

POWER FEED INSTALLATION

Model M-3580 Knee Feed

Clausing M-400EVS, 450EVS & 500EVS



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NC-0792	Limit Switch Installation
NB-59377	Power Feed Installation
ND-6292	Type 140 Servo Power Feed
0800-80001	Servo Power Feed Operation

PREPARATION

- Step 1:* Clean the power feed mounting area completely.
- Step 2:* Remove the drive clutch from the elevating jackshaft. (The clutch is push-fit on the shaft.)
- Step 3:* Remove the dial and nut.
- Step 4:* Remove the screws from the bearing retainer.
- Step 5:* Pull jackshaft out of the knee (easy pull). **Hold inboard end up** while removing to avoid damage to the pinion gear.
- Step 6:* Hold the dial hub in soft jaws and unscrew.
- Step 7:* Remove the bearing retainer and press the bearing housing and the bearing off the shaft.
- Step 8:* Drill and ream the end of the jackshaft .4375" diameter by 13/16" deep. The .4375" diameter must be concentric to the shaft O.D. within .002" T.I.R. Chamfer 1/32" x 1/2" diameter. **For best results, machining should be done in a lathe.**
- Step 9:* Place the shaft extension into the end of the jackshaft. Using the hole provided as a pilot, drill 1/8" diameter through the shaft and pin the extension with the 1/8" diameter x 5/8" long roll pin. File smooth.
- Step 10:* Reassemble the jackshaft.
- Step 11:* Replace the jack shaft in the machine.

POWER FEED INSTALLATION

- Step 1:* Slide the spacer 4341 over jackshaft threads such that it bears against the ball bearing of the jackshaft.
- Step 2:* Install adaptor 59374 using existing screws (3) such that the mounting holes for the power feed are positioned to allow mounting of power feed in the down position.

Step 3: Slide bearing race on to the jackshaft. Mount power feed using 00586 1/4-20 x 1.00 long S.H.C.S. (2)

Step 4: Existing 3mm key may have to be modified.

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, install 3mm key, slide bevel gear onto jackshaft, using shim washers 01251 and 01252 shim dial to obtain .005" spacing from the face of the power feed. This is important to keep chips from entering the gear train.

Step 2: In the following sequence, install the dial lock nut, slide 1128 spacer, place 1/8 x 3/4 key 00614 in the shaft, and slide the handwheel in place. Add the washer and tighten with 1/2-20 locknut #01115.

LIMIT SWITCH INSTALLATION

Step 1: See limit switch installation drawing NC-0792.

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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Web: www.servoproductsco.com

CALIFORNIA BRANCH

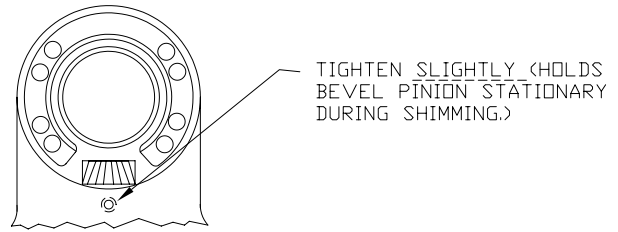
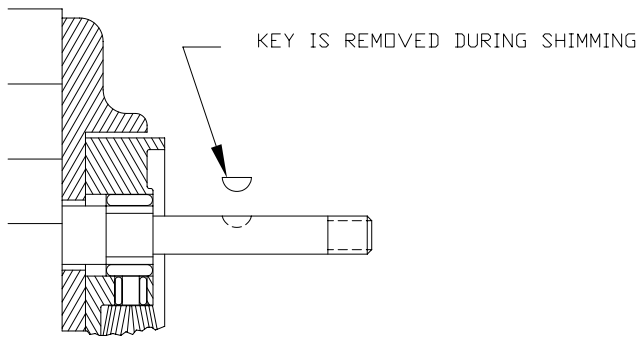
14254 Valley Blvd., Unit A
City of Industry, CA 91746
Ph. 626.961.7800 Fax 626.961.2444

HEADQUARTERS

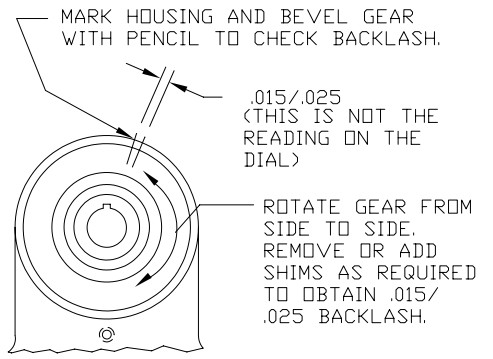
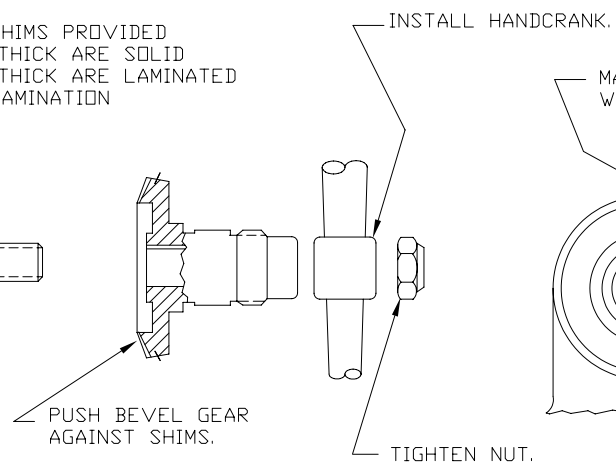
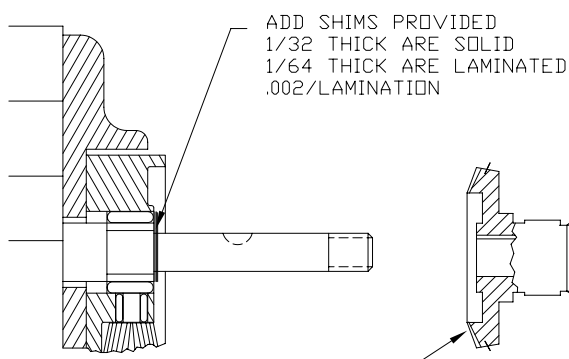
34940 Lakeland Blvd.
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FLORIDA BRANCH

8950 131st Ave. N.
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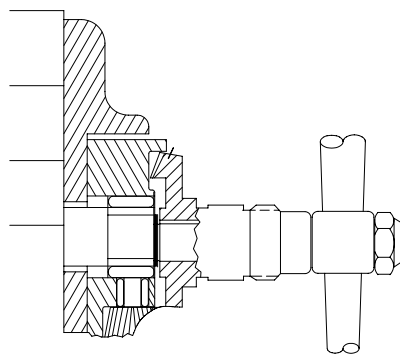
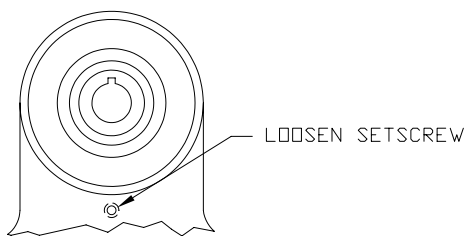


STEP 1
PREPARATION

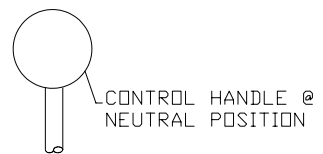


STEP 2
SHIMMING BEVEL GEAR

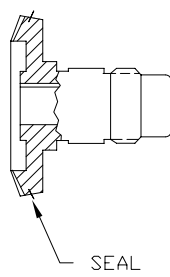
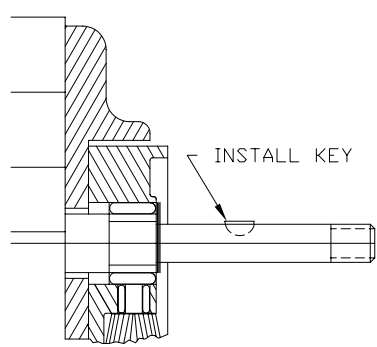
CAUTION: IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.



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 3
DOUBLE CHECK OF SHIMMING



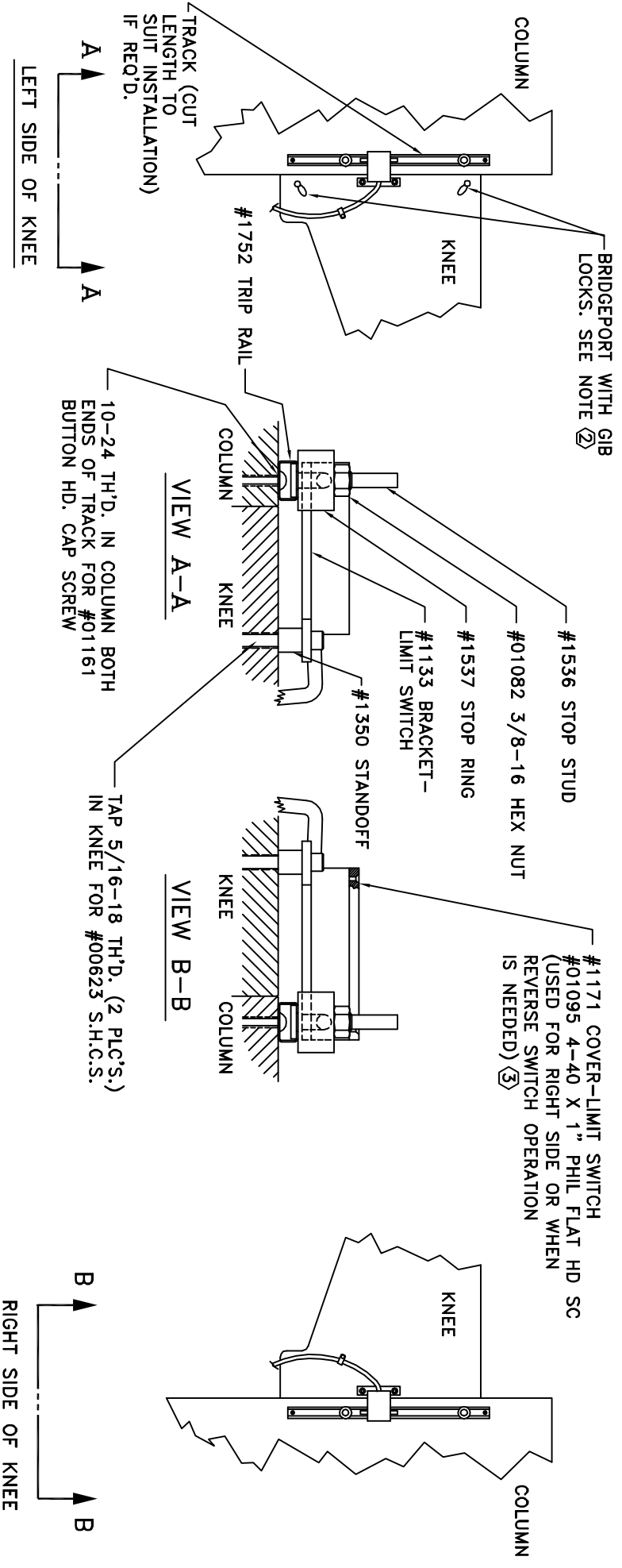
REMOVE GEAR, PACK WITH GREASE. (DO NOT USE SILICONE TYPE GREASE) REPLACE GEAR. (DO NOT LOSE ANY SHIMS)

PICTURES IN THIS DRAWING ARE FOR REFERENCE ONLY. SEE INSTALLATION DRAWING OF CORRESPONDING MODEL FOR EXACT PARTS CONFIGURATION.

STEP 4
LUBRICATION

SERVO PRODUCTS COMPANY
BEVEL GEAR INSTALLATION
NA-5444 C

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.

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 AS FOLLOWS: FRACTIONS DECIMALS ANGLES ± 1/64 ± .005 ± .005 ± 1/2°	CONTRACT NO.	APPROVALS	DATE
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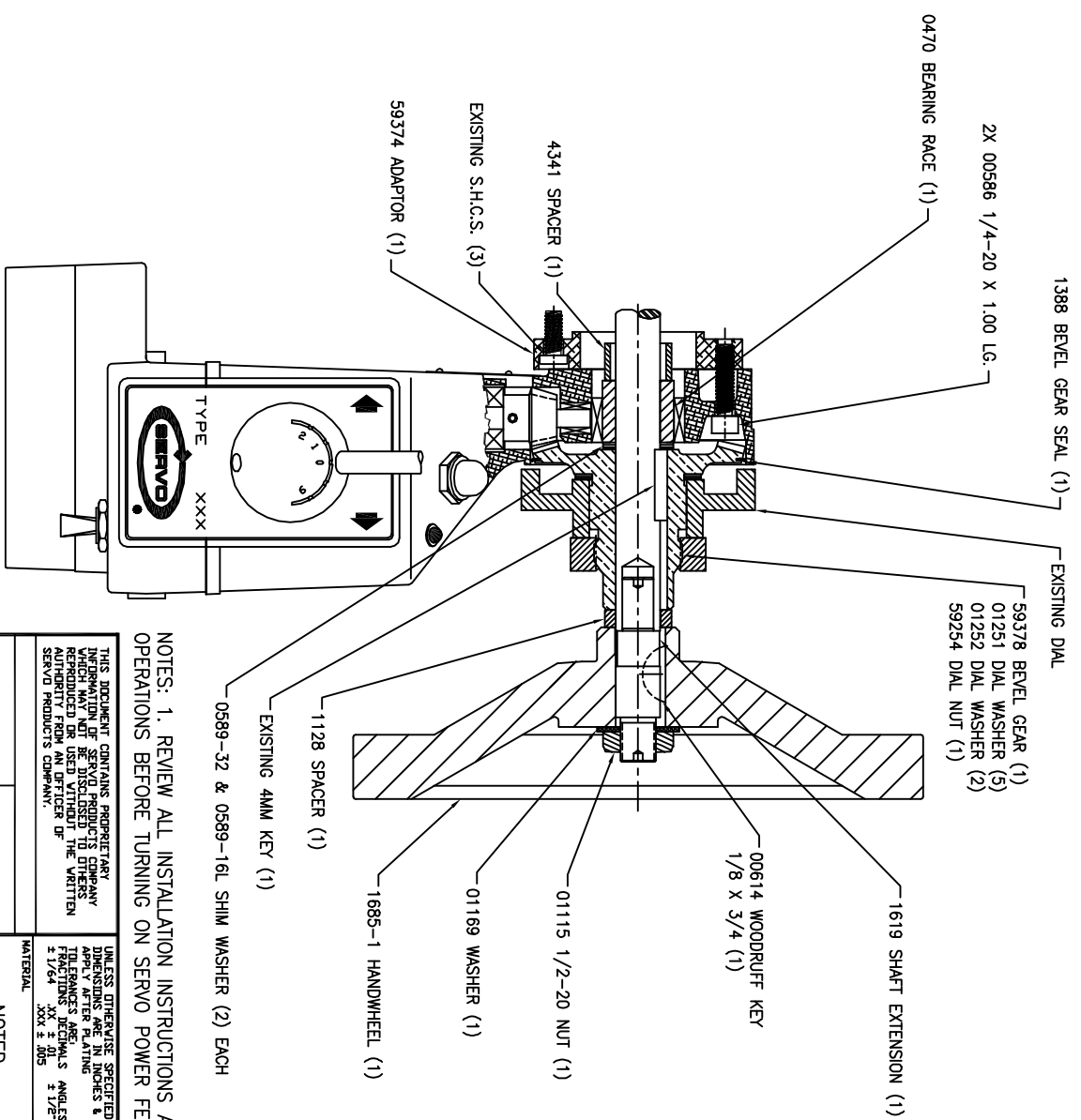
SERVOPRODUCTS COMPANY
34940 LANGLAND BLVD., EASTLAKE, OH 44095

INSTALLATION LIMIT STOP

SIZE	CODE	IDENT NO.	DRAWING NO.
B			NC-0792
SCALE		SHEET	OF
		1	1

REV. A

REVISION		DATE	DRAWN	CHECKED
ECD	LTR	DESCRIPTION		



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

CONFIDENTIAL

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE WITHIN .01 FLATNESS TO BE WITHIN .01 CONCENTRICITY TO BE WITHIN .01 REMOVE SHARP EDGES AND CORNERS .005 MIN. DIMETING STANDARD PER ANSI Y14.5M-1992		FINISH NOTED		DRAWN B.G.W. 9/6/05		INSTALLATION DRAWING MODEL 3580-140 Z-AXIS INSTALLATION	
APPLICATION USED ON		DID NOT SCALE DRAWING		CHECKED R.R.A. 9/6/05		SIZE CODE IDENT NO. DRAWING NO.	
NEXT ASSY		NONE		COMPUTER NO. NB59377.dwg		SCALE 5/8	
TYPE XXX		NONE		DATE 9/6/05		SHEET 1 OF 1	

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