Rexnord Aerospace Gear Outside Service Processing

For decades, Original Equipment Manufacturers (OEMs) within the commercial, defense and general aviation industries have depended on Rexnord Aerospace Gear Outside Service Processing for their complex gear component needs. These components can be found in mission-critical applications, including:

- Auxilary Power Units (APUs)
- Engines
- Flight controls
- Gearboxes
- Horizontal stabilizers
- Landing gear
- Wings

With a focus on continuous improvement, our excellence in engineering and manufacturing allows us to consistently provide high-quality services and parts to our customers.

Rexnord Aerospace Gear Outside Service Processing

Our outside service processing provides you with advantages for your gear component needs.

Rexnord Aerospace provides customers in the commercial, defense and general aviation industries with a range of outside service processes for gears and splines. By utilizing these services that offer an efficient and competitive, economical solution, we can help you reduce the impact of your capacity and capability restrictions.

With nearly 70 years of expertise in the aerospace industry, and a continued commitment to investing in the latest machine technology and operational training for our team of experts, customers turn to Rexnord Aerospace for a broad offering of outside service processing for gears and splines. Additionally, we are a trusted vendor to aerospace OEMs that only need "cut teeth work" on higher assembly parts.

Outside service processes

Rexnord Aerospace offers the following outside service processes for gears and splines found throughout aircraft:

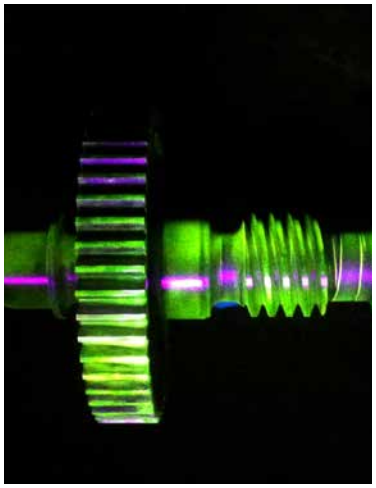
- Gear and spline teeth cutting
- Gear grinding
- Non destructive testing (NDT)
  - Nital etch
  - Magnetic Particle Inspection (MPI) and Magnetic Flaw Detection (MFD)
  - Liquid Penetrant Inspection (LPI) and Penetrant Flaw Detection (PFD) / Fluid Penetrant Inspection (FPI)
- Auxiliary services

See the reverse side of this product sheet for more detail on each of the outside service processes we offer.

Industry and regulatory standards

The class of gears we service are manufactured to the following standards:

- **Industry standards**: American Gear Manufacturers Association (AGMA) class up to 13, DIN 1
- **Regulatory standards**: AS9100, ISO 9001, Nadcap



The above NDT process shown above is LPI and PFD / FPI.

Rexnord Aerospace Gear Outside Service Processes

NDT

NDT is a wide group of analysis techniques used to evaluate the properties of a material or component that does not permanently alter the article being inspected, saving money and time in product evaluation. Applications include detection of cracking and porosity in welded joints, surface defects in castings and fatigue cracking in stressed materials. Rexnord Aerospace has a team of experts dedicated to NDT, to ensure full compliance with Prime Contractor Specifications and industry standards.

- **Nital Etch** — provides a definitive means of detecting metallurgical surface defects with particular emphasis on the detection of machining abuse. Where components have been subjected to surface hardening treatments, the surface is vulnerable to damage caused by various machining techniques that may not be visible unless Nital Etched and inspected by qualified personnel with specialized equipment. Rexnord Aerospace holds Nadcap approval for these processes. Nadcap is an accreditation program to improve quality assurance throughout the aerospace and defense industries.
- **MPI and MFD** — for detection of surface and subsurface imperfections, and indications on ferromagnetic materials, including those that have been treated with a non magnetic coating. While a surface is being magnetized, iron particles that spread on the surface of the material adhere to surface flaws, identifying the location and size. Ultraviolet lights are used to enhance the visibility of the smallest discontinuity.
- **LPI and PFD / FPI** — utilizes fluorescent techniques for the detection of surface imperfections and conditions on all material, such as metals, plastics, and composite materials. The surface is coated with a penetrant where a fluorescent dye is dissolved or suspended; the penetrant is pulled into surface defects by free surface tension. A powder is then sprayed or dusted over the part, and the powder lifts the penetrant out of the defect. The dye stains the powder, indicating the imperfections.

Gear teeth cutting

Rexnord Aerospace offers gear teeth cutting for your bevel, helical, spiral bevel, spur and worm gears from .125 inches (3.175 millimeters) to 18 inches (450 millimeters).

Auxiliary services

We use a range of auxiliary machines to complement our gear tooth processing machines, including state-of-the-art Computer Numerical Control (CNC) turning and milling, multi-capability automatic honing and CNC grinding equipment. Additionally, we feature tooth shaving equipment, broaching machines, engine lathes, and more. Our finishing machines, such as glass bead blasting, tumblers and laser etching machines, allow us to meet the demanding tolerances and finishes required in the aerospace industry.

Since 1946, Rexnord Aerospace has satisfied the needs and critical demands of the aerospace industry with exceptional, high-quality products and innovative engineering. Choose Rexnord Aerospace products and solutions for your designs. Speak with our engineering sales staff to address your questions and design inquiries.

www.rexnord.com

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