POWER FEED INSTALLATION
Model M-0253 Cross Feed
Bridgeport Mill after 8/1/10

Note: Older Bridgeport mills have the Y-axis leadscrew bearings held by a retaining ring, mounted with three screws, which presses against the outer races of the bearing pair. These instructions cover the new mills having no retaining ring; instead, a nut on the leadscrew tightens against the inner races of the bearing pair.

REFERENCE DRAWINGS ENCLOSED
NA-5444  Bevel Gear Installation
NB-59676  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. Place the 59675 spacer in the bearing housing. Then slide the power feed over the bearing race, and against the spacer.

Step 4: Line the feed up vertically. 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: Drill and tap two holes 1/4-20 x 3/8" deep. Take special care to prevent contaminating the bearings.

Step 7: Screw the shaft extension to the lead screw and tighten.

Step 8: 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. Do not over-tighten, just barely snug will ensure the leadscrew turns freely. 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
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.

PUSH BEVEL GEAR AGAINST SHIMS.

TIGHTEN NUT.

**CAUTION:** IF BACKLASH IS NOT PROPERLY SET BEFORE TURND 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

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
LIMIT SWITCH, CROSS FEEDS

INSTALLATION DRAWING
SERVO PRODUCTS COMPANY

NOTES:

TRIP RAIL #1725
ASSEMBLY
TRIP LIMIT SWITCH
KNIFE TO MOUNT TRACK
2 ROWS 1 1/2 HOLE IN LIMIT SWITCH STUD

NO SNAP CENTER LINE

LIMIT SWITCH ROD A

VIEW FROM BACK SIDE OF NIECE & SODICK

STOP BAR & TRACK
0.0 CLEARANCE BETWEEN
69.0 APPROX.

-5/16-18NC, 2 HOLES

MOUNTED ON LEFT SIDE OF KNEE & SADDLE

MOUNTED ON RIGHT SIDE OF KNEE & SADDLE

0.0 CLEARANCE

REMOVE COVER FROM LIMIT SWITCH BOX

A FOR #10-24 X 1/2 "TAP SW 
INSTALL LIMIT SWITCH BOX USING A-1117 COVER 
A & TOUCH TO FACE FROM SADDLE INSTALL
M-0253 CROSS FEED PARTS IDENTIFICATION LIST