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Model Year: 2007	Model: Camry	Doc ID: RM000002ED4000X
Title: SERVICE SPECIFICATIONS: 2GR-FE ENGINE MECHANICAL: TORQUE SPECIFICATIONS (2007 Camry)		

TORQUE SPECIFICATIONS

PART TIGHTENED	N*M	KGF*CM	FT.*LBF	
Ignition coil assembly x Cylinder head cover sub-assembly	10	102	7	
Engine hanger No. 1 x Cylinder head sub-assembly RH	33	337	24	
Engine hanger No. 2 x Cylinder head sub-assembly LH	33	337	24	
Engine mounting bracket RH x Cylinder block sub-assembly	54	551	40	
Oil level gauge guide x Cylinder head sub-assembly	21	214	15	
Idler pulley sub-assembly No. 2 x Timing chain cover sub-assembly	43	438	32	
V-ribbed belt tensioner assembly x Cylinder block sub-assembly	43	438	32	
Intake manifold x Cylinder head sub-assembly	21	214	15	
Exhaust manifold sub-assembly RH x Cylinder head sub-assembly RH	21	214	15	
Exhaust manifold sub-assembly LH x Cylinder head sub-assembly LH	21	214	15	
Drive plate & ring gear sub-assembly x Crankshaft	83	850	61	
Air cleaner case x Body	5.0	51	44 in.*lbf	
E.F.I engine coolant temperature x water by-pass joint RR	20	200	14	
Engine assembly w/ Transaxle x Body	Bolt A	85	867	63
	Bolt B	32	329	24
	Bolt C	85	867	63
	Bolt D	32	329	24
Manifold stay No. 2 x Exhaust manifold sub-assembly LH	34	347	25	
Air cleaner inlet No. 1 x Body	5.0	51	44 in.*lbf	
Air cleaner inlet assembly x Body	5.0	51	44 in.*lbf	
Battery clamp x Body	Bolt	9.0	92	80 in.*lbf

PART TIGHTENED		N*M	KG*CM	FT.*LBF
	Nut	3.5	36	31
Steering intermediate shaft x Steering gear		35	360	26
Stabilizer link x Shock absorber		74	755	55
Tie rod assembly x Steering gear		49	500	36
Speed sensor front x Front axle		8.0	82	71 in.*lbf
Front axle hub nut x Front drive shaft		294	2,998	217
Cooler compressor x V-ribbed belt tensioner		25	250	18
Engine mounting control bracket x Engine mounting bracket front No. 1 LH	Bolt A	44	450	32
	Bolt B	38	387	28
	Nut	23	235	17
Engine assembly w/ Transaxle x Front frame assembly	Bolt	87	887	64
	Nut	95	969	70
Drive shaft bearing bracket x Cylinder block sub-assembly		64	650	47
Exhaust manifold heat insulator No. 2 x Exhaust manifold sub-assembly LH		8.5	87	75 in.*lbf
Oil pressure switch x Oil pan sub-assembly		21	210	15
Engine mounting stay No. 2 RH x Intake manifold		21	214	15
Timing gear cover No. 2 x Chain cover sub-assembly		6.0	61	53 in.*lbf
Engine mounting bracket front No. 1 LH x Chain cover		54	551	40
Camshaft bearing cap x Camshaft housing	1st	10	102	7
	2nd	16	163	12
Camshaft housing x Cylinder head sub-assembly		28	286	21
Chain tensioner No. 1 x Cylinder head sub-assembly		10	102	7
Chain tensioner No. 2 x Cylinder head sub-assembly		21	214	15
Chain tensioner No. 3 x Cylinder head sub-assembly		21	214	15
Camshaft timing gear assembly x Camshaft		100	1,020	74
Camshaft timing exhaust gear assembly x Camshaft		100	1,020	74

PART TIGHTENED		N*M	KGF*CM	FT.*LBF
Engine rear oil seal retainer x Cylinder block sub-assembly		10	102	7
Knock sensor x Cylinder block sub-assembly		20	204	15
Water inlet pipe x Cylinder block sub-assembly		10	102	7
Cylinder head RH x Cylinder block sub-assembly	1st	36	367	27
	2nd	Turn 90°	Turn 90°	Turn 90°
	3rd	Turn 90°	Turn 90°	Turn 90°
Cylinder head sub-assembly LH x Cylinder block sub-assembly				
	Recessed head 1st	36	367	27
	2nd	Turn 90°	Turn 90°	Turn 90°
	3rd	Turn 90°	Turn 90°	Turn 90°
	14 mm (0.55 in.) head	30	306	22
Chain vibration damper No. 1 x Cylinder block sub-assembly		23	230	17
Idle gear No. 1 x Cylinder block sub-assembly		60	612	44
Timing chain cover plate x Timing chain cover sub-assembly		9.1	93	81 in.*lbf
Timing chain cover sub-assembly x Cylinder head and block				
	Areas 1: Bolt	21	214	15
	Areas 2: Bolt	21	214	15
	Areas 3: Bolt and Nut	21	214	15
	Areas 4: Bolt A	43	438	32
	Areas 4: Except Bolt A	21	214	15
Water pump assembly x Timing chain cover sub-assembly		9.1	93	81 in.*lbf
Oil pan baffle plate x Cylinder block sub-assembly		10	102	7
Oil pan stud bolt x Cylinder block and timing chain cover sub-assembly		10	102	7

PART TIGHTENED		N*M	KG*CM	FT.*LBF
Oil pan stud bolt x No. 2 oil pan sub-assembly		4.0	41	35 in.*lbf
Oil strainer stud bolt x Timing chain cover sub-assembly		4.0	41	35 in.*lbf
Oil strainer sub-assembly x Cylinder block and timing chain cover sub-assembly		10	102	7
Oil pan sub-assembly x Cylinder block and timing chain cover sub-assembly				
	bolt A	10	102	7
	except bolt A	21	214	15
Oil pan sub-assembly No. 2 x Oil pan sub-assembly		10	102	7
Oil pan drain plug x Oil pan sub-assembly No. 2		40	408	30
Crankshaft pulley x Crankshaft		250	2,550	184
Cylinder head cover sub-assembly x Cylinder head sub-assembly RH				
	bolt A	21	214	15
	except bolt A	10	102	7
Cylinder head cover sub-assembly LH x Cylinder head sub-assembly LH				
	bolt A	21	214	15
	except bolt A	10	102	7
Water outlet x Cylinder head sub-assembly	bolt	10	102	7
	nut	10	104	8
Water inlet housing set nut		10	102	7
Water inlet set bolt and nut		10	102	7
Oil filter cap x Oil pan		25	255	18
Camshaft position sensor		10	102	7
Ventilation valve x Cylinder head cover sub-assembly LH		27	275	20
Oil pipe union x Cylinder block sub-assembly		65	663	48
Oil pipe union x Cylinder head cover sub-assembly		65	663	48
Oil pipe x Cylinder head sub-assembly		10	102	7
Crankshaft position sensor x Cylinder block sub-assembly		10	102	7
Camshaft timing oil control valve assembly x Cylinder head cover		10	102	7

PART TIGHTENED		N*M	KGF*CM	FT.*LBF
Cylinder block water drain cock sub-assembly x Cylinder block sub-assembly		25	255	18
Drain cock sub-assembly x Water inlet housing		30	306	22
Water drain cock plug x Water drain cock sub-assembly		13	130	9
Drain cock plug x Drain cock sub-assembly		13	130	9
Spark plug x Cylinder head sub-assembly		25	254	18
Stud bolt x Cylinder head sub-assembly	For A and B bolts	10	102	7
	For C bolts	4.0	41	35 in.*lbf
W/ head screw plug x Cylinder head sub-assembly		44	449	32
W/ head screw plug No. 2 x Cylinder head sub-assembly		80	816	59
Main bearing cap x Cylinder block sub-assembly	16 pointed head 1st	61	622	45
	2nd	Turn 90°	Turn 90°	Turn 90°
	14 mm head	52	525	38
Connecting rod cap x Connecting rod	1st	25	255	18
	2nd	Turn 90°	Turn 90°	Turn 90°
Stud bolt x Cylinder block sub-assembly	bolt A	10	102	7
	bolt B	17	173	13
Sub-assembly oil nozzle No. 1 x Cylinder block sub-assembly		9.0	92	80 in.*lbf

