

## TORQUE SPECIFICATION

Part Tightened	N·m	kgf·cm	ft·lbf
Engine under cover sub-assy No. 1 x Frame assy	29	296	21
Camshaft bearing cap x Cylinder head sub-assy	10 mm (0.39 in.) head	9.0	80 in.·lbf
	12 mm (0.47 in.) head	24	18
Chain tensioner No. 1 x Cylinder head sub-assy	9.0	92	80 in.·lbf
Chain tensioner No. 2 x Cylinder head sub-assy	19	194	14
Chain tensioner No. 3 x Cylinder head sub-assy	19	194	14
Camshaft timing gear assy x Camshaft	100	1,020	74
Camshaft timing gear or sprocket x Camshaft	100	1,020	74
Timing chain cover plate x Timing chain or belt cover sub-assy	9.0	92	80 in.·lbf
Ignition coil assy x Cylinder head cover sub-assy	9.0	92	80 in.·lbf
V-bank cover x Intake air surge tank	7.5	76	66 in.·lbf
Engine hanger No. 1 x Cylinder head sub-assy RH	33	336	24
Engine hanger No. 2 x Cylinder head sub-assy LH	33	336	24
Spark plug x Cylinder head sub-assy	20	204	15
Oil filler cap housing x Cylinder head cover sub-assy LH	9.0	92	80 in.·lbf
Camshaft timing oil control valve assy x Cylinder head cover sub-assy	9.0	92	80 in.·lbf
Oil filter bracket sub-assy x Timing chain or belt cover sub-assy	19	194	14
Engine mounting bracket front No. 1 RH x Cylinder block sub-assy	43	435	31
Engine mounting bracket front No. 1 LH x Cylinder block sub-assy	43	435	31
Engine mounting insulator front No. 1 RH x Frame assy	38	387	28
Engine mounting insulator front No. 1 LH x Frame assy	38	387	28
Engine wire No. 2 (ground cable) x Cylinder block sub-assy	13	133	9
Hood sub-assy x Hood hinge assy RH & LH	13	133	10
Hood support RH & LH x Body	18	184	13
Engine rear oil seal retainer x Cylinder block sub-assy	9.0	92	80 in.·lbf
Knock sensor x Cylinder block sub-assy	20	204	15
Water outlet pipe No. 1 x Cylinder block sub-assy	9.0	92	80 in.·lbf
Cylinder head sub-assy RH x Cylinder block sub-assy	1st 2nd	36 Turn 180°	367 Turn 180°
Cylinder head sub-assy LH x Cylinder block sub-assy	Recessed head 1st 2nd	36 Turn 180°	367 Turn 180°
	14 mm (0.55 in.) head	30	22
Chain vibration damper No. 1 x Cylinder block sub-assy	19	194	14
Idle gear No. 1 x Cylinder block sub-assy	60	612	44
Timing chain or belt cover sub-assy x Cylinder head and block	23	235	17
Water pump assy x Timing chain or belt cover sub-assy	10 mm (0.39 in.) head	9.0	80 in.·lbf
	12 mm (0.47 in.) head	23	17
Oil pan stud bolt x Oil pan sub-assy	4.0	41	35 in.·lbf
Oil pan sub-assy x Cylinder block and timing chain or belt cover	10 mm (0.39 in.) head	9.0	80 in.·lbf
	12 mm (0.47 in.) head	19	14
Oil strainer sub-assy x Oil pan sub-assy	9.0	92	80 in.·lbf
Oil pan sub-assy No. 2 x Oil pan sub-assy	9.0	92	80 in.·lbf
Oil pan drain plug x Oil pan sub-assy No. 2	40	408	30
Crankshaft pulley x Crankshaft	250	2,549	184
Cylinder head cover sub-assy x Cylinder head sub-assy RH	9.0	92	80 in.·lbf
Cylinder head cover sub-assy LH x Cylinder head sub-assy LH	9.0	92	80 in.·lbf
Ventilation valve x Cylinder head cover sub-assy LH	27	275	20
Oil control valve filter plug x Cylinder head sub-assy	62	632	46

## SERVICE SPECIFICATIONS - ENGINE MECHANICAL

Part Tightened	N·m	kgf·cm	ft·lbf
Crankshaft position sensor x Cylinder block sub-assy	9.0	92	80 in.·lbf
VVT sensor x Timing chain or belt cover sub-assy	8.0	82	71 in.·lbf
Cylinder block water drain cock sub-assy x Cylinder block sub-assy	25	255	18
Oil level gauge guide x Cylinder head sub-assy	9.0	92	80 in.·lbf
Oil pan sub-assy x Transmission	37	377	27
Idler pulley sub-assy No. 1 x Timing chain or belt cover sub-assy	54	551	40
Idler pulley sub-assy No. 2 x Timing chain or belt cover sub-assy	39	398	29
V-ribbed belt tensioner assy x Cylinder block sub-assy	36	367	27
Vane pump assy x Cylinder block sub-assy	43	438	32
Intake air surge tank x Intake manifold	28	286	21
Surge tank stay x Intake air surge tank and cylinder head	21	214	15
Throttle body bracket x Throttle body w/ motor and cylinder head	21	214	15
Oil baffle plate x Surge tank stay No. 1	9.0	92	80 in.·lbf
Ground cable x Cylinder head sub-assy	8.0	82	71 in.·lbf
Water by-pass joint RR x Cylinder head sub-assy	9.0	92	80 in.·lbf
Intake manifold x Cylinder head sub-assy	28	286	21
Exhaust manifold sub-assy RH x Cylinder head sub-assy RH	30	306	22
Exhaust manifold sub-assy LH x Cylinder head sub-assy LH	30	306	22
Manifold stay x Exhaust manifold sub-assy RH and transmission	40	408	30
Manifold stay No. 2 x Exhaust manifold sub-assy LH and transmission	40	408	30
Transmission oil filler tube sub-assy x Cylinder head sub-assy	12	122	9
Cool air inlet No. 1 x Body	12	122	9
Drive plate & ring gear sub-assy x Crankshaft	83	846	61
Stud bolt x Cylinder head sub-assy and cylinder head LH (See page 14-73)	A	4.0	41
	B	20	199
Union x Cylinder head sub-assy and cylinder head LH	15	150	11
W/ Head taper screw plug x Cylinder head sub-assy and cylinder head LH	80	816	59
Connecting rod cap x Connecting rod	1st	25	250
	2nd	Turn 90°	Turn 90°
Main bearing cap x Cylinder block sub-assy	12 pointed head 1st	61	622
	2nd	Turn 90°	Turn 90°
	12 mm head	35	357
Stud bolt x Cylinder block sub-assy (See page 14-91)	A	11	112
	B	4.5	46
	C	4.0	41
Sub-assy oil nozzle No.1 x Cylinder block sub-assy	9.0	92	80 in.·lbf