

# BERGEN E N G I N E S

ON LAND. AT SEA.



Aftermarket Services

# WORLDWIDE EXCHANGE POOL



A Langley Holdings Company

# THE WORLDWIDE EXCHANGE POOL (WWEP)

Every year increasingly more customers discover the advantages of entering the WWEP. Save time and costs and maintain the highest quality of your engine revisions with our exchange pool.

## It's all about planning

Requirements to reduce engine downtime, and less engine operator resources, means reduced capacity to undertake regular engine maintenance. We have therefore built up an exchange pool of already overhauled components at fixed prices, with focus on labour consuming parts, to save valuable time and money for our customers.

The exchange pool components are provided on a supply and fit basis, making engine overhauls quick and hassle-free. You can order the necessary components from the WWEP, and replace the used components once the exchange pool components have arrived. This way engine downtime is reduced to a minimum.

## Time and labour saving

The order process is very simple, as the order of exchange pool components normally only contains a few items. Engine overhauls can be done much faster with exchange parts. As an example, a specialized workshop would spend 10-15 hours to overhaul a cylinder head.

## Quality

The WWEP components are fully stripped, ultrasonically cleaned, repainted and pressure tested before reassembly according to OEM standards. The components are also updated to the latest version, in compliance with relevant regulations. Any worn parts are automatically replaced - your assurance of reliability.

## Avoid unexpected surprises

There are many factors that may affect the lifetime of engine components. Consequently, the actual condition of some of the engine components may be unknown until dismantling. This makes it difficult to plan needed parts, labor and duration. With the exchange pool concept you remove the risk for unexpected surprises related to these components, and you can plan your overhaul much more accurately.

## Warranty

Using the exchange pool is an ideal way to reduce engine downtime while ensuring a top class overhaul, underpinned by a Bergen Engines OEM warranty (for example 12 months warranty for cylinder heads).

## Benefits

- OEM quality overhaul
- Genuine parts
- Latest technology
- Safe operation
- Reduced off-hire time
- Fixed price
- Easy to budget
- OEM warranty

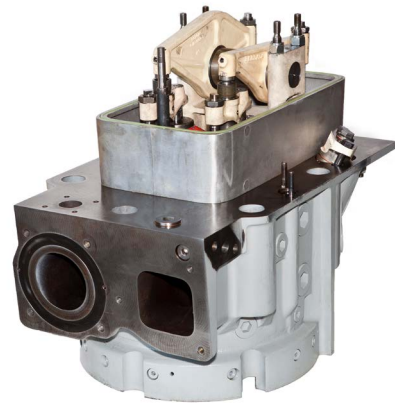


# EXCHANGE POOL COMPONENTS

For all overhauled components in the WWEP programme the following applies.

## Cylinder head

- Completely dismantled and cleaned
- Controlled and pressure tested
- Valve seats are replaced
- Valve guides are controlled and replaced if necessary
- Valve spindles are grinded or replaced if necessary
- Rocker arms are overhauled. Shaft, pressure bolt, slide shoe etc. are replaced if necessary. Bushing is always replaced.
- Sealing surface is always controlled and grinded if necessary
- All gaskets, O-rings, and circlips are replaced
- All threaded areas are controlled
- Starting air valve is controlled and overhauled (B cylinder heads only)
- Repainted
- Preserved with rust inhibitor before packing
- **12 months warranty from date of delivery**



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## Fuel injection pump

- Completely dismantled and cleaned
- Housing is controlled for damages
- Pump element replaced
- All gaskets, O-rings and circlips replaced
- Spring is replaced. Upper and lower spring plate replaced if necessary
- Top connection piece overhauled and replaced if necessary
- Tested and calibrated in Merlin DC40 test bench
- Controlled for leakages and delivery amount
- Complete test documentation included
- Preserved with rust inhibitor before packing
- **12 months warranty from date of delivery**





## Fuel injection pump drive

- Completely dismantled and cleaned
- Housing is controlled for damages
- All gaskets, O-rings and circlips replaced
- All other parts inspected and replaced if necessary
- Preserved with rust inhibitor before packing
- **6 months warranty from date of delivery**



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## Start air valve

- Completely dismantled and cleaned
- Spindle is grinded or replaced if necessary
- All springs, gaskets and O-rings are replaced
- Preserved with rust inhibitor before packing
- Pressure tested
- **6 months warranty from date of delivery**



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## Fuel injection valve

- Completely dismantled and cleaned
- Body controlled for damages, mounting face grinded if necessary
- All springs, gaskets and O-rings are replaced
- Opening pressure and spray control
- The fuel injection is also available with nozzle mounted and tested
- Preserved with rust inhibitor before packing
- **6 months warranty from date of delivery**



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## Governor

- Completely dismantled and cleaned
- All gaskets, O-rings and bearings are replaced
- Tested and adjusted / calibrated
- Repainted if necessary
- **6 months warranty from date of delivery**



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## Lubricating oil pump

- Completely dismantled and cleaned
- Shaft and gears are controlled and replaced if necessary
- All bearings, gaskets and bushings are replaced
- Repainted
- **12 months warranty from date of delivery**



## Oil mist detector

Fully overhauled, calibrated and tested by OEM

- Completely dismantled and cleaned
- Mechanical parts are inspected and replaced if necessary
- All gaskets, O-rings
- Alu-blasted according to regulations
- All sensors are replaced and calibrated
- Connecting socket, gaskets, dampers and filters are replaced
- Upgraded to EMC standard and certified to maker's procedure
- Main climate chamber tested for 20 hours
- **12 months warranty from date of delivery**



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## Fuel oil pump, engine driven

- Completely dismantled and cleaned
- Shaft and gears are controlled and replaced if necessary
- All bearings, gaskets and bushings are replaced
- Repainted
- **6 months warranty from date of delivery**



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## Air starter

- Completely dismantled and cleaned
- Bushing and bearings replaced.
- All other parts inspected and replaced if necessary.
- Repainted
- Preserved with rust inhibitor before packing
- **6 months warranty from date of delivery**



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## Cylinder liner

- Cleaned and inspected
- Honed according to specifications
- Preserved with rust inhibitor before packing
- Documentation included
- **6 months warranty from date of delivery**



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## Governor drive

- Cleaned and inspected
- All bearings and gaskets replaced
- Pinions inspected and replaced if necessary.
- Shimmed according to specifications
- Preserved with rust inhibitor before packing
- **6 months warranty from date of delivery**



## Gas admission valve

- Cleaned and inspected
- O-rings and gaskets replaced.
- Valve seat replaced.
- All other parts inspected and replaced if necessary.
- Controlled and pressure tested
- **6 months warranty from date of delivery**



## Gas regulating valve

- Cleaned and inspected
- All bearings, O-rings and gaskets replaced.
- All other parts inspected and replaced if necessary.
- Controlled and pressure tested
- **6 months warranty from date of delivery**



## Reduction valve control air

- Cleaned and inspected
- O-rings and gaskets replaced.
- All other parts inspected and replaced if necessary.
- **6 months warranty from date of delivery**



Our passion for quality is your assurance  
ON LAND and AT SEA

# RETURNING EXCHANGE COMPONENTS

The used components removed from engine must be returned to Bergen Engines within the leasing time agreed in the order. The standard time is 90 days from date of shipment. Longer leasing time can be ordered upfront for an additional fee. Late return fee will apply if returned later than the agreed leasing time.

**IMPORTANT:** All returns shipments must include a Return Order provided by Bergen Engines. Copies of this must be included on the outside and inside of the shipment. This is to secure correct and efficient processing when arriving our facilities. If a shipment is made without this you risk rejection upon arrival, and late rerun fee due to any delay.

## Late return fee

The following late return fee charges shall apply:

First month late 10%  
Second month late 15%  
Third month late 20%

All percentages are calculated against the face value of the corresponding Binding Order. The first month fee shall be due and payable the day immediately following the date on which the Removed WWEP Part was due for delivery to Supplier. The successive month fees shall become due and payable on the monthly anniversary of this date. Delays in excess of 4 months shall be invoiced with a fee of 20 % for each subsequent month until the Removed WWEP Part is delivered to Supplier in accordance with clause 3 of this Agreement.

## Delivery and conditions

Supplier shall deliver the WWEP Parts to Customer on the date agreed in the Binding Order, at the Suppliers location agreed in the Binding Order. Unless otherwise agreed in the Binding Order, the delivery of the Removed WWEP parts by Customer to Supplier shall be DDP. Removed WWEP parts must be delivered to Supplier in a repairable condition and all parts of the Removed WWEP Part must be packed and preserved for transport. If possible, we recommend reusing the packing material for the supplied components.

In the event that the Removed WWEP parts, or any of individual parts of the Removed WWEP Part, are damaged Beyond Economic Repair when delivered to Supplier, Supplier will issue Customer an invoice for the cost associated with replacing such parts.

**BERGEN ENGINES**  
ON LEASE AT SEA

Sold-to: Company

**Return Order**

Page  
Return Order  
Date  
Sold-to A/c

Ship-to:  
Bergen Engines A.S.  
Hordvikneset 73  
5108 Hordvik

Customer Reference  
Terms of Payment  
Mode of Transport  
Shipping Terms

DDP Hordvikneset 73, NORWAY

Item	Matl/Description Old Part No/Text/Cust Matl	Qty	Unit Price USD	Line Value USD
10	RB0201731 Exchange cyl.liner C25:33 RB0201731	18	PC	

Return within 60 days after delivery or according to agreed days.  
Return parts according to T&C # 3.2 # 3.3 # 3.4  
Late return will be charged according to T&C 3.8  
Please include 2 copies with the shipment, inside and outside of each collie.

Yours faithfully,  
Bergen Engines AS  
service: bergen@bergenengines.com  
+4755536345

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Enterprise number: NO 997 016 238 MVA  
A Langley Holdings Company

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Stuttgart, Germany  
All currencies except NOK:  
SWIFT: DEUTDE33XXX  
IBAN: DE22260100700155240000

Customer in Norway: Bank: Nordea Bank  
Abo. Fikst. Norge  
SWIFT: NDEANOKK  
IBAN: NO5169010562346 (NOK)  
Foretakregisteret

# CONTACT US

Do you have questions or do you need advice regarding our products and services? Feel free to give us a call or to send us an email. We are looking forward to hearing from you.

## Spare Parts & World Wide Exchange Pool

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**HQ: Bergen Engines AS, Norway**

Subsidiaries:

SPAIN | ITALY | BENELUX | DENMARK | INDIA | BANGLADESH | USA | MEXICO | UK

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