

POWER FEED INSTALLATION

Model M-4650 Cross Feed

Brute 10x50, Webb Champ and others



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-5898	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

PREPARATION

- Step 1:* Remove the nut, crank, dial assembly, and key from the lead screw.
- Step 2:* Slide the bearing race onto the lead screw. Slide the power feed over the bearing race.
- Step 3:* Line up the feed so that it sits square to the bearing housing. Using the power feed as a template, spot two holes in the bearing retainer plate. Make sure the holes clear the bearing retainer screws.
- Step 4:* Remove the power feed and bearing race.
- Step 5:* Remove the three screws holding the bearing housing and then remove the bearing housing. (The lead screw can be used to jack the housing off the pins. The lead screw does not have to be removed from the mill.)
- Step 6:* Drill and tap two holes 1/4-20 x 7/8" deep.
- Step 7:* Put the bearing housing back onto the knee.

POWER FEED INSTALLATION

- Step 1:* Screw the shaft extension to the lead screw and tighten.
- Step 2:* Using the hole provided as a pilot, drill 1/8 diameter through. Pin the extension in place using the 1/8 x 5/8 long roll pin. File smooth.
- Step 3:* Slide the spacer and then the bearing race onto the lead screw.
- Step 4:* Slide the power feed over the bearing race and secure using 1/4-20 x 1-1/4" 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. Four washers are provided for this, two solid and two laminated. Shim as required.

Step 2: In the following sequence, put on the dial locking nut, spacer, and place the YA-1605 woodruff key in the shaft extension as shown. Slide the handcrank onto the shaft extension and secure using the locking nut provided.

□ **NOTE** *A smaller diameter handcrank is supplied in order to have clearance between the cross feed crank and the knee crank.*

LIMIT SWITCH INSTALLATION

Step 1: See limit switch installation 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.

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Web: www.servoproductsco.com

CALIFORNIA BRANCH

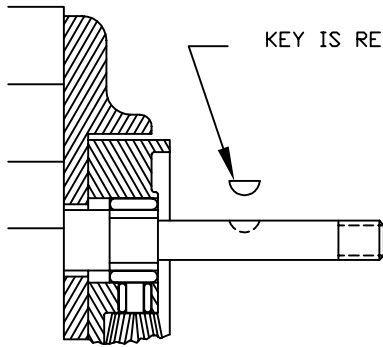
14254 Valley Blvd., Unit A
City of Industry, CA 91746
Ph. 626.961.7800 Fax 626.961.2444

HEADQUARTERS

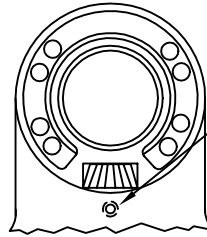
34940 Lakeland Blvd.
Eastlake, OH 44095
Ph. 440.942.9999 Fax 440.942-9100

FLORIDA BRANCH

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

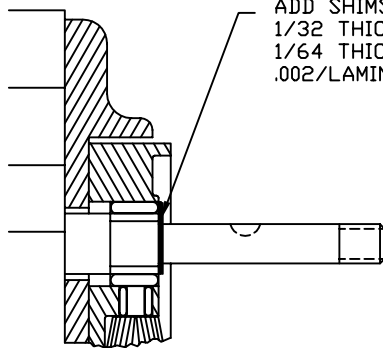


KEY IS REMOVED DURING SHIMMING

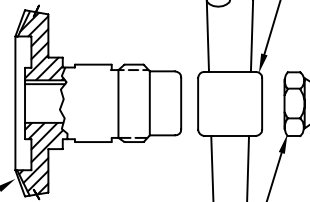


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



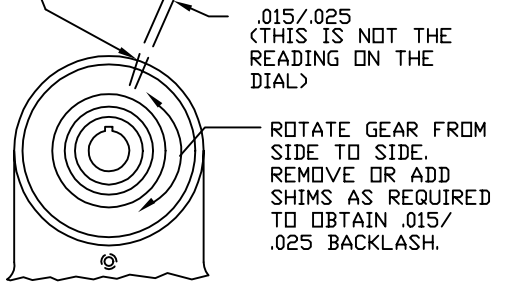
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR WITH PENCIL TO CHECK BACKLASH.



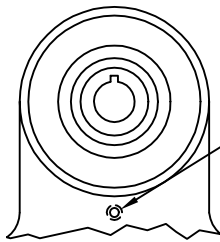
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

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

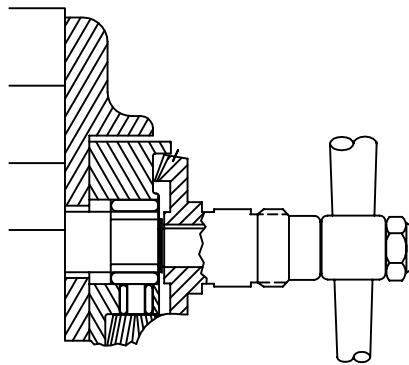
TIGHTEN NUT.

STEP 2
SHIMMING BEVEL GEAR

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



LOOSEN SETSCREW

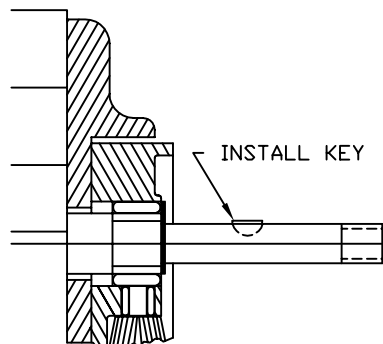


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.

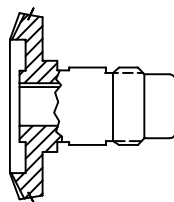


CONTROL HANDLE @ NEUTRAL POSITION

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.

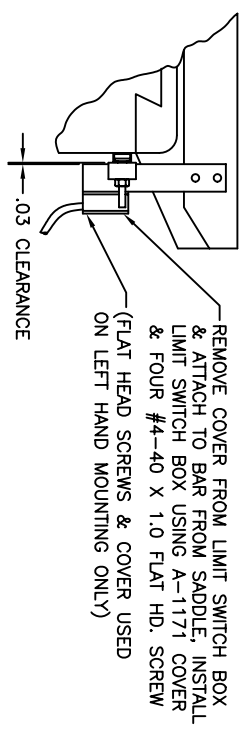
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BEVEL GEAR INSTALLATION

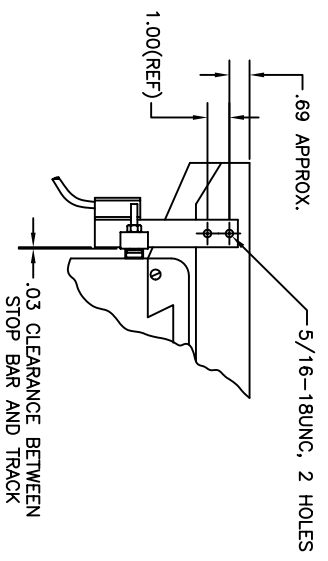
NA-5444 C

STEP 4
LUBRICATION

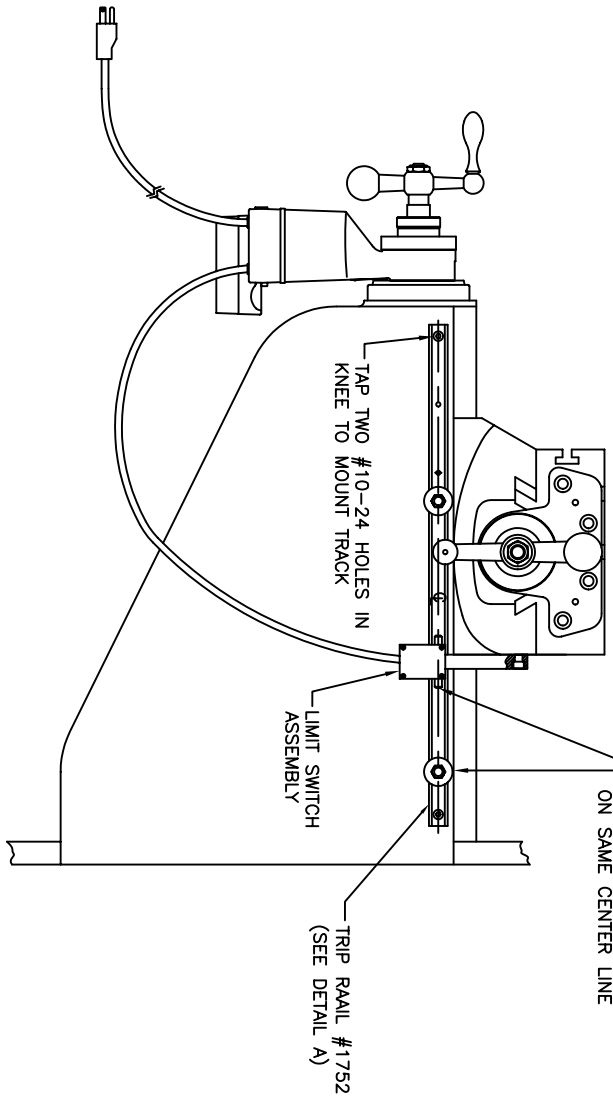
REVISION		DATE	DRAWN	CHECKED
ECO	LTR			
DESCRIPTION				



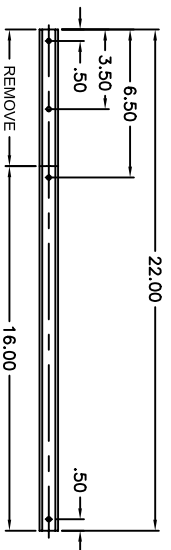
VIEW FROM BACK SIDE OF SADDLE (MOUNTED ON LEFT SIDE OF KNEE & SADDLE)



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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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE: ANGLES ± 1/2° MATERIAL ± .005 FINISH ± .005	CONTRACT NO.	APPROVALS	DATE
		T. KU	02/01/01
	CHECKED		
APPLICATION	USED ON		
NEXT ASSY			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE: ANGLES ± 1/2° MATERIAL ± .005 FINISH ± .005	CONTRACT NO.	APPROVALS	DATE
		T. KU	02/01/01
	CHECKED		
APPLICATION	USED ON		
NEXT ASSY			

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

INSTALLATION DRAWING
LIMIT SWITCH, CROSS FEEDS

SIZE: B
CODE IDENT NO.: 0800-8002-1
DRAWING NO.: NB-1538
SCALE: NONE
SHEET: OF