POWER FEED INSTALLATION
Model M-9530 Cross Feed
Kalamazoo and others

REFERENCE DRAWINGS ENCLOSED
NA-5444  Bevel Gear Installation
NB-58331 Power Feed Installation
NB-1538 Limit Switch Installation
ND-6293 Type 150 Servo Drive
ND-6292 Type 140 Servo Drive
0800-80001 Servo Power Feed Operation

PREPARATION

Step 1: Move the saddle to the front of the mill.

Step 2: Remove the nut, handle, dial assembly, and key from the lead screw. Save the key for installation later.

Step 3: Slide the bearing race onto the lead screw.

Step 4: Slide the adaptor over the bearing race and against the front of the knee.

Step 5: Orient and transfer three mounting holes from the adaptor to the existing bearing retainer. Remove the bearing race.

Step 6: Remove the bearing retainer to drill and tap 1/4-20 thru. Then reinstall.

Step 7: Screw the shaft extension onto the lead screw.

Step 8: Slide the bevel gear onto the lead screw to ensure proper fit. Then remove the bevel gear.

Step 9: Using the hole provided as a pilot, drill 1/8" diameter through the lead screw. Pin the shaft extension to the lead screw with the 1/8 diameter x 5/8" long roll pin. File smooth.

POWER FEED INSTALLATION

Step 1: Slide the adaptor onto the lead screw (counterbore facing outside).

Step 2: Slide the bearing race onto the lead screw and into the adaptor for proper alignment of the adaptor.

Step 3: Secure the adaptor to the bearing retainer using three 1/4-20 x 1" long socket head cap screws.

Step 4: Remove the bearing race.

Step 5: Slide the spacer and bearing race onto the lead crew.

Step 6: Slide the power feed onto the bearing race and secure to the adaptor using two 1/4-20 x 1" long socket head cap screws.
BEVEL GEAR INSTALLATION

Step 1: Use the 3 mm parallel key you saved before for the bevel gear installation.

Step 2: Follow drawing NA-5444 for installation of the bevel gear. Adjust for proper gear backlash.

DIAL AND HANDCRANK INSTALLATION

Step 1: After getting the proper backlash, the dial should be adjusted to obtain .005” spacing from the face of the power feed. This is important in order to keep chips from entering the gear train. Two plastic (.030” thick) and five brass (.005” thick) washers are provided for this. Shim as required.

Step 2: Put on the dial locking nut. Slide the handcrank onto the end of the shaft extension and tighten with the 1/2-20 lock nut.

LIMIT SWITCH INSTALLATION

Step 1: See the limit switch installation drawing NB-1538 enclosed.

OPERATION

See separate Servo Power Feed Operation sheet. Plug the unit into a source of 120 volt, 50 or 60 cycle power.

WARNINGS

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.

SERVO PRODUCTS COMPANY
433 North Fair Oaks Avenue, Pasadena, CA  91103 USA
Phone: 800.521.7359 or 626.796.2460  Fax: 626.796.3845
Web: www.servoproductsco.com
Call for the location of our regional Service Centers.
**STEP 1**
**PREPARATION**

**STEP 2**
**SHIMMING BEVEL GEAR**

ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR WITH PENCIL TO CHECK BACKLASH.

ROTATE GEAR FROM SIDE TO SIDE. REMOVE OR ADD SHIMS AS REQUIRED TO OBTAIN .015/.025 BACKLASH.

TIGHTEN NUT.

**CAUTION:** IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.

PUSH BEVEL GEAR AGAINST SHIMS.

LOosen SETSCREW

**STEP 3**
**DOUBLE CHECK OF SHIMMING**

WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.

**STEP 4**
**LUBRICATION**

INSTALL KEY

SEAL

**SERVO PRODUCTS COMPANY**

**BEVEL GEAR INSTALLATION**

NA-5444 C
NOTES: 1. Review all Installation Instructions and Power Feed.

LIMIT SWITCH INSTALLATION FOR CROSS

EXISTING DIAL
#00596 3/16 X 5/8 ROLL PIN
#0208 3/8-16 ROLL PIN
#5295 ADAPTER
#5794 SPACER
#5771 LOCKNUT
#0111 I-1/2-2O LOCNUT
#5799 SHAFT EXTENSION
#6990 KEY, 12" LENGTH TO TILT
#4134 BEVEL GEAR
#0774 BEARING RACE
#0986 1/4-20 X 1" SHCS (2)
#0774 BRACKET
#0693 7/32 X 7/32 HANDBAND CROAK
#0297 ADAPTOR
#0296 1/4-20 SHCS

#6970 5/16-18 X 3/4 SHCS

#1980 2 TAP SPACER 2 PLCS 5/16-18 TO MOUNT LIMIT SWITCH BAR

#1725 STOP RAIL
#1725 STOP RAIL

#9252 LIMIT SWITCH ON SAME CENTER LINE

#1515 LIMIT SWITCH TO MOUNT TRAP RAIL

#3116 1/8-24 X 1/2" BUTTON HEAD SCREW

#3127 STOP RING
NOTE:

1. CROSS TRAVEL STOP ASSEMBLY MAY BE MOUNTED ON EITHER SIDE OF KNEE.

2. WHEN MILL IS REMOVED ATTACHMENT MOUNT LIMIT SWITCH STOPS A TRAVERSE ON OPPOSITE SIDE.

3. REFERENCE DRAWING ONLY. INSTALLATION SHOWN IS A REPRESENTATION ONLY.

ASSEMBLY ON LEFT HAND MOUNTING ONLY.

KNEE LIMIT SWITCH #10-24 HOLES IN ON SAME CENTER LINE LIMIT SWITCH STOP & ASSY.

MOUNTED ON RIGHT SIDE OF SADDLE STAND OFF DRAWING ON CENTER MARKS.

STOP BAR & ANKLE

0.2 CLEARANCE BETWEEN 0.030 (REF)

5/16-18UNC 2 HOLES

69 APPOX

0.07 CLEARANCE