POWER FEED INSTALLATION
Model M-9122 Table Feed
Servo Mills SV50 & SV54

REFERENCE DRAWINGS ENCLOSED
NA-5444 Bevel Gear Installation
NB-58631 Power Feed Installation
ND-6293 Type 150 Servo Power Feed
ND-6292 Type 140 Servo Power Feed
0800-80001 Servo Power Feed Operation

PREPARATION

Step 1: Gather together the following items that you will need to complete this installation.
   a) 3/8” electric hand drill
   b) #7 drill, 1/8” drill
   c) 1/4-20 tap
   d) 9/32” diameter transfer punch
   e) flat file
   f) 3/4” socket wrench
   g) set of inch hex wrenches
   h) grease
   i) masking tape
   j) clean shop rag

Step 2: Clean the power feed mounting area completely.

Step 3: Remove the nut, handle, and dial assembly from the right hand end of the table. Keep the dial for reuse later.

MOUNTING HARDWARE INSTALLATION

Step 1: Slip the bearing race #0714 onto the lead screw shaft.

Step 2: Slip the adaptor #57237 over the bearing race and slide both together to locate the adaptor against the table bracket.

Step 3: Line up the mounting holes on the adaptor such that the power feed can be mounted vertically. Using a 9/32” diameter transfer punch, transfer the three mounting holes to the bracket.

Step 4: Remove the adaptor and the bearing race. Mask the bearing in the bracket.

Step 5: Drill and tap 1/4-20 UNC threads to 1/2” deep. Clean thoroughly. Do not use air.
Step 6: Lubricate the shaft with a light coat of grease. Slip the bearing race back onto the shaft. Then slip the adaptor over the race to center it with the shaft. Slide both pieces to locate the adaptor against the table bracket, keeping the portion of the race sticking out beyond the counterbored end of the adaptor so that it can be removed later. Secure the adaptor with three 1/4-20 x 1-1/2” long socket head cap screws provided. Remove the bearing race.

Step 7: Slip spacer #6836 onto the shaft followed by the bearing race as shown on drawing NB-58631.

SHAFT EXTENSION AND POWER FEED INSTALLATION

Step 1: Screw on the shaft extension #0333 onto the lead screw and tighten.

Step 2: Following the existing pilot hole, drill through the shaft extension using a 1/8” diameter drill.

Step 3: Support the other side of the hole with a heavy piece of metal and hammer in the #00564 roll pin. File smooth and clean thoroughly.

Step 4: Slide the Power Feed onto the bearing race and push against the adaptor. Secure with two 1/4-20 x 1-1/8” long socket head cap screws.

IF: If the bearing race is not flush with the needle bearing in the unit within ±.05”, then either shim behind the race or machine the spacer to correctly locate the race.

BEVEL GEAR INSTALLATION

Step 1: Follow the drawing NA-5444 for installation of the bevel gear. Adjust for proper gear backlash.

DIAL AND HANDWHEEL INSTALLATION

Step 1: After getting the proper gear 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. Three plastic (.030” thick) and five brass (.005” thick) washers are provided for this. Shim as required.

Step 2: In the following sequence, install the key, dial and dial nut #2255. Slide the handwheel #58923 in place and tighten with 1/2-20 locknut #01115.

Step 3: To avoid injury, replace the handle on the left side of the table with the extra handwheel #58923 provided.
LIMIT SWITCH INSTALLATION

Step 1: Remove the standard table stop pieces. 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 bracket. Place the short spacers into the counterbored holes in the T-stop. Place the limit switch assembly on the spacers and locate using the two 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. Secure using 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.
**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.

**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 HAND CRANK. 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

SEAL

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
1. Review all installation instructions.

2. Replace table left side handle with extra handwheel.

NOTE:

- #2225 dial nut
- #2225 dial
- #0696.18 8"x 5/8" roll pin
- #22250 woodruff key
- #22251 shaft extension
- #22252 stop nut
- #22253 table stop piece
- #59232 hand wheel
- #59233 hand wheel
- #6636 spacer
- #5948 adapter
- #5947 nut
- #6636 adapter
- #6636 adapter
- #6636 adapter
- #6636 adapter
- #6636 adapter

Parts:
- #00601-1 1/4-40 x 1/2" roll
- #00602-1 1/4-40 x 1/2" roll
- #00603-1 1/4-40 x 1/2" roll

- #10065:18 x 5/8" roll pin
- #10066 woodruff key
- #10067 shaft extension
- #10068 stop nut
- #10069 table stop piece
- #10070 hand wheel
- #10071 hand wheel
- #10072 hand wheel
- #10073 hand wheel
- #10074 adapter
- #10075 nut
- #10076 adapter
- #10077 adapter
- #10078 adapter
- #10079 adapter

- #10080:18 x 5/8" roll pin
- #10081 woodruff key
- #10082 shaft extension
- #10083 stop nut
- #10084 table stop piece
- #10085 hand wheel
- #10086 hand wheel
- #10087 hand wheel
- #10088 hand wheel
- #10089 adapter
- #10090 nut
- #10091 adapter
- #10092 adapter
- #10093 adapter
- #10094 adapter

- #10095:18 x 5/8" roll pin
- #10096 woodruff key
- #10097 shaft extension
- #10098 stop nut
- #10099 table stop piece
- #10100 hand wheel
- #10101 hand wheel
- #10102 hand wheel
- #10103 hand wheel
- #10104 adapter
- #10105 nut
- #10106 adapter
- #10107 adapter
- #10108 adapter
- #10109 adapter

- #10110:18 x 5/8" roll pin
- #10111 woodruff key
- #10112 shaft extension
- #10113 stop nut
- #10114 table stop piece
- #10115 hand wheel
- #10116 hand wheel
- #10117 hand wheel
- #10118 hand wheel
- #10119 adapter
- #10120 nut
- #10121 adapter
- #10122 adapter
- #10123 adapter
- #10124 adapter