

TORQUE SPECIFICATION

2AZ-FE

Part Tightened	N·m	kgf·cm	ft·lbf
Engine moving control rod w/bracket x Engine moving control bracket No. 2	64	653	47
Engine moving control rod bracket RH x Cylinder head	64	653	47
Engine mounting bracket RH x Cylinder head	54	551	40
Engine mounting stay No. 2 RH x Engine mounting control rod bracket No. 2	64	653	47
Engine hanger No.1 x Cylinder head	38	387	28 in.·lbf
Engine hanger No.2 x Cylinder head	38	387	28 in.·lbf
Knock sensor x Cylinder block	20	204	15
Engine oil pressure switch assy x Cylinder head	15	153	11
Water by-pass pipe No.1 x Cylinder block	9.0	92	80 in.·lbf
Drive shaft bearing bracket (2WD) x Cylinder block	64	653	47
V-ribbed belt tensioner assy x Timing chain cover	60	612	44
Ignition coil assy x Cylinder head	9.0	92	80 in.·lbf
Water inlet x Cylinder block	9.0	92	80 in.·lbf
Exhaust manifold converter sub-assy x Cylinder head	37	377	27
Exhaust manifold stay x Cylinder block	44	449	32
Exhaust manifold stay x Exhaust manifold converter sub-assy	44	449	32
Manifold converter insulator No. 1 x Exhaust manifold converter	12	122	9
Oil level gauge guide x Water by-pass pipe No. 1	9.0	92	80 in.·lbf
Intake manifold sub-assy x Cylinder head assy	30	306	22
Drive plate & ring gear x Crankshaft	98	1,000	72
Starter assy x Automatic transaxle assy	39	398	29
Engine mounting bracket RR (4WD) x Transfer for bolt A	34	347	25
Engine mounting bracket RR (4WD) x Cylinder block for bolt B	64	653	47
Engine mounting insulator LH x Automatic transaxle assy	95	969	70
Engine mounting insulator RH x Engine mounting bracket RH	95	969	70
Engine mounting insulator FR x Engine mounting bracket FR	87	887	64
Engine mounting insulator RR x Engine mounting bracket RR (4WD)	75	765	55
Rack & pinion power steering gear assy (4WD) x Front frame assy	70	714	52
Stabilizer bar front (4WD) x Front frame assy	19	194	14
Vane pump assy x Timing chain cover	43	438	31
Frame side plate x Front frame assy for bolt A	86	877	63
Frame side plate x Body for bolt B	32	326	24
Front suspension member brace rear x Front frame assy for bolt C	86	877	63
Front suspension member brace rear x Body for bolt D	32	326	24
Steering intermediate shaft	35	357	26
Drive plate & ring gear x Torque converter	41	418	30
Front suspension arm x Lower ball joint	127	1,295	94
Tie rod assy x Steering knuckle	49	500	36
Speed sensor front LH x Steering knuckle	8.0	82	71
Speed sensor front RH x Steering knuckle	8.0	82	71
Front axle hub LH nut x Front drive shaft	294	3,000	217
Front stabilizer link assy x Front suspension	74	755	55
Propeller shaft (4WD) x Intermediate shaft	74	755	55
Return tube x body	20	204	15
Engine mounting bracket No. 2 RH x Timing chain cover	20	204	15
Generator assy x Bracket for bolt A	52	530	38
for bolt B	21	214	15
Compressor and magnetic clutch x bracket	25	255	18
Air cleaner assy x Body	5.0	51	44 in.·lbf

SERVICE SPECIFICATIONS - ENGINE MECHANICAL

Part Tightened		N·m	kgf·cm	ft·lbf
Filler plug (Transfer)		49	500	36
Balance shaft housing x Stiffening crankcase assy	1st	22	220	15
	2nd	Turn 90°	Turn 90°	Turn 90°
Stiffening crankcase assy x Cylinder block		33	337	24
W/head taper screw plug No. 1 x Cylinder block		26	265	19
Oil control valve filter x Cylinder block		30	306	22
Cylinder block water drain cock x Stiffening crankcase assy		25	255	18
Cylinder head x Cylinder block	1st	79	806	58
	2nd	Turn 90°	Turn 90°	Turn 90°
Camshaft timing gear assy x Camshaft		54	551	40
Camshaft timing gear or sprocket x Camshaft		54	551	40
Camshaft bearing cap No. 1 x Cylinder head		30	306	22
Camshaft bearing cap No. 2 x Cylinder head		30	306	22
Camshaft bearing cap No. 3 x Cylinder head		9.0	92	80 in.·lbf
Oil pump assy x Stiffening crankcase assy		19	194	14
Chain tensioner plate x Stiffening crankcase assy		12	122	9
Oil pump drive sprocket x Oil pump		30	306	22
Chain vibration damper No. 1 x Cylinder head		9.0	92	80 in.·lbf
Chain vibration damper No. 1 x Cylinder block		9.0	92	80 in.·lbf
Chain tensioner slipper x Cylinder block		19	194	14
Timing chain guide x Crankshaft bearing cap No. 1		9.0	92	80 in.·lbf
Timing chain cover (see page 14-68)	for bolt A	9.0	92	80 in.·lbf
	for bolt B	21	214	15
	for bolt C	43	438	32
	for nut	9.0	92	80 in.·lbf
Oil pan x Stiffening crankcase assy		9.0	92	80 in.·lbf
Oil pan drain plug x Oil pan		25	255	18
Water pump assy x Cylinder block		9.0	92	80 in.·lbf
Water pump pulley x Water pump assy		26	265	19
Crank position sensor x Timing chain cover		9.0	92	80 in.·lbf
Crankshaft pulley x Crankshaft		180	1,835	133
Chain tensioner assy x Timing chain cover		9.0	92	80 in.·lbf
Camshaft position sensor x Cylinder head		9.0	92	80 in.·lbf
Cylinder head cover x Cylinder head (see page 14-41)	for bolt A	11	112	8
	for bolt B	14	143	10
	for nut	11	112	8
Oil filter union (w/ oil cooler) x Stiffening crankcase assy		30	306	22
Spark plug x Cylinder head		19	194	14
Ventilation valve x Cylinder head cover		19	194	14
Stud bolt (see page 14-92)	for bolt A	5.0	51	44 in.·lbf
	for bolt B	5.0	51	44 in.·lbf
	for bolt C	10	102	7
	for bolt D	10	102	7
Front suspension brace x Body		80	816	59
Connecting rod cap x Connecting rod	1st	25	250	18
	2nd	Turn 90°	Turn 90°	Turn 90°
Camshaft timing oil control valve x Cylinder head		9.0	92	80 in.·lbf
Crankshaft bearing cap x Cylinder block	1st	20	204	15
	2nd	40	408	30
Stud bolt (see page 14-105)	Stud bolt A	5.0	51	44 in.·lbf
	Stud bolt B	10	102	7
	Stud bolt C	5.0	51	44 in.·lbf

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Part Tightened	N-m	kgf-cm	ft-lbf
Engine hanger No. 2 x Cylinder head	20	204	15
Knock sensor x Cylinder block	20	204	15
Oil pressure switch Assy x Cylinder block	15	153	11
Compressor mounting bracket No.1 x Cylinder block	25	255	18
Generator bracket No.1 x Cylinder block	58	591	43
Pump bracket x Cylinder head	32	326	24
Engine mounting bracket RR (2WD) x Cylinder block	64	653	47
Engine mounting bracket RR (2WD) x Front frame Assy	64	653	47
Exhaust converter sub-assy x Cylinder head	49	500	36
Exhaust converter sub-assy No. 2 x Cylinder head	49	500	36
Ignition coil Assy x Cylinder head cover	8.0	82	71 in.-lbf
Surge tank stay No. 1 x Cylinder head	20	199	14
Surge tank stay No. 2 x Intake air surge tank	20	199	14
Engine hanger No. 1 x Cylinder head	20	204	15
Engine hanger No. 1 x Intake air surge tank	20	204	15
Manifold stay No. 2 x Exhaust converter sub-assy No. 2	49	500	36
Manifold stay No. 2 x Cylinder block	49	500	36
Manifold stay x Exhaust converter sub-assy	49	500	36
Manifold stay x Cylinder head	49	500	36
Engine mounting bracket (4WD) x Cylinder block (see page 14-149)	for bolt A	34	25
	for bolt B	64	47
Engine mounting insulator RH x Engine mounting bracket	95	969	70
Engine mounting insulator LH x Automatic transaxle Assy	95	969	70
Engine mounting insulator FR x Automatic transaxle Assy	87	887	64
Engine mounting insulator RR x Transverse engine engine mounting bracket	75	765	55
Rack & pinion power steering gear Assy (4WD) x Front frame Assy	70	714	52
Stabilizer bar front (4WD) x Front frame Assy	29	296	21
Vane pump Assy x Pump bracket	43	439	32
Vane pump Assy x Engine mounting bracket	43	439	32
Frame side rail plate sub-assembly x Front frame Assy (see page 14-149)	for bolt A	85	63
	for bolt B	32	24
Front suspension member brace rear x Front frame Assy (see page 14-149)	for bolt A	85	63
	for bolt B	32	24
	for nut C	32	24
Compressor and magnetic clutch x Compressor mounting bracket No.1 (see page 14-149)	for bolt	25	18
	for nut	26	19
Generator belt adjusting bar x Cylinder block (see page 14-149)	for nut A	43	32
	for bolt B	18	13
	for bolt C	8.0	71 in.-lbf
Generator bracket No. 2 x Transverse engine engine mounting bracket	28	286	21
Intermediate shaft sub-assy	35	357	26
Battery clamp sub-assy x Body	6.0	61	53 in.-lbf
Exhaust manifold heat insulator No. 2 x Exhaust manifold converter sub-assy No. 2	9.0	92	80 in.-lbf
Exhaust manifold heat insulator No. 3 x Exhaust manifold converter sub-assy No. 2	9.0	92	80 in.-lbf
Flywheel housing under cover x Automatic transaxle Assy	8.0	82	70 in.-lbf

SERVICE SPECIFICATIONS - ENGINE MECHANICAL

Part Tightened		N·m	kgf·cm	ft·lbf
Front suspension arm x Lower ball joint		127	1,295	94
Tie rod end x Steering knuckle		49	500	36
Front axle hub nut x Front drive shaft		294	2,998	217
Front stabilizer link assy x Front suspension		74	755	55
Front propeller shaft (4WD) x Intermediate shaft		74	755	55
V-bank cover x Cylinder head cover		8.0	82	70 in.·lbf
Engine mounting stay No. 2 RH x Engine mounting bracket		64	653	47
Engine moving control rod (see page 14-149)	for bolt A	64	653	47
	for bolt B	23	235	17
Front wheel		103	1,050	76
Camshaft sub-gear x Main gear		5.4	55	48 in.·lbf
Engine rear oil seal retainer x Cylinder block		8.0	82	71 in.·lbf
Oil pump assy x Cylinder block assy (see page 14-173)	for bolt A	8.0	82	71 in.·lbf
	for bolt B	20	199	14
	for bolt C	43	438	32
Crank position sensor x Oil pump assy		8.0	82	71 in.·lbf
Oil pan baffle plate x Oil pan sub-assy		8.0	82	71 in.·lbf
Oil pan sub-assy x Cylinder block (see page 14-173)	10 mm head	8.0	82	71 in.·lbf
	12 mm head	20	199	14
Oil strainer sub-assy x Oil pan sub-assy		8.0	82	71 in.·lbf
Oil pan sub-assy No. 2 x Oil pan sub-assy		8.0	82	71 in.·lbf
Oil pan drain plug x Oil pan sub-assy No. 2		45	459	33
Water inlet housing x Cylinder block		8.0	82	71 in.·lbf
Cylinder head assy x Cylinder block assy	12 pointed head 1st	54	551	40
	2nd	Turn 90°	Turn 90°	Turn 90°
	Recessed head	19	189	14
Oil control valve filter x Cylinder head assy		45	459	33
Cylinder head cover rear x Cylinder head assy		10	102	7
Camshaft timing gear assy (VVT-i) x Camshaft		150	1,530	111
Camshaft bearing cap x Cylinder head assy		16	163	12
Timing belt plate x Oil pump assy		8.0	82	71 in.·lbf
Water pump assy x Cylinder block assy		8.0	82	71 in.·lbf
Oil level gage guide x Cylinder block assy		8.0	82	71 in.·lbf
Oil filter union x Cylinder block assy		30	306	22
Timing belt idler bracket x Cylinder block assy		28	286	21
Timing belt No. 3 cover x Cylinder head assy		9.0	92	80 in.·lbf
Camshaft timing pulley x Camshaft		125	1,275	92
Timing belt idler sub-assy No. 2 x Timing belt idler bracket		43	438	32
Timing belt idler sub-assy No. 1 x Cylinder block assy		34	348	25
Timing belt tensioner x Oil pump assy		27	280	20
Engine mounting bracket x Cylinder block		28	286	21
Timing belt No. 2 cover x Timing belt No. 3 cover		9.0	92	80 in.·lbf
Timing belt No. 1 cover x Oil pump assy		9.0	92	80 in.·lbf
Crankshaft pulley x Crankshaft		220	2,243	162
VVT sensor No. 1 x Cylinder head assy		8.0	82	71 in.·lbf
Camshaft timing oil control valve assy x Cylinder head assy		8.0	82	71 in.·lbf
Cylinder head cover x Cylinder head assy		8.0	82	71 in.·lbf
Spark plug x Cylinder head assy		25	255	18
W/head straight screw plug No. 1 x Cylinder head assy		44	449	32
W/head straight screw plug No. 2 x Cylinder head assy		44	449	32
Connecting rod cap x Connecting rod	1st	25	255	18
	2nd	Turn 90°	Turn 90°	Turn 90°

Part Tightened	N·m	kgf·cm	ft·lbf
crankshaft bearing cap x Cylinder block assy 12 pointed head 1st 2nd 6 pointed head	22	224	16
	Turn 90°	Turn 90°	Turn 90°
	27	275	20
Cylinder block w/head straight screw No. 1 plug x Cylinder block	30	306	22
Cylinder block w/head straight screw No. 2 plug x Cylinder block	50	510	37
Cylinder block w/head straight screw No. 3 plug x Cylinder block	30	306	22
Water seal plate x Cylinder block	18	184	13
Cylinder block water drain cock sub-assy x Cylinder block	39	398	29
Vane pump assy x Adjusting strut	43	439	32
Generator assy x Generator bracket	58	591	43
Generator assy x Adjusting bar	18	184	13
Intake air surge tank x Intake manifold	28	286	21
Front suspension brace sub-assy upper center x Body	80	816	59
Drive plate & ring gear sub-assy x Crankshaft	83	846	61
Water outlet x Cylinder head	15	153	11
Intake manifold x Cylinder head	15	153	11
Cylinder head cover rear x Cylinder head	10	102	7
Air cleaner case x Body	5.0	51	44 in.·lbf