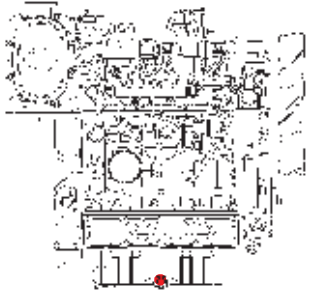




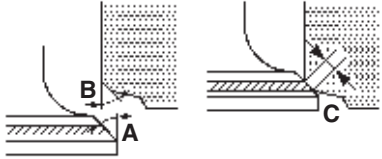


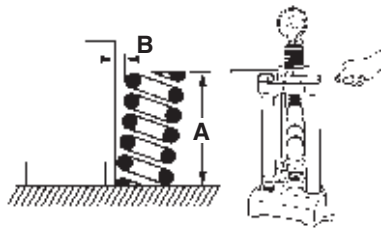
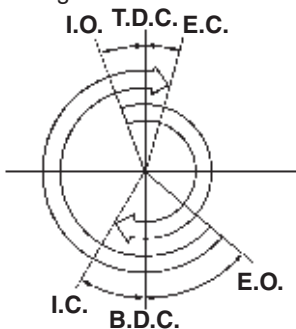

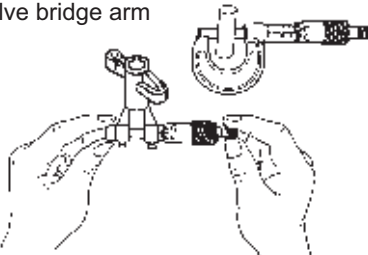
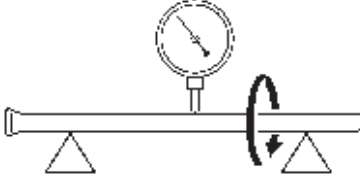
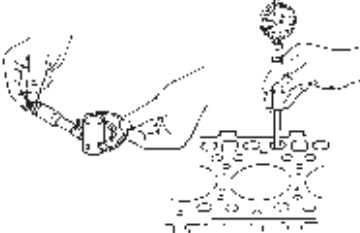


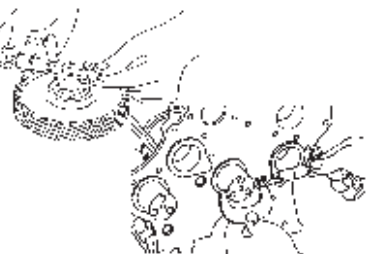
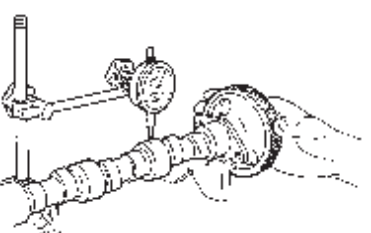



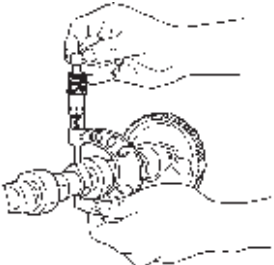

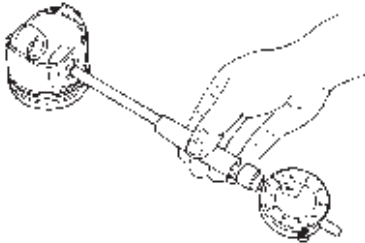
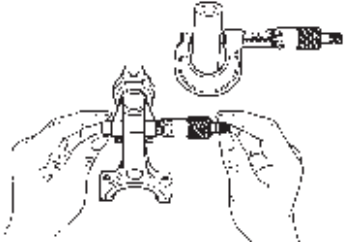

**SERVICING SPECIFICATIONS****(1) ENGINE BODY**

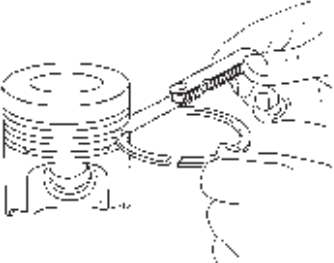

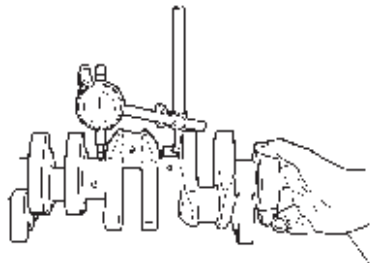
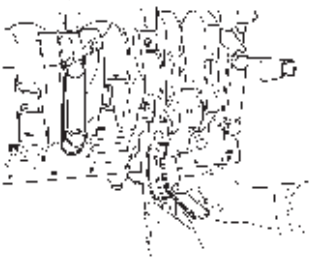
Item	Factory Specification	Allowable Limit
Lubricating oil capacity 	13.2 L 3.49 U.S.gals 2.90 Imp.gals	—
Cylinder head surface 	Flatness	—  0.05 mm / 500 mm 0.002 in. / 19.7 in.
Compression pressure 	3.09 to 3.28 MPa / 200 min <sup>-1</sup> (rpm) 31.5 to 33.5 kgf/cm <sup>2</sup> / 200 min <sup>-1</sup> (rpm) 448 to 476 psi / 200 min <sup>-1</sup> (rpm)	2.41 MPa / 200 min <sup>-1</sup> (rpm) 24.6 kgf/cm <sup>2</sup> / 200 min <sup>-1</sup> (rpm) 350 psi / 200 min <sup>-1</sup> (rpm)
Top clearance 	0.70 to 0.90 mm 0.028 to 0.035 in.	—
Valve clearance (When cold) 	0.23 to 0.27 mm 0.0091 to 0.010 in.	—

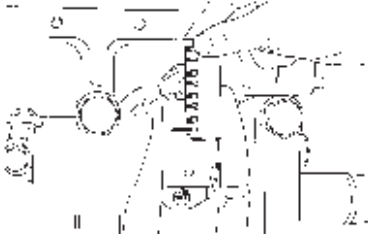
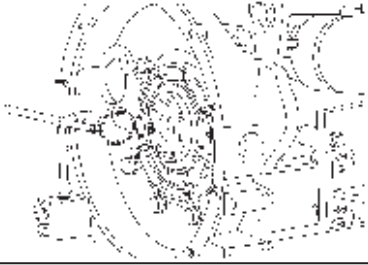
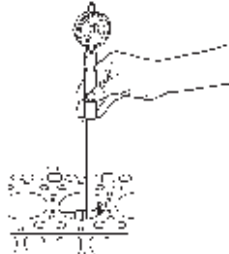
Item	Factory Specification	Allowable Limit	
Valve & valve seat 	Face angle (A) (Intake)	1.0 rad 60°	—
	Face angle (A) (Exhaust)	0.79 rad 45°	—
	Seat angle (B) (Intake)	1.0 rad 60°	—
	Seat angle (B) (Exhaust)	0.79 rad 45°	—
	Seat width (C) (Intake)	1.5 to 1.9 mm 0.059 to 0.074 in.	—
	Seat width (C) (Exhaust)	2.0 to 2.3 mm 0.079 to 0.090 in.	—
Valve stem to valve guide 	Clearance (Intake)	0.035 to 0.065 mm 0.0014 to 0.0025 in.	0.1 mm 0.004 in.
	Clearance (Exhaust)	0.035 to 0.065 mm 0.0014 to 0.0025 in.	0.1 mm 0.004 in.
	Valve stem O.D. (Intake)	6.960 to 6.975 mm 0.2741 to 0.2746 in.	—
	Valve stem O.D. (Exhaust)	6.960 to 6.975 mm 0.2741 to 0.2746 in.	—
	Valve guide I.D. (Intake)	7.010 to 7.025 mm 0.2760 to 0.2765 in.	—
	Valve guide I.D. (Exhaust)	7.010 to 7.025 mm 0.2760 to 0.2765 in.	—
Valve recessing 	Intake valve	0.60 to 0.80 mm (Recessing) 0.024 to 0.031 in. (Recessing)	1.2 mm (Recessing) 0.047 in. (Recessing)
	Exhaust valve	0.850 to 1.05 mm (Recessing) 0.0335 to 0.0413 in. (Recessing)	1.2 mm (Recessing) 0.047 in. (Recessing)
Valve spring 	Free length (A) (Intake)	35.1 to 35.6 mm 1.39 to 1.40 in.	34.6 mm 1.36 in.
	Free length (A) (Exhaust)	35.1 to 35.6 mm 1.39 to 1.40 in.	34.6 mm 1.36 in.
	Tilt (B) (Intake)	—	1.0 mm 0.039 in.
	Tilt (B) (Exhaust)	—	1.0 mm 0.039 in.
	Setting load / Setting length (Intake)	63.5 N / 31.5 mm 6.48 kgf / 31.5 mm 14.3 lbf / 1.24 in.	45.9 N / 31.5 mm 4.68 kgf / 31.5 mm 10.3 lbf / 1.24 in.
	Setting load / Setting length (Exhaust)	63.5 N / 31.5 mm 6.48 kgf / 31.5 mm 14.3 lbf / 1.24 in.	45.9 N / 31.5 mm 4.68 kgf / 31.5 mm 10.3 lbf / 1.24 in.

Item	Factory Specification	Allowable Limit
Valve timing  <p>I.O. T.D.C. E.C. I.C. B.D.C. E.O.</p>	Open (Intake valve) 0.24 rad before T.D.C. (14° before T.D.C.)	—
	Close (Intake valve) 0.63 rad after T.D.C. (36° after T.D.C.)	—
	Open (Exhaust valve) 0.79 rad before B.D.C. (45° before B.D.C.)	—
	Close (Exhaust valve) 0.30 rad after T.D.C. (17° after T.D.C.)	—
Rocker arm shaft to rocker arm 	Clearance 0.016 to 0.045 mm 0.00063 to 0.0017 in.	0.15 mm 0.0059 in.
	Rocker arm shaft O.D. 15.973 to 15.984 mm 0.62886 to 0.62929 in.	—
	Rocker arm I.D. 16.000 to 16.018 mm 0.62993 to 0.63062 in.	—
Valve bridge arm shaft to valve bridge arm 	Clearance 0.018 to 0.042 mm 0.00071 to 0.0016 in.	0.15 mm 0.0059 in.
	Valve bridge arm shaft O.D. 9.023 to 9.032 mm 0.3552 to 0.3555 in.	—
	Valve bridge arm I.D. 9.050 to 9.065 mm 0.3563 to 0.3568 in.	—
Push rod 	Alignment —	0.25 mm 0.0098 in.
Tappet to tappet guide 	Clearance 0.020 to 0.062 mm 0.00079 to 0.0024 in.	0.07 mm 0.003 in.
	Tappet O.D. 23.959 to 23.980 mm 0.94327 to 0.94409 in.	—
	Tappet guide I.D. 24.000 to 24.021 mm 0.94489 to 0.94570 in.	—




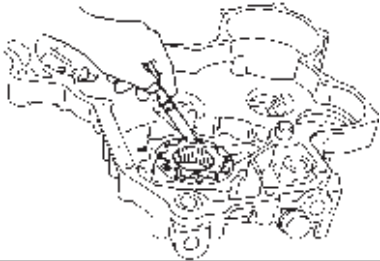

Item			Factory Specification	Allowable Limit
 <p>Timing gear</p>	Backlash (Crank gear to idle gear 1)		0.0490 to 0.193 mm 0.00193 to 0.00759 in.	0.22 mm 0.0087 in.
	Backlash (Idle gear 1 to cam gear)		0.0490 to 0.189 mm 0.00193 to 0.00744 in.	0.22 mm 0.0087 in.
	Backlash (Idle gear 1 to idle gear 2)	V3800-CR-TE4 V3800-CR-TIE4	0.0440 to 0.185 mm 0.00174 to 0.00728 in.	0.22 mm 0.0087 in.
	Backlash (Idle gear 2 to supply pump gear)	V3800-CR-TE4 V3800-CR-TIE4	0.0440 to 0.177 mm 0.00174 to 0.00696 in.	0.22 mm 0.0087 in.
	Backlash (Idle gear to supply pump gear)	V3800-CR-TE4C V3800-CR-TIE4C	0.0300 to 0.165 mm 0.00119 to 0.00649 in.	0.22 mm 0.0087 in.
 <p>Idle gear</p>	Side clearance		0.15 to 0.30 mm 0.0059 to 0.011 in.	0.90 mm 0.035 in.
 <p>Idle gear shaft to idle gear bushing</p>	Clearance		0.050 to 0.091 mm 0.0020 to 0.0035 in.	0.10 mm 0.0039 in.
	Idle gear shaft 1 O.D.		44.959 to 44.975 mm 1.7701 to 1.7706 in.	—
	Idle gear shaft 2 O.D.		44.959 to 44.975 mm 1.7701 to 1.7706 in.	—
	Idle gear bushing I.D.		45.025 to 45.050 mm 1.7727 to 1.7736 in.	—
 <p>Camshaft</p>	Alignment		—	0.01 mm 0.0004 in.
 <p>Camshaft</p>	Side clearance		0.070 to 0.22 mm 0.0028 to 0.0086 in.	0.30 mm 0.012 in.

Item	Factory Specification	Allowable Limit
Cam 	Height (Intake)  37.64 mm 1.482 in.	37.14 mm 1.462 in.
	Height (Exhaust)  38.96 mm 1.534 in.	38.46 mm 1.514 in.
Camshaft journal to camshaft bearing 	Oil clearance  0.050 to 0.091 mm 0.0020 to 0.0035 in.	0.15 mm 0.0059 in.
	Camshaft journal O.D.  45.934 to 45.950 mm 1.8085 to 1.8090 in.	—
	Camshaft bearing I.D.  46.000 to 46.025 mm 1.8111 to 1.8120 in.	—
Piston pin bore 	Piston pin bore I.D.  30.006 to 30.013 mm 1.1814 to 1.1816 in.	30.05 mm 1.183 in.
Piston pin to small end bushing 	Clearance  0.020 to 0.040 mm 0.00079 to 0.0015 in.	0.15 mm 0.0059 in.
	Piston pin O.D.  30.006 to 30.011 mm 1.1814 to 1.1815 in.	—
	Small end bushing I.D.  30.031 to 30.046 mm 1.1824 to 1.1829 in.	—
Piston ring 	Ring gap (Top ring)  0.30 to 0.45 mm 0.012 to 0.017 in.	1.25 mm 0.0492 in.
	Ring gap (Second ring)  0.30 to 0.45 mm 0.012 to 0.017 in.	1.25 mm 0.0492 in.
	Ring gap (Oil ring)  0.25 to 0.45 mm 0.0099 to 0.017 in.	1.25 mm 0.0492 in.

Item		Factory Specification	Allowable Limit
Piston ring groove to piston ring 	Clearance (Top ring)	0.05 to 0.09 mm 0.002 to 0.003 in.	0.15 mm 0.0059 in.
	Clearance (Second ring)	0.0930 to 0.120 mm 0.00367 to 0.00472 in.	0.20 mm 0.0079 in.
	Clearance (Oil ring)	0.020 to 0.060 mm 0.00079 to 0.0023 in.	0.15 mm 0.0059 in.
Connecting rod 	Alignment	—	0.05 mm 0.002 in.
Crankshaft 	Alignment	—	0.02 mm 0.0008 in.
Crankshaft journal to crankshaft bearing 	Oil clearance	0.018 to 0.062 mm 0.00071 to 0.0024 in.	0.20 mm 0.0079 in.
	Crankshaft journal O.D.	74.977 to 74.990 mm 2.9519 to 2.9523 in.	—

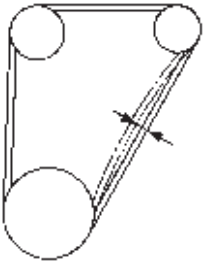
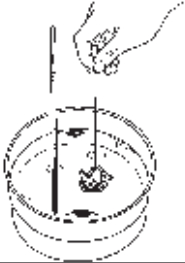
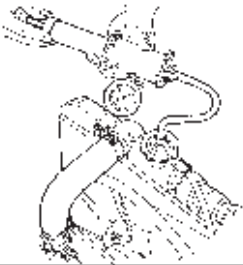
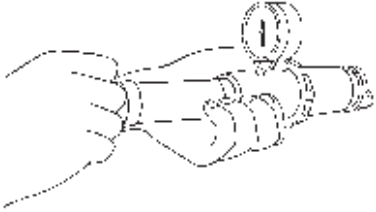
Item		Factory Specification	Allowable Limit
Crankpin to crankpin bearing 	Oil clearance	0.018 to 0.051 mm 0.00071 to 0.0020 in.	0.20 mm 0.0079 in.
	Crankpin O.D.	52.977 to 52.990 mm 2.0857 to 2.0862 in.	—
Crankshaft 	Side clearance	0.15 to 0.31 mm 0.0059 to 0.012 in.	0.50 mm 0.020 in.
Cylinder 	Bore I.D. (Standard size)	100.000 to 100.022 mm 3.93701 to 3.93787 in.	100.150 mm 3.94291 in.
	Bore I.D. (Oversize)	100.500 to 100.522 mm 3.95670 to 3.95755 in.	100.650 mm 3.96260 in.

**(2) LUBRICATING SYSTEM**

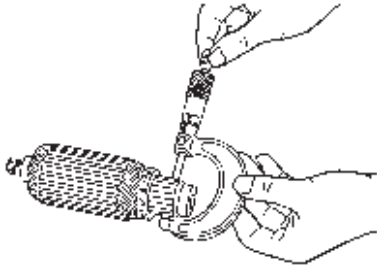
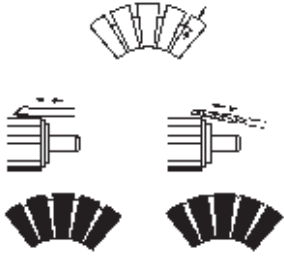
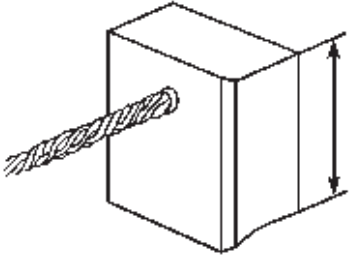
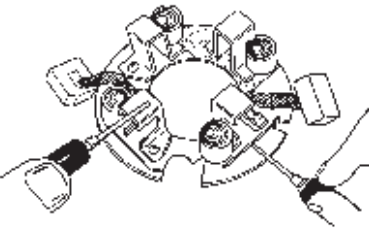
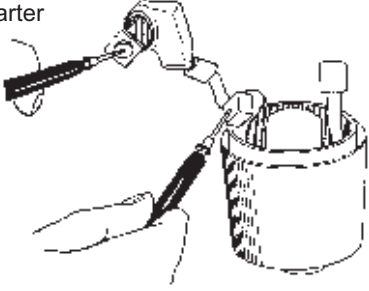

Item	Factory Specification	Allowable Limit
Engine oil pressure 	Engine oil pressure (At idle speed) —	50 kPa 0.5 kgf/cm <sup>2</sup> 7 psi
	Engine oil pressure (At rated speed)	200 to 390 kPa 2.0 to 4.0 kgf/cm <sup>2</sup> 29 to 56 psi
Inner rotor to outer rotor (Oil pump) 	Clearance	0.040 to 0.16 mm 0.0016 to 0.0062 in.
Outer rotor to pump body (Oil pump) 	Clearance	0.100 to 0.184 mm 0.00394 to 0.00724 in.
Inner rotor to cover (Oil pump) 	Clearance	0.025 to 0.075 mm 0.00099 to 0.0029 in.

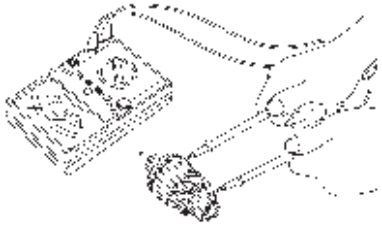

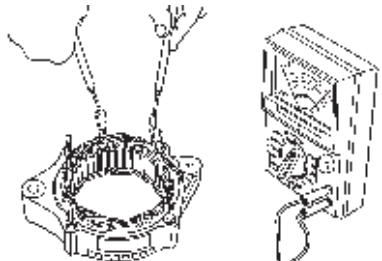
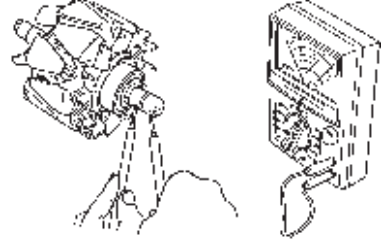
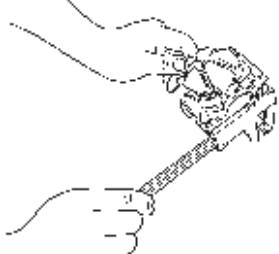


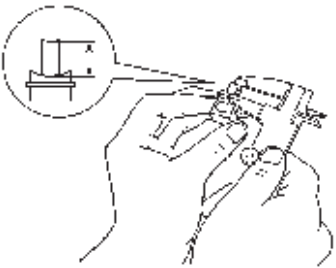
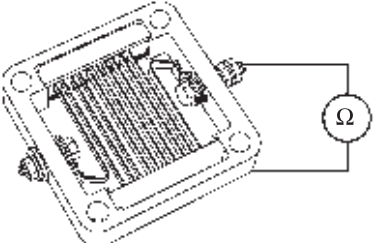
**(3) COOLING SYSTEM**

Item	Factory Specification	Allowable Limit
Fan belt 	Tension	10 to 12 mm (0.40 to 0.47 in.) deflection at 98 N (10 kgf, 22 lbf) of force
Thermostat 	Valve opening temperature (At beginning)	74.5 to 78.5 °C 166.1 to 173.3 °F
	Valve opening temperature (Opened completely)	90 °C 194 °F
Radiator 	Water tightness	No water leak at specified pressure
Radiator cap 	Pressure falling time	10 seconds or more for pressure falling from 90 to 60 kPa (from 0.9 to 0.6 kgf/cm <sup>2</sup> , from 10 to 9 psi)

**(4) ELECTRICAL SYSTEM**

Item	Factory Specification	Allowable Limit
Starter 	Commutator O.D.	32.0 mm 1.26 in.  31.4 mm 1.24 in.
Starter 	Mica under cut	0.50 mm 0.020 in.  0.20 mm 0.079 in.
Starter 	Brush length	18.0 mm 0.709 in.  11.0 mm 0.433 in.
Starter 	Brush holder resistance (Brush holder - Holder support)	Infinity
Starter 	Field coil resistance (Lead - Brush)	Continuity
Starter 	Field coil resistance (Brush - Yoke)	Infinity

Item		Factory Specification	Allowable Limit
Starter 	Armature coil resistance (Commutator - Armature coil core)	Infinity	—
Starter 	Armature coil resistance (Segment - Segment)	Continuity	—
Alternator 	Stator resistance	Less than 1.0 $\Omega$	—
Alternator 	Rotor resistance	2.8 to 3.3 $\Omega$	—
Alternator 	Slip ring O.D.	22.7 mm 0.894 in.	22.1 mm 0.870 in.

Item	Factory Specification	Allowable Limit
<p>Alternator</p> 	<p>Brush length</p>	<p>10.0 mm 0.394 in.</p> <p>1.5 mm 0.059 in.</p>
<p>Intake air heater</p> 	<p>Resistance</p>	<p>Approx. 0.3 Ω</p> <p>—</p>

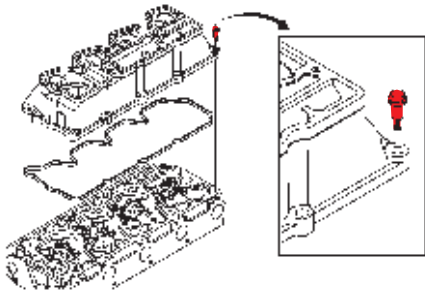

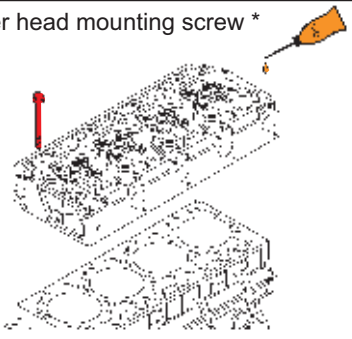
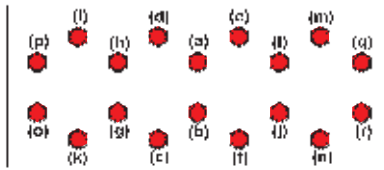
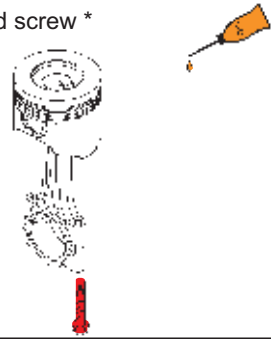
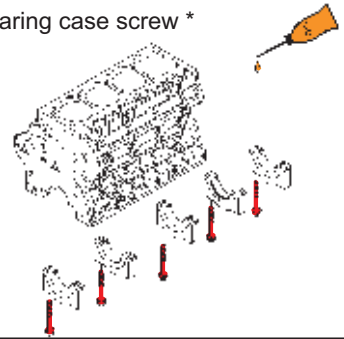
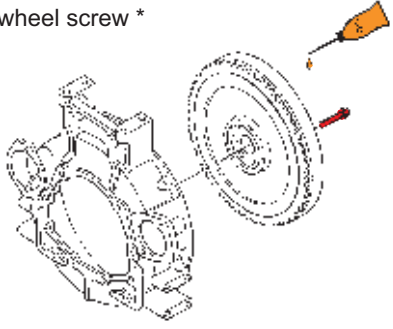
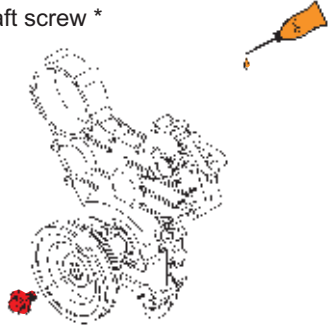
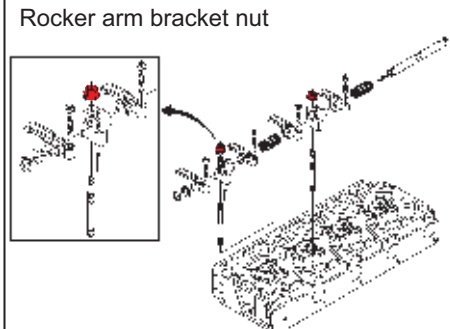
# TIGHTENING TORQUES

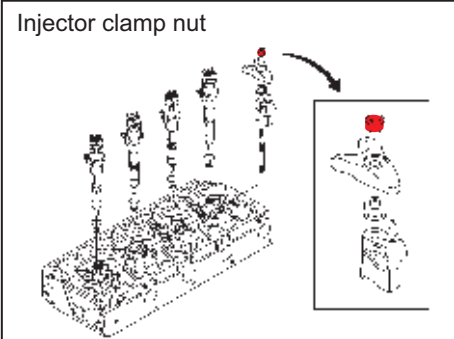
## (1) Special Tightening Torques

For "\*" marked screws, bolts and nuts on under table, apply engine oil to their threads and seats before tightening.

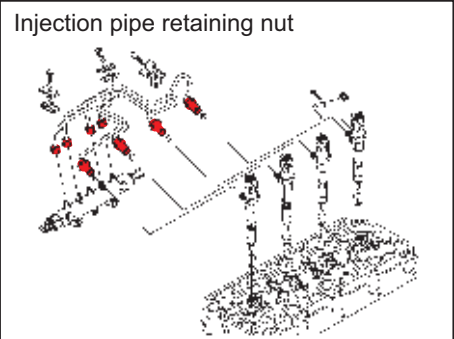
For "\*\*\*" marked parts on under table, apply the anti-seize & lubricating compound

(Bostick, NEVER-SEEZ, Pure nickel special grade) to their threads and seats before tightening.

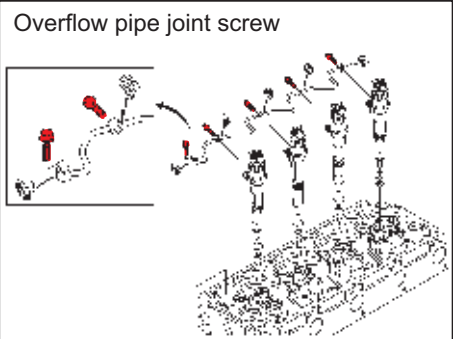
<p>Cylinder head cover 1 screw</p> 		<p>Cylinder head cover 2 screw</p> 		<p>Cylinder head mounting screw *</p> 	
V3800-CR-TE4		V3800-CR-TE4		V3800-CR-TE4	
V3800-CR-TIE4	6.87 to 11.2 N·m 0.700 to 1.15 kgf·m	V3800-CR-TIE4	9.81 to 11.2 N·m 1.00 to 1.15 kgf·m	V3800-CR-TIE4	98.1 to 107 N·m 10.0 to 11.0 kgf·m
V3800-CR-TE4C	5.07 to 8.31 lbf·ft	V3800-CR-TE4C	7.24 to 8.31 lbf·ft	V3800-CR-TE4C	72.4 to 79.5 lbf·ft
V3800-CR-TIE4C		V3800-CR-TIE4C		V3800-CR-TIE4C	
<p>Cylinder head tightening order</p> 		<p>Connecting rod screw *</p> 		<p>Main bearing case screw *</p> 	
V3800-CR-TE4		V3800-CR-TE4		V3800-CR-TE4	
V3800-CR-TIE4	a → r	V3800-CR-TIE4	79 to 83 N·m 8.0 to 8.5 kgf·m	V3800-CR-TIE4	138 to 147 N·m 14.0 to 15.0 kgf·m
V3800-CR-TE4C		V3800-CR-TE4C	58 to 61 lbf·ft	V3800-CR-TE4C	102 to 108 lbf·ft
V3800-CR-TIE4C		V3800-CR-TIE4C		V3800-CR-TIE4C	
V3800-CR-TE4C					
<p>Flywheel screw *</p> 		<p>Crankshaft screw *</p> 		<p>Rocker arm bracket nut</p> 	
V3800-CR-TE4		V3800-CR-TE4		V3800-CR-TE4	
V3800-CR-TIE4	98.1 to 107 N·m 10.0 to 11.0 kgf·m	V3800-CR-TIE4	255 to 274 N·m 26.0 to 28.0 kgf·m	V3800-CR-TIE4	49 to 55 N·m 5.0 to 5.7 kgf·m
V3800-CR-TE4C	72.4 to 79.5 lbf·ft	V3800-CR-TE4C	188 to 202 lbf·ft	V3800-CR-TE4C	37 to 41 lbf·ft
V3800-CR-TIE4C		V3800-CR-TIE4C		V3800-CR-TIE4C	



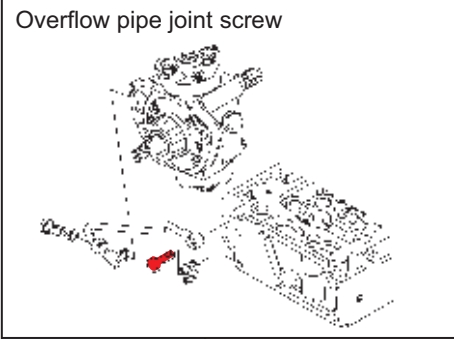
V3800-CR-TE4	
V3800-CR-TIE4	24 to 27 N·m 2.4 to 2.8 kgf·m
V3800-CR-TE4C	18 to 20 lbf·ft
V3800-CR-TIE4C	



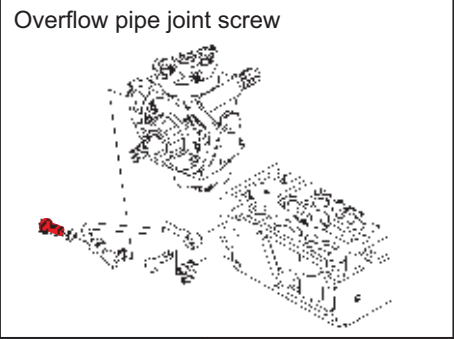
V3800-CR-TE4	
V3800-CR-TIE4	23 to 36 N·m 2.3 to 3.7 kgf·m
V3800-CR-TE4C	17 to 26 lbf·ft
V3800-CR-TIE4C	



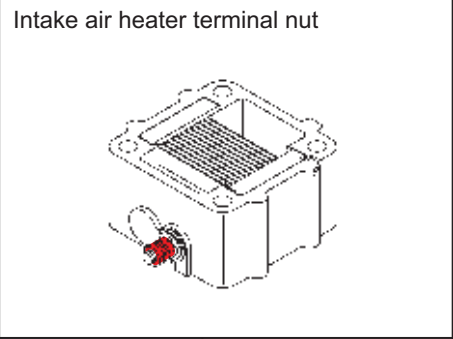
V3800-CR-TE4	
V3800-CR-TIE4	9.81 to 11.2 N·m 1.00 to 1.15 kgf·m
V3800-CR-TE4C	7.24 to 8.31 lbf·ft
V3800-CR-TIE4C	



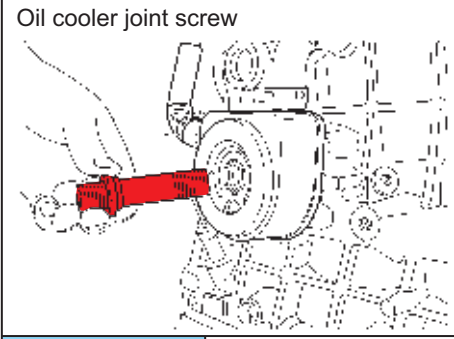
V3800-CR-TE4	
V3800-CR-TIE4	7.9 to 12 N·m 0.80 to 1.3 kgf·m
V3800-CR-TE4C	5.8 to 9.4 lbf·ft
V3800-CR-TIE4C	



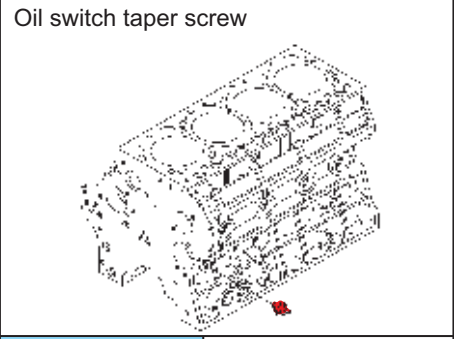
V3800-CR-TE4	
V3800-CR-TIE4	16 to 19 N·m 1.6 to 2.0 kgf·m
V3800-CR-TE4C	12 to 14 lbf·ft
V3800-CR-TIE4C	



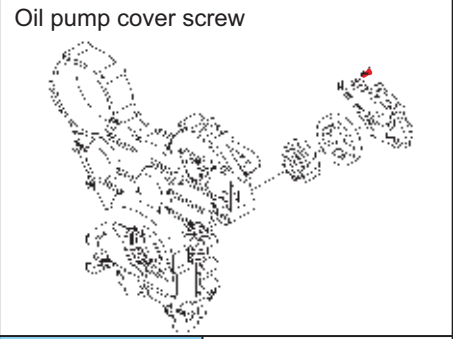
V3800-CR-TE4	
V3800-CR-TIE4	3.5 to 5.3 N·m 0.35 to 0.55 kgf·m
V3800-CR-TE4C	2.6 to 3.9 lbf·ft
V3800-CR-TIE4C	



V3800-CR-TE4	
V3800-CR-TIE4	40 to 44 N·m 4.0 to 4.5 kgf·m
V3800-CR-TE4C	29 to 32 lbf·ft
V3800-CR-TIE4C	

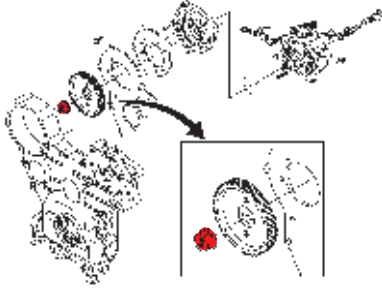


V3800-CR-TE4	
V3800-CR-TIE4	15 to 19 N·m 1.5 to 2.0 kgf·m
V3800-CR-TE4C	11 to 14 lbf·ft
V3800-CR-TIE4C	



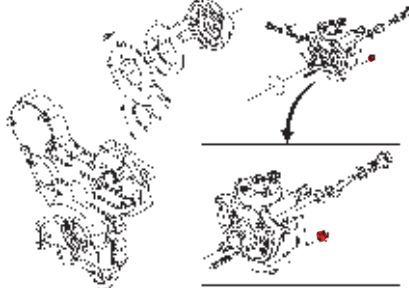
V3800-CR-TE4	
V3800-CR-TIE4	7.9 to 9.3 N·m 0.80 to 0.95 kgf·m
V3800-CR-TE4C	5.8 to 6.8 lbf·ft
V3800-CR-TIE4C	

Supply pump gear mounting nut



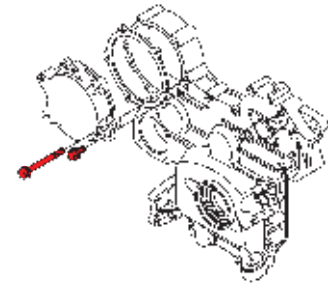
V3800-CR-TE4	
V3800-CR-TIE4	59 to 68 N·m 6.0 to 7.0 kgf·m
V3800-CR-TE4C	44 to 50 lbf·ft
V3800-CR-TIE4C	

Supply pump mounting nut



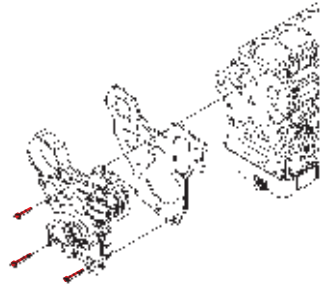
V3800-CR-TE4	
V3800-CR-TIE4	24 to 27 N·m 2.4 to 2.8 kgf·m
V3800-CR-TE4C	18 to 20 lbf·ft
V3800-CR-TIE4C	

Supply pump gear cover mounting screw



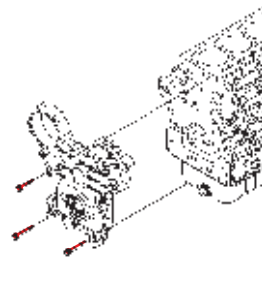
V3800-CR-TE4	
V3800-CR-TIE4	24 to 27 N·m 2.4 to 2.8 kgf·m
V3800-CR-TE4C	18 to 20 lbf·ft
V3800-CR-TIE4C	

Gear case cover mounting screw



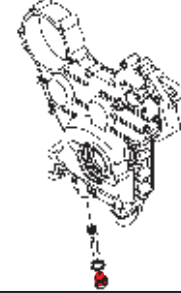
V3800-CR-TE4	
V3800-CR-TIE4	24 to 27 N·m 2.4 to 2.8 kgf·m 18 to 20 lbf·ft

Gear case cover mounting screw



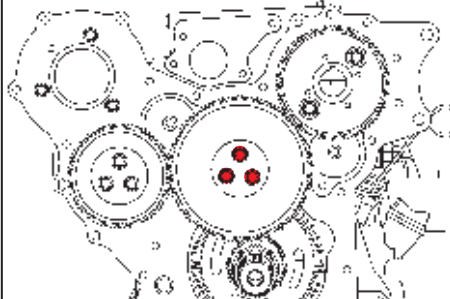
V3800-CR-TE4C	
V3800-CR-TIE4C	24 to 27 N·m 2.4 to 2.8 kgf·m 18 to 20 lbf·ft

Relief valve retaining screw



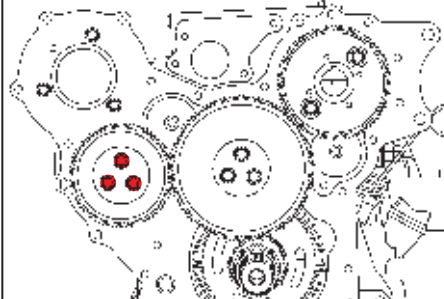
V3800-CR-TE4	
V3800-CR-TIE4	69 to 78 N·m 7.0 to 8.0 kgf·m
V3800-CR-TE4C	51 to 57 lbf·ft
V3800-CR-TIE4C	

Idle gear 1 mounting screw



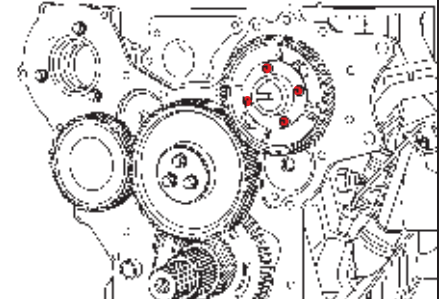
V3800-CR-TE4	
V3800-CR-TIE4	24 to 27 N·m 2.4 to 2.8 kgf·m
V3800-CR-TE4C	18 to 20 lbf·ft
V3800-CR-TIE4C	

Idle gear 2 mounting screw



V3800-CR-TE4	
V3800-CR-TIE4	24 to 27 N·m 2.4 to 2.8 kgf·m 18 to 20 lbf·ft

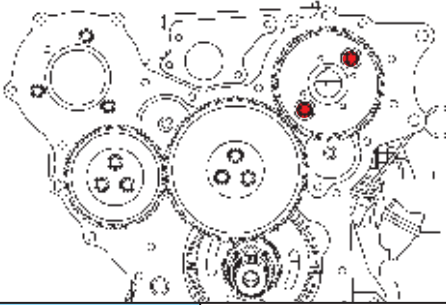
Camshaft position pulsar gear mounting screw



V3800-CR-TE4	
V3800-CR-TIE4	4.7 to 5.6 N·m 0.48 to 0.58 kgf·m
V3800-CR-TE4C	3.5 to 4.1 lbf·ft
V3800-CR-TIE4C	



Camshaft set screw



V3800-CR-TE4

V3800-CR-TIE4

24 to 27 N·m  
2.4 to 2.8 kgf·m

V3800-CR-TE4C

18 to 20 lbf·ft

V3800-CR-TIE4C

Plate mounting screw



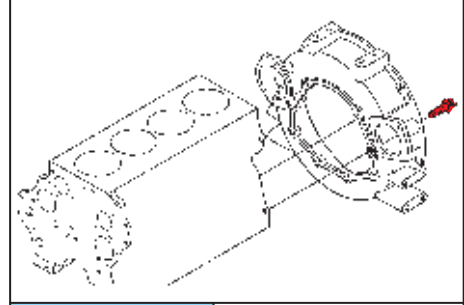
V3800-CR-TE4

V3800-CR-TIE4

24 to 27 N·m  
2.4 to 2.8 kgf·m  
18 to 20 lbf·ft

V3800-CR-TIE4C

Flywheel housing mounting screw



V3800-CR-TE4

V3800-CR-TIE4

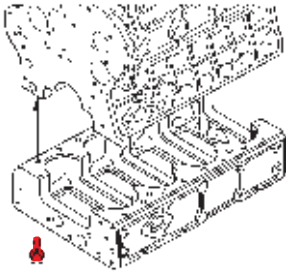
78 to 90 N·m  
7.9 to 9.2 kgf·m

V3800-CR-TE4C

58 to 66 lbf·ft

V3800-CR-TIE4C

Crankcase 2 mounting screw



V3800-CR-TE4

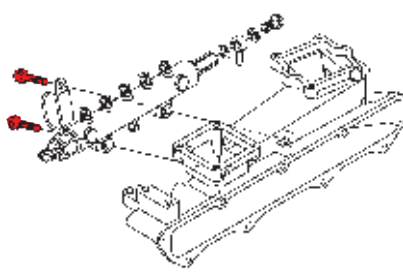
V3800-CR-TIE4

49 to 55 N·m  
5.0 to 5.7 kgf·m  
37 to 41 lbf·ft

V3800-CR-TE4C

V3800-CR-TIE4C

Common rail mounting screw



V3800-CR-TE4

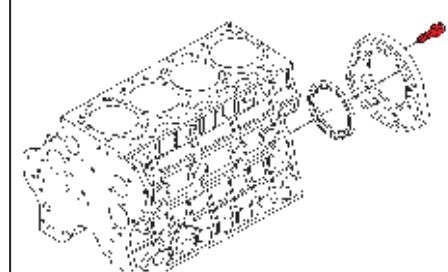
V3800-CR-TIE4

24 to 27 N·m  
2.4 to 2.8 kgf·m  
18 to 20 lbf·ft

V3800-CR-TE4C

V3800-CR-TIE4C

Bearing case cover mounting screw



V3800-CR-TE4

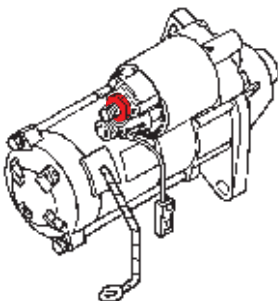
V3800-CR-TIE4

24 to 27 N·m  
2.4 to 2.8 kgf·m  
18 to 20 lbf·ft

V3800-CR-TE4C

V3800-CR-TIE4C

Starter's terminal B mounting nut



V3800-CR-TE4

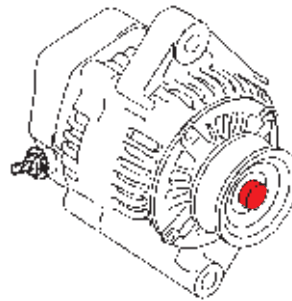
V3800-CR-TIE4

9.8 to 11 N·m  
1.0 to 1.2 kgf·m  
7.3 to 8.6 lbf·ft

V3800-CR-TE4C

V3800-CR-TIE4C

Alternator pulley nut



V3800-CR-TE4

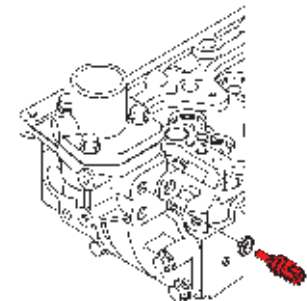
V3800-CR-TIE4

58.4 to 78.9 N·m  
5.95 to 8.05 kgf·m  
43.1 to 58.2 lbf·ft

V3800-CR-TE4C

V3800-CR-TIE4C

Coolant temperature sensor taper screw



V3800-CR-TE4

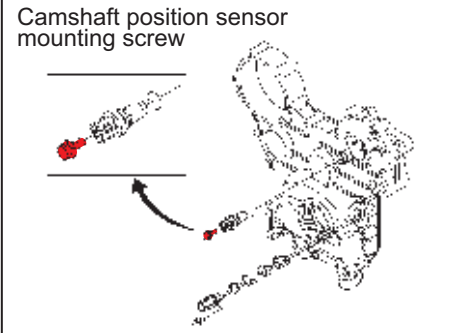
V3800-CR-TIE4

16 to 23 N·m  
1.6 to 2.4 kgf·m  
12 to .17 lbf·ft

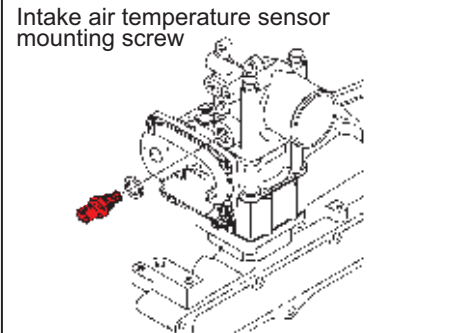
V3800-CR-TE4C

V3800-CR-TIE4C

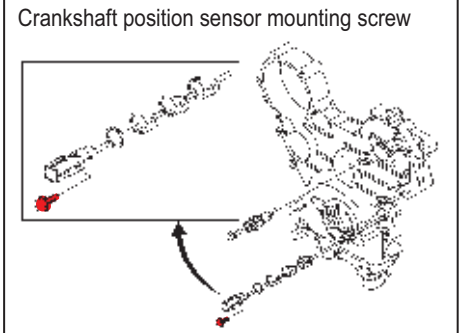




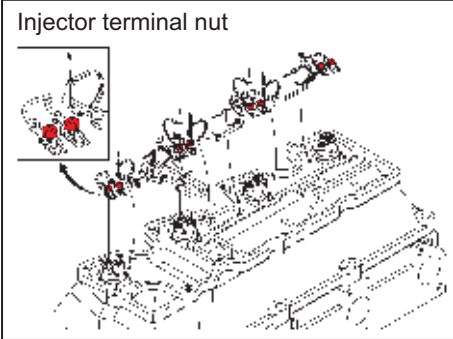
V3800-CR-TE4	
V3800-CR-TIE4	4 to 5 N·m 0.4 to 0.6 kgf·m
V3800-CR-TE4C	3 to 4 lbf·ft
V3800-CR-TIE4C	



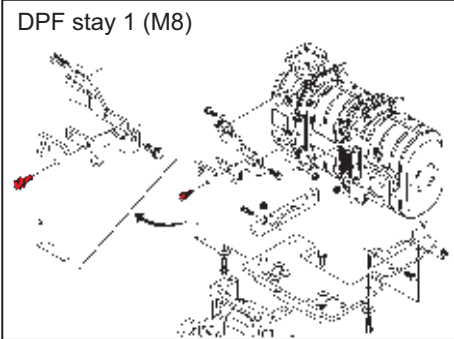
V3800-CR-TE4	
V3800-CR-TIE4	30 to 39 N·m 3.0 to 4.0 kgf·m
V3800-CR-TE4C	22 to 28 lbf·ft
V3800-CR-TIE4C	



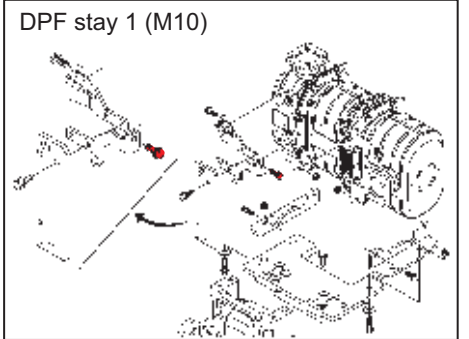
V3800-CR-TE4	
V3800-CR-TIE4	4 to 5 N·m 0.4 to 0.6 kgf·m
V3800-CR-TE4C	3 to 4 lbf·ft
V3800-CR-TIE4C	



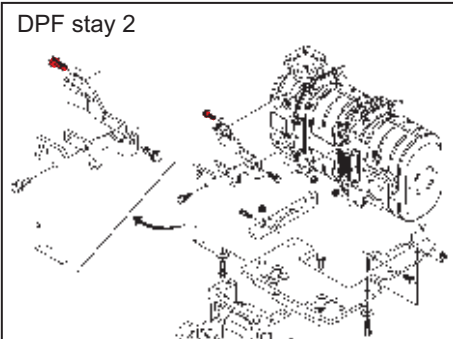
V3800-CR-TE4	
V3800-CR-TIE4	1.6 to 2.2 N·m 0.16 to 0.23 kgf·m
V3800-CR-TE4C	1.2 to 1.6 lbf·ft
V3800-CR-TIE4C	



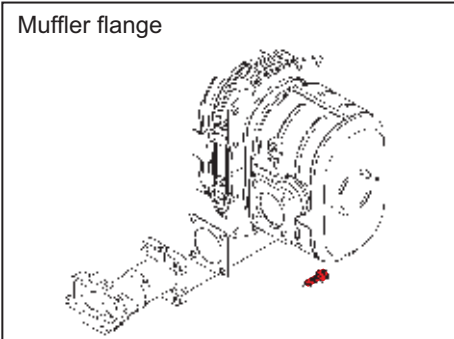
V3800-CR-TE4	
V3800-CR-TIE4	24 to 27 N·m 2.4 to 2.8 kgf·m
V3800-CR-TE4C	18 to 20 lbf·ft
V3800-CR-TIE4C	



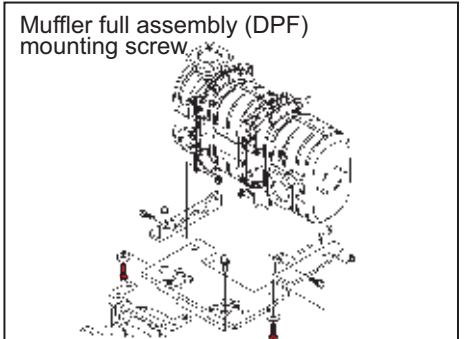
V3800-CR-TE4	
V3800-CR-TIE4	49 to 55 N·m 5.0 to 5.7 kgf·m
V3800-CR-TE4C	37 to 41 lbf·ft
V3800-CR-TIE4C	



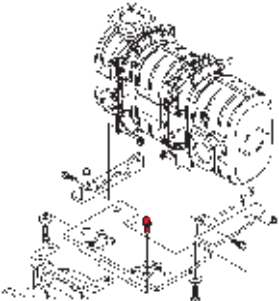
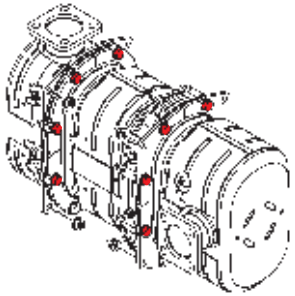
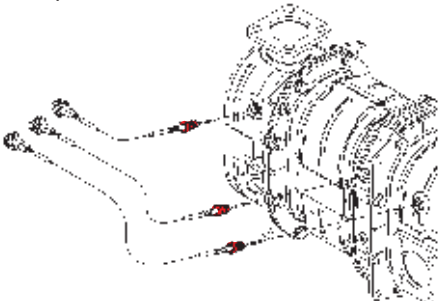
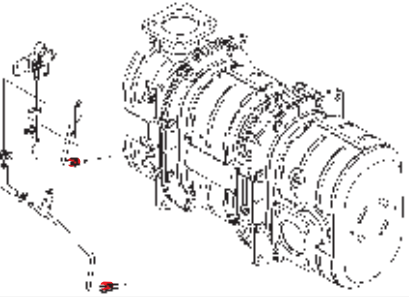
V3800-CR-TE4	
V3800-CR-TIE4	49 to 55 N·m 5.0 to 5.7 kgf·m
V3800-CR-TE4C	37 to 41 lbf·ft
V3800-CR-TIE4C	



V3800-CR-TE4	
V3800-CR-TIE4	49 to 55 N·m 5.0 to 5.7 kgf·m
V3800-CR-TE4C	37 to 41 lbf·ft
V3800-CR-TIE4C	



V3800-CR-TE4	
V3800-CR-TIE4	49 to 55 N·m 5.0 to 5.7 kgf·m
V3800-CR-TE4C	37 to 41 lbf·ft
V3800-CR-TIE4C	

<p>DPF bracket</p> 		<p>Filter comp (DPF) mounting screw</p> 		<p>Temperature sensor **</p> 	
V3800-CR-TE4		V3800-CR-TE4		V3800-CR-TE4	
V3800-CR-TIE4	78 to 90 N·m 7.9 to 9.2 kgf·m 58 to 66 lbf·ft	V3800-CR-TIE4	49 to 55 N·m 5.0 to 5.7 kgf·m 37 to 41 lbf·ft	V3800-CR-TIE4	25 to 34 N·m 2.5 to 3.5 kgf·m 18 to 25 lbf·ft
V3800-CR-TE4C		V3800-CR-TE4C		V3800-CR-TE4C	
V3800-CR-TIE4C		V3800-CR-TIE4C		V3800-CR-TIE4C	
<p>Differential pressure pipe **</p> 					
V3800-CR-TE4					
V3800-CR-TIE4	16 to 22 N·m 1.6 to 2.3 kgf·m 12 to 16 lbf·ft				
V3800-CR-TE4C					
V3800-CR-TIE4C					

## (2) General Tightening Torques

Screw and bolt material grades are shown by numbers punched on the screw and bolt heads.

Prior to tightening, be sure to check out the numbers as shown below.

None or 4 : Standard grade

7 : Special grade

Nominal Diameter	Standard Grade	Special Grade
M6	7.9 to 9.3 N·m 0.80 to 0.95 kgf·m 5.8 to 6.8 lbf·ft	9.81 to 11.2 N·m 1.00 to 1.15 kgf·m 7.24 to 8.31 lbf·ft
M8	18 to 20 N·m 1.8 to 2.1 kgf·m 13 to 15 lbf·ft	24 to 27 N·m 2.4 to 2.8 kgf·m 18 to 20 lbf·ft
M10	40 to 45 N·m 4.0 to 4.6 kgf·m 29 to 33 lbf·ft	48 to 55 N·m 4.9 to 5.7 kgf·m 36 to 41 lbf·ft
M12	63 to 72 N·m 6.4 to 7.4 kgf·m 47 to 53 lbf·ft	78 to 90 N·m 7.9 to 9.2 kgf·m 58 to 66 lbf·ft