

POWER FEED INSTALLATION

Model M-3780 Knee Feed

Alliant, Sharp First, and others



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-5574	Power Feed Installation
NC-0792	Limit Switch Installation
ND-6292	Type 140 Servo Drive
0800-80001	Servo Power Feed Operation

PREPARATION

- Step 1:* Remove the drive clutch from the elevating jack shaft. (Clutch is push-fit on shaft.)
- Step 2:* Remove the dial and nut.
- Step 3:* Remove the screws from the bearing retainer.
- Step 4:* Pull the jack shaft out of the knee (easy pull). **Hold inboard end up** while removing to avoid damage to the pinion gear.
- Step 5:* Hold the dial hub in soft jaws and unscrew.
- Step 6:* Remove the bearing retainer and press the bearing housing and bearing off the shaft.
- Step 7:* Drill and ream the end of the jack shaft .4375 diameter by 13/16 deep. The hole must be concentric to shaft o.d. within .002 TIR. Chamfer 1/32 x 1/2 diameter. **For best results, machining should be done in a lathe.**
- Step 8:* Place the shaft extension onto the jack shaft. 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 9:* Reassemble the jack shaft.
- Step 10:* Replace the jack shaft in the machine.

POWER FEED INSTALLATION

- Step 1:* Slide the bearing race onto the jack shaft with the counterbored end against the ball bearing.
- Step 2:* Slide the power feed over the bearing race and against the bearing retainer.
- Step 3:* Spot the mounting holes in the bearing retainer. Drill and tap 1/4-20 thread in two places.
- Step 4:* Secure the feed 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 lock nut, place the key in the shaft, and slide the handcrank in place. Add the washer and the 1/2-20 lock nut.

LIMIT SWITCH INSTALLATION

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

OPERATION

See separate *Servo Power Feed Operation* sheet. Unit will operate on either 50 or 60 cycles.

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

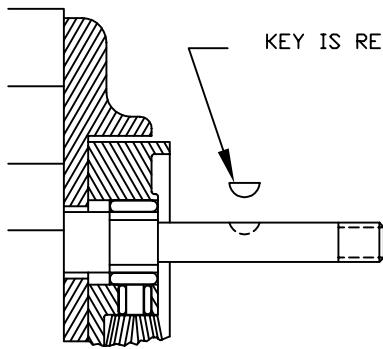
14254 Valley Blvd., Unit A
City of Industry, CA 91746
Ph. 626.961.7800 Fax 626.961.2444

HEADQUARTERS

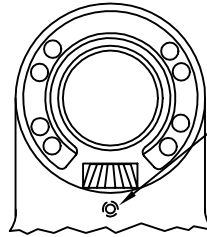
34940 Lakeland Blvd.
Eastlake, OH 44095
Ph. 440.942.9999 Fax 440.942-9100

FLORIDA BRANCH

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

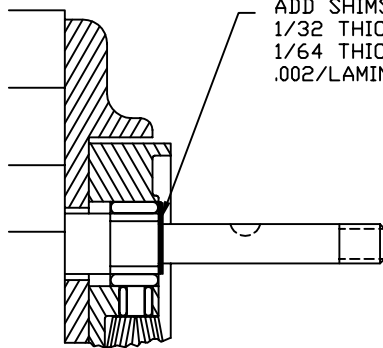


KEY IS REMOVED DURING SHIMMING

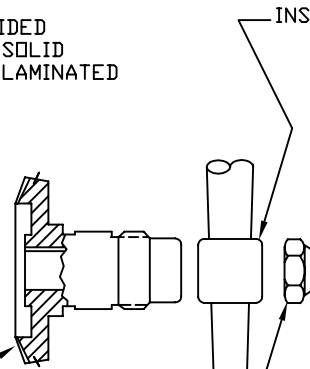


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



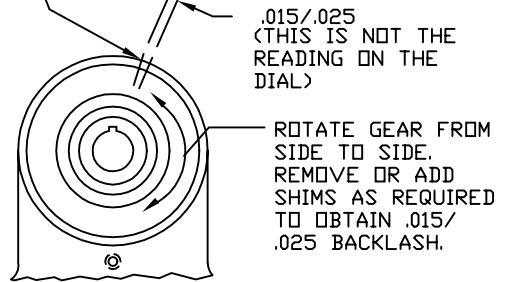
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR WITH PENCIL TO CHECK BACKLASH.



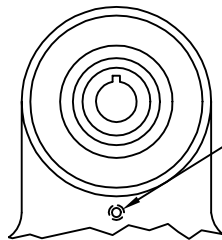
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

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

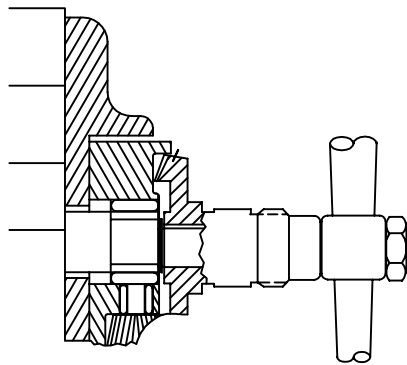
STEP 2
SHIMMING BEVEL GEAR

TIGHTEN NUT.

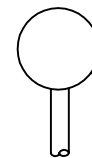
CAUTION: IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.



LOOSEN SETSCREW

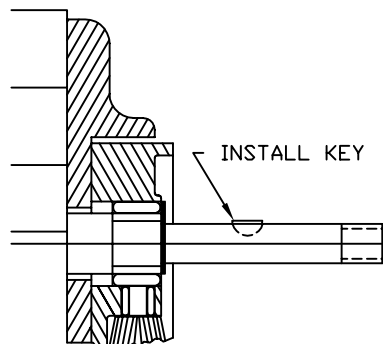


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.

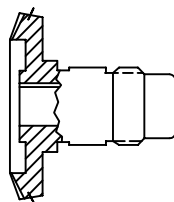


CONTROL HANDLE @ NEUTRAL POSITION

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)

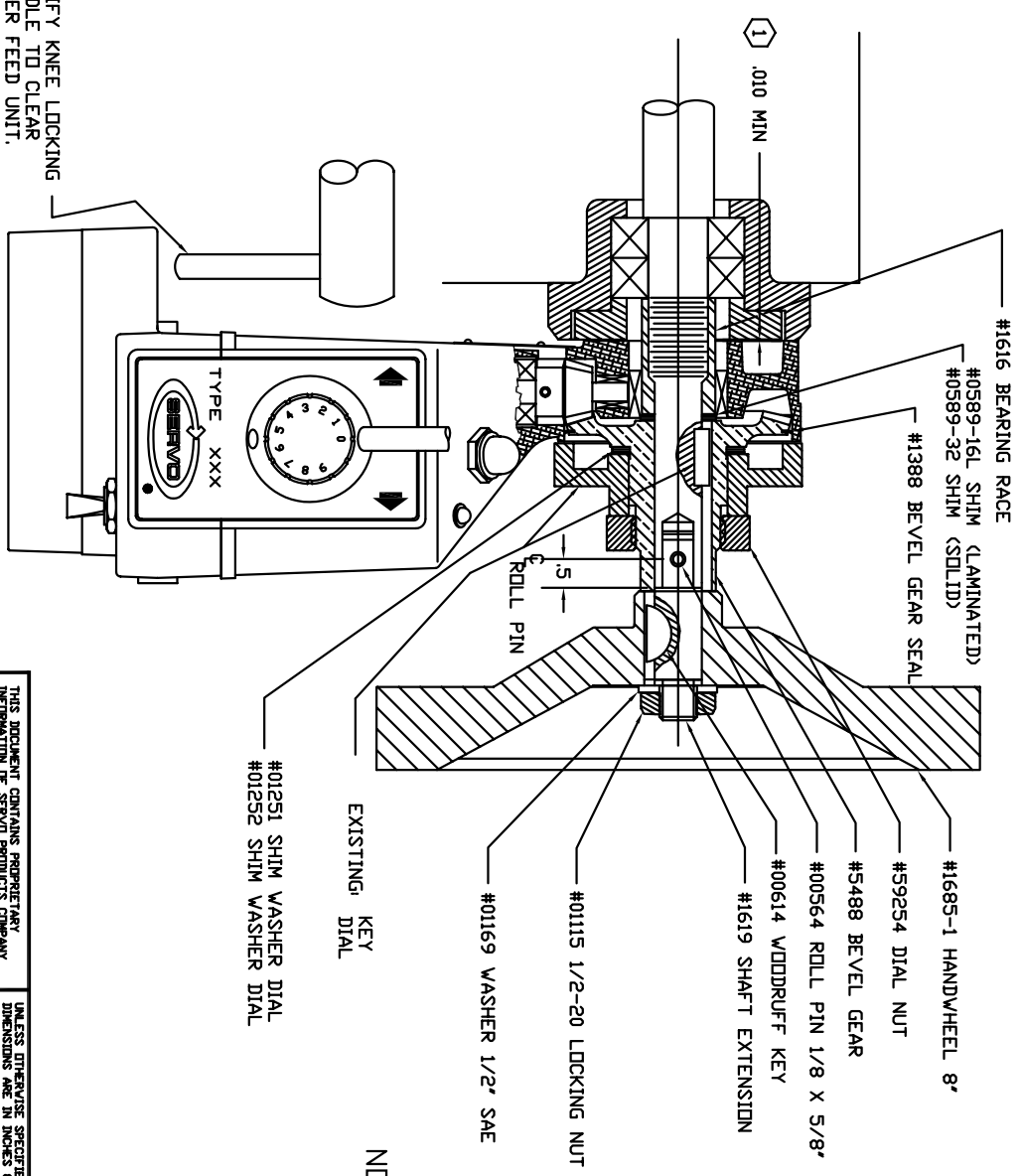
PICTURES IN THIS DRAWING ARE FOR REFERENCE ONLY. SEE INSTALLATION DRAWING OF CORRESPONDING MODEL FOR EXACT PARTS CONFIGURATION.

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BEVEL GEAR INSTALLATION

NA-5444 C

REVISION		DATE	DRAWN	CHECKED
ECD	LTR			
DESCRIPTION				



- NOTES:
- 1 BEARING RETAINER MUST RECESS IN BSS, MACHINE AS REQUIRED TO OBTAIN DIMENSION SHOWN.
 - 2 SEE DRAWING C-0792 FOR INSTALLATION OF LIMIT SWITCH.
 - 3 REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED OPERATION BEFORE TURNING ON SERVO POWER FEED.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE WITHIN 0.005 IN. FLATNESS TO BE WITHIN .01 CONCENTRICITY TO BE WITHIN .01 REMOVE SHARP EDGES AND CORNERS 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	6/5/95
	CHECKED	

SERVO PRODUCTS COMPANY
34940 LAKELAND BLVD., EASTLAKE, OH 44095

INSTALLATION DRAWING
SHARP FIRST, ALLIANT
MODEL 3780

SIZE: B (0800-80068) SCALE: 5/8

COMPUTER NO. NB5574B.DWG

DRAWING NO. NB-5574

SHEET 1 OF 1

MODIFY KNEE LOCKING HANDLE TO CLEAR POWER FEED UNIT.

