

SPECIFICATIONS 1GR-FE ENGINE CONTROL TORQUE SPECIFICATIONS

CAMSHAFT OIL CONTROL VALVE

Part Tightened	N*m	kgf*cm	ft.*lbf
Camshaft timing oil control valve assembly x Cylinder head	10	102	7

THROTTLE BODY

Part Tightened	N*m	kgf*cm	ft.*lbf
Throttle body with motor assembly x Intake air surge tank	11	112	8

ECM

Part Tightened	N*m	kgf*cm	in.*lbf
ECM x Body	8.0	82	71

ACCELERATOR PEDAL

Part Tightened	N*m	kgf*cm	in.*lbf
Accelerator pedal sensor assembly x Body	5.0	51	44

MASS AIR FLOW METER

Part Tightened	N*m	kgf*cm	in.*lbf
Mass air flow meter x Air cleaner assembly	1.7	17	15

CAMSHAFT POSITION SENSOR

Part Tightened	N*m	kgf*cm	in.*lbf
VVT sensor x Cylinder head	8.0	82	71

CRANKSHAFT POSITION SENSOR

Part Tightened	N*m	kgf*cm	ft.*lbf
Crankshaft position sensor x Cylinder block	10	102	7
Cooler compressor assembly x Belt tensioner, Cylinder block	24	245	18

IGNITION COIL AND SPARK PLUG

Part Tightened	N*m	kgf*cm	ft.*lbf
Spark plug x Cylinder head	20	204	15
Ignition coil assembly x Cylinder head cover	10	102	7

ENGINE COOLANT TEMPERATURE SENSOR

Part Tightened	N*m	kgf*cm	ft.*lbf
Engine coolant temperature sensor x Rear water bypass joint	19.6	200	14

KNOCK SENSOR

Part Tightened	N*m	kgf*cm	ft.*lbf
Knock sensor x Cylinder block	20	204	15
No. 1 water outlet pipe x Cylinder block	10	102	7

AIR FUEL RATIO SENSOR

Part Tightened		N*m	kgf*cm	ft.*lbf
Air fuel ratio sensor x Exhaust manifold	with SST	38	387	28
	without SST	44	449	32

HEATED OXYGEN SENSOR

Part Tightened	N*m	kgf*cm	ft.*lbf
----------------	-----	--------	---------

Part Tightened		N*m	kgf*cm	ft.*lbf
Heated oxygen sensor x Front exhaust pipe	with SST	38	387	28
	without SST	44	449	32

POWER STEERING OIL PRESSURE SWITCH

Part Tightened		N*m	kgf*cm	ft.*lbf
Power steering oil pressure switch x Vane pump assembly		20.6	210	15