

# Gearcase Maintenance

[Print](#)

[\(10\)](#) » [Twin Screw Extruders Design and Operating Characteristics](#) » [Used Extruders](#) » [Gearcase Maintenance](#)

Gearcase maintenance

Vol. 20 #1, March 1993

WHY DIDN'T MY "SPARE" GEARCASE LAST AS LONG AS THE ORIGINAL? During my thirty years in this business, I have heard this question too often. A good, heavy duty gearcase should last fifteen or twenty years or more, as long as it is maintained properly. This includes: Oil changed at regular intervals and heat exchanger kept clean so that water flows freely through tubes. As we know, for many reasons, gearcases do fail.

When a spare case is installed and only runs for six to seven months, we ask why. In most cases, a gearcase is stored in a warehouse where there is no heat or air conditioning. The temperature can vary twenty to fifty degrees, and, after several weeks, all the oil has drained from the top half of gears and bearings. This will now allow rust to form. Due to condensation, the gears and bearings begin to pit. The longer the gearcase is stored, the more damage to gears and bearings will occur.

When the gearcase is installed and begins to run, rust is removed from gear surfaces and becomes submerged in the oil. Pits in the bearing surfaces are now exposed and we now have rough bearing surfaces. It is only a matter of time, a short time, before the thrust bearing fails. The thrust bearing is the first to go, due to extreme load put on this bearing.

To prevent this from happening, the spare gearcase should be stored in normally heated and air conditioned places, and run periodically. Keep the gearcase full of oil and run the motor to allow oil to flow and coat all bearings and gears. A small DC or AC motor can be attached to run the gearcase at regular intervals, once a month, for fifteen to twenty minutes. This will keep the bearings and gears well oiled and preserve your gearcase. I have had to replace all of the bearings in many spare gearcases because of rust. This could easily have been prevented if the steps I have outlined were followed.

- David C. Kores. Sr.

See also:

- [Extruder maintenance](#)
- [Gearbox design ratings](#)
- [Thrust bearings](#)
- [Synthetic lubricants for extruders?](#)
- [Ten myths about gear lubrication](#)

Return to [Consultants' Corner](#)