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TECHNICAL BULLETIN		Mfg: CATERPILLAR
	December 2009	Model: C15
	TB 2526	Liter: 14.6L
		V I N:
		Year: 99-07

Lower Cylinder Block Bore Repairs For
Caterpillar 3400, C15, & C18 Diesel Engines

The AERA Technical Committee offers the following information regarding lower cylinder block repairs for Caterpillar 3400, C15 & C18 diesel engines. This information should be considered any time the cylinder liners are being serviced. The photo in Figure 1 below depicts resulting damage if the lower cylinder bores are not within specifications.

SEE DIAGRAMS TAB ABOVE

With newer engines (C Series) developing higher cylinder pressures and horsepower and older engine upgrades, the condition of lower bores becomes paramount during an engine build. Couple that with the older engines possibly having been previously built a few times before, making sure the liner is properly supported is even more important. Some engines are being upgraded from an older aluminum piston to the newer steel piston designs and this can increase the demand for performance of cylinder components as well. Clearances in the newer technology steel pistons are much tighter than those of their older aluminum predecessors, so controlling the liner movement could head off an expensive failure.

The process to repair the lower receiver bore is done with a "step" bore machining technique and a 4W6061 lower repair sleeve. To do this the cylinder block is machined to a specific oversized diameter and to a specific depth to create the proper press fit and a step in the block bore. The "Step", as shown below in Figure 2, helps retain the sleeve and creates a good seal when the sleeve bottoms out against it.

SEE DIAGRAMS TAB ABOVE

The oversized dimensions to be machined into the cylinder block (shown above) to accept the 4W6061 repair sleeve and create the proper press fit are:

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Depth of machining is 8.826 +/- .010" (224.19 +/- 0.25mm)
Diameter is 6.2205 +/- .001" (158.00 +/- 0.025mm)

The AERA Technical Committee

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Bulletin Diagram: FIGURE 1. CYLINDER LINER DAMAGE - CYLINDER BLOCK



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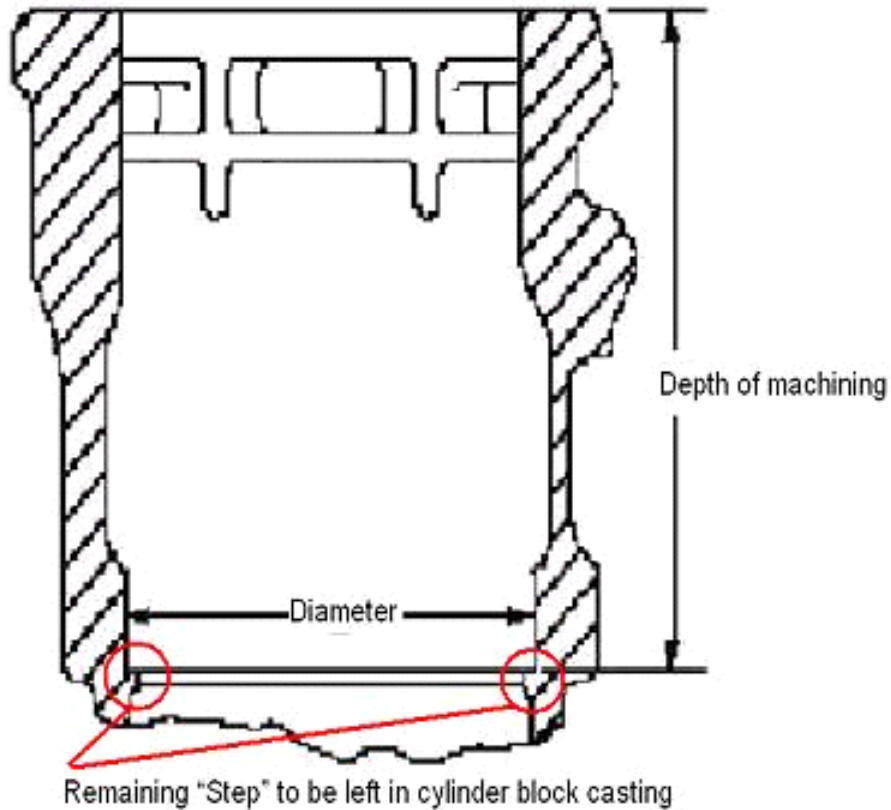
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Bulletin Diagram: FIGURE 2. CYLINDER BLOCK MACHINING LOCATIONS - CYLINDER BLOCK



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