WÄRTSILÄ **Engine Services**

2-STROKE REMANUFACTURING SOLUTIONS

ENERGY
ENVIRONMENT
ECONOMY

ENORMOUS COST SAVINGS

Wärtsilä Remanufacturing Solutions offer a new dimension in maintenance cost limitation. Globally available Exchange Parts and locally offered Remanufacturing Services for all brands allow customers to dramatically reduce the operation expenses of their engines.

- Reduced maintenance costs
- Maximized service lifetime
- Improved profitability

WÄRTSILÄ

THE CONCEPT

Remanufacturing brings used and worn out components back to their full functionality. The standard component specifications and service lifetime is fully regained.

This well proven concept reduces the costs of maintenance compared to a replacement by new components substantially.

Customers can benefit from a long list of advantages:

- Strongly reduced maintenance costs due to the re-use of component cores
- High engine reliability due to guaranteed OEM quality, latest modification standards, industrialized production processes
- Reduced environmental footprint by reusing materials

Worn cylinder covers become as new

WHAT CUSTOMERS SAVE

The cost for remanufacturing parts is only a fraction of the price of a new component. Since the quality is equal, more and more ship owners and operators are taking advantage of this highly efficient maintenance concept.

On RTflex engines, the savings can easily make 20% of the total maintenance costs!

The maintenance cost savings for operating years 4-13
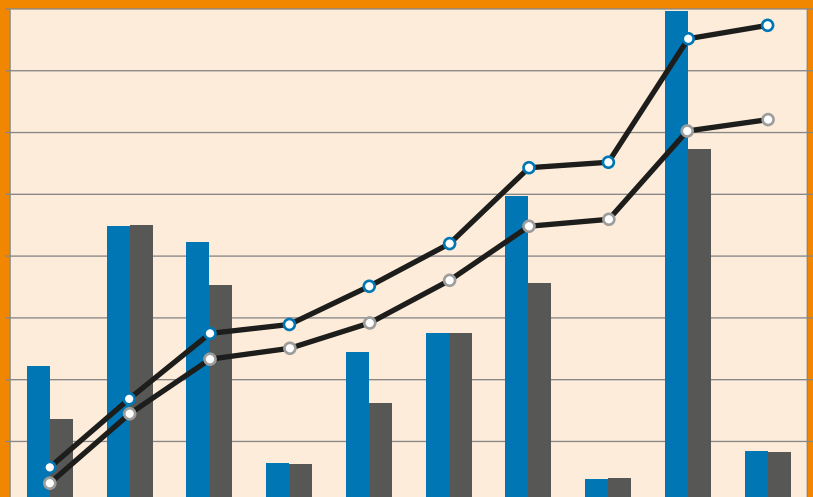
■ maintenance costs, normal schedule, all new parts
■ maintenance costs, normal schedule, new + remanufactured parts
●○ cumulative maintenance costs (all new parts)
●○ cumulative maintenance costs (new + remanufactured parts)
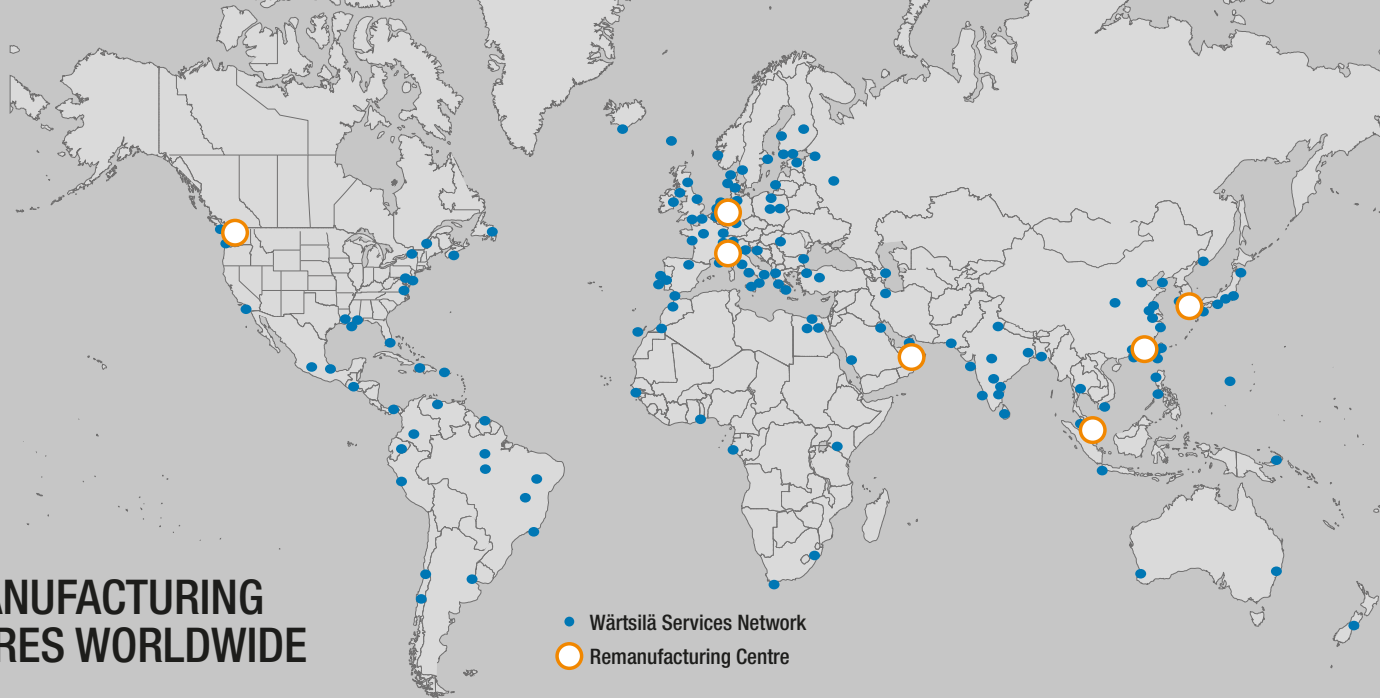
REMANUFACTURING CENTRES WORLDWIDE

- Wärtsilä Services Network
○ Remanufacturing Centre

PRODUCTS AVAILABLE

SAVE UP TO*

Exhaust valve spindles	Cylinder covers	Piston crowns	Piston rods
-70%	-75%	-50%	-50%
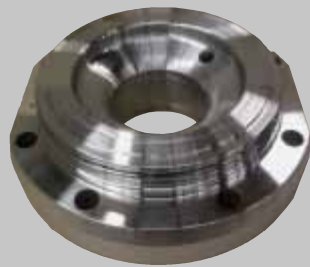
* From the global list price of new components

REMANUFACTURING SERVICES

Remanufacturing Services are carried out on the customers' own components. In comparison to the global list price of a new part the costs of this service are dramatically lower.

Your benefits
- Get your own parts back
- Workshops all over the world

Component Remanufacturing Centres → SU's → **Customer**

How Remanufacturing Services are locally available.

THIS IS HOW IT WORKS

The customer sends his used components to a Wärtsilä Workshop for remanufacturing and receives the same components back. The local Wärtsilä representative is the contact person and can support the logistic process.

The Wärtsilä Remanufacturing Services are available in various workshops in all regions of the world. These officially approved remanufacturing centers apply industrialized procedures on high standard equipment and tools.

EXCHANGE PARTS AVAILABLE

Injection Control Units	Flex Fuel Pumps	Servo Oil Pumps	Pressure Control Valve	CLU4/C
-50%	-65%	-50%	-40%	-50%

* From the global list price of new components

EXCHANGE PARTS

The Exchange Parts Service is currently valid for major components of Wärtsilä two stroke RT-flex engines. The exchange system means remanufactured components are available ex stock and sold at a reduced cost to the customer. This is achieved by having a pool of remanufactured components available at Wärtsilä's warehouses that can be supplied before the used components are sent back for remanufacturing. Meaning the customer can benefit from the price advantages of a remanufactured component without the associated lead times.

Component Remanufacturing Centres → **WGLS** → **SU's** → **Customer**

How exchange parts become globally available

Your benefits
- All products available ex-stock
- All products globally available
- Latest design components

THIS IS HOW IT WORKS

Wärtsilä has created a pool of 'Exchange Parts' in Wärtsilä's warehouses in Kampen (the Netherlands) and Singapore. The pool stock means that customer's orders can be delivered while the used parts to be taken into the process are returned to Wärtsilä or are in the remanufacturing process. The used components are remanufactured in dedicated and specialised Wärtsilä workshops and put back into stock.

Contact your local sales representative or visit www.wartsila.com for more information

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