

LUBRICATION: BEARINGS AND THE USE OF GREASES / OILS

Proper lubrication of the Bearings and moving parts associated with a Spiral System are extremely important to maintaining the life of these parts. The most effective way of maintaining the Bearings and moving parts on the system is to incorporate a Preventative Maintenance Program for your facility. As part of this program a regularly scheduled lubrication of the Bearings and making sure all oil levels for the Track and Chain Oilers are maintained. By allowing these items to go without lubrication the result will be to shorten the life of the Bearings, Belt and Drive Chain. The following are recommendations to address these critical areas for Spiral operation.

BEARINGS

The Bearings are mechanical devices that are used to support loads and reduce friction between moving parts of machines. The friction causes a loss of energy resulting in extreme amounts of heat buildup within the Bearings and causing the mechanical wear. The direct result of this mechanical wear is the premature failure of these bearings.

All metallic bearings are designed to run with some type of lubrication. The proper lubrication is very important, as improper lubrication can also cause premature failure of these bearings. Another major factor is the operating temperature such as Ambient (room) or Freezer applications.

BEARING FAILURES

Most Bearing failures are caused by improper lubrication, incorrect mounting, debris buildup, and the lack of routine maintenance. Most common causes of Bearing Failure are as follows:

1. Fatigue Failure - This is the flaking or galling of the raceway for the Bearings. The life of a Bearing is usually determined by the speed of operation and the load that is applied.

2. Contamination - The sign of contamination is scratching or pitting of the race surface. This contamination is caused by, improper lubrication, adverse environmental conditions, water buildup, and airborne dust. The use of a Pressure Washer will force water past the seals; this will cause rust to form, and destroy the bearing. Flour in a bakery application can form an abrasive if this is allowed to contaminate the grease in the Bearing and cause premature failure.

3. Lubrication Failure - By inspecting the lubricant in a Bearing, you can determine premature failure. If the grease is hard or caked, and changed from the original color, this indicates Lubricant Failure. The lubricating capabilities of the grease have been diminished in this condition. The Bearing will fail due to a lack of lubrication. The following are common causes of Lubricant Failure:

- Dirty Lubricant
- Too Much Lubricant
- Wrong Kind of Lubricant

To prevent the contamination there are procedures outlined by the Anti-Friction Bearing Manufacturers Association which are below:

1. Work with clean tools in clean surroundings.
2. Remove all outside dirt from housing before exposing Bearings.
3. Handle with clean, dry hands.



4. Treat a used Bearing as carefully as a new one.

5. Use clean solvents and flushing oils.

6. Lay Bearings out on clean paper and cover them.

7. Protect disassembled Bearings from dirt and moisture.

8. Use clean lint-free rags if Bearings are wiped.

9. Keep Bearings wrapped in oil-proof paper when not in use.

10. Clean inside of housing before replacing Bearings.

11. Install new Bearings as removed from packages.

12. Keep bearing lubricants clean when applying and cover containers when not in use.

**SEE LUBRICANT CHART
ON BACK**

RECOMMENDED LUBRICANTS

OILS

Application	Main Drive Motor (Euro-Drive: Blue)	Main Drive Motor (Sumitomo: Green)	Take-Up Motor (U.S. Motors)	Take-Up Motor (Euro-Drive)
Room Temperature (Cooler) 0°F to +80°F -18°C to +26°C	Mobil SHC630 -40°F to +176°F -40°C to +80°C	Omala 150 2 gallon	Mobil SHC634	Mobil SHC634
Blast Freezer -40°F to +176°F -40°C to +80°C	Mobil SHC630 -40°F to +176°F -40°C to +80°C	Stratos 10	Mobil SHC624 Service Factor: 1.5 minimum	Mobil SHC629 -40°F to +50°F -40°C to +10°C
Proofer +80°F to +120°F +26°C to +49°C	Mobil SHC630 -40°F to +176°F -40°C to +80°C	Omala 220	Mobil SHC634	Mobil SHC634



Technical Service Programs

- PM Video
- On-Site System Training
- PM Service Programs
- Cleaning Systems
- Belt Cleaning Bulletin
- Operations Manual
- Replacement Parts

Technical Services Group

For information, call
1-631-293-2211
service@ijwhite.com

GREASES

Application	Pulley Bearings	Pipe and Motor Base Bearings	Belt / Track Oiler
Room Temperature (Cooler) 0°F to +80°F -18°C to +26°C	Lubriplate FML-2 Grease	Shell Alvania EP Grease 2	DC-2000 or Mineral Oil
Blast Freezer 0°F to -50°F -18°C to -45°C	Lubriplate Aero Grease	Lubriplate Aero Grease	DC-2000
Proofer +80°F to +120°F +26°C to +49°C	Lubriplate FML-2 Grease	Shell Alvania EP Grease 2	DC-2000



**I.J. WHITE offers 24 hour - 7 Days / Week
Emergency Technical Service**

Telephone: 631-293-2211 • Fax: 631-293-3788
E-mail: service@ijwhite.com • www.ijwhite.com