



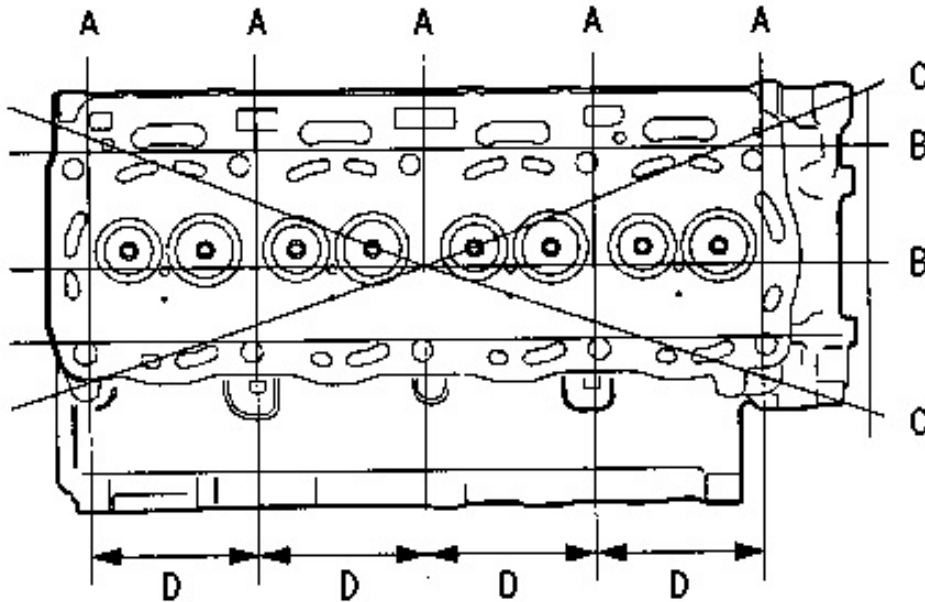
Cylinder Head Installation on Caterpillar/Perkins 3054E/1104D Diesel Engines

The AERA Technical Committee offers the following information on cylinder head installation for Caterpillar/Perkins 3054E/1104D diesel engines. This information is somewhat unique to this engine series and differs from previous 3054 series engines.

The torque sequence and procedures shown below should be followed after the cylinder head has been resurfaced or deemed acceptable for reuse using the specification listed below.

Cylinder Head Specifications

Dimension Maximum	Permissible Distortion
Width (A)	.0018" (.033 MM)
Height (B)	.0019" (.050 MM)
Diagonal Line(C)	.0019" (.050 MM)
Width (D)	.0018" (.033 MM)



Cylinder Head Thickness New 4.643-4.647" (117.950-118.050 MM)
Cylinder Head Thickness Minimum 4.614" (117.200 MM)

Cylinder Head Installation

Before installation, lubricate the threads and the underside of the head bolts with clean engine oil. There are seven longer (1, 3 & 4) and three shorter (2, and 5-10) bolts used.

1. Tighten all bolts in the sequence that is shown in Figure 2 to 37 FT/LBS (50 Nm)
2. Tighten all bolts again in sequence to 74 FT/LBS (100 Nm)
3. Tighten the seven short bolts (2 and 5-10) an additional 225° ($5/8$ of a turn)
4. Tighten the three long bolts (1, 3 & 4) for the additional 270° ($3/4$ of a turn)

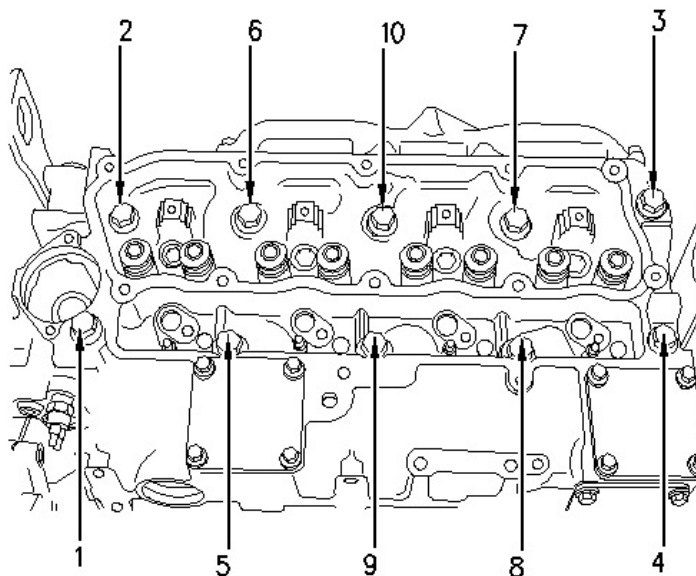


Figure 2. Head Bolt Torque Sequence

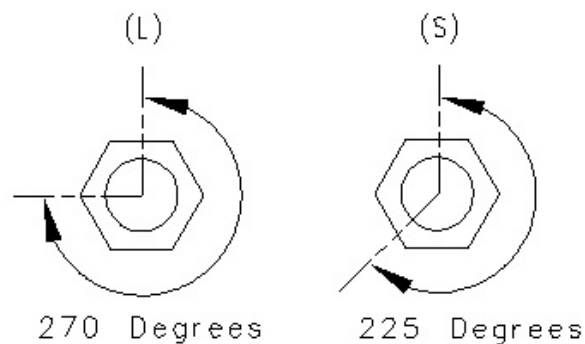


Figure 3. Degree Torques