



Four-stroke division

Our engine component division is highly specialized in reconditioning of major engine components with in all four-stroke engines.

As the crews have been reduced in recent years, the time and skills with regard to engine service overhauls on site have declined equally.

Facing the increased focus on quality and price we have developed engine exchange kits minimizing possible poor onsite repairs...

- CNC tool center machining of connecting rods with new serration and bore to original standard - (magnaflux tested with full report for class society approval).

- Cylinder cover reconditioning facility for standard overhauls and more extensive repairs within all four-stroke engines.
- Gehringer honing machine with fixed spindle for precise honing of cylinder liners with correct honing pattern and roughness (reduction of lube oil consumption) from 0 - 450 mm bore.

Authorized service (HI service) and repair facility by HHI-EMD for all HIMSEN engines.



The CNC control center



The CNC in action

Reconditioning of connecting rods

PJ Diesel provides reconditioning of all makes and types of connecting rods in house with a short delivery time.

Procedure

The connecting rod is cleaned and dismantled, checked for damage and cracks, checked for overheating and ovality in the big-end bore, checked for damage in the small-end bore, re-machining of the serration, re-boring of the big-end to standard size, shot-peening (if required), mounting of new small-end bushing, new screws, bolts and nuts.

Final check by our quality control

A work report will be provided upon completion.

Exchange stock

PJ Diesel have a exchange system/stock of connecting rods available 24 hours.

Upon receipt of order we supply exchange con rods with deposit.

This deposit is later credited upon receipt of used connection rods in repairable condition within 3 months after delivery.



Totally renewed connection rod goes into our exchange system

"A trusted service partner for the environment- and economy-conscious service company or ship owner"

Reconditioning of cylinder covers

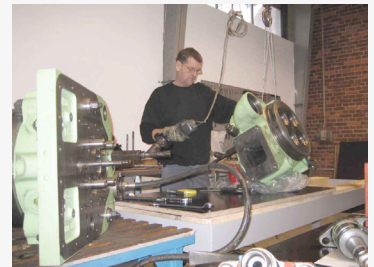
Example:

Each cover is to be dismantled, inspection of all parts for wear and damage, valve seats, spindles, rotor cap, safety valve, rocker gear are to be reconditioned or replaced as necessary, lapping of tightening recess, 7-bar pressure test and refitting.

A work report will be provided upon completion.



The 4 Stroke workshop



Overhaul of cylinder covers



Cylinder liners after cleaning and honing

Honing of liners

Gehring Honing machine

Stroke: 1500 mm

Bore: 0 - 450 mm

- Each liner is to be cleaned and the inside diameter measured. Control of o-ring groove, check of landing surface and sealing surface.
- The liners are then "machine" honed to reestablish liner geometry of the entire running surface followed by final check measurements.
- A report of the work performed will be provided upon completion inclusive roughness.
- If the first control of the cylinder liner indicated reconditioning is not possible,

the liner is rejected; the customer will be informed and new liners are quoted.



Measuring of surface roughness RA value



7-stone vertical honing machine