

TORQUE SPECIFICATION

Part Tightened		N·m	kgf·cm	ft·lbf
Cylinder block water drain cock sub-assy x Cylinder block sub-assy		20	204	15
Oil strainer sub-assy x Cylinder block sub-assy		9.0	92	80 in.·lbf
Oil pan sub-assy x Cylinder block sub-assy		9.0	92	80 in.·lbf
Oil pan drain plug x Oil pan sub-assy		37	377	27
Oil filter union x Cylinder block sub-assy		30	306	22
Oil pump assy x Cylinder block sub-assy		9.0	92	80 in.·lbf
Cylinder head sub-assy x Cylinder block sub-assy	1st	49	500	36
	2nd	Turn 90°	Turn 90°	Turn 90°
Oil control valve filter x Cylinder head sub-assy		30	306	22
Camshaft timing oil control valve assy x Cylinder head sub-assy		9.0	92	80 in.·lbf
Camshaft timing gear assy x Camshaft		54	551	40
Camshaft timing gear or sprocket x Camshaft No. 2		54	551	40
Camshaft, Camshaft No. 2 x Cylinder head sub-assy	Bearing cap No. 1	23	235	17
	Bearing cap No. 3	13	133	10
Chain vibration damper No. 1 x Cylinder head sub-assy		9.0	92	80 in.·lbf
Chain vibration damper No. 1 x Cylinder block sub-assy		9.0	92	80 in.·lbf
Chain tensioner slipper x Cylinder block sub-assy		19	194	14
Timing chain or belt cover sub-assy x Cylinder head sub-assy		13	133	10
Timing chain or belt cover sub-assy x Cylinder block sub-assy	M6	13	133	10
	M8	19	194	14
Chain tensioner assy No. 1 x Cylinder head sub-assy		9.0	92	80 in.·lbf
Crankshaft pulley x Crankshaft		138	1,407	102
Water pump assy x Cylinder block sub-assy		11	112	8
Water pump assy x Timing chain or belt cover sub-assy		9.0	92	80 in.·lbf
Cylinder head cover sub-assy x Cylinder head sub-assy	w/o washer	11	112	8
	w/ washer	9.0	92	80 in.·lbf
Cylinder head cover sub-assy x Timing chain or belt cover sub-assy		11	112	8
Spark plug x Cylinder head sub-assy		25	255	18
Stud bolt				
Timing chain or belt cover sub-assy x Cylinder head sub-assy	length 89 mm (3.50 in.)	9.5	97	84 in.·lbf
	length 53.5 mm (2.11 in.)	5.0	51	44 in.·lbf
Cylinder head cover sub-assy x Cylinder head sub-assy		5.0	51	44 in.·lbf
Intake manifold x Cylinder head sub-assy		9.5	97	84 in.·lbf
Exhaust manifold x Cylinder head sub-assy		9.5	97	84 in.·lbf
W/ Head taper screw plug No. 2 x Cylinder head sub-assy		44	449	33
Crankshaft bearing cap sub-assy x Cylinder block sub-assy	M10 1st	22	224	16
	2nd	44	449	33
	3rd	Turn 90°	Turn 90°	Turn 90°
	M8	19	194	14
Connecting rod x Connecting rod cap	1st	20	204	15
	2nd	Turn 90°	Turn 90°	Turn 90°
Stud bolt				
Water by-pass pipe No. 1 x Cylinder block sub-assy		5.0	51	44 in.·lbf
Water inlet x Cylinder block sub-assy		5.0	51	44 in.·lbf
Oil strainer sub-assy x Cylinder block sub-assy		5.0	51	44 in.·lbf
Oil pan sub-assy x Cylinder block sub-assy		5.0	51	44 in.·lbf
Knock control sensor x Cylinder block sub-assy		11	112	8