

WHAT YOU WILL NEED...

Apart from the typical tools you will need (assorted wrenches, sockets, hammers, screw drivers, slide calipers, feeler gauges, and the like...), there are some specialized tools you will also require:

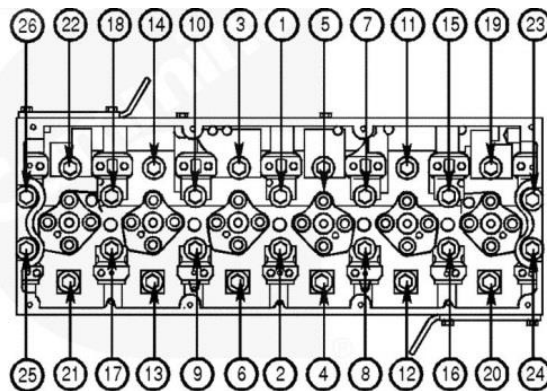


Also, it is a good idea to have some type of cleaning and/or degreasing solution on hand as well as lint-free rags. One of the most important aspects of engine assembly is, **KEEP IT CLEAN!**

ENGINE BUILD SPECIFICATIONS – CUMMINS® ISX

MAIN CAP BOLTS:	110 ft/lbs + 180° (Before ESN: 79012120) 300 ft/lbs, Loosen, 300 ft/lbs + 90° (After ESN: 79012120)
CONNECTING ROD BOLTS:	52 ft/lbs + 60° (Used Bolts) 29 ft/lbs, Loosen, 52 ft/lbs + 60° (New Bolts)
EXHAUST MANIFOLD BOLTS:	22, 41 ft/lbs
FLYWHEEL BOLTS:	92, 184 ft/lbs (w/ 15w40 Oil), Flywheel Hsg: 74, 145 ft/lbs
VIBRATION DAMPER:	130 ft/lbs
CYLINDER LINER PROTRUSION/RECESSION:	Recession: .014" - .019" (Groove-Top Liners) Protrusion: .007" - .014" (Flat-Top Liners)
CRANKSHAFT (TRUST) END PLAY:	.004" - .019"
ROCKER ARM BOLTS:	50 ft/lbs, Loosen, 22 ft/lbs +60°
OIL PAN BOLTS:	40 ft/lbs
VALVE CLEARANCE (Set Cold):	Intake: .014" Exhaust: .027"
CYLINDER HEAD BOLTS:	148, 300 ft/lbs + 90°
FIRING ORDER:	1 – 5 – 3 – 6 – 2 – 4
OIL PRESSURE AT IDLE:	20 PSI @ Idle, 200° F

CYLINDER HEAD TORQUE SEQUENCE:



SPECIAL NOTES: Cummins® ISX feeds oil through the camshaft in order to lubricate the camshaft bearings. During the process, the camshaft acts as a centrifuge and any impurities in the oil will collect on the inside of the camshaft. The camshaft expansion plug must be removed and the inside of the camshaft must be cleaned.

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