

# POWER FEED INSTALLATION

## Model M-3750 Cross Feed

Alliant, Sharp First, and others



### REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-5489	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

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### PREPARATION

*Step 1:* Remove the nut, handcrank, dial, and key from the lead screw.

### POWER FEED INSTALLATION

*Step 1:* Place the adaptor in the cavity of the bearing carrier.

*Step 2:* Using the adaptor as a template, spot four holes.

*Step 3:* Drill and tap 1/4-20 four places.

**NOTE** *Due to the irregularities in a cast surface, take special care to be sure that the adaptor is centered and parallel to the lead screw. Shim as required.*

*Step 4:* Secure the adaptor using four 1/4-20 x 1" cap screws.

*Step 5:* Screw the shaft extension onto the lead screw and tighten.

*Step 6:* Using the hole provided as a pilot, drill a 1/8 diameter hole through the shaft extension.

*Step 7:* Pin the shaft extension to the lead screw with the 1/8 diameter x 5/8" long roll pin. File smooth.

*Step 8:* Slide the bearing race onto the lead screw.

*Step 9:* Mount the power feed to the adaptor using two 1/4-20 x 1" cap screws.

### BEVEL GEAR INSTALLATION

*Step 1:* Replace the key and slide the bevel gear in place.

*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. Plastic and metal washers are provided for this. Shim as required.

*Step 2:* Put on the dial locking nut.

*Step 3:* Install the modified #7 woodruff key in the shaft extension.

*Step 4:* Slide the handcrank onto the end of the lead screw and tighten with the 1/2-20 lock nut.

**NOTE** *Due to the cast surface of the cavity in the bearing carrier, the shoulder of the lead screw may stick out past the handcrank. If so, add a washer so that the locking nut is against the handcrank.*

## LIMIT SWITCH INSTALLATION

*Step 1:* See limit switch installation on drawing NB-1538 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

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Largo, FL 33773  
Ph. 727.585.8555 Fax 727.585.6555

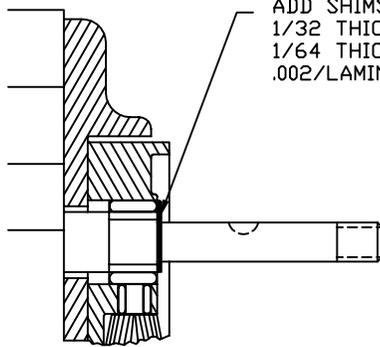


KEY IS REMOVED DURING SHIMMING



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.

TIGHTEN NUT.

STEP 2  
SHIMMING BEVEL  
GEAR

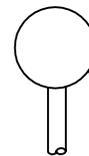
**CAUTION:** IF BACKLASH  
IS NOT PROPERLY SET  
BEFORE TURNING UNIT ON,  
BEVEL GEAR MAY BE  
DESTROYED.



LOOSEN SETSCREW

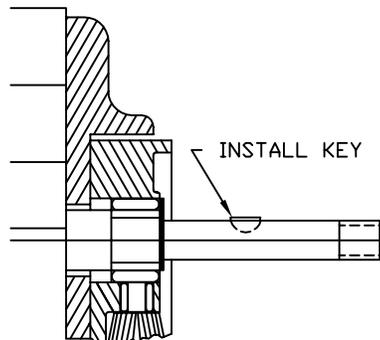


WITH POWER FEED IN  
NEUTRAL POSITION, TURN  
HANDCRANK. IF EXCESSIVE  
GEAR NOISE OR BINDING  
OCCURS, SHIMS NEED TO BE  
ADDED. WHEN ADDING SHIMS,  
REPEAT STEPS 1 AND 2.



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.

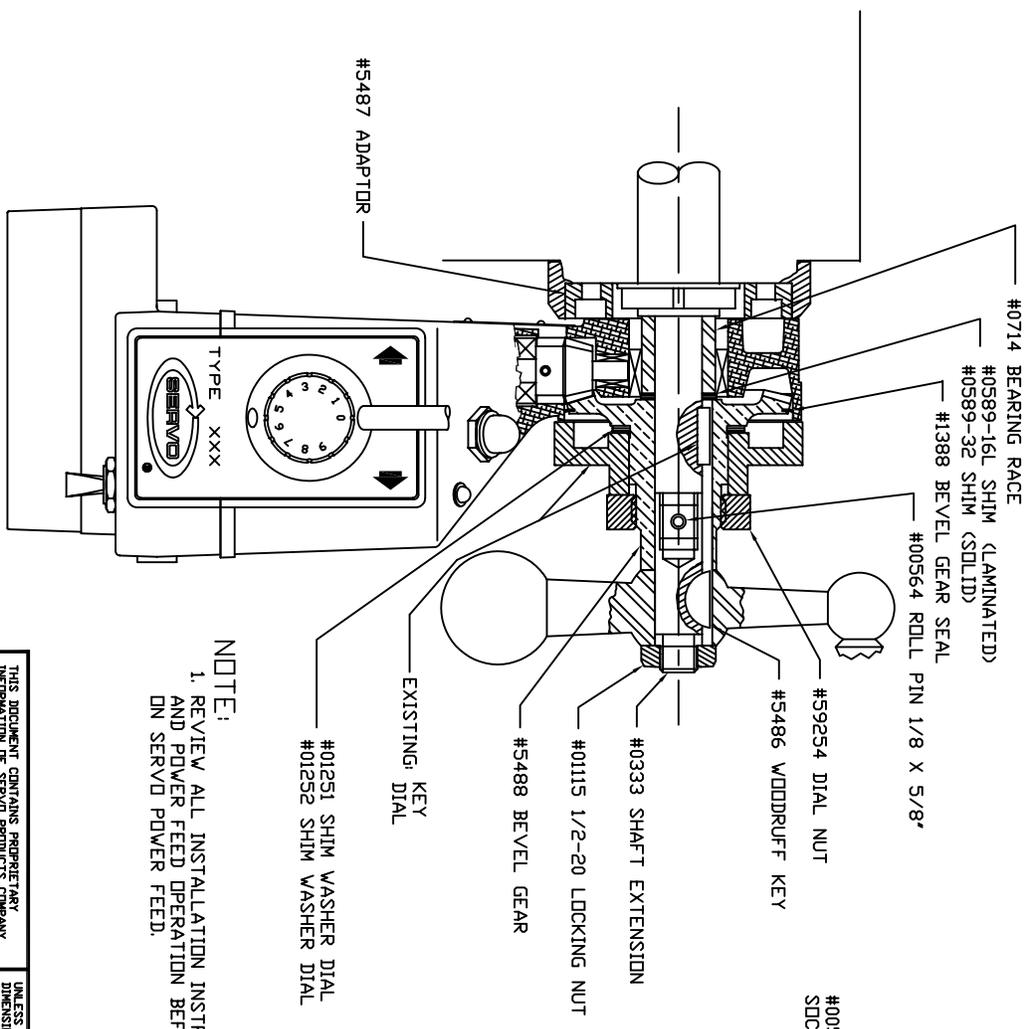
SERVO PRODUCTS COMPANY

BEVEL GEAR INSTALLATION

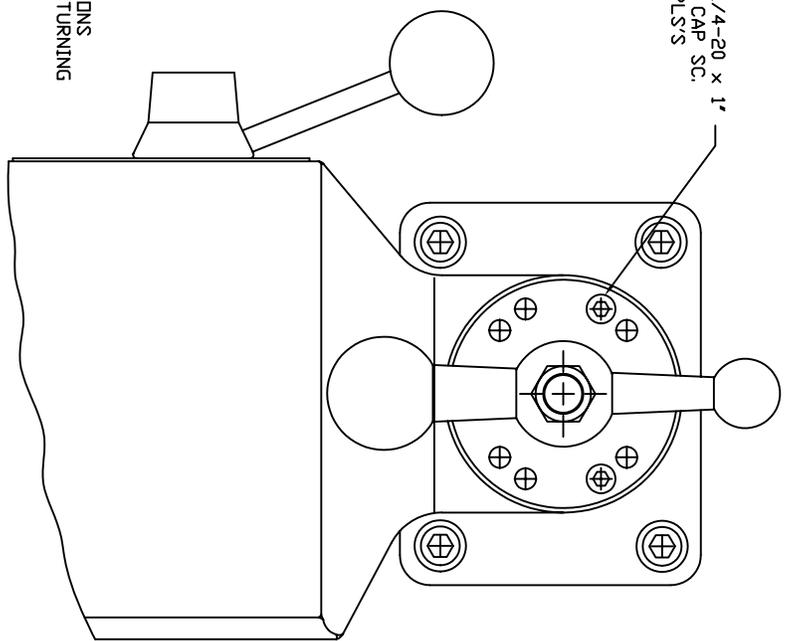
NA-5444 C

STEP 4  
LUBRICATION

REVISION		DATE	DRAWN	CHECKED
ECD	LTR	DESCRIPTION		



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



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES & TOLERANCES ARE IN FRACTIONS. DECIMALS & ANGLES ARE IN DEGREES. UNLESS OTHERWISE SPECIFIED, FINISH IS 1/64" XX ± .005

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CONTRACT NO. APPROVALS DATE 6/2/95  
DRAWN G. BUINN  
CHECKED

SERVOD PRODUCTS COMPANY  
34940 LAKELAND BLVD., EASTLAKE, OH 44095  
INSTALLATION DRAWING  
SHARP FIRST & ALLIANT  
MODEL 3750  
SIZE B CODE IDENT NO. 0800-80130 DRAWING NO. NB-5489 REV. A  
SCALE 5/8 SHEET DF

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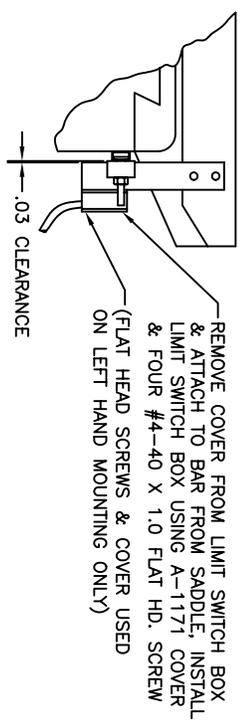
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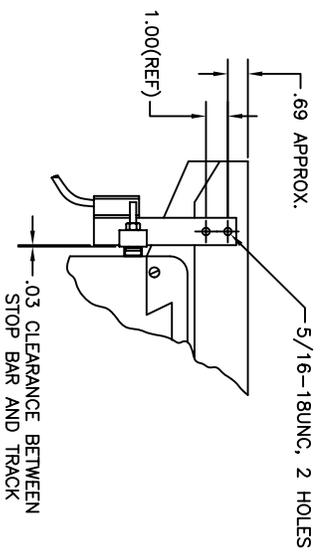
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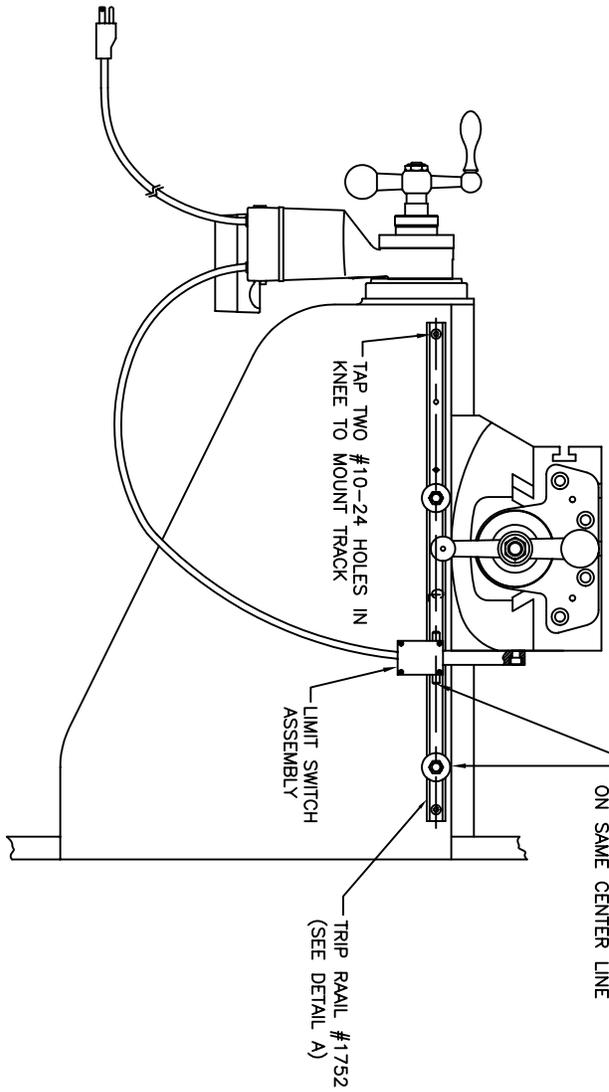
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DESCRIPTION				



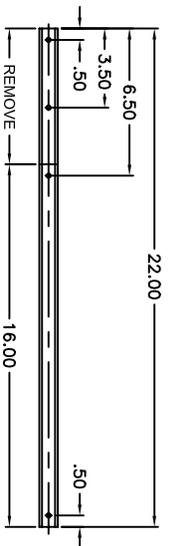
VIEW FROM BACK SIDE OF SADDLE (MOUNTED ON LEFT SIDE OF KNEE & SADDLE)



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



- 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.  
 4. TRIP RAIL IS DESIGNED FOR 16" CROSS TRAVEL. IT CAN BE MODIFIED FOR 12" CROSS TRAVEL (SEE DETAIL A)



DETAIL A (MODIFICATION FOR 12" CROSS TRAVEL)

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 Y14.3M-1982

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	CHECKED		
APPLICATION	USED ON		
NEXT ASSY			

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INSTALLATION DRAWING  
 LIMIT SWITCH, CROSS FEEDS

SIZE: B CODE IDENT NO.: 0800-8002-1 DRAWING NO.: NB-1538 REV.: B

SCALE: NONE SHEET: OF