



Center for repair and rebuild of components and assemblies

Overhaul of engines, transmissions, other components and assemblies of mining and construction equipment



Information about center

The center is equipped according to the Komatsu standards, designed for distributor repair shops. The specialists of the Center work on certified equipment: machines for machining cylinder blocks and crankshafts, precision measuring instruments, cleaning systems and surface painting, engine break-in test bench, assembly areas and much more.

Each component or unit for overhaul is disassembled, and all its elements undergo a thorough troubleshooting based on the manufacturer's rejection criteria.

Basic elements of the engine, such as the cylinder block, crankshaft, cylinder heads, as the most expensive parts, are restored. In terms of their parameters, the restored parts are identical to new ones, as the geometry and condition of the parts strictly comply with the manufacturer's specifications and criteria.

There is operates a multi-stage quality control in the center, including re-checking of parts before assembly.

After assembly, all engines undergo mandatory tests on a running-in stand, the purpose of which is to ensure the service life of the repaired engine (not less than 80% of the planned previous operating time of the customer's unit/unit).

During the engine test, all the necessary parameters are checked in accordance with the test plans with the obligatory achievement of 100% of the rated engine power.



Services

Repair of diesel engines of construction and mining equipment.

Owners of Komatsu equipment are saving significantly by extending the life of the engine, rather than buying a new one. This opportunity is provided to them by the official distributor of Komatsu KOMEK Machinery Kazakhstan. Compared to the price of a new engine, overhaul costs 40-60% less.

Transmission repair (gearbox and GTR)

Machining of basic engine parts (engine cylinder block, cylinder head, crankshaft, connecting rods).

A wide and modern machine park of the Center allows for unique repairs and restoration of expensive engine parts. This service is included in the cost of the overhaul. Machining of the basic parts of the engine is required to eliminate various surface damage, scuffs, cracks, restore the original geometry and tightness



KOMEK



Advantages



Retrenchment of costs

The cost of a remanufactured engine is less than the cost of a new one.



Komatsu quality

Genuine parts are used, the engine meets the manufacturer's specifications (as from the factory)



KOMEK Machinery Kazakhstan guarantee

Company warranty 6-12 months or 3000-6000 hours when using original parts



Reduce of the downtime

Recovery is faster than ordering and shipping a new engine



Ensuring the productivity of machinery

After a major overhaul, the engine power reaches the declared by the manufacturer

Facts about the center in numbers



>300

components and
units restored

12 years

in repair and
restoration

1550 m²

workshop
area

14 000 000 \$

capacity of own warehouse of
spare parts

6-12 months/
3000-6000 m/h

Guarantee terms

at least
80%

the resource of
the restored
node from the
resource of the
new one

The customers of the center get the following

All remanufactured engines pass a mandatory stage of quality control - run-in tests with 100% of rated power, in accordance with the requirements of the manufacturer.

The Rebuild Center uses only original spare parts, and parts are restored using high-precision semi-automatic equipment.

Each remanufactured component must be tested on break-in stands. After completion of all stages, the component is assigned a new serial number and shipped to the warehouse, from where it is transferred to the customer at a convenient time for him.

In terms of performance, a remanufactured component is virtually indistinguishable from a new one. In addition, it is covered by Komatsu's original warranty, which is equivalent to a new product warranty.

Komatsu HD785-5 mining truck engine





Technological equipment of the center

The center is equipped with the most modern and high-tech equipment. Semi-automatic machines for machining parts can increase productivity by 30-50%.



ROBBI SPES
Machining of engine block cylinders, cylinder heads and transmission housings



ROBBI R 2000-C
Machining coaxial holes 22-200 mm and up to 2200 mm long, machining accuracy 0.01mm



Carmec VGP1200
Quick replacement of guide bushings of any cylinder head



ROTTLER SG10XY
Valve seat boring and CNC with fixed pilot



Stand CDT - 22
Diagnostics of fuel pumps and high pressure injectors and common rail systems



Carmec PTR 1600L
Cylinder head tightness test, cylinder head length up to 1350 mm



AMC Schou K2000U
Machining of the engine crankshafts



3MB9817
Honing of engine block cylinders



DM100
Connecting rod cap machining, max diameter 275mm



Taylor DX 36
Testing of engines with maximum power up to 1500 hp



Recovery process



1. ACCEPTANCE Inspect and check the component for completeness and visible damage. The operation is carried out in accordance with the Komatsu checklist.



2. WASH

Cleaning the component of dirt, oil, lubricants in preparation for the next steps.



3. COMPONENT DISASSEMBLY AND WASHING OF PARTS

The component is disassembled in strict accordance with the Komatsu checklist under the supervision of experts. Each stage of disassembly is recorded, the center staff photographs each spare part. The resulting data is used for the disassembly report and the final evaluation of the component.



4. PARTS CHECK

Assess the reusability of parts and the need for refurbishment.



5. PREPARATION OF SPARE PARTS FOR COMPONENT ASSEMBLY

a) Recovery of spare parts selected for reuse using high-precision machine tools for metal machining. b) Ordering the spare parts necessary for the restoration of the component, subject to full or partial replacement.



6. PRELIMINARY (COMPONENT) ASSEMBLY

The component precedes the main assembly and includes the assembly of the cylinder head, the assembly of the ICE connecting rod, the short block of the engine, the power train, the torque converter and the transmission. Each stage takes place strictly in accordance with the Komatsu instructions.



7. MAIN COMPONENT ASSEMBLY

The main assembly begins after the completion of the preparation of all spare parts (new, remanufactured, used). Each stage of assembly takes place strictly in accordance with Komatsu manual.



8. COMPONENT TESTING

Testing a component on a running bench. The test results are entered into the database and can be provided to the customer upon request. If the component does not pass the test, the center specialists check, fix the problem, and the process is repeated



9. COLORING AND PACKAGING

Component is staining; installing spare parts that can only be installed after painting and pack the component..



10. INSPECTION AND DELIVERY

Features and operation of the K-WINS system

Komatsu Working Information Navigation System

The disassembly and assembly of the main components of Komatsu mining and construction equipment is carried out under the guidance of the K-WINS electronic system, which contains a phased visualization of processes and control points at critical stages of work, which eliminates the possibility of deviation from the technology.



K-WINS is a parts overhaul support system developed and used for Komatsu Global Reman factories.

It teaches you how to work with a parts database and provides “standartization” for overhaul parts.

Dissambly



Reusability assessment



Order list



Parts kit



Assembly



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