

POWER FEED INSTALLATION

Model M-1380 Knee Feed

Kondia G, FV-1, Hurco SM1 and others



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NC-0792	Limit Switch Installation (1390 only)
NB-3216	Power Feed Installation
ND-6292	Type 140 Servo Drive
0800-80001	Servo Power Feed Operation

NOTE *If both vertical and cross feeds are being mounted, position the bearing retainer in a radial position 30° clockwise for the knee and 30° counter-clockwise for the cross feed.*

PREPARATION

- Step 1:* Remove the drive clutch from the elevating jack shaft.
- Step 2:* Remove the dial and nut.
- Step 3:* Remove the bearing retainer.
- Step 4:* Pull the jack shaft out of the knee. **Hold inboard end up** while removing to avoid damage to the pinion gear.
- Step 5:* Remove the dial holder and press the bearing off the jack shaft.
- Step 6:* Drill and ream the end of the jack shaft .4375" diameter by 13/16" deep. The .4375 diameter must be concentric to the shaft o.d. within .002 TIR. Chamfer 1/32 x 1/2 diameter. **For best results, machining should be done in a lathe.**
- Step 7:* Place the shaft extension into the end of the jack shaft. Using the hole provided as a pilot, drill 1/8" diameter through and pin the shaft extension to the jack shaft with the 1/8 diameter x 5/8" long roll pin. File smooth.
- Step 8:* Replace the bearing onto the jack shaft.
- Step 9:* Replace the jack shaft in the machine.
- Step 10:* Secure Servo bearing retainer in place of the Kondia retainer.

POWER FEED INSTALLATION

- Step 1:* Slide the spacer #6740 over threads followed by shim #04867.
- Step 2:* Slide the spacer #0477 onto the lead screw.
- Step 3:* Slide the bearing race onto the jack shaft against the #0477 spacer.

Step 4: Add the adaptor and secure using the three 1/4-20 x 3/4" long socket head cap screws supplied. Using drawing ND-3216, check the .125 dimension.

IF: If necessary, remove the bearing race and the #0477 spacer. Machine the length of the spacer per Note 1.

Step 5: With the spacer and bearing race in place, slide the power feed and secure with 1/4-20 x 1" long socket head cap screws provided.

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, put on the dial locking nut, place the key in the shaft, and slide handwheel in place. Add the washer and 1/2-20 lock nut.

LIMIT SWITCH INSTALLATION

Step 1: For model 1390, see limit switch installation drawing NC-0792 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

Web: www.servoproductsco.com

CALIFORNIA BRANCH

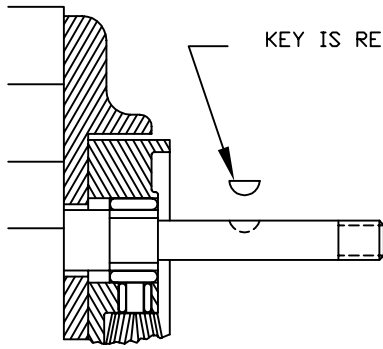
14254 Valley Blvd., Unit A
City of Industry, CA 91746
Ph. 626.961.7800 Fax 626.961.2444

HEADQUARTERS

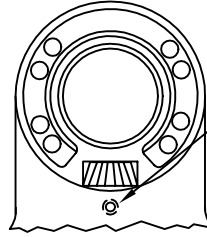
34940 Lakeland Blvd.
Eastlake, OH 44095
Ph. 440.942.9999 Fax 440.942-9100

FLORIDA BRANCH

8950 131st Ave. N.
Largo, FL 33773
Ph. 727.585.8555 Fax 727.585.6555

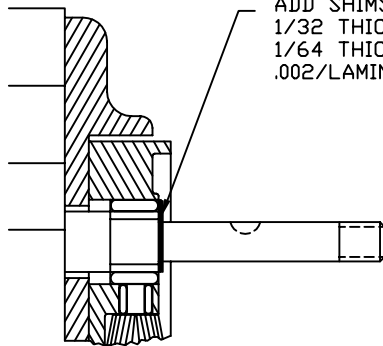


KEY IS REMOVED DURING SHIMMING

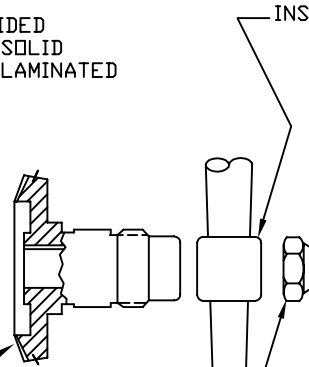


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



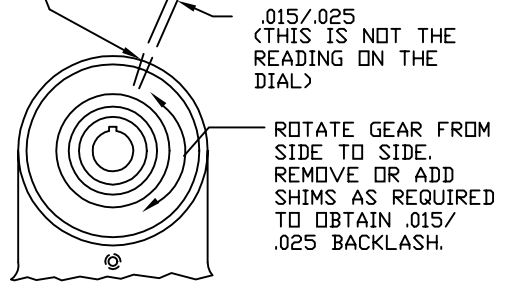
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR WITH PENCIL TO CHECK BACKLASH.



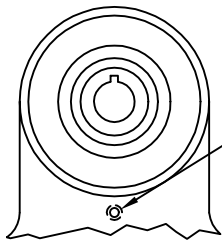
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

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

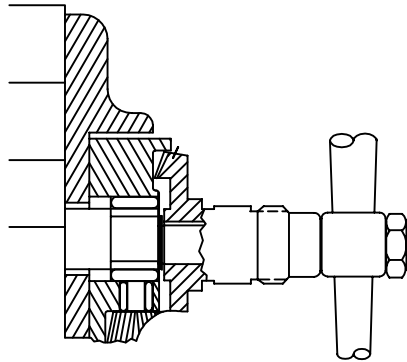
STEP 2
SHIMMING BEVEL GEAR

TIGHTEN NUT.

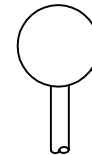
CAUTION: IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.



LOOSEN SETSCREW

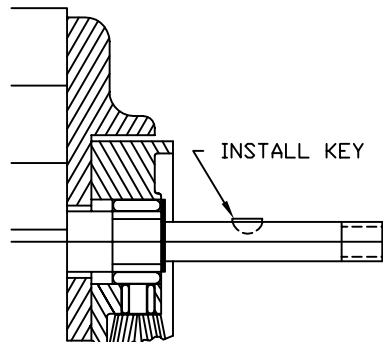


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.



CONTROL HANDLE @ NEUTRAL POSITION

STEP 3
DOUBLE CHECK OF SHIMMING



INSTALL KEY



SEAL

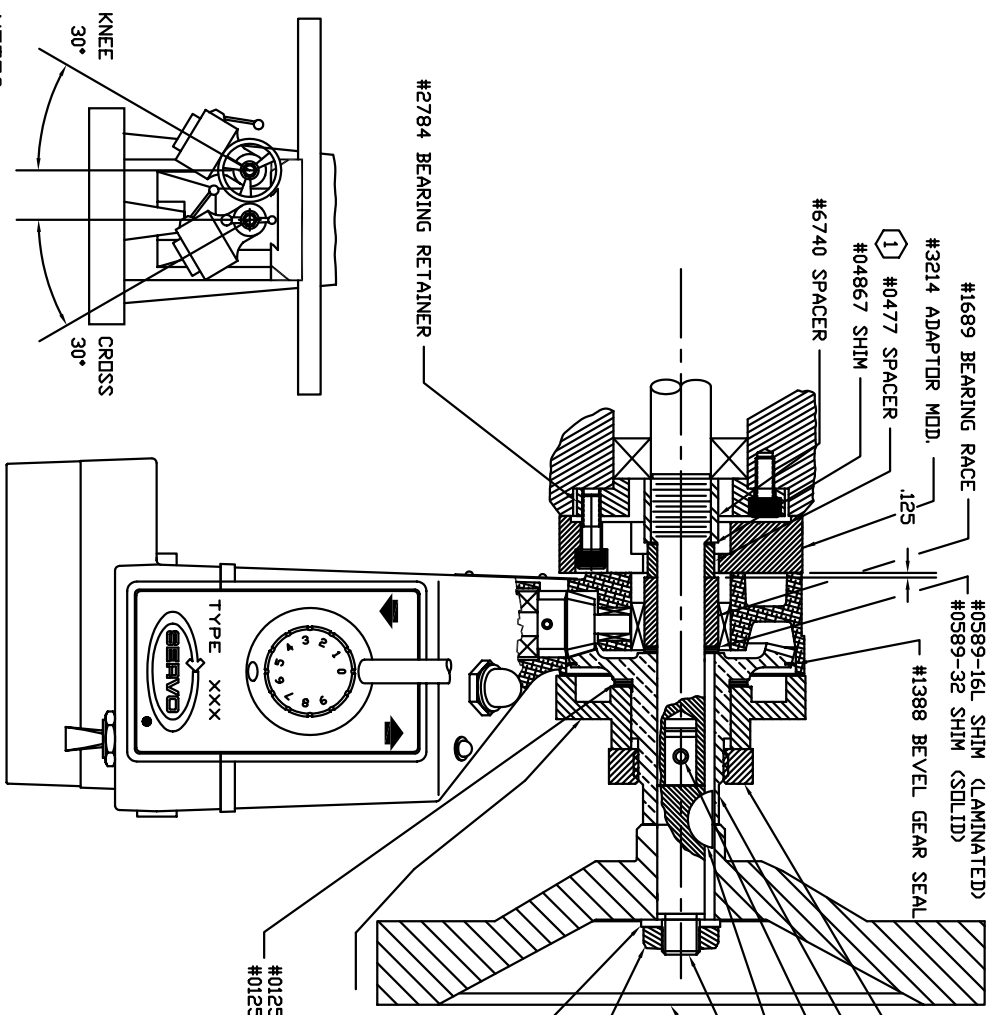
REMOVE GEAR, PACK WITH GREASE. (DO NOT USE SILICONE TYPE GREASE) REPLACE GEAR. (DO NOT LOSE ANY SHIMS)

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



- NOTES:
1. POSITIONS FOR INSTALLATION WHEN BOTH KNEE & CROSS HAVE POWER FEEDS.
 2. INSTALL THE UNITS VERTICAL WHEN ONLY ONE AXIS IS INSTALLED.

- EXISTING DIAL
- NOTES:
1. MACHINE LENGTH OF SPACER SD MAX. PROJECTION IS AS NOTED.
 2. SEE DRAWING C-0792 FOR INSTALLATION OF LIMIT SWITCH MODEL 1390 ONLY.
 3. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED OPERATION BEFORE TURNING ON SERVO POWER FEED.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE TO BE WITHIN .015 CONCENTRICITY TO BE WITHIN .01 REMOVE SHARP EDGES AND CORNERS .005 MIN. DRAWING STANDARD PER ANSI Y14.5M-1992

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE AS FOLLOWS: DECIMALS ± 1/64 .XX ± .005 ANGLES ± 1/2° MATERIAL NOTED FINISH NOTED DID NOT SCALE DRAWING

CONTRACT NO.	APPROVALS	DATE
	BROWN G. BUINN	6/19/95
	CHECKED	

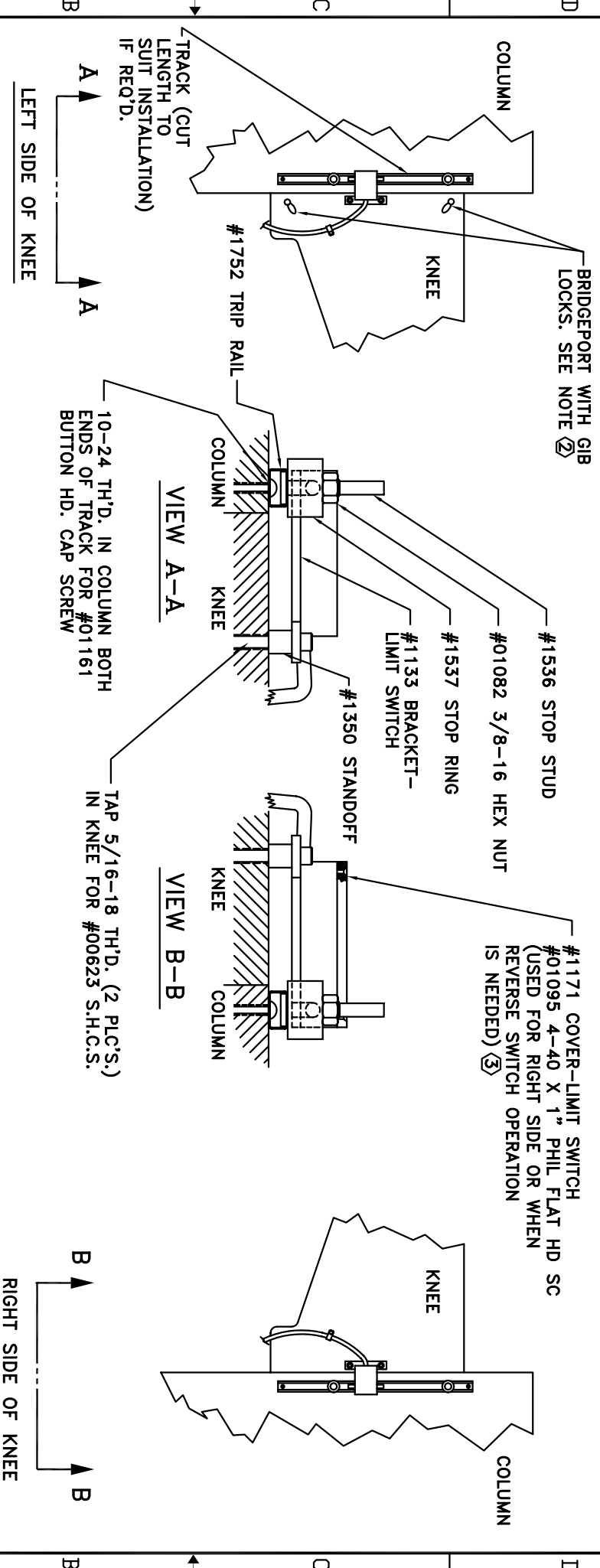
SERVO PRODUCTS COMPANY
 34940 LAKELAND BLVD., EASTLAKE, OH 44095
INSTALLATION DRAWING
KONDIA
MODEL 1380
 SIZE CODE IDENT. NO. DRAWING NO. REV.
 B 0800-80014 NB-3216 C
 SCALE 5/8 SHEET OF

REVISION		DATE	DRAWN	CHECKED
ECD	LTR	DESCRIPTION		

4 3 2 1

A B C D

REVISION		DATE	DRAWN	CHECKED
ECD	LTR	DESCRIPTION		



- NOTES:**
1. LIMIT SWITCH MAY BE MOUNTED ON RIGHT OR LEFT HAND SIDE OF MILL.
 2. BRIDGEPORT WITH GIB LOCKS IN KNEE MOUNT LIMIT SWITCH ON RIGHT HAND SIDE OF KNEE.
 3. LIMIT SWITCH BOX MAY BE TURNED OVER TO REVERSE SWITCH OPERATION IF REQUIRED.

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CONTRACT NO.	APPROVALS	DATE
	J.TUCKER	05/20/98

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INSTALLATION LIMIT STOP

SIZE CODE IDENT. NDL. DRAWING NDL. SHEET 1 OF 1

SCALE B NC-0792 REV A

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CONTRACT NO.	APPROVALS	DATE
	J.TUCKER	05/20/98

APPLICATION	USED IN	DID NOT SCALE DRAWING

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INSTALLATION LIMIT STOP

SIZE CODE IDENT. NDL. DRAWING NDL. SHEET 1 OF 1

SCALE B NC-0792 REV A