POWER FEED INSTALLATION
Model M-0250/251/252 Cross Feed
Bridgeport Mill and others

REFERENCE DRAWINGS ENCLOSED
NA-5444  Bevel Gear Installation
NB-0332  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 table to the front of the knee.

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

*Step 3:* Slide the bearing race onto the lead screw. Then slide the power feed over the bearing race.

*Step 4:* Line the feed up so that it sits square to the bearing housing. Using the power feed as a template, spot two mounting holes.

*Step 5:* Remove the power feed and bearing race from the lead screw.

*Step 6:* Remove the four screws holding the bearing housing and remove from the mill. Clean the mounting face. (The lead screw can be used to jack the housing off the pins. The lead screw does not have to be removed from the mill.)

*Step 7:* Drill and tap two holes 1/4-20 x 7/8” deep. Take special care to prevent contaminating the bearings.

*Step 8:* Put the bearing housing back onto the mill.

*Step 9:* Screw the shaft extension to the lead screw and tighten.

*Step 10:* Using the hole provided as a pilot, drill 1/8 diameter hole thru and pin using 1/8 diameter x 5/8” long roll pin. File smooth.

POWER FEED INSTALLATION

*Step 1:* Slide the bearing race onto the lead screw.

*Step 2:* Slide the power feed onto the bearing race and secure with two 1/4-20 x 1-1/2” long socket head cap screws.

BEVEL GEAR INSTALLATION

*Step 1:* 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: In the following sequence, replace dial and dial locking nut, slide the crank onto shaft extension and secure with 1/2-20 lock nut. (A smaller diameter crank is supplied in order to have clearance between the cross feed crank and the knee crank.)

LIMIT SWITCH INSTALLATION

Step 1: See the limit switch installation drawing NB-1538. Check Note 4 and Detail A on the drawing to modify the trip rail for various cross travel distances.

NOTE For mills equipped with the Bridgeport optical measuring system or the measuring attachment, install limit switch assembly on the left-hand side of the mill.

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
.002/LAMINATION

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR
WITH PENCIL TO CHECK BACKLASH.

.015/.025
(THIS IS NOT THE
READING ON THE DIAL)

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

PUSH BEVEL GEAR
AGAINST SHIMS.

TIGHTEN NUT.

STEP 3
DOUBLE CHECK OF SHIMMING

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

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

REMOVE GEAR, PACK WITH GREASE.
(DO NOT USE SILICONE TYPE GREASE)
REPLACE GEAR.
(Do NOT lose any shims)

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

SERVO PRODUCTS COMPANY
BEVEL GEAR INSTALLATION
NA-5444 C