a nozzle that has been cut to a 2–3 mm (0.08–0.12 in.) opening.

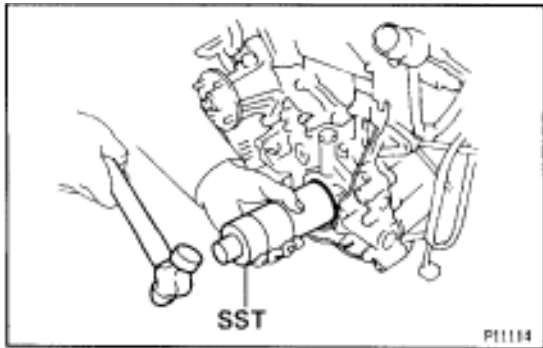
HINT: Avoid applying an excessive amount to the surface. Be particularly careful near oil passages.

- Parts must be assembled within 5 minutes of application. Otherwise the material must be removed and reapplied.
- Immediately remove nozzle from the tube and reinstall cap.

- (c) Place 2 new O-rings in position on the cylinder block.

- (d) Install the oil pump with the 9 bolts.
Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)





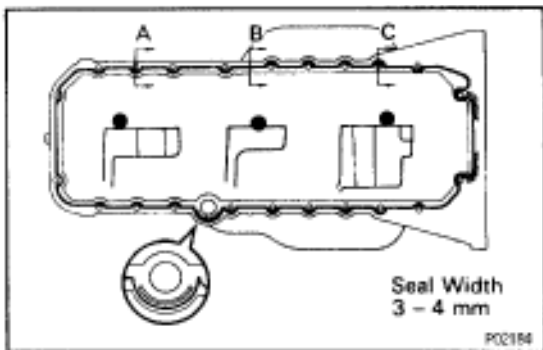
2. INSTALL CRANKSHAFT FRONT OIL SEAL

- (a) Apply MP grease to a new oil seal lip.
- (b) Using SST and a hammer, tap in the oil seal until its surface is flush with the oil pump body edge.
SST 09316-60010 (09316-00010)

3. INSTALL NO.1 OIL PAN

- (a) Remove any old packing (FIPG) material and be careful not to drop any oil on the contact surfaces of the No.1 oil pan and cylinder block.
 - Using a razor blade and gasket scraper, remove all the old packing (FIPG) material from the gasket surfaces and sealing groove.
 - Thoroughly clean all components to remove all the debris.
 - Using a non-residue solvent, clean both sealing surfaces.

NOTICE: Do not use a solvent which will affect the painted surfaces.



- (b) Apply seal packing to the No.1 oil pan as shown in the illustration.

Seal packing:

Parts No. 08826-00080 or equivalent

- Install a nozzle that has been cut to a 3-4 mm (0.12-0.16 in.) opening.

HINT: Avoid applying an excessive amount to the surface.

- Parts must be assembled within 5 minutes of application. Otherwise the material must be removed and reapplied.
- Immediately remove nozzle from the tube and reinstall cap.

- (c) Place a new O-ring in the position on the cylinder block.
- (d) Install the No.1 oil pan with the 22 bolts.

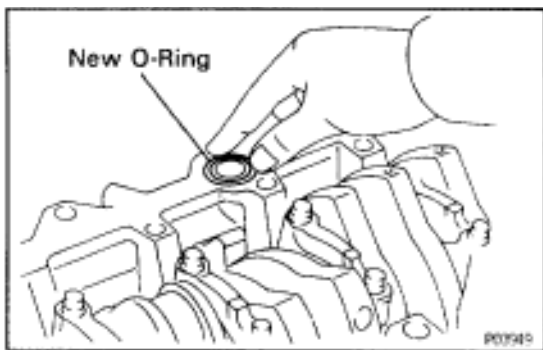
Torque:

12 mm head

21 N·m (210 kgf·cm, 15 ft·lbf)

14 mm head

39 N·m (400 kgf·cm, 29 ft·lbf)



4. 2JZ-GTE:

INSTALL TURBO OIL OUTLET PIPE

- (a) Install a new gasket and the oil outlet pipe with the 2 nuts.
Torque: 27 N·m (280 kgf·cm, 20 ft·lbf)
- (b) Connect the 2 turbo oil outlet hoses.

5. INSTALL OIL PAN BAFFLE PLATE

Torque: 8.8 N·m (90 kgf·cm, 78 in·lbf)

6. INSTALL OIL STRAINER

Install a new gasket and the oil strainer with the bolt and 2 nuts.

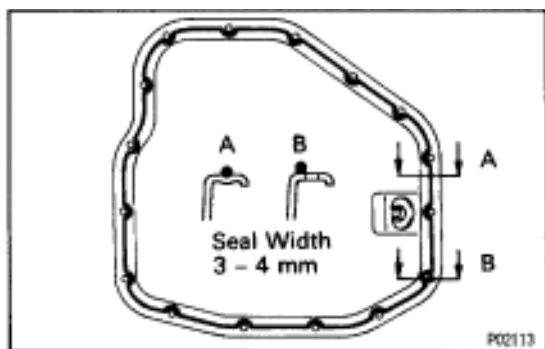
Torque: 8.8 N·m (90 kgf·cm, 78 in.·lbf)

7. INSTALL NO.2 OIL PAN

(a) Remove any old packing (FIPG) material and be careful not to drop any oil on the contact surfaces of the No.1 and No.2 oil pans.

- Using a razor blade and gasket scraper, remove all the old packing (FIPG) material from the gasket surfaces and sealing groove.
- Thoroughly clean all components to remove all the debris.
- Using a non-residue solvent, clean both sealing surfaces.

NOTICE: Do not use a solvent which will affect the painted surfaces.



(b) Apply seal packing to the No.2 oil pan as shown in the illustration.

Seal packing:

Part No.08826-00080 or equivalent

- Install a nozzle that has been cut to a 3-4 mm (0.12-0.16 in.) opening.

HINT: Avoid applying an excessive amount to the surface.

- Parts must be assembled within 5 minutes of application. Otherwise the material must be removed and reapplied.
- Immediately remove nozzle from the tube and reinstall cap.

(c) Install the No.2 oil pan with the 14 bolts and 2 nuts.

Torque: 8.8 N·m (90 kgf·cm, 78 in.·lbf)

8. INSTALL OIL LEVEL SENSOR

(a) Install a new gasket to the level sensor.

(b) Install the level sensor with the 4 bolts.

Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

(c) Connect the level sensor connector.

9. INSTALL OIL DIPSTICK GUIDE AND DIPSTICK

(a) Install a new O-ring on the dipstick guide.

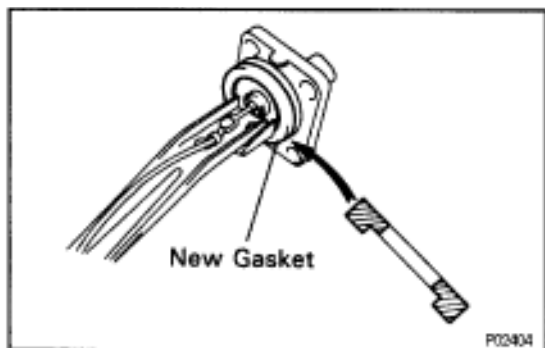
(b) Install the guide with the bolt.

10. INSTALL CRANKSHAFT TIMING PULLEY

(See step 1 in timing belt installation in Engine Mechanical)

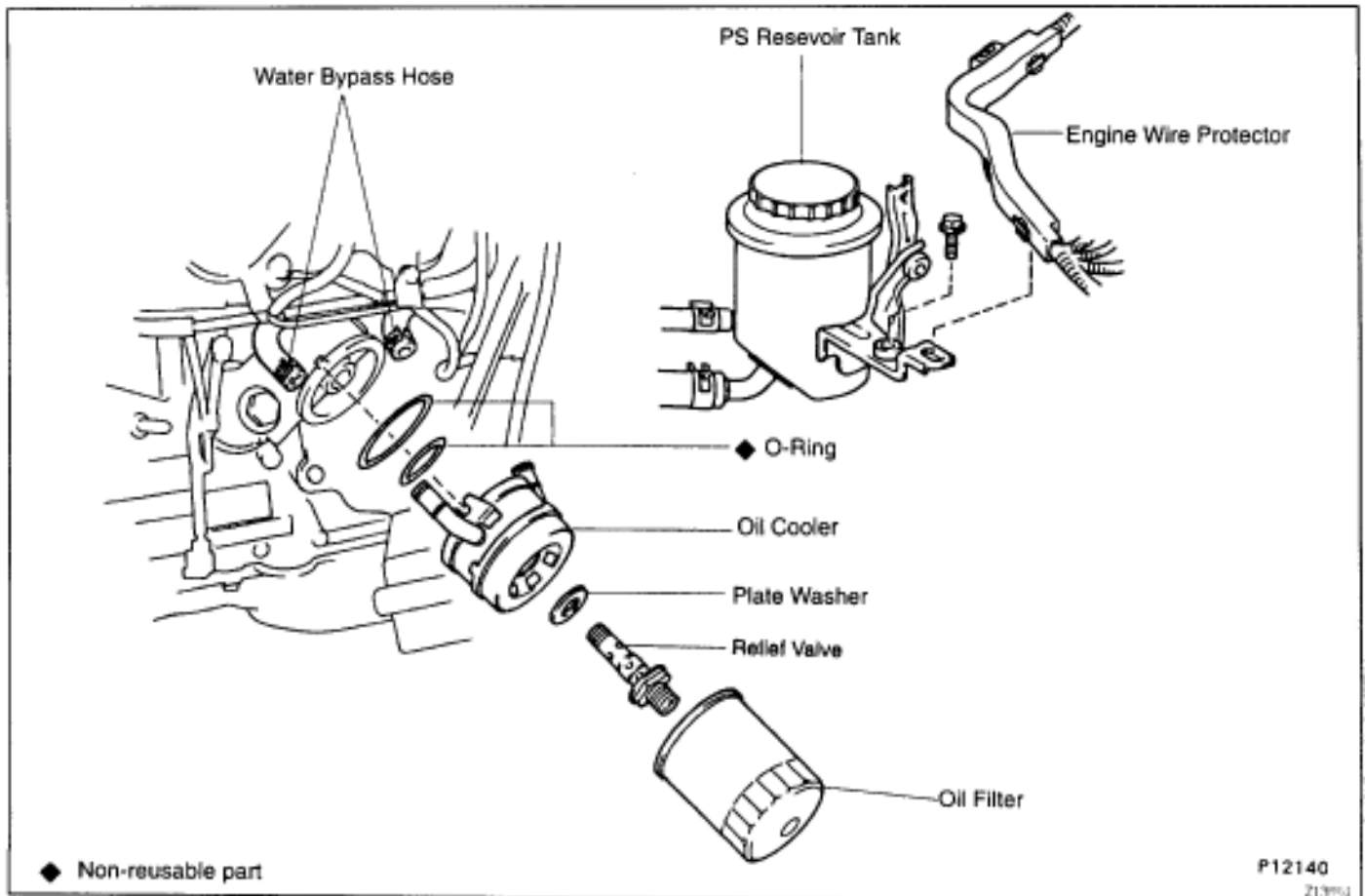
11. INSTALL IDLER PULLEY

(See step 2 in timing belt installation in Engine Mechanical)



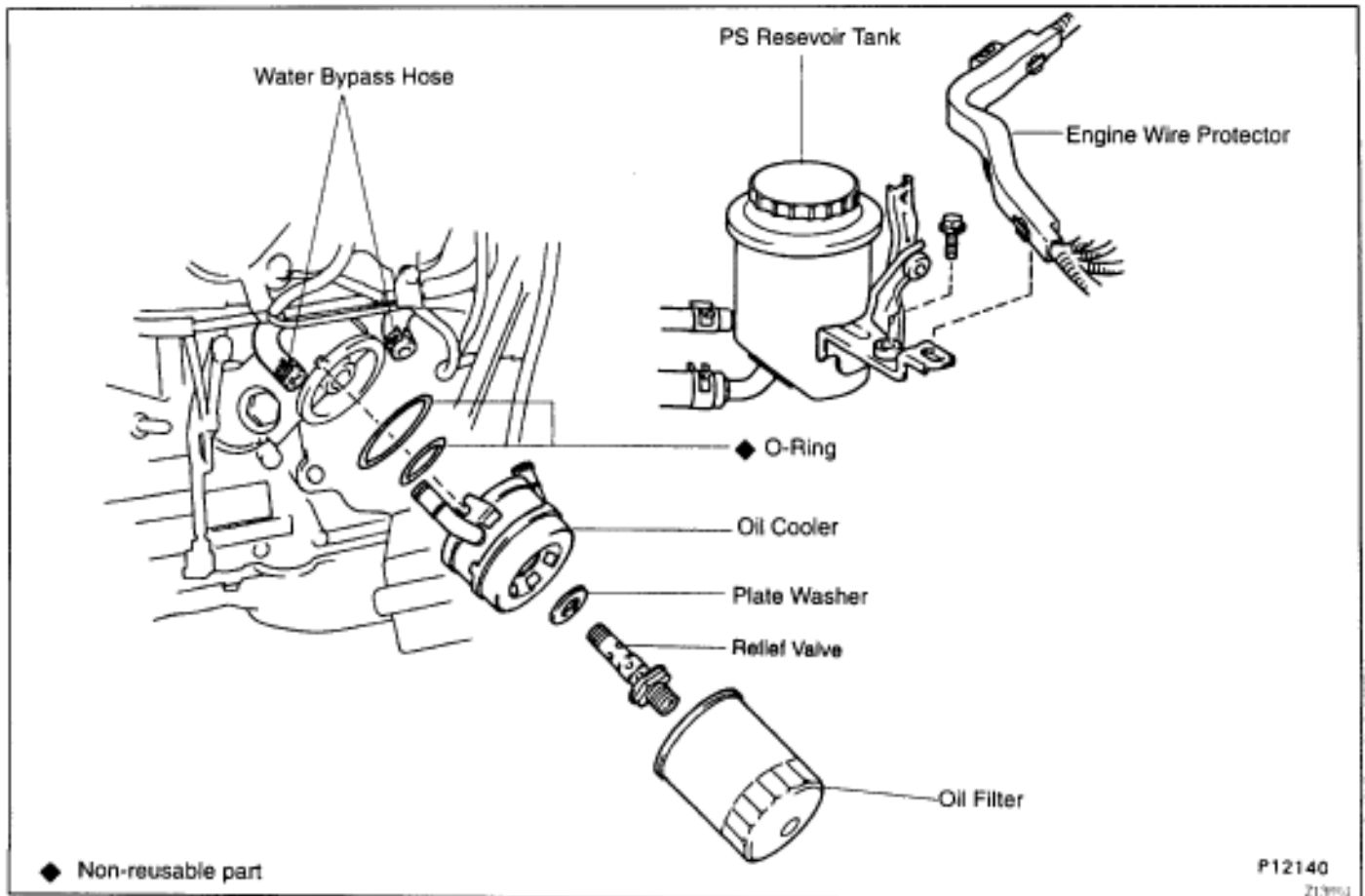
12. 2JZ-GTE M/T:
INSTALL DRIVE BELT TENSIONER BRACKET
Torque: 27 N·m (280 kgf·cm, 20 ft·lbf)
13. INSTALL TIMING BELT
(See step 3 in timing belt installation in Engine Mechanical)
14. 2JZ-GTE:
INSTALL CRANKSHAFT POSITION SENSOR
Torque: 8.8 N·m (90 kgf·cm, 78 in·lbf)
15. 2JZ-GTE:
INSTALL GENERATOR
16. REMOVE ENGINE STAND FROM ENGINE
17. ASSEMBLY ENGINE AND TRANSMISSION
(See components for engine removal & transmission separation and assembly)
18. INSTALL ENGINE WITH TRANSMISSION
(See components for engine removal and installation)

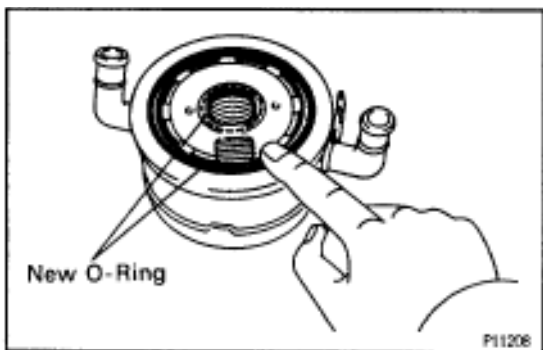
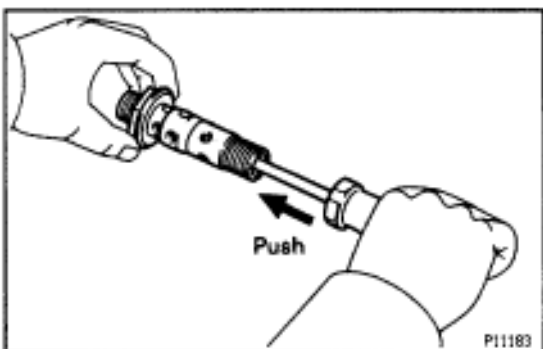
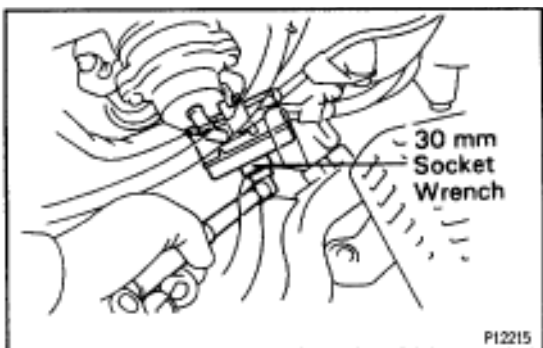
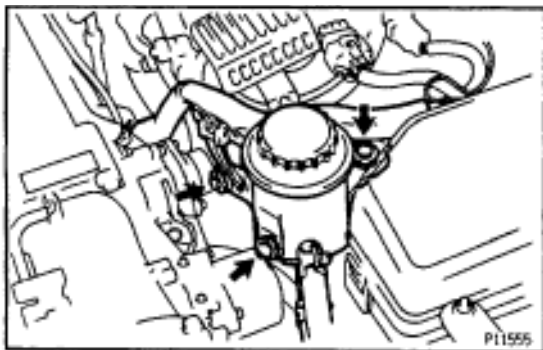
OIL COOLER (2JZ-GTE) COMPONENTS FOR REMOVAL AND INSTALLATION



12. 2JZ-GTE M/T:
INSTALL DRIVE BELT TENSIONER BRACKET
Torque: 27 N·m (280 kgf·cm, 20 ft·lbf)
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(See step 3 in timing belt installation in Engine Mechanical)
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17. ASSEMBLY ENGINE AND TRANSMISSION
(See components for engine removal & transmission separation and assembly)
18. INSTALL ENGINE WITH TRANSMISSION
(See components for engine removal and installation)

OIL COOLER (2JZ-GTE) COMPONENTS FOR REMOVAL AND INSTALLATION





OIL COOLER REMOVAL

1. **DISCONNECT PS RESERVOIR TANK WITHOUT DISCONNECTING HOSES**
 - (a) Disconnect the 2 clamps of the engine wire protector from the bracket.
 - (b) Remove the 3 bolts and disconnect the reservoir tank.
2. **DRAIN ENGINE COOLANT**
3. **REMOVE OIL FILTER**
4. **DISCONNECT WATER BYPASS HOSES FROM OIL COOLER**
5. **REMOVE OIL COOLER**
 - (a) Remove the relief valve, plate washer and oil cooler.
 - (b) Remove the 2 O-rings from the oil cooler.

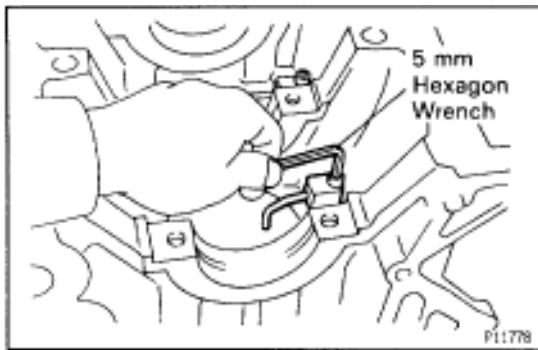
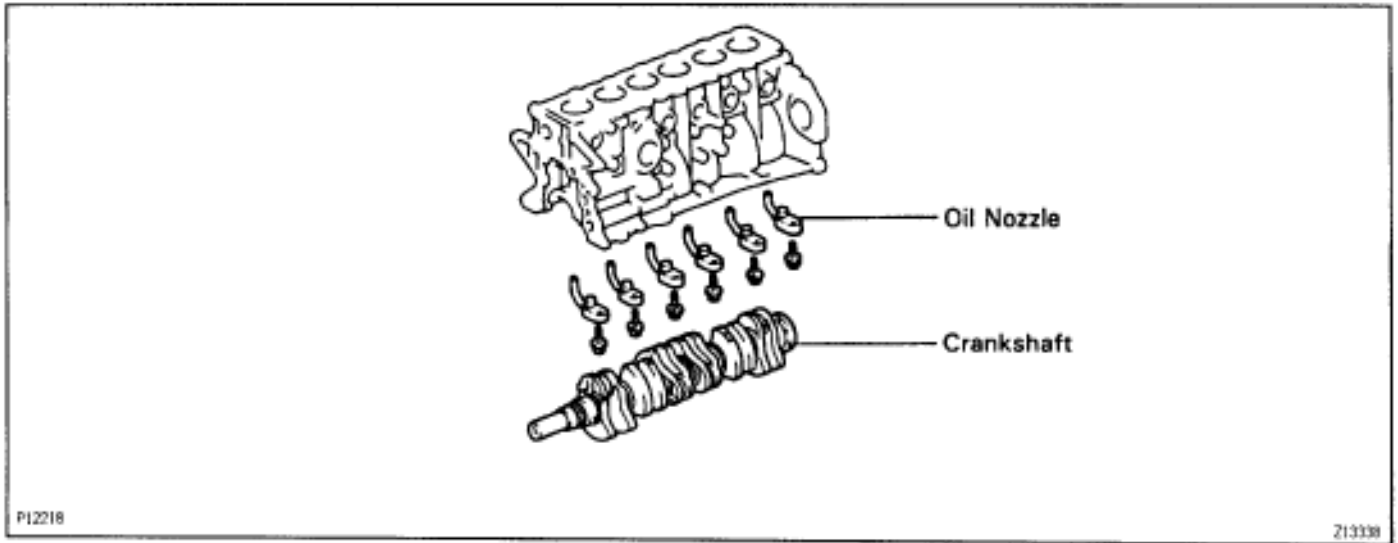
OIL COOLER INSPECTION

1. **INSPECT RELIEF VALVE**
Push the valve with a wooden stick to check if it is stuck. If stuck, replace the relief valve.
2. **INSPECT OIL COOLER**
Check the oil cooler for damage or clogging. If necessary, replace the oil cooler.

OIL COOLER INSTALLATION

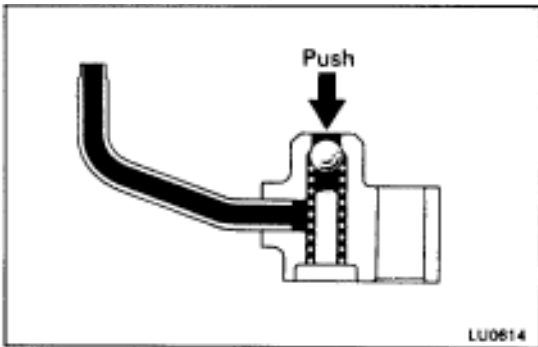
1. **INSTALL OIL COOLER**
 - (a) Install 2 new O-rings to the oil cooler.
 - (b) Apply a light coat of engine oil on the threads and under the head of the relief valve.
 - (c) Temporarily install the oil cooler with the plate washer and relief valve.
 - (d) Tighten the relief valve.
Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)
2. **CONNECT WATER BYPASS HOSES TO OIL COOLER**
3. **CONNECT PS RESERVOIR TANK**
4. **INSTALL OIL FILTER**
5. **FILL WITH ENGINE COOLANT**
6. **START ENGINE AND CHECK FOR LEAKS**
7. **CHECK ENGINE OIL LEVEL**

OIL NOZZLE (2JZ-GTE) COMPONENTS



OIL NOZZLES REMOVAL

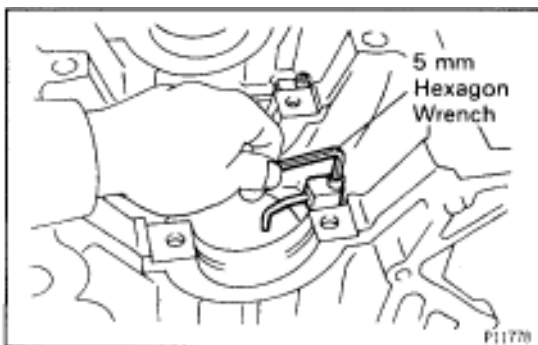
- 1. REMOVE CRANKSHAFT**
(See step 6 in cylinder block disassembly in Engine Mechanical)
- 2. REMOVE OIL NOZZLES (WITH RELIEF VALVES)**
Using a 5 mm hexagon wrench, remove the bolt and oil nozzle. Remove the 6 oil nozzles.



OIL NOZZLES INSPECTION

INSPECT RELIEF VALVES (OIL NOZZLES)

Push the valve with a wooden stick to check if it is stuck. If stuck, replace the relief valve.



OIL NOZZLES INSTALLATION

- 1. INSTALL OIL NOZZLES (WITH RELIEF VALVES)**
Using a 5 mm hexagon wrench, install the oil nozzle with the bolt. Install the 6 oil nozzles.
Torque: 8.8 N·m (90 kgf·cm, 78 in.·lbf)
- 2. INSTALL CRANKSHAFT**
(See step 8 in cylinder block assembly in Engine Mechanical)

SERVICE SPECIFICATIONS

SERVICE DATA

Oil pressure	at idle speed at 3,000 rpm (2JZ-GE) or 4,000 rpm (2JZ-GTE)		49 kPa (0.5 kgf/cm ² , 7.1 psi) or more 324-579 kPa (3.3-5.9 kgf/cm ² , 49-84 psi)
Oil pump (2JZ-GE)	Tip clearance	STD	0.310-0.490 mm (0.0122-0.0193 in.)
		Maximum	0.53 mm (0.0209 in.)
	Body clearance	STD	0.100-0.175 mm (0.0039-0.0069 in.)
		Maximum	0.20 mm (0.0079 in.)
	Side clearance	STD	0.030-0.090 mm (0.0012-0.0035 in.)
		Maximum	0.12 mm (0.0047 in.)
Oil pump (2JZ-GTE)	Tip clearance	STD	0.056-0.326 mm (0.0022-0.0128 in.)
		Maximum	0.40 mm (0.0157 in.)
	Body clearance	STD	0.080-0.135 mm (0.0031-0.0053 in.)
		Maximum	0.16 mm (0.0063 in.)
	Side clearance	STD	0.020-0.065 mm (0.0007-0.0026 in.)
		Maximum	0.10 mm (0.0039 in.)

TORQUE SPECIFICATIONS

Part tightened		N·m	kgf·cm	ft·lbf
A/C compressor x Cylinder block	for stud bolt	26	265	19
	for bolt and nut	52	530	38
Oil pressure switch x Cylinder block		14	150	11
Drive belt tensioner damper x Tensioner arm (2JZ-GTE M/T)		20	200	14
Oil drain plug x No.2 oil pan		38	375	27
Oil pump body cover x Oil pump body		10	105	8
Plug x Oil pump body	2JZ-GE	49	500	36
	2JZ-GTE	29	300	22
Oil pump x Cylinder block		21	210	15
No.1 oil pan x Cylinder block	12 mm head	21	210	15
	14 mm head	39	400	29
Turbo oil outlet pipe x No.1 oil pan (2JZ-GTE)		27	280	20
Oil pan baffle plate x No.1 oil pan		8.8	90	78 in.·lbf
Oil strainer x No.1 oil pan		8.8	90	78 in.·lbf
No.2 oil pan x No.1 oil pan		8.8	90	78 in.·lbf
Oil level sensor x No.1 oil pan		5.4	55	48 in.·lbf
Drive belt tensioner bracket x Oil pump (2JZ-GTE)		27	280	20
Crankshaft position sensor x Oil pump (2JZ-GTE)		8.8	90	78 in.·lbf
Oil cooler x Oil filter bracket (2JZ-GTE)		78	800	58
Oil nozzle x Cylinder block (2JZ-GTE)		8.8	90	78 in.·lbf

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