

Aerospace Repair Services

Technical Data



DER/DOA Repairs and Overhauls

The Barden and FAG global repair station network is able to offer aerospace bearing repairs and overhauls which are accepted by both the Federal Aviation Authority (FAA) and the European Aviation Safety Agency (EASA) by utilising a Design Engineering Representative (DER) and/or a Design Organisation Approval (DOA).

**Up to 20% less
expensive than
OEM repairs***

A DER is an individual, who holds the required technical qualifications and experience, appointed in accordance with Federal Regulations. A DER may recommend or approve technical data to the FAA.

Under EASA, a DOA is a design organisation responsible for the design of aircraft, related parts and appliances, and for changes or repairs design approvals. A full list of companies holding DOA status, together with their capabilities, can be downloaded from the EASA website¹

Technical data developed under an EASA Part 21J DOA is considered accepted or approved by the FAA. Repairs performed at US repair stations under a DER are accepted by EASA.

The Barden/FAG Process

Barden and FAG use the same processes to develop a DER/DOA repair or overhaul as they do to manufacture new parts or conduct Original Equipment Manufacturer (OEM) repairs.

Most OEM bearing designs are simply 'envelope' designs with performance requirements. The OEM provides a 'source-controlled' drawing and the bearing manufacturer designs the internals of the bearing using its own knowledge and expertise.

In the case of OEM repairs, Barden and FAG use their broad aerospace bearing experience and knowledge to ensure any type of repair will deliver equivalent quality and performance and bring the bearing back to the condition specified by the Instructions for Continued Airworthiness. The proposed repair scheme is presented to the OEM for approval.

The RDE Process

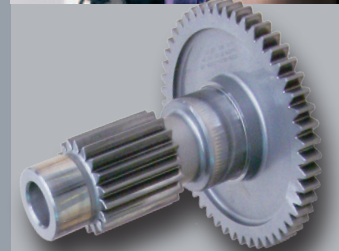
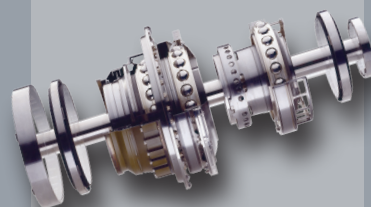
The Barden and FAG Repair Development Engineering (RDE) process starts with a part. The customer provides both a serviceable part and a scrap part (the serviceable part can be obtained on the open market if necessary). The scrap part is destroyed in the RDE testing process while the serviceable part is dimensionally evaluated.

The outcome of the process, which can take as little as four weeks to complete, is a complete RDE package, including drawings and comprehensive repair and overhaul instructions. This package is submitted to the DER/DOA approval process. Following approval by the DER or DOA, an application is submitted through the regulatory process to have the operations specification of the repair station updated to include the new repair or overhaul.

Once included on the operations specification, commercial repairs may proceed.

*DER/DOA repairs are typically 15 – 20% cheaper than OEM repairs as there is no licensing royalty.

¹http://en.wikipedia.org/wiki/European_Aviation_Safety_Agency



For further information and contacts:
www.fag.com/bearingrepair www.bardenbearings.com