

Centrifugal Compressor Gearbox Preventative Maintenance

Centrifugal compressors are highly engineered turbomachines that are subject to operational changes resulting from environmental conditions, wear or neglect. Performing the following routine gearbox maintenance procedures will help prevent unscheduled shutdowns and unanticipated repair expenses.

Opening the Gearbox

As part of our five-year preventative maintenance service, Ingersoll Rand recommends opening the compressor gear casing to inspect critical rotating components and perform any maintenance that is required.

The horizontally split gear casing makes it easy for a professionally trained, and Ingersoll Rand certified, field service technician to visit your site to clean and inspect all impellers, inlets, and diffusers; as well as visually check gearing and measure backlash clearances; axial pinion floats; and the tight clearances between impellers and inlets.

Bullgear Bearing Inspection

The bullgear bearings are critical components that permit operation of the integrally geared centrifugal compressor. These bearings facilitate rotation of the bullgear that control the rotation of the pinions and impellers, providing aerodynamic flow. While the gear casing is open, it is highly recommended that the integrity of the bullgear bearings is assessed.

Ball bearings are widely used to facilitate rotation in low horsepower electrical motors and compressors. Proper filtration and lubrication maintenance is essential to prevent contamination from foreign particles and to promote ball bearing health. In some cases it might be necessary to replace ball bearings to reduce the risk of failure and avoid larger unplanned expenses and downtime.



Heavy Duty Options.

Ingersoll Rand offers additional compressor protection options to maintain smooth operation of your machinery. These enhancements are available for MSG® TURBO-AIR® 3000 and MSG® TURBO-AIR® 6000 compressors, and are ideal for environments where there is a high concentration of airborne particulate.



MSG TURBO-AIR 6040

PEEK Polymer Sleeve Bearings

These bearings can handle larger axial thrust loads and are less susceptible to failure due to contamination from foreign particulate than ball bearings because they do not have any independent moving parts.

Buffered Bullgear Oil Seal

The buffered bullgear oil seal provides a barrier of positive pressure air that protects and prolongs bullgear ball bearing life by preventing harmful particles from entering and damaging the bullgear ball bearings.

Remember to Replace All Seals and Gaskets That are Disturbed During Maintenance Activities

Complete maintenance kits are available to provide all the necessary parts for a safe and proper reassembly.



CARE Maintenance Programs | RELIABILITY FOR LIFE

Compressed air is critical to your operation. A proper maintenance strategy is crucial to avoiding unplanned, unbudgeted downtime and production interruptions. By choosing an Ingersoll Rand CARE maintenance service program — from full risk transfer to routine maintenance or parts coverage — you are investing in your future with a trusted global partner.



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