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Maintenance

6.1 Lubrication

The L120 series actuators have a sealed gear case, factory-lubricated with grease. The thrust base, when supplied, is factory-lubricated with the same grease as the gear case if the stem nut is factory-machined for the customer's driven shaft. If a blank stem nut is installed in the thrust base, a tag is provided on the actuator advising that the base is not lubricated. The gear case can be mounted in any position. However, mounting of the motor or the switch compartment in the down position is not recommended. These mounting positions may result in the motor or switch compartment being saturated with lubricant if the seal fails.

No seal can remain absolutely tight at all times. Therefore, it is not unusual to find a very small amount of weeping around shaft seals—especially during long periods of idleness such as storage. Using grease minimizes this condition as much as possible. If a small amount is weeping at start-up, remove it with a clean cloth. Once the equipment is operating on a regular basis, the weeping should stop.

6.1.1 Lubrication Inspection

Inspect Limitorque L120 series actuators for correct lubrication prior to operating - particularly following a long storage period.

Each application has its own effect on the actuator and the frequency of these inspections should be based on the application and the operating experience. The following lubrication inspection schedule is recommended until operating experience indicates otherwise.

For the Gear Case, inspect lubrication every 18 months or 500 cycles, whichever occurs first.

During an inspection consider the following:

- Quantity – Ensure there is enough lubricant so that the Worm and the Worm Gear are totally immersed in grease regardless of the position.

Note: The lubricant level can be verified by orienting the actuator with the control compartment facing up. Remove the Geared Limit Switch. The level of lubricant should be within ½ inch of the bottom of the opening in the gear housing.

- Quality – Inspect lubricant for dirt, water or other foreign matter. If any one of these is found:
 1. Flush the actuator with a commercial degreaser/cleaner that is not corrosive and does not affect the seal materials.
 2. Repack the actuator with fresh lubricant allowing room for grease thermal expansion.
- Consistency – Ensure the lubricant is fluid approximating a standard NLGI-0 grade consistency or less.

6.1.2 Factory Lubricant

Gear Case: The L120 series actuator gear case is factory-lubricated with an EP-0 lithium grease, suitable for temperatures from -20°F (-29°C) to +250°F (+121°C).

Table 6.1 – Specified Approximate Lubricant Weights

Actuator Size	lb.	kg
L120-10	2.75	1.3
L120-20	4.25	1.9
L120-40	5.75	2.6

Geared Limit Switch: Permanently lubricated with Beacon 325. Limitorque does not recommend disassembly of the gearbox.

6.2 Minimum Lubricant Qualities Required

The standard lubricants used by Limitorque have been proven to be extremely reliable over years of service. Limitorque does not recommend a particular lubricant substitute for the standard lubricants; however, Limitorque does require the following lubricant qualities as a minimum.

▲ CAUTION: Do not mix lubricants of a different base chemical. Mixing lubricant bases may cause lubricant properties to be ineffective.

The Lubricant must:

- contain an “EP” additive.
- be suitable for the temperature range intended.
- be water and heat-resistant and non-separating.
- not create more than 8% swell in Buna N or Viton.
- not contain any grit, abrasive, or fillers.
- comply with a slump-prefer NLGI-0 grade.
- not be corrosive to steel gears, ball, or roller bearings.
- have a dropping point above 316°F (158°C) for temperature ranges of -20°F (-29°C) to +250°F (+121°C).