SERVO POWER FEED OPERATION

**Power** - Plug the feed into a source of 120 volts ac, 50/60 cycle power having a current capacity of five amperes.

**CAUTION**

The feed has a 3-wire cord that includes a ground terminal. **Do not** remove this terminal. On installations where the cord is wired to a junction box, be sure to ground the green wire.

Turn the power switch ON. The blue LED pilot light turns on to verify that the feed control has power. Turn the power OFF at night or when the feed will not be used for an extended period.

**Feed Direction** - The operating handle controls the feed direction. Handle to the left feeds to the left; handle to the right feeds to the right. When the handle is in the center, the feed stops and the clutch disengages.

**Feed Rate** - Rotate the black center knob to control the feed rate. The numbers (0-9) are for reference only. The Type 150 feed rate is regulated electronically, which means the rate remains essentially constant at typical cutting speeds no matter the load, within the capacity of the feed. **Do not** use the Type 150 as a knee feed; it will stall.

**Rapid Traverse** - Press the blue LED switch to increase the feed rate to 35 ipm (inches per minute). This does not disturb the feed rate previously selected using the black center knob.

**Overload Protection** - The circuit and motor are protected by a circuit breaker-on/off switch combination that will open when the feed is under excessive load. To reset: disengage the feed. Then turn the power switch back on. **Do not overload the feed.** If the circuit breaker opens, reduce the cutting load before continuing.

**Limit Switches** - The limit switch is a safety stop only and is not intended to be used as an accurate stop. The stopping point changes according to the speed of the motor at the time the limit stop is run into. When the feed shuts itself off against a stop, throw the handle to the opposite side to reverse the feed. It will automatically feed in the direction away from the stop.

**CAUTION**

**Do not** allow the feed to drive into any hard stop. This may damage the feed and the milling machine. Always set the stops so that they prevent the feed from running into the end of the table travel.

**WARNING**

**CHECK HAND CRANK CLEARANCES BEFORE OPERATION.**

Clearances between the surfaces of the hand crank and the non-moving parts of the equipment on which the hand crank is installed must be at least one-fourth inch (1/4") to prevent injury. Modification of existing hand crank or replacement may be required.

**Do not** operate without proper clearance!

Prevent contact during fast traverses.
CAUTION
Every attempt has been made to seal this feed. However, excessive amounts of coolants can work their way in and ultimately damage the feed. For long life, keep the unit as dry as possible. Wipe down at the end of each shift.

Motor Brushes - The motor is a commutator type with the brushes accessible from the outside. The replacement brush, part number 01283, is available from your dealer or the factory. Check the brushes monthly. Replace if less than 1/4" long. Reseal the brush caps with Silastic 738 RTV non-corrosive adhesive sealant.

Lubrication - At assembly, grease the bevel gear with bearing grease as noted on drawing #NA-5444. Every three months of operation, remove the bottom cover and lightly grease the large spur gear.

CAUTION
Damage to the motor may result from over-greasing the (Nylon) spur gear.

SERVO Type 140 and Type 150 Specifications

Type 150 Power Feed
- Semi-automatic machining on Class 1 mills to 3 hp
- Peak torque: to 150 in·lb/17 N·m (full-wave SCR control compound DC motor)
- Intermittent torque: 120 in·lb/13.6 N·m
- Continuous torque: 100 in·lb/11.3 N·m
- Variable feed rate: .50-35 ipm/13-889 mmpm
- Rapid traverse: 35 ipm/889 mmpm
- Gear reduction ratio: 72:1
- Smooth surface finish at speeds as low as .5 ipm/13 mmpm at full torque.
- Superior speed regulation, ramping, dynamic breaking, friction safety clutch, and limiting circuit protection.
- Approx. weight: 15 lb/6.8 kg

Type 140 Power Feed
- Semi-automatic machining on Class 1 mills to 3 hp
- Peak torque: to 140 in·lb/15.8 N·m (half-wave series motor)
- Intermittent torque: 105 in·lb/11.9 N·m
- Continuous torque: 90 in·lb/10.2 N·m
- Variable feed rate: table/cross .75-25 ipm/19-635 mmpm
- Rapid traverse: table/cross 35 ipm/889 mmpm; knee 12 ipm/305 mmpm
- Gear reduction ratio: 72:1 (motor to lead screw shaft)
- Helical gearing and torque limiting friction safety clutch.
- Approx. weight: 15 lb/6.8 kg

Options Available:
Model 620 Safety Handle Kit (Handwheel, clutch and spring. Designed for Bridgeport mills.)
Model 640 Shaft Extension Kit (Restores normal table travel when feed is mounted on Bridgeport mill table)
Model 660 Limit Switch Kit (Mounts limit switch to rear of table when front tee slot is covered, for example, by a linear scale.)
Model 670 Shaft Extension Kit (Restores normal table travel when feed is mounted on Lagun mill table)

Spare Parts:
See drawing #6292L (Type 140) or #6293L (Type 150) for an exploded view of the feed showing all parts.

01283 Brush (rectangular)
01282 Brush holder
00573 Brush cap
4737 Nylon gear assembly
2974 Bottom cover
1767-4 Armature
04103-K Circuit breaker 3.0
*** Bevel gear (need model #)

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