POWER FEED INSTALLATION
Model M-5050 Cross Feed
Acra 10x50, 10x54

REFERENCE DRAWINGS ENCLOSED
NA-5444 Bevel Gear Installation
NB-6296 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 saddle to the front of the mill.

Step 2: Remove the nut, handle, dial assembly, and key from the lead screw. Save the key for installation later.

Step 3: Screw the shaft extension onto the lead screw.

Step 4: Slide the bevel gear onto the lead screw to ensure proper fit. Then remove the bevel gear.

Step 5: Using the hole provided as a pilot, drill a 3/16" diameter hole through the lead screw. Pin the shaft extension to the lead screw with the 3/16" diameter x 5/8" long roll pin. File smooth.

POWER FEED INSTALLATION

Step 1: Slide the adaptor onto the lead screw (counterbore facing outside).

Step 2: Slide the bearing race onto the lead screw and into the adaptor for proper alignment of the adaptor.

Step 3: Using a transfer punch, transfer the three mounting holes onto the bearing retainer and tap 1/4-20 through.

Step 4: Secure the adaptor to the bearing retainer using three 1/4-20 x 1" socket head cap screws.

Step 5: Remove the bearing race.

Step 6: Slide the two spacers onto the lead screw followed by the bearing race, as shown on installation drawing NB-6296.

Step 7: Slide the power feed onto the bearing race and secure to the adaptor using two 1/4-20 x 1" long socket head cap screws.
**BEVEL GEAR INSTALLATION**

*Step 1:* For the bevel gear installation, use the 3 mm parallel key you saved before or cut the key provided to the proper length to fit.

*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. Two plastic (.030" thick) and five brass (.005" thick) washers are provided for this. Shim as required.

*Step 2:* Put on the dial locking nut.

*Step 3:* Slide the spacer and handcrank onto the end of the shaft extension and tighten with the 1/2-20 lock nut.

**LIMIT SWITCH INSTALLATION**

*Step 1:* See the limit switch installation drawing NB-1538 and drawing NB-6296.

**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
(THE 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

REMOVE GEAR, PACK WITH GREASE. (DO NOT USE SILICONE TYPE GREASE) REPLACE GEAR. (DO NOT loose 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
OPERATIONS BEFORE TURNING ON SERVO POWER FEED.

NOTES:
1. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED.