

POWER FEED INSTALLATION

Model M-9530 Cross Feed

Kalamazoo and others



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-58331	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:* Slide the bearing race onto the lead screw.
- Step 4:* Slide the adaptor over the bearing race and against the front of the knee.
- Step 5:* Orient and transfer three mounting holes from the adaptor to the existing bearing retainer. Remove the bearing race.
- Step 6:* Remove the bearing retainer to drill and tap 1/4-20 thru. Then reinstall.
- Step 7:* Screw the shaft extension onto the lead screw.
- Step 8:* Slide the bevel gear onto the lead screw to ensure proper fit. Then remove the bevel gear.
- Step 9:* Using the hole provided as a pilot, drill 1/8" diameter through the lead screw. Pin the shaft extension to the lead screw with the 1/8 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:* Secure the adaptor to the bearing retainer using three 1/4-20 x 1" long socket head cap screws.
- Step 4:* Remove the bearing race.
- Step 5:* Slide the spacer and bearing race onto the lead screw.
- Step 6:* 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: Use the 3 mm parallel key you saved before for the bevel gear installation.

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. Slide the 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 enclosed.

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.

SERVO PRODUCTS COMPANY

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Call for the location of our regional Service Centers.

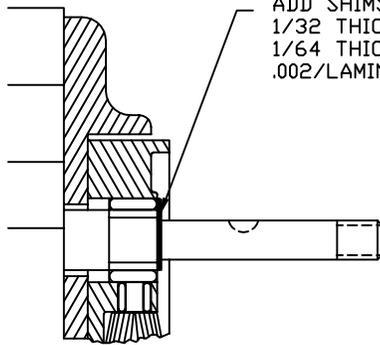


KEY IS REMOVED DURING SHIMMING



TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR AGAINST SHIMS.

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.

TIGHTEN NUT.

STEP 2
SHIMMING BEVEL GEAR

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



LOOSEN SETSCREW

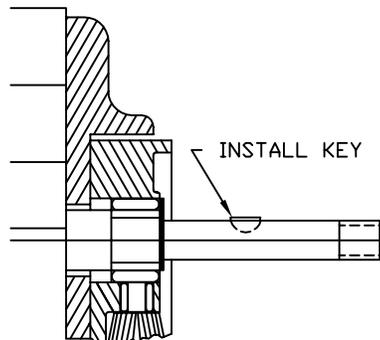


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.



CONTROL HANDLE @ NEUTRAL POSITION

STEP 3
DOUBLE CHECK OF SHIMMING



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.

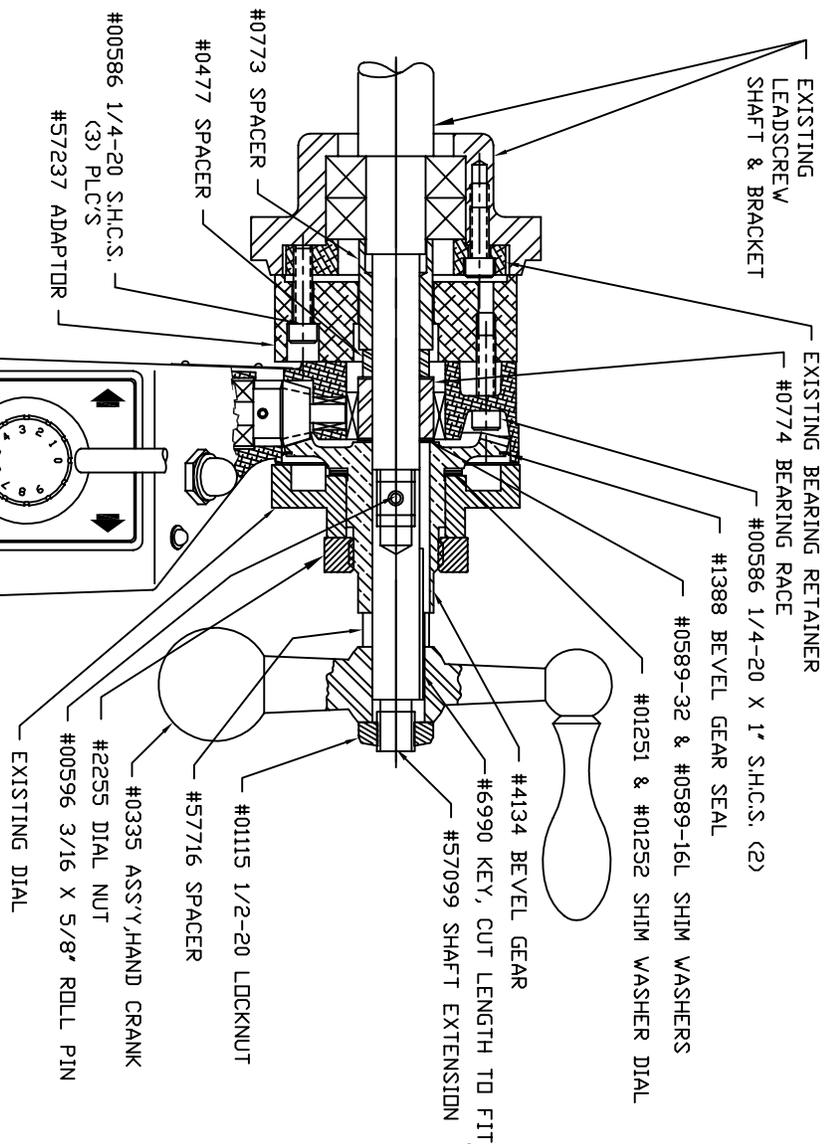
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BEVEL GEAR INSTALLATION

NA-5444 C

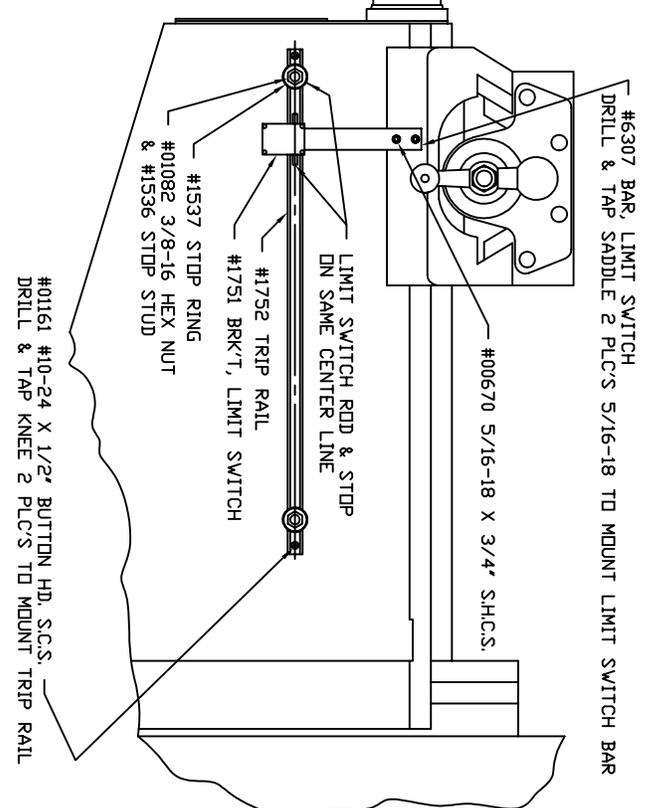
STEP 4
LUBRICATION

REVISION		DATE	APPROVED
ECD	LTR	DESCRIPTION	



NOTES: 1. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED OPERATIONS BEFORE TURNING ON SERVO POWER FEED.

LIMIT SWITCH INSTALLATION FOR CROSS



UNLESS OTHERWISE SPECIFIED, FLATNESS TO BE WITHIN .01, CONCENTRICITY TO BE WITHIN .01, REMOVE SHARP EDGES AND CORNERS .005 MIN.

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	TOLERANCES ARE	ANGLES
FRACTIONS	DECIMALS	± 1/2 DEG.
± 1/64	± .005	± 1/2
± .005	± .005	± 1/2
MATERIAL		CHECKED

CONTRACT NO.	APPROVALS	DATE
	T. KU	4/08/96

SERVO PRODUCTS COMPANY
 433 N. FAIR OAKS AVE., PASADENA, CALIFORNIA 91103

INSTALLATION DRAWING
 MODEL 9530, KALAMAZOO

SIZE: B CODE IDENT. NO.: 0800-80592 DRAWING NO.: NB-58331 REV: 1

SCALE: 5/8 SHEET: 1 OF 1

APPLICATION USED ON

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