



Technical Service Bulletin 04T24 Sealed Bearing Lubrication and Break-In

GENERAL

Proper bearing lubrication is critical for satisfactory bearing life. The biggest cause of bearing failure is over-lubrication. If you don't know bearings and don't know what you are doing, you might be better off not lubricating at all. These instructions are for bearings with contacting lip seals.

GREASE TYPE

No 2 polyurea base grease. This is industrial bearing grease available at industrial supply houses. Don't use lithium base automotive grease; it is incompatible.

QUANTITY

Below 1000 RPM: Inject only until the grease just begins to ooze out the seal lip. Watch both sides of the bearing. Non-spindle bearings on the 515C run below 1000 RPM

Over 1000 RPM: Inject an amount no greater than a pencil eraser for each inch of shaft diameter. If using a grease gun, dispense onto a piece of paper to see how much trigger action is required to dispense this amount. The spindle bearings on the 515C run at 1750 RPM. They should only get an eraser-size shot.

Over-greasing: Will cause either a hot bearing or a blown lip seal or both. Overheating will kill a bearing instantly, while a blown seal will allow contamination to enter the bearing and kill it more slowly. Overheating is due to bearing churning (balls work too hard to push excess grease out of the way). If you can't hold your hand on it, it is likely overheated and spares should be purchased.

FREQUENCY

Normal Service: Re-lubrication not required. Normal service is defined as clean and dry and air temperature between -30F and 120F and at bearing speed under: $RPM = 6900/\text{shaft diameter(in)}$. For the 515C, all sealed bearings but those on the spindle shaft are in "normal" service.

Moderate: Every six months. The spindle bearings on the 515C are typically operating in an environment that is moderate due to dirt and moisture. A direct water hose down on the machine and bearings is not recommended for the 515C or any saw or bearing.

Severe: Once per week. Severe means a high contamination, outdoor, wash-down environment. Do not hose down the machine or bearings. If you do, apply grease very slowly to avoid blowing out the lip seal until the grease oozes out the seal, then perform a bearing run-in procedure.

BEARING BREAK-IN or RUN-IN PROCEDURE

Heavily or overly greased bearings should be run-in as follows: Run for 15 seconds then stop for 15 seconds, then repeat cycle for 30 seconds, 1 minute, and 5 minutes. Bearings should only get warm to touch. After 5 minutes of running or after completing first long cut, feel bearings again.