

## LUBRICATION SPECIFICATIONS FOR LC, LC PLUS, LC “X” SERIES MACHINES

<u>AVAILABLE ACCESSORIES</u>		
TECHNO ISEL LUBE KIT	PART NO.: H90Z00-LUBEKIT3	PRICE: \$75.00
THK LUBE KIT	PART NO.: H90Z00-LUBEKIT4	PRICE: \$105.00

### Y-Axis (Long Axis) – THK Products

**Grease:** Lithium-based grease (JIS NO. 2) or Urea-based Grease (JIS No. 2), such as AFB Grease (THK), Alvania Grease No. 2 (Shell), Daphne Eponex Grease No. 2 (Idemitsu Kosan) or equivalent.

**Oil:** Sliding surface oil or turbine oil (ISOVG32-68), such as Super Multi 32 to 68 (Idemitsu Kosan), Vactra No. 2S (Mobile), DT Oil (Mobile), Tonner Oil (Showa Shell or equivalent).

**TABLE 1**

<b>THK</b>			
	BALLSCREW	RAIL	CARRIAGE
GREASE	√	√	√
OIL	√	√	

**Note:** On some items you can use either the grease or oil.

### X and Z-Axes – ISEL Products

**Grease:** Alvania-1, -2, -3 (Shell) for light, med. and heavy-duty apps, respectively.

**Oil:** Renolin CLP 100 (Part No. 299020).

**TABLE 2**

<b>ISEL</b>			
	BALLSCREW	RAIL	CARRIAGE
GREASE	√		√
OIL		√	√

**Note:** On some items you can use either the grease or oil.

### LC/LCP/LCX SERIES LUBRICATION MAINTENANCE

For regular work loads, machine maintenance is required at least once a month. The machine should also be lubricated once it is received.

**Warning:** Before inserting any object into the machine, press the E-stop button.

**Notes:** Do not use WD-40 or silicon spray on the machine. It may damage the drive components of the machine.

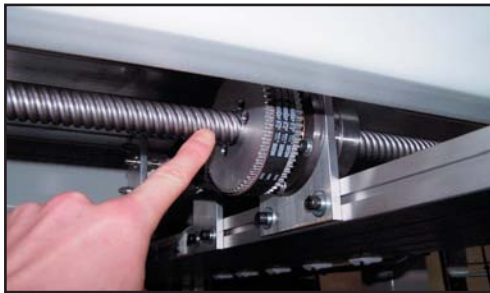
**Use the Grease and Oil Recommendations listed on the previous page, paying close attention to what grease and/or oil must be used! The grease/oil for the Y-axis is different from the X- and Z-axes.**

### LONG AXIS (Y)

#### THK Ball Screw:

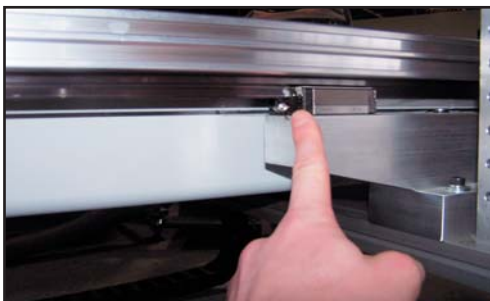
1. Clean the ball screw with a dry rag removing old grease and debris that may have collected.
2. Apply grease (see TABLE 1) on the ball screw and run the machine back and forth several times to spread the grease out.

By applying the grease and running the axis back and forth, small particles that may have collected in the ball nut may be flushed out. It is recommended to repeat Steps 1 and 2 again.



#### THK Carriages and Rails:

THK specifications indicate that a small amount of grease needs to be applied to the rails after 4 months of use. The picture below indicates the location of a grease fitting. Note there are 4 bearing carriages total. (2 on the left and 2 right sides of the machine).



### GANTRY (X AND Z AXES)

#### Ball Screw and Rails:

1. Remove black end caps at the top and bottom of Z Axis and both ends of (X Axis) Gantry. (There are 4 spots per axis.)

#### Gantry



#### Z Axis



**Notes:** See alternate lubrication instructions (1B, 2B) for nylon wipes below.

2. Jog the axis to end of travel or until lube point is visible. Using the a grease gun, insert a small amount of grease (see TABLE 2). This lube point greases both the bearing and ball screw simultaneously.
3. Run the machine back and forth 1/2 dozen times.

If you can not reach the lube points then you can apply grease and oil (see TABLE 2) through the nylon wipes.

- 1B. Apply oil to an acid brush. Spread apart the rubber guards and brush oil onto the rails. When applying oil to the rail behind the ball screw, it may be necessary to bend the acid brush to reach the rails.
- 2B. Apply grease to a second acid brush or your finger and apply grease to the ball screw.

