How To Maintain Gear Boxes?

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It is not desirable for a machine or equipment to have a faulty gearbox, since this can be very costly to the organization. When a gearbox fails, it can drastically affect productivity. Sometimes it may stop the whole line, or even an entire plant, which leads to a huge loss of revenue due to downtime. The failure of a gearbox can also harm humans in some applications where human interference is involved. To avoid this, it is crucial to use gearboxes made by highly regarded gearbox manufacturers.

Maintaining the gearbox properly or taking extra safety precautions can extend its life.

Improve The Life of Your Gearbox with These Before and After Maintenance Tips.

Pre-Installing & pre-commissioning the gearboxes

Make sure that the gearbox meets the manufacturer's thermal and mechanical specifications. It is not uncommon for gearboxes to be used for applications that exceed the design specifications and have a larger input power than what is recommended.

Before the gearboxes are installed, the proper amount of lubricant should be filled into the gearbox, as specified by the manufacturer. Oil cups are extremely important for Vertical Mounted Gearboxes.

Keep the breather clean and use the correct type. Clean the mating surfaces of the gearbox and motor before connecting them. Ensure that the gearbox has been properly treated against rust.

Gearboxes and motor shafts (solid or hollow) must be aligned properly. The size of the coupling for input and output shafts should be checked before fitting the coupling & shaft diameter. A tight bore tolerance for couplings and shafts is essential to preventing heavy force fits or press-fits.

Check the gearbox for noise, vibration, leakage, and temperature prior to connecting the geared motor to the load. Gearboxes are strictly tested for leakage, noise, vibration, and temperature, before being dispatched to the customer, in order to avoid problems arising from the above parameters.

To prevent movement of the gearbox and motor when using foot free (Solid input) gearboxes, ensure that stoppers are used on the gearbox and motor. For shaft-mounted gearbox ensure the locking of coupling, improper locking may lead to Vibrations.

Using tyre couplings for foot-free gearboxes can compensate for angle errors and dampen vibration and impact. Because tire couplings are flexible, they can compensate for significant angle errors.

After Installation & Commissioning of Gearboxes

As recommended by the manufacturer, change the oil after a specific amount of time. Check the old oil for metallic particles after changing the oil, as these could indicate worn internal parts.

Keep an eye on leaking gearbox joints, plugs, and input and output shafts.

Keep an eye out for noise and vibration in the gearbox. The presence of any significant changes in the internal condition of the gearbox will be confirmed by periodic vibration analysis of its internal bearings and gears.

Be alert for signs of overheating of the engine gearbox. If the paint on the gearbox has discolored or burned, or if there is a dark spot in the sight glass, this may mean that too much heat is rising inside the gearbox. Monitoring the gearbox temperature on a regular basis with an infrared thermometer is necessary to detect any unexpected fluctuations in heat.

Make sure that there is no backlash in the gearbox, as well as no increase in play or lift at the input and output shafts. Too much backlash may cause gears to wear. An increase in shaft endplay or lift indicates that the bearing rolling elements or bearing housings are wearing out.

By observing the motor current during no-load and heavy load conditions, it may indicate that parts are jammed and may result in bearings and other parts failing.

Consult the manufacturer of the gearbox for any advice you may need regarding inspection, maintenance, repair, or replacement of the gearbox. As gearbox experts, we can give you the most reliable advice and aid regarding your gearboxes and make sure they are working at their optimum potential.

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