

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.

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!

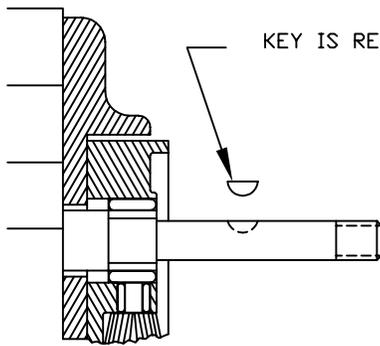
Prevent contact during fast traverses.

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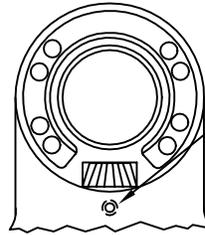
433 North Fair Oaks Avenue, Pasadena, CA 91103 USA
Phone: 800.521.7359 or 626.796.2460 Fax: 626.796.3845

Web: www.servoproductsco.com

Call for the location of our regional Service Centers.

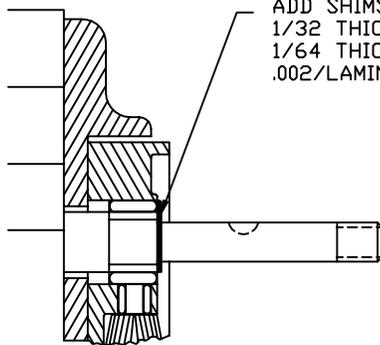


KEY IS REMOVED DURING SHIMMING

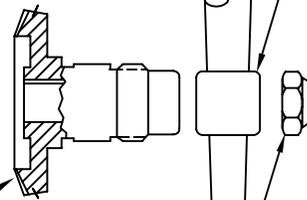


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



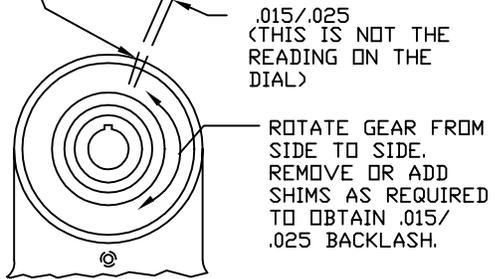
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR WITH PENCIL TO CHECK BACKLASH.



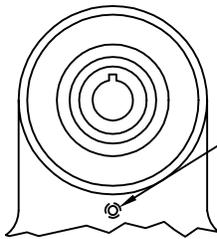
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

ROTATE GEAR FROM SIDE TO SIDE. REMOVE OR ADD SHIMS AS REQUIRED TO OBTAIN .015/.025 BACKLASH.

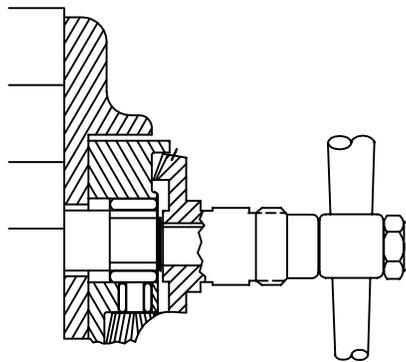
TIGHTEN NUT.

STEP 2
SHIMMING BEVEL GEAR

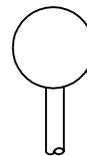
CAUTION: IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.



LOOSEN SETSCREW

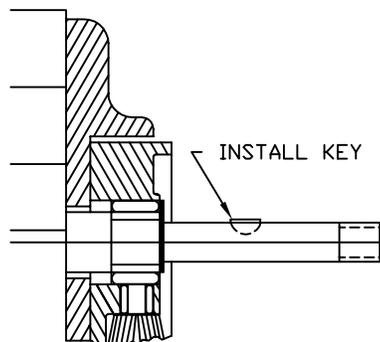


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.



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.

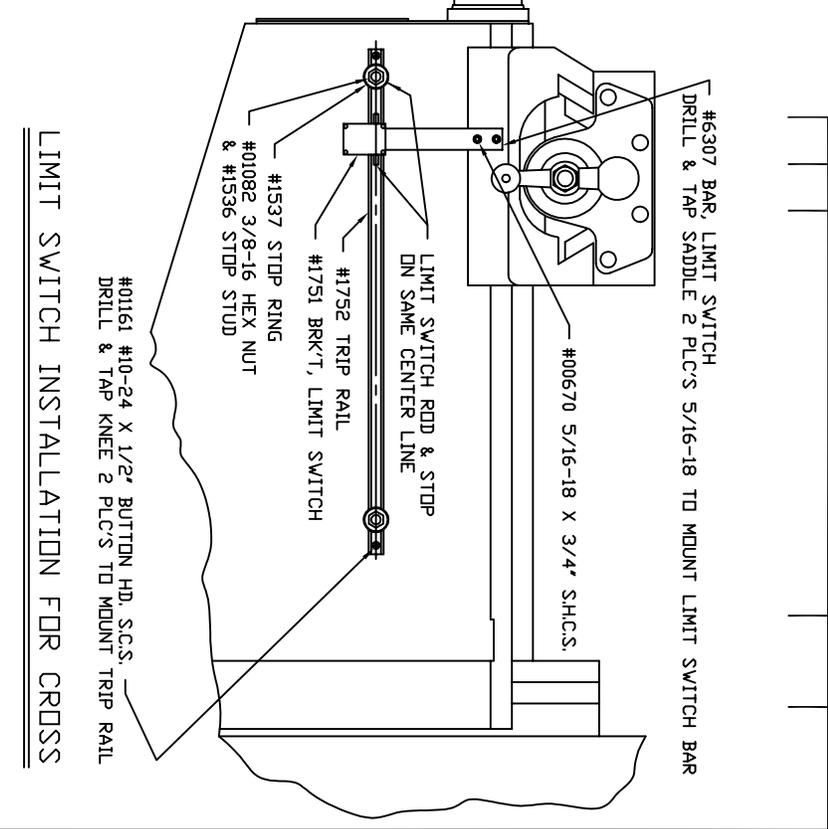
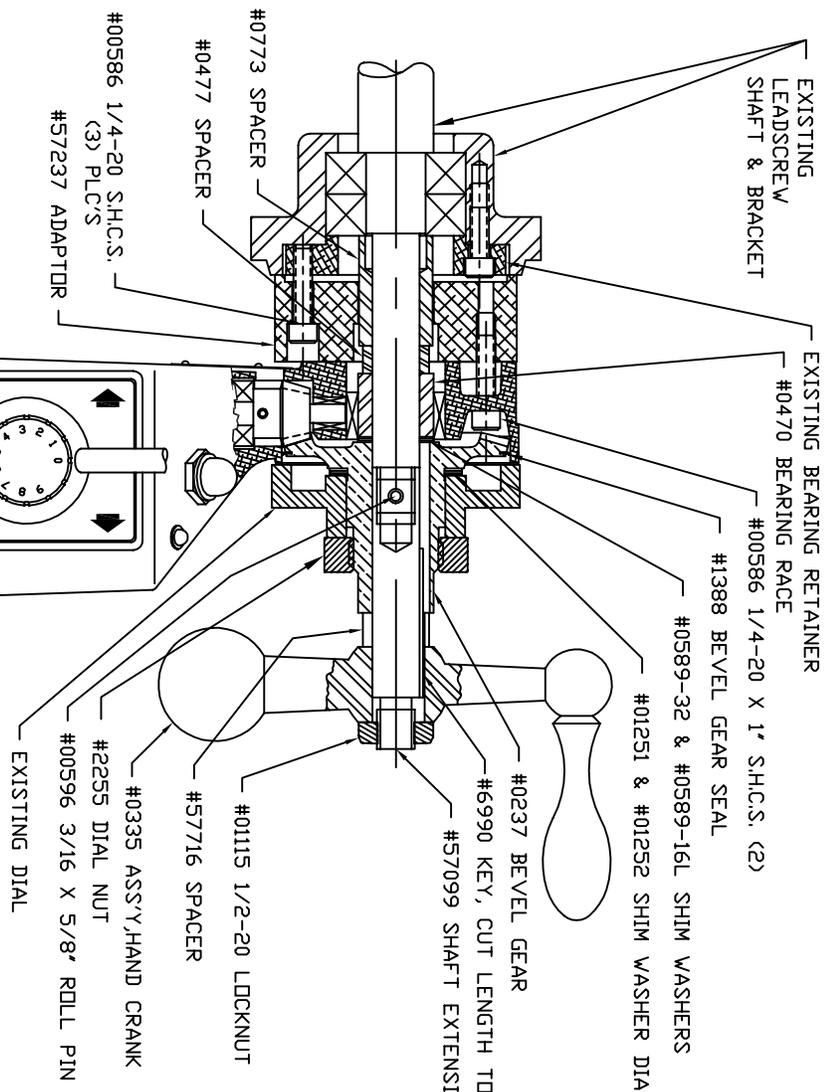
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BEVEL GEAR INSTALLATION

NA-5444 C

STEP 4
LUBRICATION

REVISION		DATE	APPROVED
ECD	LTR	DESCRIPTION	



LIMIT SWITCH INSTALLATION FOR CROSS

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

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 FRACTIONS DECIMALS ANGLES ± 1/64 .XX ± .05 ± 1/2 MATERIAL FINISH DID NOT SCALE DRAWING

CONTRACT NO.	APPROVALS	DATE
	T. KU	6/23/94
APPROVALS		
DATE		
CHECKED		

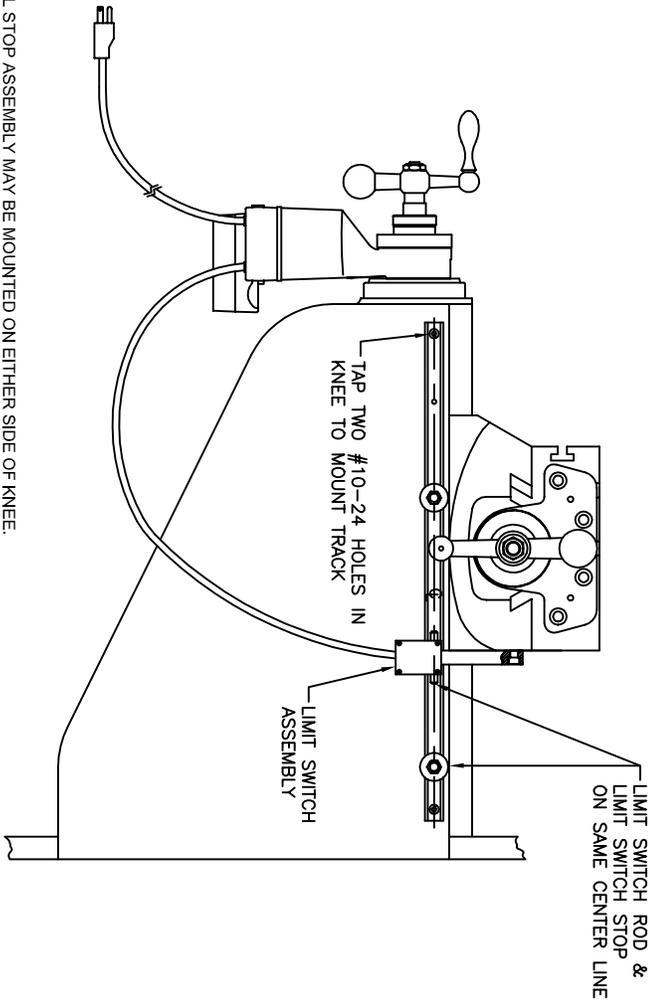
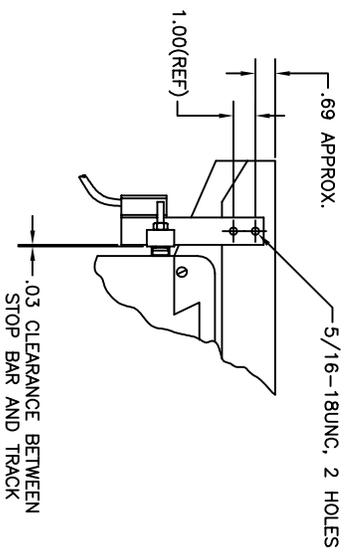
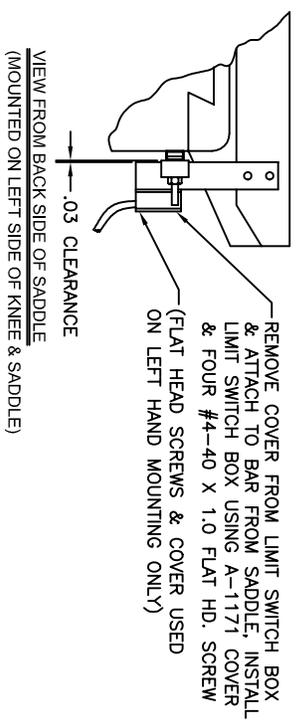
SERVOPRODUCTS COMPANY
 433 N. FAIR OAKS AVE., PASADENA, CALIFORNIA 9103

INSTALLATION DRAWING
MODEL 5050

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
B	0800-80170	NB-6296	B
SCALE	5/8	SHEET	1 OF 1

A B C D 4 3 2 1

REVISION		DATE	DRAWN	CHECKED
ECC	LTR			
DESCRIPTION				



- NOTES:
1. CROSS TRAVEL STOP ASSEMBLY MAY BE MOUNTED ON EITHER SIDE OF KNEE
 2. WHEN MILL HAS MEASURING ATTACHMENT, MOUNT LIMIT SWITCH, STOPS & TRACK ON OPP. SIDE.
 3. REFERENCE DRAWING ONLY. INSTALLATION SHOWN IS A BRIDGEPORT MILL.

VIEW FROM BACK SIDE OF SADDLE
(MOUNTED ON RIGHT SIDE OF KNEE & SADDLE)

UNLESS OTHERWISE SPECIFIED PERPENDICULARITY, PARALLELISM, STRAIGHTNESS, FLATNESS, ROUNDNESS, CONCENTRICITY, CYLINDRICITY TO BE WITHIN .01 TOTAL OR .040/IN. SURFACE ROUGHNESS WITHIN 125 REMOVE SHARP CORNERS AND EDGES .005 MIN. DRAFTING STANDARD PER ANSI Y14.5M-1982

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CONTRACT NO.	APPROVALS	DATE	CHECKED
	T. KU	02/01/01	
MATERIAL	FINISH	DO NOT SCALE DRAWING	
APPLICATION	USED ON		

SERVO PRODUCTS COMPANY
433 NO. FAIR OAKS AVE., PASADENA CALIFORNIA 91103

INSTALLATION DRAWING
LIMIT SWITCH, CROSS FEEDS

SIZE: B
CODE IDENT NO.: 0800-8002-1
DRAWING NO.: NB-1538
SCALE: NONE
SHEET: A

