



AFRICAN TURBOMED LTD.

WORLD WIDE SERVICES AND SPARE PARTS

The Complete Turbo Solution in Africa



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TURBOMED

TURBO • TECHNOLOGY • WORLD CARE

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PROFESSIONALISM • EXPERTISE • DEDICATION

Who we are

AFRICAN TURBOMED LTD. is a newly established company located in Lagos, Nigeria, a sister company of TURBOMED S.A. and is active in the field of turbocharger services and spare parts supply.

For more than 40 years, TURBOMED S.A. has been identified with the high quality of turbocharger services and spare parts supply. With a steady course of action our company continuously expands its well-established global network of experts and associates.

Our new company in Lagos Nigeria - West Africa, provides turbocharger services and spare parts for all T/C types and manufacturers on time in Marine, in Oil & Gas Field and in Power Plant Industry.

Experience, high expertise, professionalism, consistency and accountability are some of the principles that permit our company to offer high quality products and value-added services to customers.

The key to your turbocharger's needs!

- 24 Hours worldwide Turbocharger services (Overhauling – Inspection – Maintenance)
- Turbocharger spare parts supply
- Repair – Reconditioning of turbocharger spare parts
- Turbocharger Modification – Retrofit



Overhauling – Maintenance

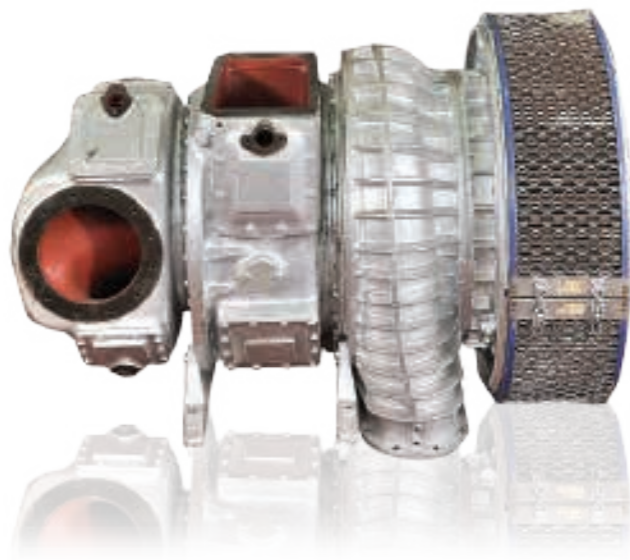
Since we are always giving priority to the customers' needs, we are aiming to serve any vessel around the world in order to ensure its turbocharger's operationally safe, minimizing potential engine downtime.

The staff of AFRICAN TURBOMED is made up of experienced, certified professional technicians and engineers who are ready to travel, support and confront the most demanding requirements in the field of turbocharger services either on board or at workshop 24/7, 365 days a year worldwide.

All overhauling works are accompanied with full inspection, maintenance and conformity report, according to the manufacturer's specifications.

Reconditioning

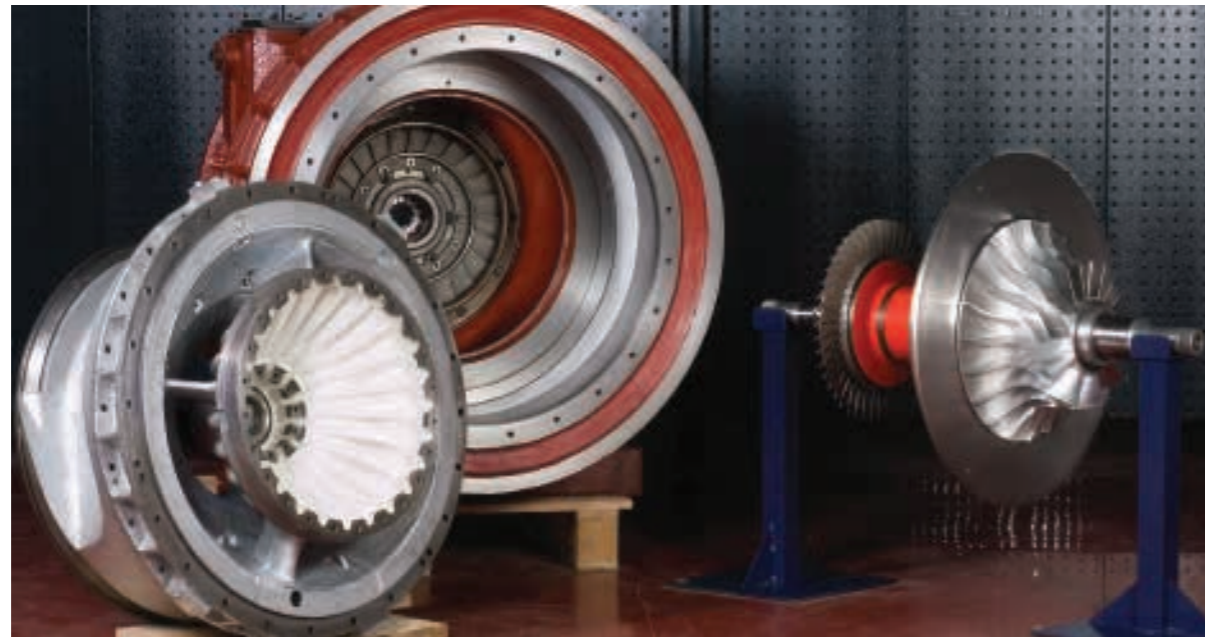
In our state of the art workshop, our experienced and well-trained technical staff repairs turbocharger units and spare parts, using machineries of cutting edge technologies. All the works are carried out in accordance with manufacturers' specifications.



Spare parts

The premises of our new service station in Nigeria include a fully equipped warehouse, which allows the easy and fast worldwide shipping of turbocharger spare parts for all T/C types and manufacturers of main engine and diesel generator.

- Complete turbochargers units
- Turbocharger Cartridges
- Turbocharger Main Parts (Rotor shafts, Diffusers, Nozzle rings and cover rings, Casings and more)
- Turbocharger Consumable parts (Overhauling kit, Bearing sets, Sealing bushes, Connection elements and Gaskets etc.)



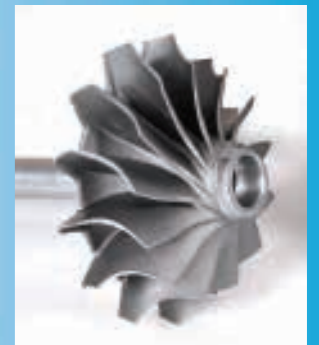
Diesel Generator Turbochargers



Complete cartridge for D/G



Before

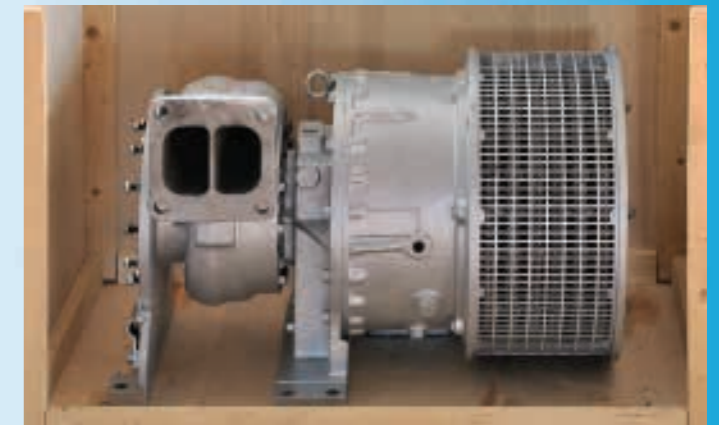


After

Before Overhauling



After Overhauling



Our facilities in Greece

TURBOMED S.A. provides marine turbocharger services since 1976, holding a leading position in the domestic and international market. Experience, high expertise, professionalism, consistency and accountability are some of the principles that permit the company to offer high quality products and value-added services to customers.

TURBOMED's repair and engineering center, includes a state of the art workshop and a fully equipped warehouse.



State of the art Repair shop!

With big capabilities on the reconditioning sector using all the necessary Non destructive testing equipment, we offer repair solutions backed up by the latest technology of repairing methods. All repaired parts are inspected and supplied according to manufacturers specifications with the relevant measurement reports.

- Reconditioning of complete Turbochargers
- Reconditioning - Rotor shafts – Reblading, Chrome plating, Gland strips repair, Partition wall repair. Dynamic balancing
- Rebuilding of Turbine Blades and Compressor wheel blades (Impeller-Inducer blades)
- Repair of Nozzle rings - Cover rings
- Reconditioning of Bearings and Pumps
- Reconditioning and re-felting of air filter silencers

Class certificates can be provided upon request. Minimum 1 Year warranty.

3 precision dynamic balancing machines Schenk (Germany) ISO 1940
Advanced technology supreme. Accuracy Capacity from 0,5 kgr up to 3000 kgr



Air Filter - Silencer



Filter-Silencer is a very important and sensitive part of the Turbocharger. After some time of operation the soundproofing material and the internal parts of the filter wear out, fill dirt and oils. The dirt on the worn insulation is a potential risk of being sucked from Turbocharger if it is remained for long time and can cause from a simple damage to the compressor wheel up to total destruction of the Turbocharger. Furthermore, when the dirt exceeds some limits then during the operation of the turbocharger the phenomenon of surging appears, causing instability of the air flow and a high pitch vibration of audible level.

Proper maintenance of the filter helps not only to improve the performance of the Turbocharger but has also the following results:

- Less maintenance and less need for removal for cleaning purposes of the air coolers
- The engines operate safer, with lower exhaust gas temperatures
- Higher power efficiency. The power does not being reduced when air ducts clog and the exhaust gas temperature increases
- Higher engine efficiency and reliability. The air ducts are cleaner without clogs resulting lower exhaust temperatures causing the engines to operate with their the maximum power and limited chances to burn the exhaust valves
- Less wear on various parts of the cylinders. The machine does not absorb harmful corrosive particles when the vessel passes from regions like the Middle East
- Fewer health and safety risks. No need for chemical cleaning of the turbo with potentially harmful chemicals
- Environmentally safe. The filters of TURBOMED provide 100% of the air insulation in order to act effectively in the absorption of contaminants, in contrast to copper mesh or inexpensive useless wrappers. A good filter acts as a catalyst to combustion resulting with less pollution.
- Security. The engines operate safe and are protected from sudden damage.

The characteristics of a proper functional and efficient filter are the following:

- Strong solid construction. Steel Caps and wire mesh, able to withstand severe vibrations
- Excellent insulating ability without gaps. No cases of damage from foreign particles
- Long operational life with extra 30,000 hours
- Washable, eco-friendly

TURBOMED due to its many years of experience offers complete reconstruction in air filters, construction entirely based of sample as well as cleaning and Re-felting (replacement of soundproofing material) with warranty 5 years or 30,000 hours.





a 365 day, 24 hour service

Round the globe!

WORLDWIDE TURBOCHARGER SERVICE

Our highly trained and experienced service engineers, overcome adverse circumstances, give solutions and are available to travel on call around the world, offering fast and professional services, immediately responding to support any turbocharger failure or standard overhauling - maintenance.

Training is a continuous process and is considered as one of the most important factors for the nonstop improvement of the provided services.

RETROFIT: By taking into consideration main engine's specification data and Turbocharger's specifications with the appropriate calculations, Turbomed can suggest the best alternative solution for the optimum performance of the vessel's engine and carry out, with responsibility the upgrade of old turbochargers.

Overhauling Kit

The overhauling kit contains all consumable spare parts which have to be available on board during an overhauling. Bearings, oil Pumps, Sealing bushes along with all the ancillary parts as Gaskets, locking plate, sealing ring, screws etc.

TURBOMED is capable of supplying immediately overhauling kit for the most popular makers, as well as, taking care of their transfer with the worldwide technical teams.



Overhauling Kit



Super precision Ball and Roller bearing

Optimization on the flexible design of the LA70/TA07 bearing housing, made of thermally processed material and double guided steel casings, provides endurance, strength, supreme reliability and most important the optimum of flexibility thus avoiding the repercussion of bearing vibrations.



Oil Pumps



Precision works

PRECISION WORKS: With highly skilled technical staff experienced working with tight tolerances, and equipped with the latest technology tooling machines, our machine shop is capable of manufacture a variety of highly precision components from the design stage.

Manufacturing methods

CAD / CAM Systems

CNC Milling

CNC Lathe works

Conventional Lathe works

Turbocharger Products: Nozzle rings, Gas Labyrinths, Oil-Air labyrinths, Thrust bearings - collars, Impellers and more.



Before



After



Sample



New Fabrication of Nozzle Ring.
Reverse engineering based on
customer sample



LOKUMA

UNIVERSAL CENTER MU-400VA

UNIVERSAL CENTER MU-400AV



all in one package!

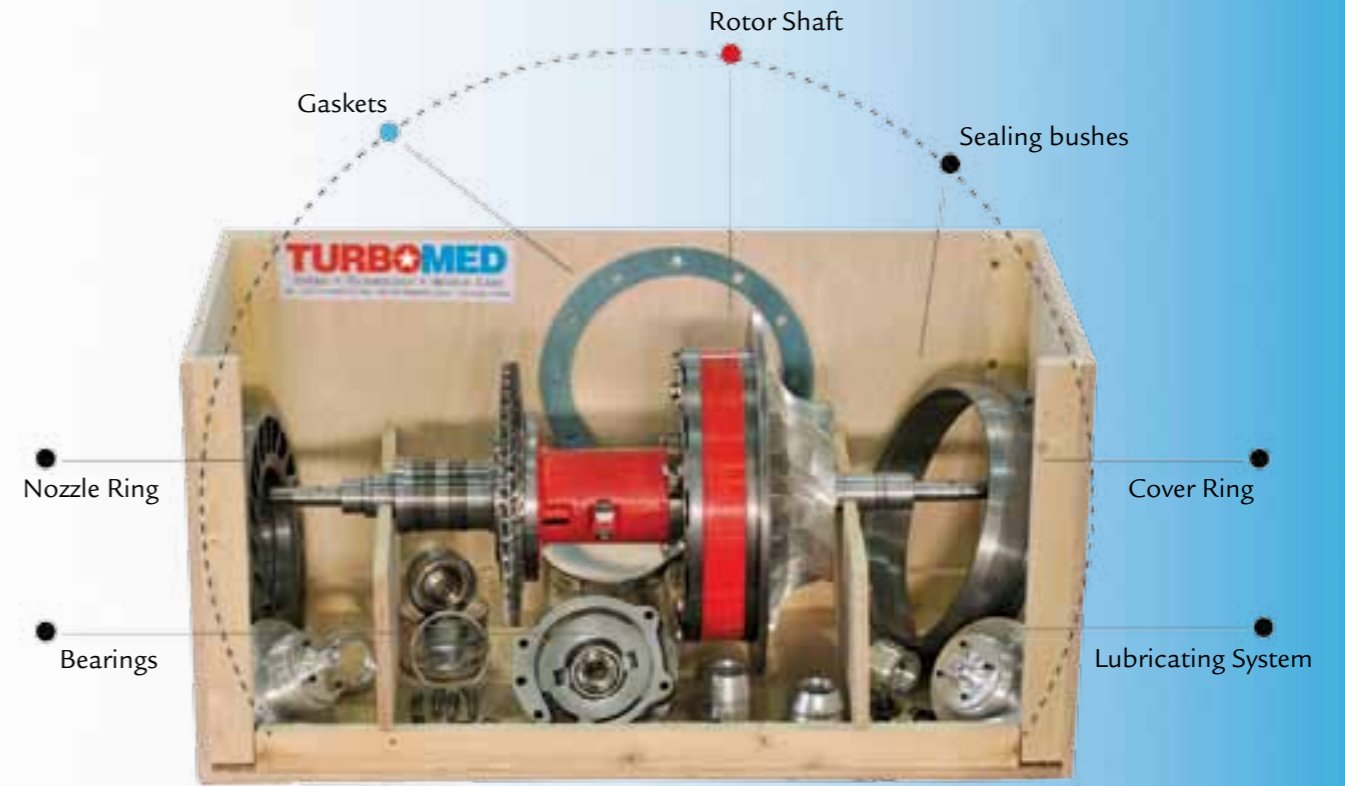
on exchange basis

A new service called TURBOBOX is provided by Turbomed, in which all critical components of a Turbocharger are included:

1. OVERHAULING KIT
Including: Bearings, Lubricating System (oil pumps, lubricating disks etc.) sealing bushes - Gas / Oil Labyrinth rings, gaskets, safety and piston rings, bolts.
2. NOZZLE RING Including Bolts
3. COVER RING Including Bolts
4. ROTOR SHAFT COMPLETE DYNAMIC BALANCED READY TO FIT
Including full reports
5. CLASS CERTIFICATE Upon request

TURBOBOX can be delivered immediately worldwide, at any port. The customer pays only for components that he uses at a very low price, because they are offered on exchange basis.

The unused spare parts can be returned at no cost except the transportation cost. Old parts that need to be repaired or dynamic balanced are packed in the same box with the unused ones and shipped to the nearest Service Station of Turbomed.



a box with benefits

The Turbocharger operates at its nominal capacity according to manufacturer's specifications.

The Rotor shaft will always be dynamically balanced, ensuring the optimum operation of the Turbocharger and the Diesel Engine.

Reduced fuel consumption.

Compliance with international air pollutant emission regulations such as IMO - Annex IV of MARPOL.

Minimize damage and additional stresses of the engine as a result of low scavenging pressure with the known unpleasant effects. eg increased temperature to cylinders.

Reducing the risks of engine's degradation and ship's performance.

Effective saving of time and money because the service engineer who repairs the turbocharger has at his disposal all critical spares parts needed.

Thus it is gained valuable time without waiting to find parts, eg transportation or search appropriate workshop to perform dynamic balance.

Less cost and stress in ordering more or less spare parts. The customer will pay only spare the parts he uses.

Release from the stress of finding the suitable time for the maintenance of turbocharger, as now the maintenance can be performed in minimum time and not necessarily during dry docking.

TURBOMED'S commitment and obligation is to always have in stock the turbocharger-specific TURBOBOX you need, without any further obligation or commitment on your part. Just send us the following technical data and you will get your own package in no time at all.

MANUFACTURER
TYPE
SPECIFICATIONS
SERIAL NR.



from one gram up to a tone foundry!

Our foundry your advantage

Our foundry at Amaliada manufactures high precision casting parts from 1gr to 1000kg.

Production Methods:

- Investment Casting (Lost Wax)
- Green Sand
- Croning
- Cold Box

The materials used are:

Stainless steel and its alloys
Common and special steels
Spheroid cast iron
Ferrous and non-ferrous alloys



Lost Wax Process
Investment casting
traditional Methods

Accurate
precision casting
objects
with weight from 1gr.
...up to 1,000,000 gr

