

aerospace services

Offers **FAA/DER-** and **OEM-Approved** Repairs



Timken Aerospace Services provides FAA/DER- and OEM-approved repairs, enabling Timken to offer comprehensive remanufacturing services for any bearing by replacing rings, cages and rolling elements with Timken Aerospace components.

cost-effective, quality aircraft bearing repairs

Timken offers comprehensive service on most engine mainshaft, gearbox and accessory applications. Timken associates' broad bearing and manufacturing knowledge base and experience in restoring used aircraft bearings to like-new condition result in significant cost savings for customers.

Bearing remanufacturing requires far less time than manufacturing new replacements. Instead of scrapping serviceable bearings, Timken reconditions components through industry-approved processes.

Timken Aerospace Services also manages rotatable pools of remanufactured bearings for customers, allowing them to reduce inventory and support JIT and other cost-minimization programs. Timken is committed to maximizing customers' bearing investments.

focus and experience

Timken Aerospace Services is solely focused on bearing remanufacturing. Our plant is equipped with the best technology and equipment available for inspecting and repairing bearings. Most Aerospace Services associates have more than 15 years experience in aircraft bearing manufacture, inspection, quality assurance and repair.

The company also offers precision bearing inspection programs. Many Timken gauges and inspection devices have been custom manufactured to accurately review bearing geometry and provide the best recommendations regarding repair or replacement.

the remanufacturing process

Strict quality standards are met throughout the remanufacturing process. During the remanufacturing process, bearings and components are:

- Logged in and serialized for traceability.
- Thoroughly cleaned using automated washing systems.
- Checked for cracks through magnetic particle inspection (MPI).
- Undergo surface analysis, including dimensional profile checks, and are repaired or replaced appropriately.
- Repaired as needed – including honing raceways, plating the mounting surfaces and stripping and re-plating cages – and reassembled in the Clean Room. (Rolling element complements may be inspected and reused, but are generally replaced.)
- Preserved and packaged to meet original or OEM-overhaul-manual specifications.

Timken Aerospace Services relies on raw material sources and processes that are OEM and FAA/DER approved. The ability to obtain high-quality replacement parts boosts our ability to restore bearings to like-new condition. With the exception of balls, all replacement components are manufactured by Timken Aerospace, assuring the integrity of the components.

qualifications and approvals

While repair approval historically has been granted on a part-number-specific basis, Timken Aerospace Services now is FAA approved to inspect and repair “any aerospace turbine engine, APU or accessory gearbox ball or cylindrical or tapered roller bearing,” using the TAS Bearing Inspection Manual (TAS/BIM). This approval is currently limited to Level 2 repairs. However, in cases where the repair yield at Level 2 is unacceptably low, we secure Level 4 repair approvals through our DER engineering process.

Timken Aerospace Services is now approved by a number of leading aerospace OEMs, including PW, GE, Honeywell, Rolls-Royce and Sikorsky, as well as the U.S. Air Force, Army and Navy. Our highly skilled workforce reports to FAA auditors and pursues ongoing training to continually offer quality bearing remanufacturing.

To learn more about how Timken Aerospace Services can reduce replacement costs, call Timken Aerospace U.S. at 603.443.8941 (fax 603.443.8910) or Timken Aerospace Europe at (44)1902.719300.



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