

FOUR WARTSILA 12V50DF OVERHAULS IN ONLY 14 DAYS

TIGHT OVERHAUL SCHEDULE MET FOR LNG TANKER IN SINGAPORE

Goltens Singapore was engaged by a Singaporean shipyard to undertake an engine overhaul project on a 9-year-old LNG tanker with a tight timeline. The yard required four Wartsila 12V50DF auxiliary engines to be overhauled in only 14 days.

Goltens Singapore compiled the overhaul scope of work and drafted the work schedule for the 18,000 hour routine maintenance work based on the engine manuals and extensive past experience.

OVERHAUL SCOPE:

- Inspection and overhaul of all 48 cylinder heads including the pressure test and renewal of intake/exhaust valves, valve guides and valve seats
- Inspection and overhaul of the rocker arm assemblies
- Inspection, calibration and crack test of pistons and connecting rods per engine maker's specification
- Calibration and honing of cylinder liners for better engine performance
- Renewal of crank pin bearings and checking of bearing clearances per the instruction manual and engine running hours
- Overhauling of fuel injection systems for increased efficiency
- Adjustment of valve tappet clearances
- Renewal of all gas admission valves
- Checking and recording the crankshaft deflections

RESULTS:

The 18,000-hour overhauls were successfully completed within the 14-day window required by the customer. All engine safety devices were checked and found to be working normally and a running in program was carried out as per the maintenance manual. Once completed, the dual fuel engines were tested up to 100% load and all engine parameters were found to be normal prior to handing the engines over to the vessel's Chief Engineer.

PROJECT FACTS: DUAL FUEL ENGINE OHAUL

Engine Make/Model:	Wartsila 12V50DF
Quantity:	Four
Location:	Singapore
Vessel Type:	LNG Tanker
Year of Build:	2012



Figure 1: Goltens technicians disassembling one of the 12V50DFs



Figure 2: Goltens Engineer removing Piston



Figure 3: Slacking of Cylinder head nuts



Figure 4: Cylinder Head installation



Figure 5: Torquing of Rocker Arm Assemblies



Figure 6: Part of Goltens' team after completion of the 18,000 hr overhauls