POWER FEED INSTALLATION
Model M-225 Table Feed
Bridgeport Mill
Replaces Bridgeport Gear Box Feed

REFERENCE DRAWINGS ENCLOSED
- NA-5444  Bevel Gear Installation
- NB-0480  Power Feed 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 extreme left.

Step 2: Remove the nut, crank, dial, key, and power feed unit, including slotted bearing sleeve and cotter (shear) pin.

Step 3: Clean the lead screw with sandpaper to remove any burrs and facilitate installation of ball bearing and sleeves.

POWER FEED INSTALLATION

Step 1: Install on the lead screw in the following sequence: spacer #0477 (7/16” long) 77R10 bearing, sleeve #0478 (4.72” long). Add the adapter #0479 using the original screws. Tap in place over the bearing.

Step 2: Add shims against the sleeve #0478 to the dimension shown on drawing ND-0480.

Step 3: Add the bearing race.

Step 4: Install power feed using the 1/4-20 x 1.0” 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. Two plastic (.030” thick) and five brass (.005” thick) washers are provided for this. Shim as required.

Step 2: In the following sequence: replace key (if removed), dial, and dial locking nut, slide handle in place and tighten with 1/2-20 lock nut.
LIMIT SWITCH INSTALLATION

Step 1: Remove the standard table stop pieces and install the table stop pieces furnished. Put the standard stops back in a position to prevent feed stops from being set beyond extreme table travel.

Step 2: Remove the two cap screws holding the T-shaped table stop. Place the limit switch spacers into the T-stop and install limit switch using 3/8-16 x 1-1/4" long socket head cap screws.

Step 3: The T-stop is retained to act as a positive stop where required for manual operation.

NOTE For proper operation, the electrical limit switch should be engaged .4 inch before the mechanical stop to allow for coasting of the table. The T-stops are often not symmetrical and may need to be ground to obtain proper operation.

Step 4: Put the cable clamp on the cable and secure to the right-hand chip scraper screw.

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.

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STEP 1
PREPARATION

KEY IS REMOVED DURING SHIMMING

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.

TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING)

ROTATE GEAR FROM SIDE TO SIDE. REMOVE OR ADD SHIMS AS REQUIRED TO OBTAIN 0.015/0.025 BACKLASH.

PUSH BEVEL GEAR AGAINST SHIMS.

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 REFERENCE ONLY. SEE INSTALLATION DRAWING OF CORRESPONDING MODEL FOR EXACT PARTS CONFIGURATION.

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BEVEL GEAR INSTALLATION
NA-5444 C
M-0225 TABLE FEED PARTS IDENTIFICATION LIST