POWER FEED INSTALLATION
Model M-4850 Cross Feed
RB1 Mill

REFERENCE DRAWINGS ENCLOSED
NA-5444 Bevel Gear Installation
NB-6234 Power Feed Installation
NB-1538 Limit Switch Installation
ND-6293 Type 150 Servo Power Feed
ND-6292 Type 140 Servo Power Feed
0800-80001 Servo Power Feed Operation

PREPARATION

Step 1: Gather together the following items that you will need to complete this installation.
   a) 3/8" electric hand drill
   b) 1/8" drill, #7 drill
   c) 1/4-20 tap
   d) 9/32" transfer punch
   e) flat file
   f) 3/4" socket wrench
   g) set of inch hex wrenches
   h) grease
   i) clean shop rag

Step 2: Remove the nut, handcrank, dial assembly and key from the lead screw.

Step 3: Remove bearing retainer from end bracket.

POWER FEED INSTALLATION

Step 1: Slide the bearing race into the adaptor.

Step 2: Slide the adaptor and bearing race onto the lead screw. Using the adaptor as a template, spot (3) three holes so the feed sits 45° clockwise from the vertical as shown on drawing #NB-6234.

Step 3: Remove the adaptor and bearing race. Drill and tap 1/4-20 x 3/8" deep (3) three places.

Step 4: Secure the adaptor to the end bracket using (3) three 1/4-20 x 1-1/2" long cap screws.

Step 5: Screw the shaft extension onto the lead screw and tighten.

Step 6: Using the hole provided as a pilot, drill 1/8" diameter through and pin in place using the 1/8" x 5/8" long roll pin. File smooth.

Step 7: Slide the spacer and bearing race onto the lead screw.
**Step 8:** Secure the Power Feed adaptor using 1/4-20 x 1-1/4” long cap screws.

**BEVEL GEAR INSTALLATION**

**Step 1:** Follow the drawing NA-5444 for installation of the bevel gear. Adjust for proper gear backlash.

**DIAL AND HANDWHEEL INSTALLATION**

**Step 1:** After getting the proper gear 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. Three plastic (.030” thick) and five brass (.005” thick) washers are provided for this. Shim as required.

**Step 2:** Install the Woodruff key and handcrank.

**LIMIT SWITCH INSTALLATION**

Install the limit switch as shown on the installation drawings.

**OPERATION**

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

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**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.
**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.

0.015/0.025 (THIS IS NOT THE READING ON THE DIAL)

ROTATE GEAR FROM SIDE TO SIDE. REMOVE OR ADD SHIMS AS REQUIRED TO OBTAIN 0.015/.025 BACKLASH.

PUSH BEVEL GEAR AGAINST SHIMS.

TIGHTEN NUT.

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

**STEP 3**
DOUBLE CHECK OF SHIMMING

LOosen SETSCREW

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

**SERVO PRODUCTS COMPANY**

BEVEL GEAR INSTALLATION

NA-5444 C
1. Review all installation instructions and power feed.

**NOTE:**

On the side of the knee:

Limit stop may be mounted.

- $1750$ - Limit switch bottom.
- $1752$ - Limit switch top.
- $1757$ - Stop ring.
- $1516$ - Stop.

With cross slide:

1. Mount the tool as shown for drilling and tapping.
2. Configure the tool setting per setup procedure.
3. Mount all installation instructions and power feed.

**NOTE:**

On the side of the knee:

Limit stop may be mounted.
INSTALLATION DRAWING

UNIT SWITCH CROSS FEEDS

NOTES:

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

A. 1.000 (REF)

B. 0.750 APPROX.

S/16 - 18UNC 2 HOLES

ON LEFT HAND MOUNTING ONLY

A. FOUR 0.25 X 1.0 FLAT HD SCREW

B. ATTACH TO BACK FROM SADDLE. INSTALL LIMIT SWITCH BOX USING A-11/17 COVER

C. REMOVE COVER FROM LIMIT SWITCH BOX

STOP BAR AND TRACK

0.0 CLEARANCE BETWEEN

VIEW FROM BACK SIDE OF SADDLE

0.0 CLEARANCE BETWEEN

VIEW FROM BACK SIDE OF SADDLE

ON SNAKE CENTER LINE

LIMIT SWITCH STOP A

LIMIT SWITCH STOP B

ASSEMBLY

STAIR TO MOUNT TRACK

S/16 - 18UNC 2 HOLES

S/16 - 18UNC 2 HOLES

1.000 (REF)