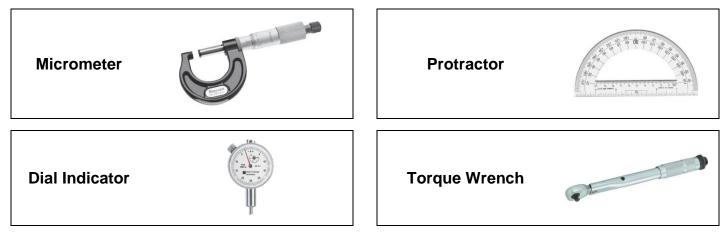
## WHAT YOU WILL NEED...

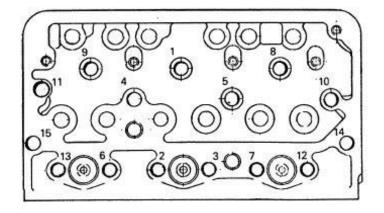
Apart from the typical tools you will need (assorted wrenches, sockets, hammers, screw drivers, slide calipers, feeler gauges, and the like...), there are some specialized tools you will also require:



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 – PERKINS<sup>®</sup> 3.152 DIRECT INJECTION

MAIN CAP BOLTS:	110-115 ft/lbs
CONNECTING ROD BOLTS:	Self-Locking (Non Plated): 70 ft/lbs
	Cadmium: 45 ft/lbs
	Phosphate: 60 ft/lbs
CAMSHAFT GEAR BOLTS:	21 ft/lbs
BALANCER WEIGHT BOLTS:	55 ft/lbs
IDLER GEAR HUB:	50 ft/lbs
FLYWHEEL BOLTS:	78 ft/lbs
CYLINDER LINER PROTRUSION/RECESSION:	.004" Below to .002" Above
PISTON PROTRUSION:	.001" Below to .004" Above
CRANKSHAFT (TRUST) END PLAY:	.002"015"
BELL HOUSING BOLTS:	36 ft/lbs
VIBRATION DAMPNER BOLTS:	.1875" Washers: 105 ft/lbs
	.35" Washers: 240 ft/lbs
VALVE CLEARANCE (Set Cold):	Intake: .012"   Exhaust: .012"
FIRING ORDER:	1-2-3
CYLINDER HEAD NUTS & BOLTS:	Nuts: 60 ft/lbs
	Bolts: 70 ft/lbs



This information is provided from the best available sources at the time of publication; however, the supplier assumes no responsibility for data accuracy or consequences of its application. Be aware that this publication is <u>NOT</u> a warranty.