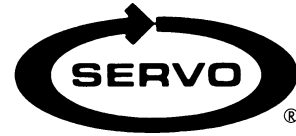


# POWER FEED INSTALLATION

## Model M-4750 Cross Feed

### Millport K



#### REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-6107	Power Feed Installation
NB-1538	Limit Switch Installation
ND-6293	Type 150 Servo Power Feed
ND-6292	Type 140 Servo Power Feed
0800-80001	Servo Power Feed Operation

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#### PREPARATION AND POWER FEED INSTALLATION

*Step 1:* Gather together the following items that you will need to complete this installation.

- a) 3/8" electric hand drill
- b) 1/8" drill, #7 drill
- c) 1/4-20 tap
- d) 9/32" transfer punch
- e) flat file
- f) 3/4" socket wrench
- g) set of inch hex wrenches
- h) grease
- i) clean shop rag

*Step 2:* Remove the nut, handcrank, dial and key from the lead screw.

*Step 3:* Place the bearing race onto the lead screw.

*Step 4:* Slide the adaptor onto the bearing race and flush to the bearing retainer.

*Step 5:* Using the adaptor as a template, spot three mounting holes.

*Step 6:* Drill and tap 1/4-20 three places into the bearing retainer.

*Step 7:* Secure the adaptor to the bearing retainer.

*Step 8:* Screw the shaft extension onto the lead screw.

*Step 9:* Using the hole provided as a pilot, drill 1/8" diameter hole through and pin in place using the 1/8" x 5/8" long roll pin. File smooth.

*Step 10:* Modify the existing Woodruff key per detail A on drawing #NB-6107.

## 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, 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. Three 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 and insert the key. Slide the handcrank in place. Secure using washer and locking nut provided.

## LIMIT SWITCH INSTALLATION

Install the limit switch as shown on the installation drawing NB-1538.

## 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.

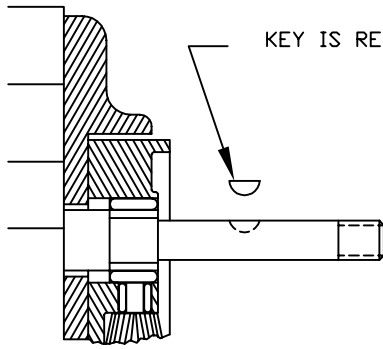
***Do not operate*** without proper clearance!

Prevent contact during fast traverses.

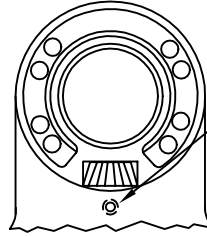
## SERVO PRODUCTS COMPANY

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](http://www.servoproductsco.com)

Call for the location of our regional Service Centers.

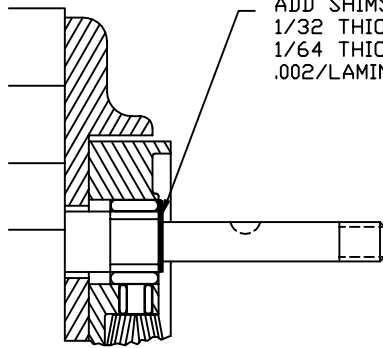


KEY IS REMOVED DURING SHIMMING

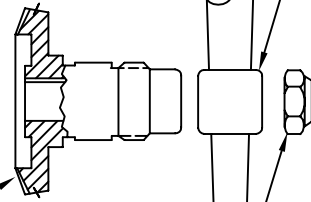


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1  
PREPARATION



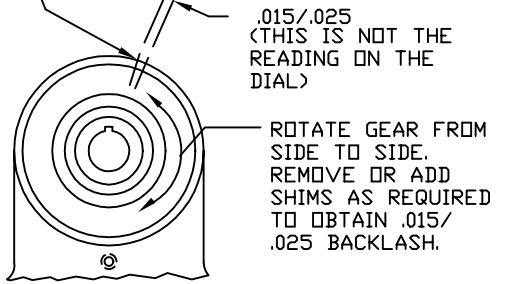
ADD SHIMS PROVIDED  
1/32 THICK ARE SOLID  
1/64 THICK ARE LAMINATED  
.002/LAMINATION



PUSH BEVEL GEAR  
AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR  
WITH PENCIL TO CHECK BACKLASH.



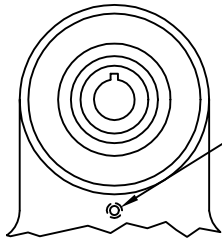
.015/.025  
(THIS IS NOT THE  
READING ON THE  
DIAL)

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

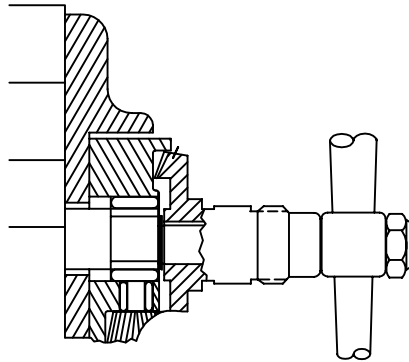
TIGHTEN NUT.

STEP 2  
SHIMMING BEVEL  
GEAR

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



LOOSEN SETSCREW

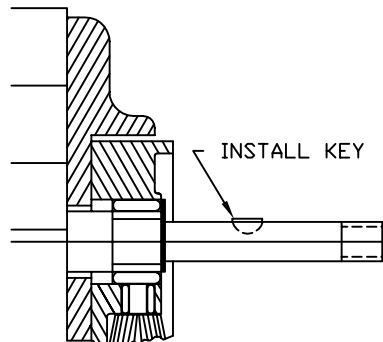


WITH POWER FEED IN  
NEUTRAL POSITION, TURN  
HANDCRANK. IF EXCESSIVE  
GEAR NOISE OR BINDING  
OCCURS, SHIMS NEED TO BE  
ADDED. WHEN ADDING SHIMS,  
REPEAT STEPS 1 AND 2.

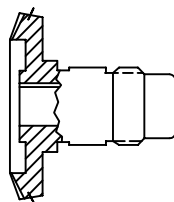


CONTROL HANDLE @  
NEUTRAL POSITION

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)

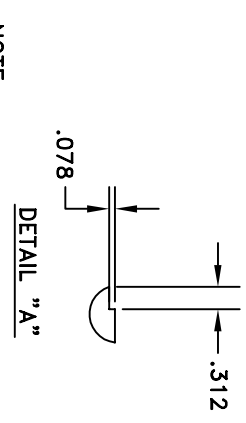
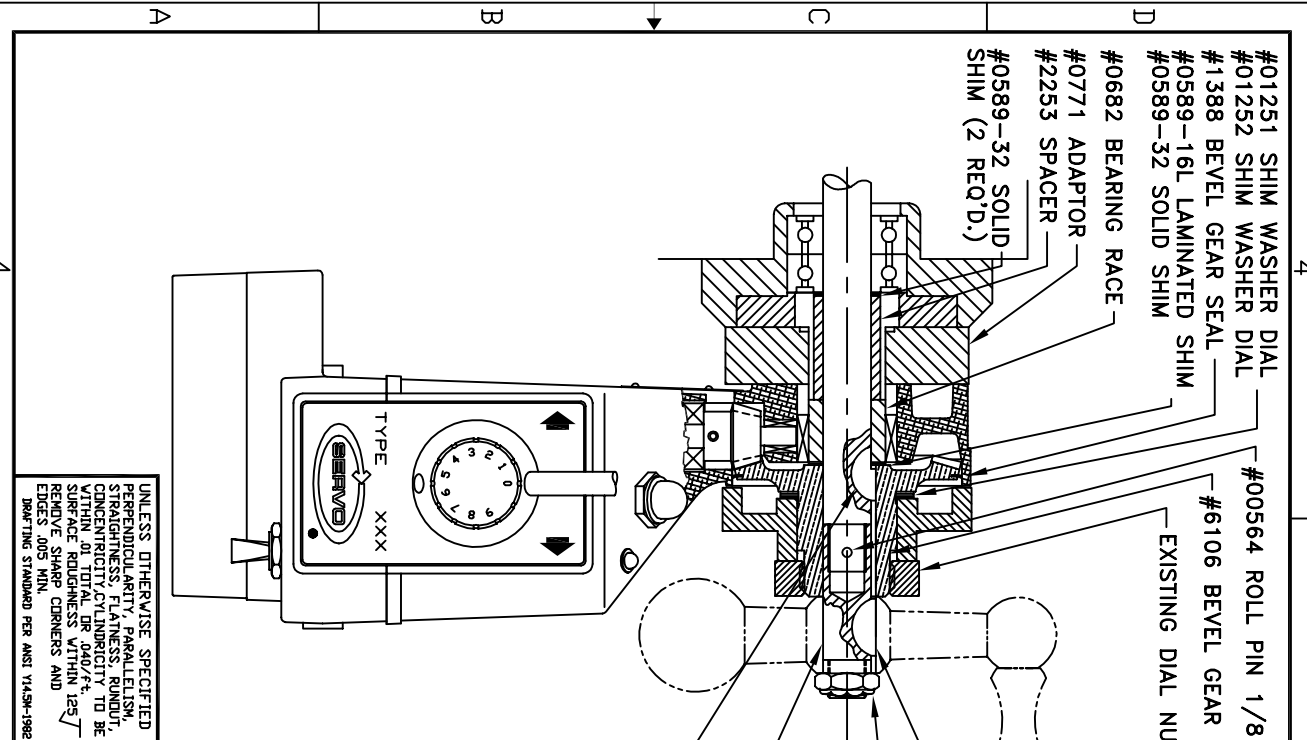
PICTURES IN THIS DRAWING ARE FOR  
REFERENCE ONLY. SEE INSTALLATION  
DRAWING OF CORRESPONDING MODEL  
FOR EXACT PARTS CONFIGURATION.

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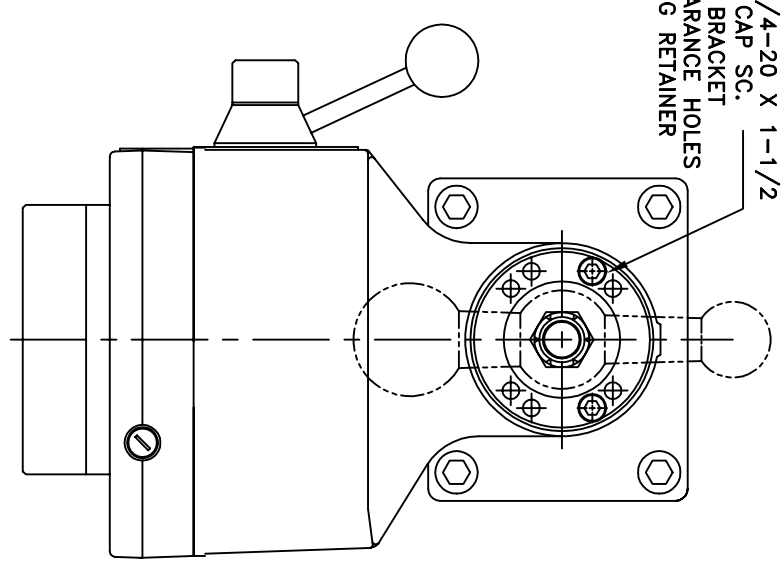
BEVEL GEAR INSTALLATION

NA-5444 C

STEP 4  
LUBRICATION



#00602 1/4-20 X 1-1/2  
 SOC. HD. CAP SC.  
 TAP INTO BRACKET  
 WITH CLEARANCE HOLES  
 IN BEARING RETAINER  
 CAP.



**NOTE:**  
 1. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED. FEED OPERATION BEFORE TURNING ON SERVO POWER FEED.

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

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 SERVO PRODUCTS COMPANY.

UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES &  
 TOLERANCES ARE AS FOLLOWS:  
 FRACTIONS: DECIMALS: ANGLES  
 ± 1/64 ± .005 ± .005 ± 1/2°  
 FINISH: .XX ± .005  
 MATERIAL: NOTED

CONTRACT NO.	APPROVALS	DATE
	DRAWN J. TUCKER	1/22/97
CHECKED		

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

**MODEL 4750**  
**INSTALLATION DRAWING**  
**MILLPORT K**

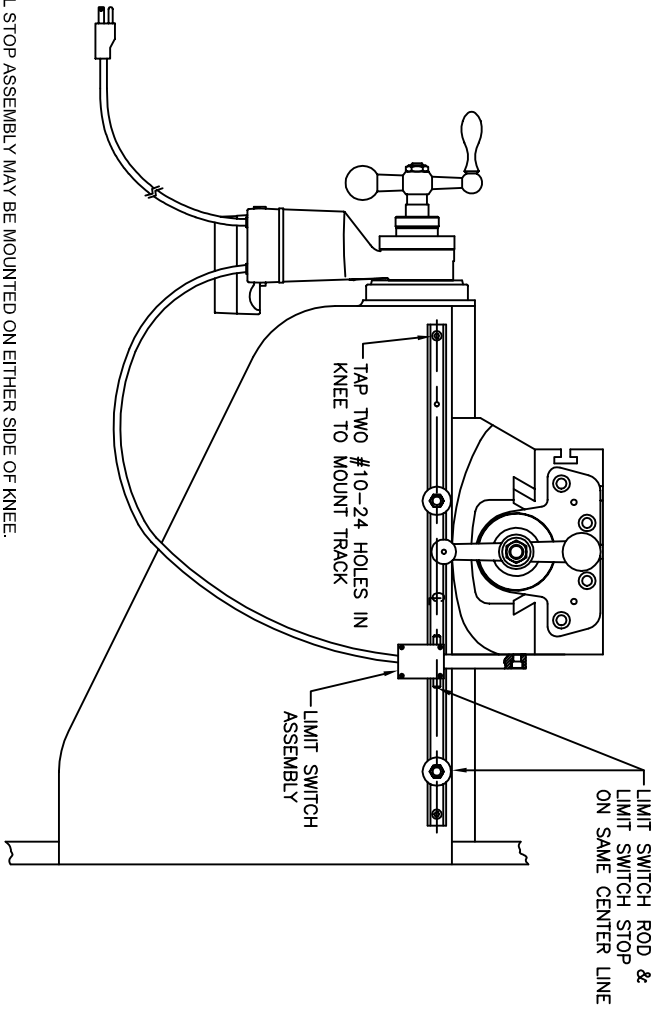
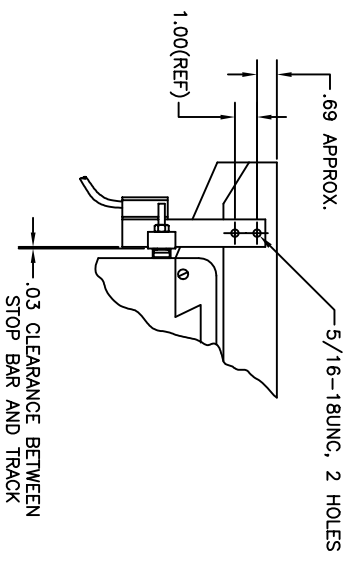
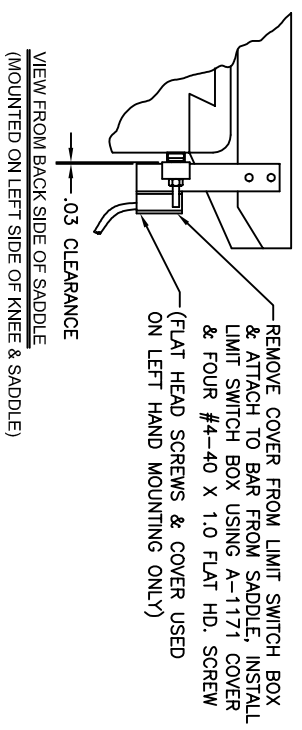
SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
B	0800-80149	NB-6107	A

SCALE: B  
 SHEET: A OF

APPLICATION	USED ON	DID NOT SCALE DRAWING
NEXT ASSY		

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.

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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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE: .005 ± 1/64 .005 ± 1/2

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

**SERVO** 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 REV. A

SCALE NONE SHEET OF