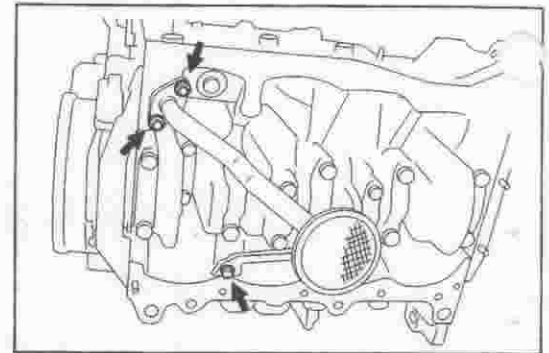


ENGINE MECHANICAL

10. Remove the oil strainer. (M101, M201 series)

NOTE:

- On the J102 series, the oil strainer is provided on the oil pan.



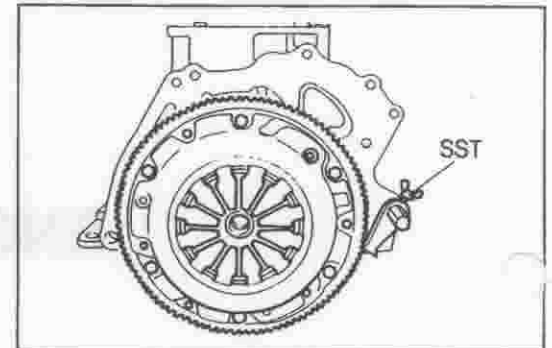
YEM00236-00220

11. Remove the clutch cover and clutch disc.

NOTE:

- Prevent the clutch cover from turning, using the following SST.

SST: 09210-87701-000



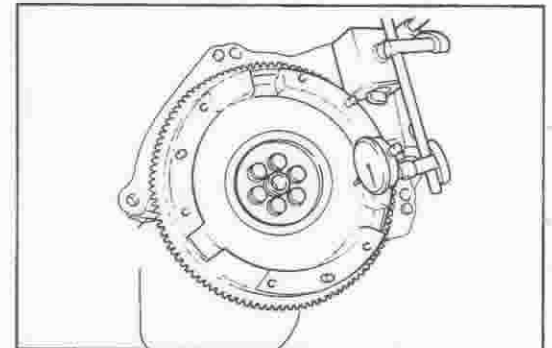
YEM00130-00128

12. Check of flywheel (drive plate) runout.

NOTE:

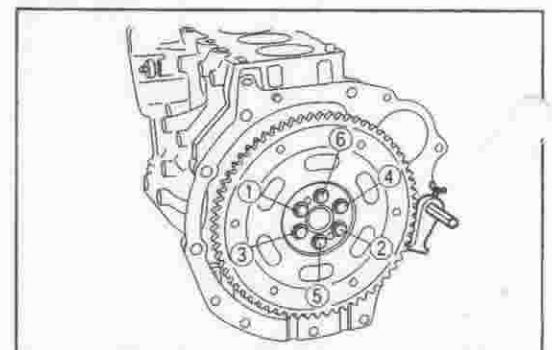
- If the runout does not conform to the specification, confirm the tightening torque of the tightening torque conforms to the specified value, replace the flywheel (drive plate).

Specified Runout Limit: Less than 0.2 mm



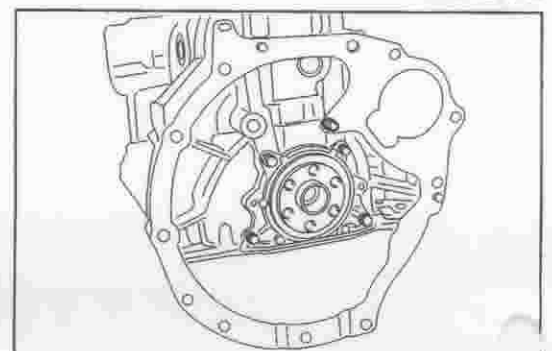
YEM00131-00129

13. Loosen the attaching bolts of the flywheel (drive plate) in the sequence as indicated in the right figure. Remove the flywheel (drive plate).



YEM00132-00130

14. Remove the rear end plate.



YEM00133-00131

5. Installation of rear oil seal retainer

- (1) Apply engine oil to the inner surface of the oil seal.
- (2) Apply the liquid gasket or equivalent to the flange surface in such a way that the sealing may be formed without any discontinued spot, in a size equivalent to a 3 mm to 4 mm diameter, following the procedure given in the right figure.

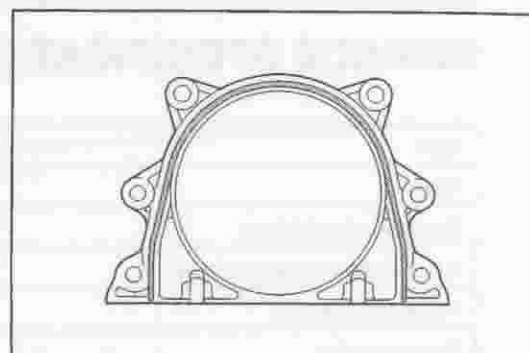
Liquid Gasket: Three Bond TB 1280E or equivalent

NOTE:

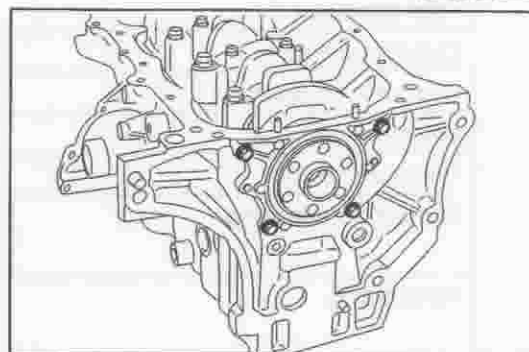
- The assembling should be carried out within three minutes after the application of liquid gasket.

- (3) With the rear oil seal retainer aligned with the knock pin, install the rear oil seal retainer to the cylinder block.

Tightening Torque: 6.8 - 10.2 N·m



YEM00279-00250



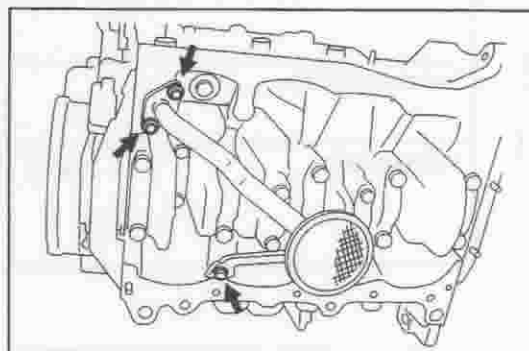
YEM00280-00251

6. Installation of oil pump strainer

(M101, M201 series)

Install the oil strainer to the cylinder block.

Tightening Torque: 6.0 - 11.0 N·m

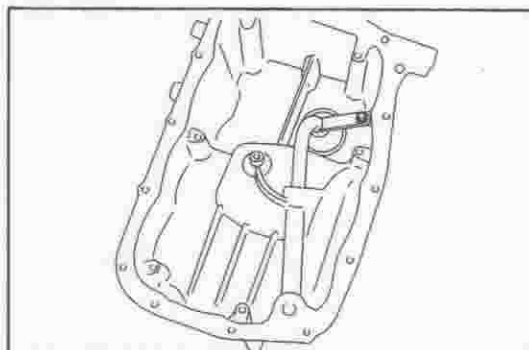


YEM00281-00252

(J102 series)

Install the oil strainer to the oil pan.

Tightening Torque: 6.0 - 11.0 N·m

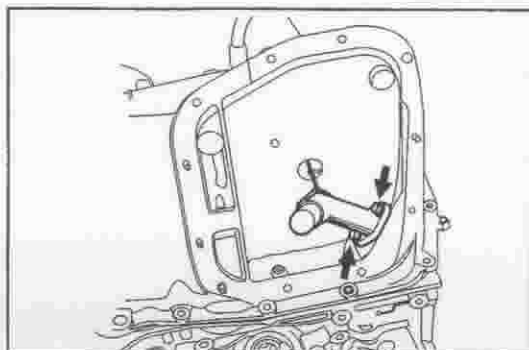


YEM00282-00253

(S221 series)

Install the oil strainer to the oil pan.

Tightening Torque: 6.0 - 11.0 N·m



YEM00283-00254

SERVICE SPECIFICATIONS

Item	Engine type	K3-VE	K3-VE2	
Kind		Gasoline, 4 cycle, EFI		
Number of cylinders		4-cylinder-in-line		
Combustion chamber type		Pent roof type		
Valve mechanism		Chain Drive, DOHC (DVVT)		
Bore × stroke	(mm)	φ 72.0 × 79.7		
Total displacement	(cc)	1298		
Compression ratio		10.0 ± 0.3	11.0 ± 0.3	
Compression pressure		1471 kPa at 330 rpm	1285 kPa at 300 rpm	
Maximum output	(kW/rpm)	63.0/6000	74.0/7000	
Maximum torque	(N·m/rpm)	120.0/3200	120.0/4400	
Number of piston ring	Compression ring	2		
	Oil ring	1		
Valve timing	Intake	Open	BTDC 30° - -12°	BTDC 52° - 10°
		Close	ABDC 10° - 52°	ABDC 28° - 70°
	Exhaust	Open	BBDC 30°	BBDC 45°
		Close	ATDC 2°	ATDC 2°
Valve clearance	Intake (Cold)	(mm)	0.18 ^{+0.055} _{-0.035}	
	Exhaust (Cold)	(mm)	0.31 ^{+0.055} _{-0.035}	
Idling speed	(rpm)	M101, M201, J102 series	700	
		S221 series	M/T	650
			A/T	700

YEM00290-00000

Cylinder head x Cylinder head cover	8.8 - 13.2	0.9 - 1.3	Nut
Cylinder head x Fuel delivery pipe	16.8 - 25.2	1.7 - 2.6	
Cylinder head x Intake manifold	15.2 - 22.8	1.6 - 2.3	
Cylinder head x Exhaust manifold	21.0 - 29.0	2.1 - 2.9	M101, M201, J102 series
	23.2 - 34.8	2.6 - 3.6	Bolt S221 series
	32.0 - 48.0	3.3 - 4.9	Nut S221 series
Cylinder head x Water inlet	7.2 - 10.8	0.7 - 1.1	M101, M201, J102 series
Cylinder head x Cam angle sensor	5.3 - 9.8	0.5 - 1.0	
Cylinder head x Engine coolant temperature sensor	16.0 - 24.0	1.6 - 2.4	M101, M201, J102 series
Cylinder block x Water inlet pipe	6.3 - 11.7	0.6 - 1.2	S221 series
Cylinder block x Oil filter bracket	6.0 - 11.0	0.6 - 1.1	M101, M201, J102 series
Cylinder block x Chain arm	15.2 - 22.8	1.6 - 2.3	
Cylinder block x Chain guide	5.3 - 9.8	0.5 - 1.0	
Cylinder block x Chain guide No. 2	5.3 - 9.8	0.5 - 1.0	
Cylinder block x Water pump	7.2 - 10.8	0.7 - 1.1	
Cylinder block x Chain oil nozzle	5.3 - 9.7	0.5 - 1.0	
Cylinder block x Oil pressure switch	10.5 - 19.5	1.1 - 2.0	
Cylinder block x DVVT oil filter	17.1 - 31.9	1.7 - 3.3	
Cylinder block x Chain cover	14.4 - 21.6	1.5 - 2.2	M8 x 1.25
	7.2 - 10.8	0.7 - 1.1	M6 x 1.0
Cylinder block x Cylinder head	32.0 - 34.0	3.2 - 3.4	Tighten further by turning 90° ± 10°
Cylinder block x Rear oil seal retainer	6.8 - 10.2	0.7 - 1.0	
Cylinder block x Rear end plate	5.3 - 9.7	0.5 - 1.0	
Cylinder block x Oil pan	6.0 - 11.0	0.6 - 1.1	M6 x 1.0
	29.4 - 54.6	3.0 - 5.6	M10 x 1.25
Cylinder block x Oil pump	7.2 - 10.8	0.7 - 1.1	
Cylinder block x Knock sensor	35.2 - 52.8	3.6 - 5.4	Except European specifications
Cylinder head x Chain tensioner	7.2 - 10.8	0.7 - 1.1	
Cylinder head x Ignitor bracket	5.3 - 9.8	0.5 - 1.0	M101, M201, J102 series
Cylinder head x Throttle body	5.3 - 9.8	0.5 - 1.0	M101, M201, J102 series
Chain cover x Idler pulley	35.2 - 52.8	3.6 - 5.3	
Chain cover x Crank angle sensor	5.3 - 9.8	0.5 - 1.0	
Chain cover x Oil control valve	5.3 - 9.8	0.5 - 1.0	
Throttle body x Throttle body bracket	10.8 - 25.2	1.1 - 2.6	M101, M201, J102 series
	16.8 - 25.2	1.7 - 2.6	S221 series
Oil level gauge bracket x Intake manifold	6.0 - 11.1	0.6 - 1.1	J102 series
Water inlet x Radiator thermo control switch	30.0 - 40.0	3.1 - 4.1	M101, M201, J102 series
Water bypass outlet x Radiator thermo control switch	19.6 - 29.4	2.0 - 3.0	S221 series
Water bypass outlet x Engine coolant temperature sensor	16.0 - 24.0	1.6 - 2.4	S221 series
Cylinder block x Oil strainer	6.0 - 11.0	0.6 - 1.1	M101, M201 series

Components	N·m	kgf-m	Remarks
Oil pan x Oil strainer	6.0 - 11.0	0.6 - 1.1	J102, S221 series
Oil pan drain plug	23.6 - 35.4	2.4 - 3.6	
Camshaft cap No. 1, No. 2	10.5 - 14.5	1.1 - 1.5	
Water pump pulley x Water pump	8.1 - 15.0	0.8 - 1.5	
DVVT controller x Intake camshaft	40.0 - 54.0	4.1 - 5.5	
Ignitor assy x Ignition coil cover	5.3 - 9.8	0.5 - 1.0	S221 series
Throttle body x Intake manifold	5.3 - 9.8	0.5 - 1.0	S221 series
Exhaust manifold x Oxygen sensor	29.0 - 39.0	2.9 - 3.9	
Exhaust manifold x Exhaust manifold cover	5.3 - 9.8	0.5 - 1.0	M101, M201, J102 series
Exhaust manifold x Exhaust manifold stay	20.0 - 30.0	2.0 - 3.1	S221 series
Connecting rod cap nut bolt	19.5 - 24.5	2.0 - 2.5	Tighten further by turning $90^\circ \pm 10^\circ$
Crankshaft bearing cap bolt	53.0 - 65.0	5.4 - 6.6	
Crankshaft pulley set bolt	120.0 - 140.0	12.2 - 14.3	
Crankshaft x Flywheel	32.0	3.3	Temporarily tightening
	73.3 - 82.7	7.5 - 8.4	

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