

3rd gen Prius head gasket job, various torque values, roughly in order encountered during reassembly:

Cylinder head bolts: 36 ft/lb, then 90 degrees, then 45 degrees, with oil-drenched threads.

- Torque in criss-cross pattern, commencing from center. Also, remove bolts in criss-cross pattern, commencing from outermost, in multiple stages as well.

- Use caution when loosening: if bolt head does not rotate, stop and rap top of bolt with hammer, try again.)

- Blow threaded hole with compressed air to clear possible debris before installing bolt. Don't forget the (loose) washers

Camshaft housing sub-assembly hold-down bolts: 20 ft/lbs

Camshaft bearing cap bolts:

Longer, gold coloured bolts: 20 ft/lbs (3 per cap)

Shorter, black coloured bolts: 12 ft/lbs (2 per cap)

Timing chain cover hold-down bolts:

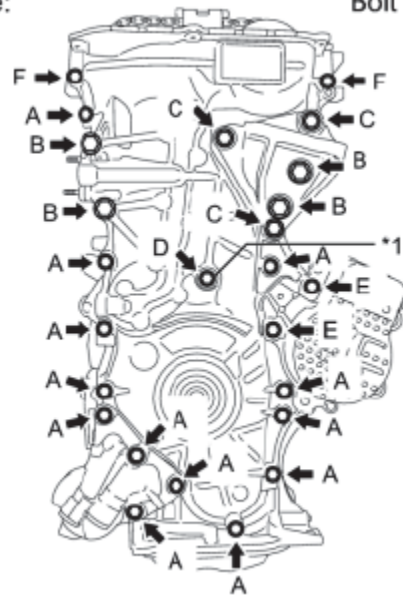
Bolt A,E,F: 19 ft/lbs

Bolt B,C: 38 ft/lbs

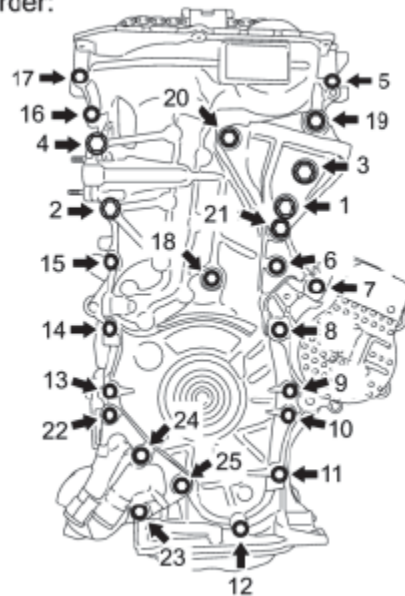
Bolt D: 7 ft/lbs

Illustration for bolt type locations and torque sequence:

Torque:



Bolt Torque Order:



Oil Filter Bracket hold-down bolts: 19 ft/lb

Water pump hold-down bolts:

2 (35mm) bolts towards rear: 19 ft/lb

3 (15mm) bolts towards front: 15 ft/lb

Inlet Water Sub-Assembly (thermostat housing) hold-down bolts: 7 ft/lbs

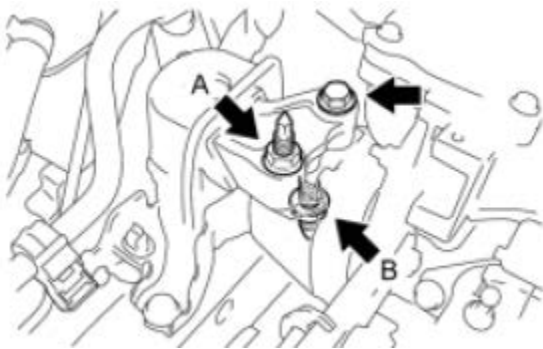
Engine Mount bolts:

Nut A: 70 ft/lb

Nut B: 38 ft/lb

Bolt: 70 ft/lb

See illustration for nut/bolt type and locations:



Crankshaft pulley hold-down bolt: 140 ft/lb

Timing chain tensioner hold-down bolts: 9 ft/lb

Engine oil pressure switch: 11 ft/lb

Apply "Toyota Genuine Adhesive 1344, Three Bond 1344" or equivalent to 2~3 threads, before installing

Engine coolant temperature sensor: 15 ft/lb

Intake manifold to engine: 2 nuts and 3 bolts: 21 ft/lbs

Throttle body to intake, hold-down bolts/nuts: 7 ft/lbs

EGR pipe to intake, two bolts: 7 ft/lbs

Exhaust manifold to engine torque: 15 ft/lb

It's heat shield hold-down bolts: 9 ft/lb

Fuel rail hold-down bolts: 15 ft/lb

EGR Valve/Cooler to cylinder head and/or exhaust manifold:

Studs: 84 in/lb

Bolts: 15 ft/lb

EGR Pipe between valve and intake manifold: 7 ft/lb

Valve cover, any-and-all bolts: 7 ft/lb