POWER FEED INSTALLATION  
Model M-3750 Cross Feed  
Alliant, Sharp First, and others

REFERENCE DRAWINGS ENCLOSED
- NA-5444: Bevel Gear Installation
- NB-5489: 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:* Remove the nut, handcrank, dial, and key from the lead screw.

POWER FEED INSTALLATION

*Step 1:* Place the adaptor in the cavity of the bearing carrier.

*Step 2:* Using the adaptor as a template, spot four holes.

*Step 3:* Drill and tap 1/4-20 four places.

**NOTE** Due to the irregularities in a cast surface, take special care to be sure that the adaptor is centered and parallel to the lead screw. Shim as required.

*Step 4:* Secure the adaptor using four 1/4-20 x 1” cap screws.

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

*Step 6:* Using the hole provided as a pilot, drill a 1/8 diameter hole through the shaft extension.

*Step 7:* Pin the shaft extension to the lead screw with the 1/8 diameter x 5/8” long roll pin. File smooth.

*Step 8:* Slide the bearing race onto the lead screw.

*Step 9:* Mount the power feed to the adaptor using two 1/4-20 x 1” cap screws.

BEVEL GEAR INSTALLATION

*Step 1:* Replace the key and slide the bevel gear in place.

*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. Plastic and metal washers are provided for this. Shim as required.

Step 2: Put on the dial locking nut.

Step 3: Install the modified #7 woodruff key in the shaft extension.

Step 4: Slide the handcrank onto the end of the lead screw and tighten with the 1/2-20 lock nut.

NOTE Due to the cast surface of the cavity in the bearing carrier, the shoulder of the lead screw may stick out past the handcrank. If so, add a washer so that the locking nut is against the handcrank.

LIMIT SWITCH INSTALLATION

Step 1: See limit switch installation on 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.
**STEP 1**
PREPARATION

**STEP 2**
SHIMMING BEVEL GEAR

ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
0.002/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 0.015/0.025 BACKLASH.

TIGHTEN NUT.

PUSH BEVEL GEAR AGAINST SHIMS.

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

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.

CONTROL HANDLE @ NEUTRAL POSITION

**STEP 4**
LUBRICATION

INSTALL KEY

REMOVE GEAR, PACK WITH GREASE.
(DO NOT USE SILICONE TYPE GREASE)
REPLACE GEAR.
(DO NOT LOSE ANY SHIMS)

PICTURES IN THIS DRAWING ARE FOR REFERENCE ONLY. SEE INSTALLATION DRAWING OF CORRESPONDING MODEL FOR EXACT PARTS CONFIGURATION.

**SERVO PRODUCTS COMPANY**

BEVEL GEAR INSTALLATION

NA-5444 C

FORM 0800-80002 7/25/95
1. Cross travel stop assembly may be mounted on either side of knee (see detail A).

2. When using attachment mount limit switch, stop & track on opp. side.

3. Reference Drawing Only. Installation shown is a representation only.

4. Trip rail is designed for 115 cross travel. It can be modified for 125 cross travel (see detail A).

**NOTES:**

- View from back side of saddle
- 0.3 clearance between stop bar & track
- 1.00 (Ref.)
- 69 Approx.
- 5/16-18 UNC, 2 holes
- 0.3 clearance
- View from back side of saddle
- 0.3 clearance