TORQUE SPECIFICATION

031LP-02

| Part Tightened | N⋅m | kgf⋅cm | ft·lbf |
|---|----------|----------|-------------|
| Spark plug x Cylinder head sub–assy | 18 | 184 | 13 |
| Ignition coil No. 1 x Cylinder head sub-assy | 9.0 | 92 | 80 in. lbf |
| Idler pulley assy x Engine mounting bracket | 40 | 408 | 30 |
| Camshaft x Camshaft bearing cap No.2 | 13 | 130 | 9.6 |
| No. 2 camshaft x Camshaft bearing cap No.1 | 23 | 235 | 17 |
| Oil pump assy x Service hole screw plug | 15 | 153 | 11 |
| Brake reservoir bracket x Body | 8.5 | 87 | 75 in. lbf |
| Brake master cylinder reservoir sub–assy x Brake reservoir bracket | 8.5 | 87 | 75 in. lbf |
| Air cleaner assy x Cylinder head cover sub–assy | 7.0 | 71 | 62 in. lbf |
| Air cleaner assy x Intake manifold | 3.0 | 31 | 27 in. lbf |
| Battery negative terminal x Battery negative cable | 6.0 | 61 | 53 in. lbf |
| Engine hanger x Cylinder head sub–assy | 40 | 408 | 30 |
| E. F. I. water temperature sensor x Cylinder head sub–assy | 20 | 204 | 15 |
| Radio setting condenser x Cylinder head sub-assy | 9.0 | 92 | 80 in. lbf |
| Exhaust manifold x Cylinder head sub-assy | 27 | 275 | 20 |
| Exhaust manifold x Exhaust manifold heat insulator No. 1 | 8.0 | 82 | 71 in. lbf |
| Water by–pass pipe No. 1 x Cylinder block sub–assy | 9.0 | 92 | 80 in. lbf |
| Water by–pass pipe No. 1 x Cylinder head sub–assy | 9.0 | 92 | 80 in. lbf |
| Oil level gage guide x Intake manifold | 9.0 | 92 | 80 in. lbf |
| Flywheel x Crankshaft 1st | 49 | 500 | 36 |
| 2nd | Turn 90° | Turn 90° | Turn 90° |
| Transmission input damper assy x Fly wheel | 20 | 204 | 15 |
| Starter hole insulator x Hybrid vehicle transaxle assy | 32 | 326 | 24 |
| Engine mounting bracket RH x Engine mounting insulator RH | 52 | 530 | 38 |
| Engine mounting insulator bracket LH x Engine mounting insulator LH | 80 | 816 | 59 |
| Front suspension crossmember sub–assy x Body Bolt A | 113 | 1152 | 83 |
| Bolt B | 157 | 1602 | 116 |
| Engine moving control rod x Front suspension crossmember | 56 | 571 | 41 |
| Engine moving control rod x Hybrid vehicle transaxle assy | 100 | 1020 | 74 |
| Steering sliding yoke sub–assy x Steering gear assy | 35 | 357 | 26 |
| Compressor assy x Cylinder block sub–assy | 25 | 255 | 18 |
| Vacuum switching valve assy No. 2 x Engine mounting insulator RH | 7.5 | 76 | 5.5 in. lbf |
| Air cleaner inlet No. 1 x Air cleaner case | 3.0 | 31 | 27 in. lbf |
| Front wheel x Front axle | 103 | 1050 | 76 |
| Oil pan sub-assy x Stud bolt | 5.0 | 51 | 44 in. lbf |
| Oil pan sub-assy x Cylinder block sub-assy | 24 | 245 | 18 |
| Oil pan sub–assy x Oil strainer sub–assy | 11 | 112 | 8.1 |
| Oil pan sub-assy x Oil pan sub-assy No. 2 | 9.0 | 92 | 80 in. lbf |
| Oil pan sub-assy No. 2 x Oil pan drain plug | 38 | 387 | 28 |
| Oil filter union x Oil pan sub–assy | 30 | 306 | 22 |
| Cylinder head sub–assy x Cylinder block sub–assy 1st | 29 | 296 | 21 |
| 2nd | Turn 90° | Turn 90° | Turn 90° |
| 3rd | Turn 90° | Turn 90° | Turn 90° |
| Camshaft timing gear assy x Camshaft | 64 | 653 | 47 |
| Camshaft timing gear x No. 2 Camshaft | 64 | 653 | 47 |
| Chain vibration damper x Cylinder head sub-assy | 9.0 | 92 | 80 in.·lbf |
| Chain vibration damper x Cylinder block sub-assy | 9.0 | 92 | 80 in.·lbf |
| Chain tensioner x Cylinder block sub–assy | 9.0 | 92 | 80 in.·lbf |

2004 Prius - Preliminary Release (RM1075U)

Author: Date: 121

SERVICE SPECIFICATIONS - ENGINE MECHANICAL

| Part Tightened | | N⋅m | kgf⋅cm | ft·lbf |
|--|-----------|----------|----------|------------|
| Bolt B Nu | Bolt A | 32 | 326 | 24 |
| | Bolt B, C | 11 | 112 | 8.1 |
| | Nut D | 24 | 245 | 18 |
| | Bolt E | 24 | 245 | 18 |
| Crankshaft damper sub–assy x Crankshaft | | 128 | 1305 | 95 |
| Water pump assy x Cylinder block sub–assy | | 11 | 112 | 8.1 |
| Engine mounting bracket x Cylinder block sub-assy | | 55 | 561 | 41 |
| Fuel delivery pipe sub–assy x Cylinder head sub–assy | Bolt A | 19 | 194 | 14 |
| | Bolt B | 9.0 | 92 | 80 in.·lbf |
| Cylinder head cover sub–assy x Cylinder head sub–assy | | 10 | 102 | 7.4 |
| Ventilation valve sub–assy x Cylinder head cover sub–assy | | 27 | 275 | 20 |
| Water pump pulley x Water pump assy | | 15 | 153 | 11 |
| Crank position sensor x Oil pump assy | | 7.5 | 76 | 66 in. lbf |
| Water inlet x Cylinder block sub–assy | | 9.0 | 92 | 80 in.·lbf |
| Camshaft timing oil control valve assy x Cylinder block sub-assy | | 7.5 | 76 | 66 in. lbf |
| Cam position sensor x Cylinder head sub–assy | | 8.0 | 82 | 71 in. lbf |
| Stud bolt × Cylinder head (See page 14–124) | Bolt A | 10 | 102 | 7.4 |
| | Bolt B | 4.0 | 41 | 35 in.·lbf |
| | Bolt C | 10 | 102 | 7.4 |
| | Bolt D | 9.0 | 92 | 80 in.·lbf |
| Oil control valve filter plug \times Cylinder head | | 30 | 306 | 22 |
| w/Head taper screw plug No.1 x Cylinder head | | 44 | 449 | 32 |
| Connecting rod cap × Connecting rod | 1st | 15 | 153 | 11 |
| | 2nd | Turn 90° | Turn 90° | Turn 90° |
| Bearing cap × Cylinder block | 1st | 22 | 224 | 16 |
| | 2nd | Turn 90° | Turn 90° | Turn 90° |
| Stud bolt × Cylinder block | | 5.0 | 51 | 44 in.·lbf |
| Stud bolt (For knock sensor) × Cylinder block | | 11 | 112 | 8 |
| Cylinder block water drain cock plug × Cylinder block | | 35 | 357 | 26 |
| | | | | - |

Author: Date: 122