

## General Operation

1. Run the motor which drives the reducer and check the direction of reducer output rotation. Consult motor nameplate for instructions to reverse the direction of rotation.
2. Attaching the load: On direct coupled installations, check shaft and coupling alignment between speed reducer and loading mechanism. On chain/sprocket and belt/pulley installation, locate the sprocket or pulley as close to the oil seal as possible to minimize overhung load. Check to verify that the overhung load does not exceed specifications published in the catalog.
3. High momentum loads: If coasting to a stop is undesirable, a braking mechanism should be provided to the speed reducer output or the driven mechanism.

**CAUTION** The system of connected rotating parts must be free from critical speed, torsional or other type vibration, no matter how induced. The responsibility for this system analysis lies with the purchaser of the speed reducer.

## Installation Instructions

The following instructions apply to standard Leeson LeCentric™ type reducers with base or flange mounting in motorized and non-motorized double and triple reduction options.

1. Mount the unit to a rigid flat surface using grade 5 or higher fasteners. The mounting fasteners should be the largest standard size that will fit in the base mounting hole. Shim as required under flange or base feet which do not lie flat against the mounting surface.
2. LeCentric™ reducers are filled with proper amount of oil from LEESON. Oil quantity is based on mounting position, as indicated on reducer nameplate. Unless otherwise indicated with order, all reducers are filled to level indicated for position H3. If position other than the one indicated on nameplate is required, refer to page 60 for alternate mounting positions and for oil quantities.
3. Connect motor to speed reducer.
4. LeCentric™ reducers are designed to operate without a vent. Installation of a vent is not required.

**CAUTION** DO NOT CHANGE MOUNTING POSITIONS WITHOUT CONTACTING FACTORY. Altering the mounting position may require special lubrication provisions which must be factory installed.

**CAUTION** Do not operate the reducer without making sure it contains the correct amount of oil. Confirm that mounting position on nameplate matches application requirement from page 60. Do not overfill or underfill with oil, or injury to personnel, reducer or other equipment may result.

**CAUTION** A unit cannot be used as an integral part of a machine superstructure which would impose additional loads on the unit other than those imposed by the torque being transmitted either through a shaft-mounted arrangement, and any shaft mounted power transmitting device. (e.g. sprockets, pulleys, couplings)

**CAUTION** For safe operation and to maintain the unit warranty, when changing a factory installed fastener for any reason it becomes the responsibility of the person making the change to properly account for fastener grade, thread engagement, load, tightening torque and the means of torque retention.

## Lubrication

All standard reducers ordered from the factory are filled with Mobilgear® SHC 320 synthetic oil to operate within a -25 to +113°F ambient temperature range. Lubrication quantities are specified on page 60 for various mounting positions. Prior to startup, verify that the mounting position on nameplate matches required position (see page 60). LeCentric™ reducers are filled to proper amount of oil based on mounting position printed on nameplate. **All LeCentric™ Gear Reducers will be filled with oil for position “H3” unless otherwise specified.** If the ambient temperature will be outside the range for the lubricant installed at the factory, drain and refill the reducer with the proper viscosity lubricant prior to use. Consult the factory for alternate lubricants.

Change Intervals: LeCentric™ units utilize extreme pressure lubricants which protect the teeth in the event of the oil thinning out due to local temperature rise, or high pressure due to accidental overloads. LeCentric™ reducers are “lubed-for-life” and do not require regular oil changes under normal industrial operating conditions and environments. If the reducers are operated in severe environments (i.e. high or low temperatures, high altitudes), oil changes may be required. High ambient temperatures cause the oil to thin out and reduce its protective qualities. In such cases it will be necessary to utilize heavier grades than shown. Conversely, low temperatures will necessitate a thinner grade, otherwise trouble may be experienced with burning out of motors at starting. In this condition, the pour point of the oil must be less than the lowest ambient temperature to be encountered. Refer to installation manual provided with reducer for approved lubricants and suppliers.

**CAUTION** In the Food and Drug Industry (including animal food), consult the lubrication supplier for recommendation of lubricants which are acceptable to the Food and Drug Administration and/or other authoritative bodies having jurisdiction.

**CAUTION** Do not mix different oils in the reducer. Oils should be compatible with Viton® seal material.

**CAUTION** Oil should be changed/checked if reducer is used in severe environment.

**CAUTION** SYNTHETIC LUBRICANTS IN FOOD PROCESSING INDUSTRY Synthetic lubricants may contain toxic substances and should not be used in the food processing industry without the lubricant manufacturer's approval. Lubricants which meet USDA “H1” classification are suitable for food processing applications.