

DIESEL SERVICE, CRANKSHAFT MACHINING, LASER ALIGNMENT AND ELECTROPLATING

CRANKSHAFT AND ENGINE BLOCK REPAIR WAUKESHA 12V-AT27GL SERIES

A major Oil & Gas company in Indonesia approached Goltens to inspect and offer a repair solution for their troubled Waukesha 12V-AT27GL gas engine. A team consisting of a Diesel Service Engineer and an In-Situ Machining Specialist was dispatched to the customer's site to measure the extent of damage and recommend the best repair solution.

During the inspection of the engine, Goltens discovered that one of the engine's main journals and bearing caps had been damaged. Extensive fretting was discovered on #4 main bearing cap and extensive scoring was found on the bearing. Goltens recommended a laser alignment check on the bores, machining of the crankshaft and selective electroplating of the bearing cap.

It was suspected that the crankshaft damage was caused by hammering as a result of the damaged and loosened cap but Goltens performed a laser check on the bores to ensure there was no other cause.

REPAIRS CONSISTED OF:

- Disassembly of engine
- Relocate engine block to safe area for repairs
- Removal of crankshaft from engine block
- Laser alignment check on center line of main bearing bore
- Selective electro plating of #4 main bearing cap due to fretting on mating surface
- Machined main journal #4 by 1.0mm undersize at workshop
- Replaced crankshaft in engine block
- Engine reassembly and laser alignment
- Operational testing and commissioning

RESULTS:

Goltens' team completed this complicated job in full compliance with the demanding Health, Safety and Environmental requirements of the Oil & Gas industry. Goltens completed the job within the agreed timeframe and returned the repaired engine to service.

PROJECT FACTS:

Engine type:	Waukesha 12V-AT 27 GL
Bore/Stroke:	275/300mm
Main Journal dia:	225.00 mm
C/P Journal dia:	195.00 mm
Location:	Jambi - Indonesia

