

Cylinder Head Distortion

Special Tool(s) / General Equipment

	307-400 Gauge Bar TKIT-2002N-DEW TKIT-2000AP-FLM/LM
	Feeler Gauge

Cleaning

1. **NOTE:** It is important that the cylinder head be thoroughly cleaned prior to taking cylinder head distortion measurements. Failure to remove carbon deposits or other material from measurement areas will result in inaccurate measurements.

Clean the cylinder head.
Refer to: Cylinder Head Cleaning (303-01B Engine - 6.7L Power Stroke Diesel, General Procedures).

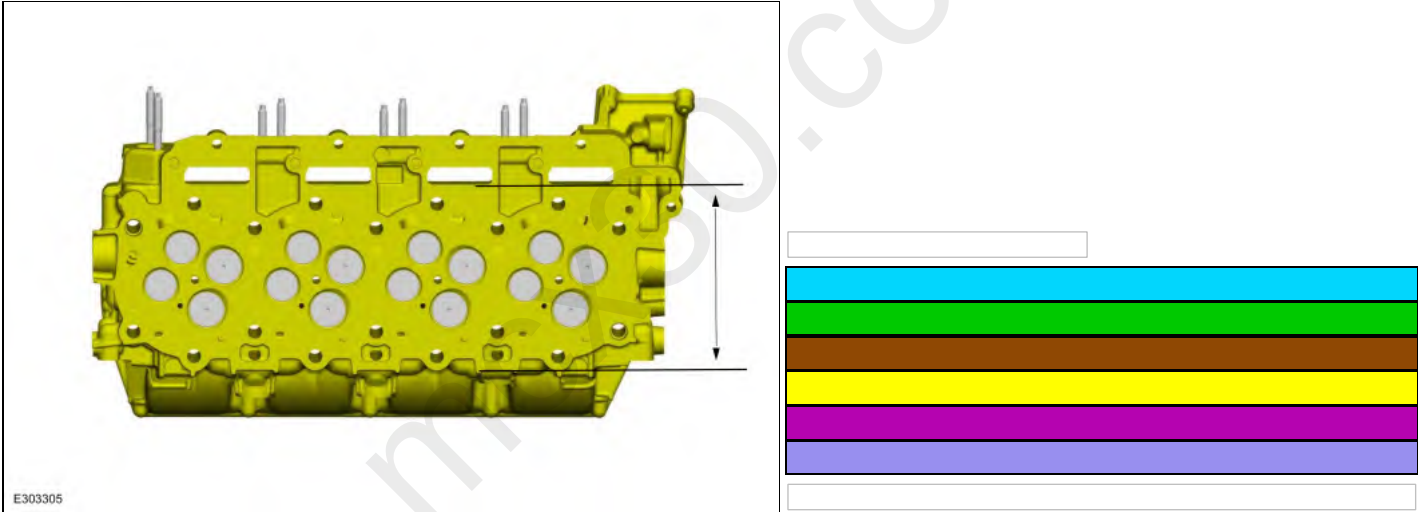
Check

1. **NOTE:** Staining of the metal surface is normal and does not affect sealing ability.

NOTE: Witness marks or indentations in the cylinder head resulting from the head gasket fire rings are normal and do not affect sealing ability.

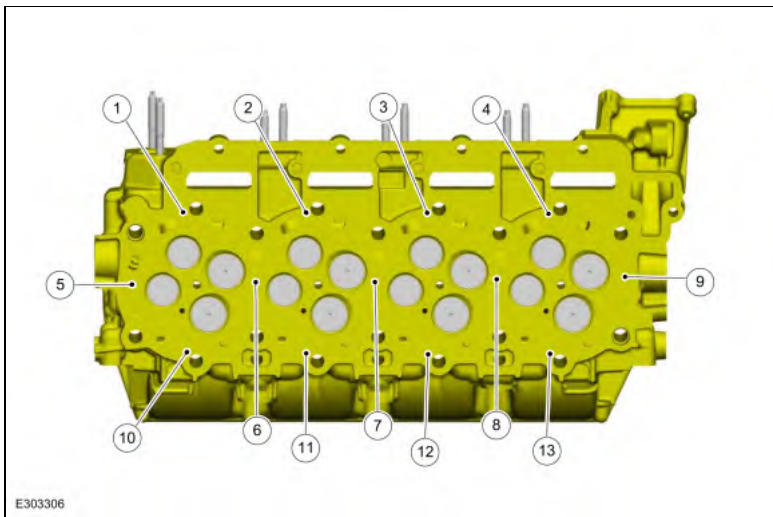
NOTE: Do not measure for cylinder head distortion along the length, across the full width, or across a diagonal of the cylinder head. These types of measurement will provide inaccurate results.

Measure only the outboard surface of the cylinder head, from the push rod openings to the outer edge of the cylinder head.



2. **NOTE:** When checking the 13 locations on the combustion chamber sealing surface, keep the feeler gauge away from the valve area as they may lead to incorrect measurement.

Check for distortion only at the 13 locations shown.



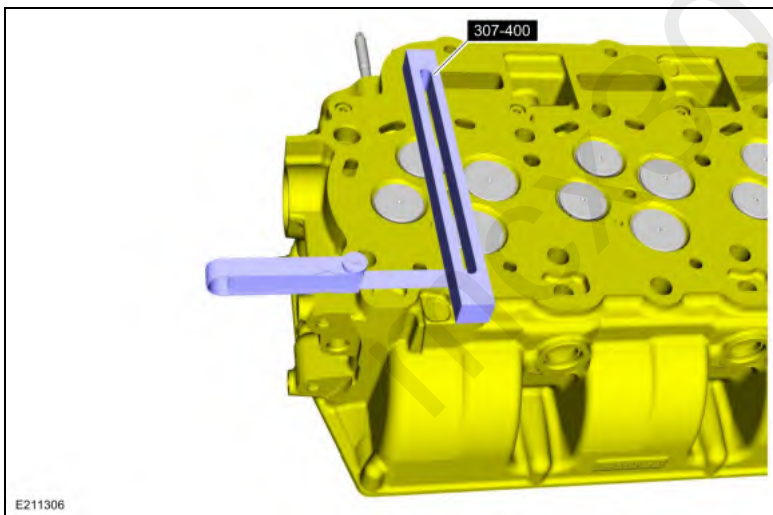
3. **NOTICE:** Avoid running the tip of the feeler gauge into the Gauge Bar (or straightedge). This may cause damage to, or distort the tip of, the feeler gauge. The result may be inaccurate readings.

NOTE: If the Gauge Bar is not available, use a calibrated straightedge that is calibrated by the manufacturer to be flat within 0.0127 mm (0.0005 in) per running foot length, such as a Snap-On® GA438A, or equivalent.

Place the 0.1 mm (0.003 in) feeler gauge on the cylinder head at one of the specified locations. Then place the Gauge Bar (or straightedge) on top of the feeler gauge. Lightly press on the center of the Gauge Bar (or straightedge) while checking the measurement.

Use Special Service Tool: 307-400 Gauge Bar.

Use the General Equipment: Feeler Gauge



A horizontal bar chart with six bars of equal length, stacked vertically. The colors from top to bottom are cyan, green, brown, yellow, purple, and light blue. Each bar has a thin black outline.

4. Attempt to pull the feeler gauge out from under the Gauge Bar (or straight edge).
Use Special Service Tool: 307-400 Gauge Bar.
Use the General Equipment: Feeler Gauge



6. Repeat the cylinder head distortion measurement at each of the 13 locations shown.

