



Preliminary Information

PIP5163E Alleged Cylinders Out Of Round

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
All	All	2000 - 2021	All	All	All	All

Supersession Statement

This PI was superseded to update Model Years. Please discard PIP5163D.

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition / Concern

Suspecting an engine block of possible cylinder bore damage, scoring or out of round as the possible cause of engine oil consumption, misfire, cylinder leakage or blow by.

NOTE: GM has not had an issue with cylinders being machined out of round for any engine family in recent history.

The peak to valley spec for crosshatch is .65-2.8 microns. Any deviation and the crosshatch will be gone.

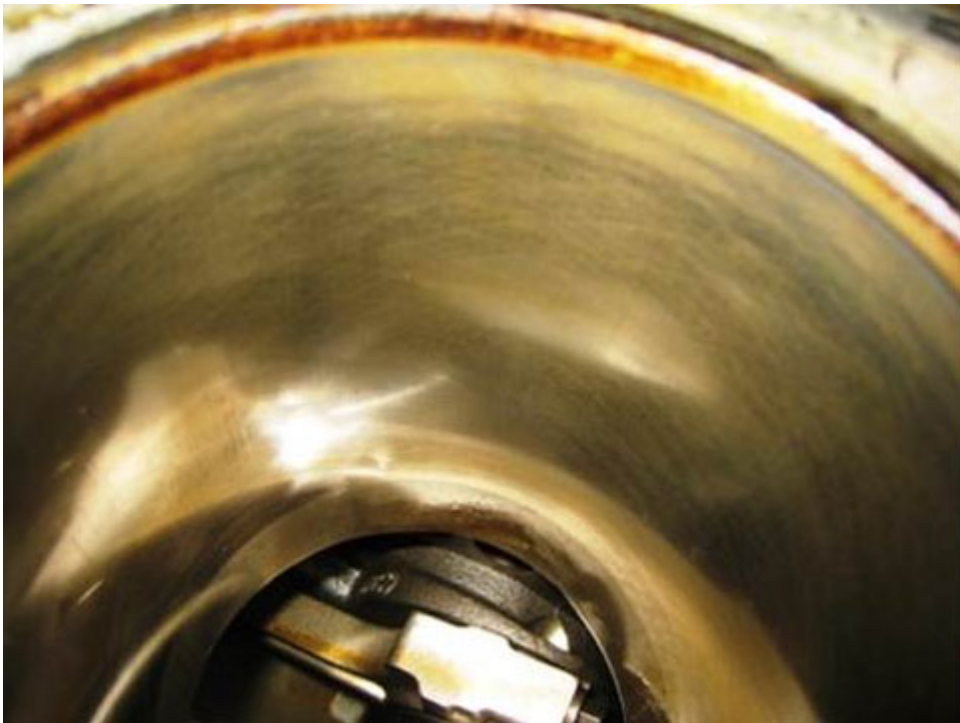
Even if a cylinder is suspected of being oversize we can only confirm that by checking with an air gauge at the engine plant.

Recommendations / Instructions

When inspecting the engine block to determine if the cylinder bores are good,

Look for the following:

- 1. Cylinder damage or scoring-** the cylinder walls will contain grooves deep enough to catch with a finger nail.
- 2. An out of round cylinder bore-** will contain areas where the cross hatch is missing or worn from different section of the cylinder bore. If there is crosshatch all the way around the bore from top to bottom the cylinder bore is not out of round.
- 3. Dirt intrusion-** If the filtering system has been compromised the engine will wear out very quickly. You will find grit in the intake Runners and the cylinder bores will look lightly sand blasted. The crosshatch will be faint and there will not be sharpness. At high mileage this may not be Warrantable if the air filtering system has been opened numerous times for service in dusty climates.
- 4. Catalytic Converter failure-** If a converter fails and the brick is broken, the dust can be drawn back into the engine. A block showing this type of failure, will have bores that look to be sand blasted. Back cylinders go first if caught early. Otherwise there will be no Crosshatch and the engine will need to be replaced.



Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

