

POWER FEED INSTALLATION

Model M-4300 Table Feed

Sharp HMV



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-5616	Power Feed 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, handle, and dial assembly from the right-hand end of the table.
- Step 2:* Remove the bearing retainer from the end bracket.

POWER FEED INSTALLATION

- Step 1:* Slip on the bearing retainer #2784 and spot the three countersunk holes. Drill and tap 1/4-20 x 1/2" deep. Secure with 1/4-20 x 7/8" long socket head cap screws.
- Step 2:* Slip the bearing race #0682 inside the adaptor #0771. Slide them onto the lead screw up to the end bracket. Secure the adaptor with the three 1/4-20 x 1/2" long socket head cap screws. Remove the bearing race.
- Step 3:* Add the sleeve #0773 as shown, followed by the bearing race #0682.
- Step 4:* Install the power feed to the adaptor using the 1/4-20 x 1" long socket head cap screws.
- Step 5:* Screw the shaft extension onto the lead screw and tighten.
- Step 6:* You may wish to add the roll pin after determining the shims required for the bevel gear.
Using the hole provided as a pilot, drill 1/8" diameter through the lead screw and pin the extension in place using the 1/8 diameter x 5/8" long roll pin. File smooth.

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: After shimming the dial, put on the dial locking nut and insert the woodruff key #5486 for the handcrank. Slide the existing handcrank in place and secure with the 1/2-20 lock nut.

LIMIT SWITCH INSTALLATION

Step 1: Remove the standard table stop pieces and install the table stop pieces furnished. Put the standard stops back in a position to prevent feed stops from being set beyond extreme table travel.

Step 2: Install the limit switch as shown in drawing ND-5616.

Step 3: The T-stop is retained to act as a positive stop where required for manual operation.

NOTE *For proper operation, the electrical limit switch should be engaged .4 inch before the mechanical stop to allow for coasting of the table. The T-stops are often not symmetrical and may need to be ground to obtain proper operation.*

Step 4: Put the cable clamp on the cable and secure to the right-hand chip scraper screw.

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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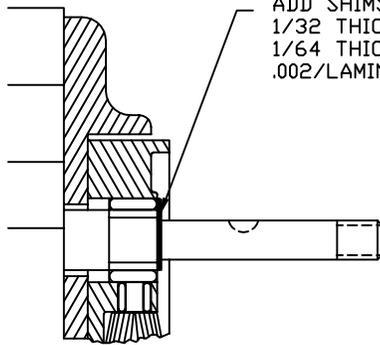


KEY IS REMOVED DURING SHIMMING



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

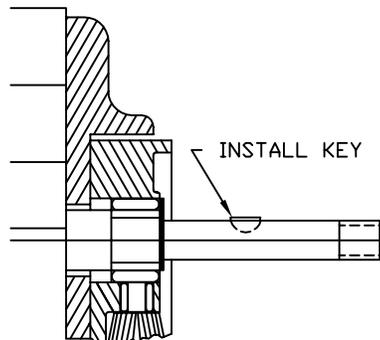


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.



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.

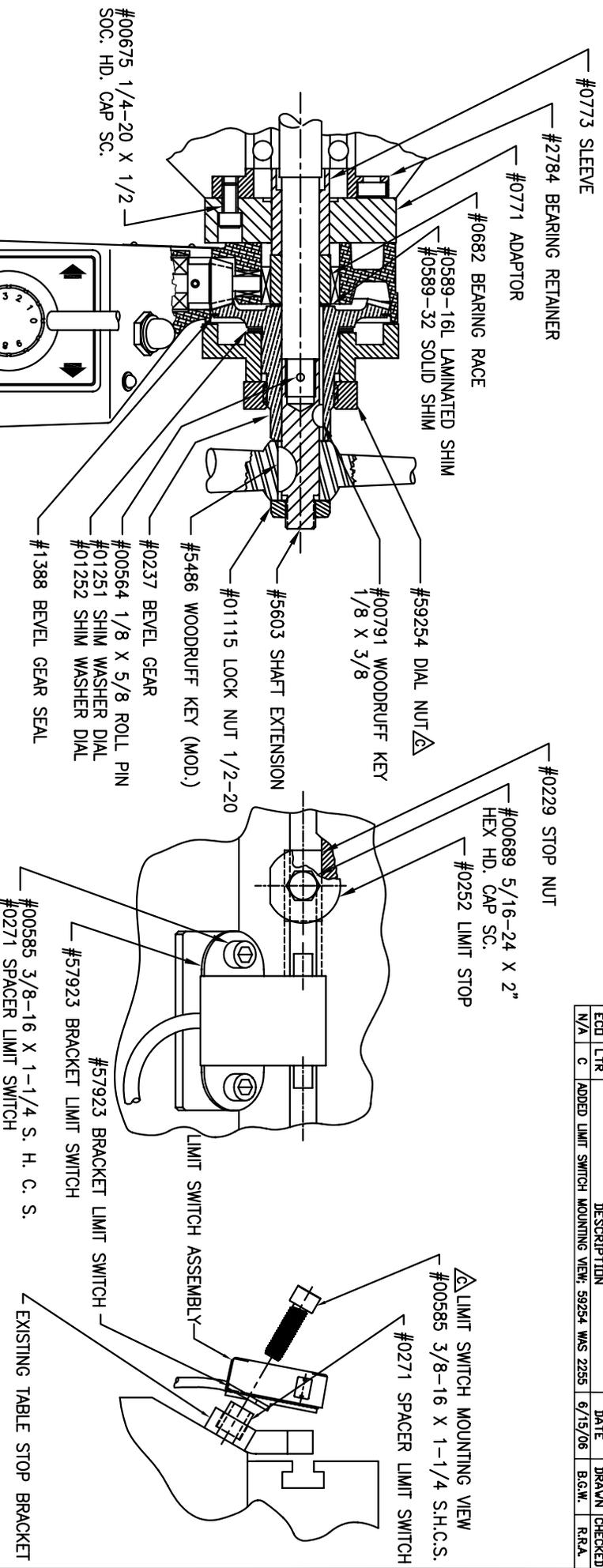
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BEVEL GEAR INSTALLATION

NA-5444 C

STEP 4
LUBRICATION

REVISION		DATE	DRAWN	CHECKED
ECD	LTR	DESCRIPTION		
N/A	C	ADDED LIMIT SWITCH MOUNTING VIEW: 59254 WAS 2255	6/15/06	B.G.W. R.R.A.



LIMIT SWITCH INSTALLATION

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

CONFIDENTIAL

UNLESS OTHERWISE SPECIFIED PERPENDICULARITY, PARALLELISM, STRAIGHTNESS, FLATNESS, ROUNDNESS, CONCENTRICITY, CYLINDRICITY TO BE WITHIN .01 TOTAL OR .040/RL SURFACE ROUGHNESS WITHIN 125 REMOVE SHARP CORNERS AND EDGES .005 MIN. DRAWING STANDARD PER ANSI Y46.9-1982

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE ANGLES	± 1/64	XX ± .005	± 1/2°
MATERIAL	NOTED		
FINISH			
DID NOT SCALE DRAWING			
APPLICATION	USED IN		
NEXT ASSY			

CONTRACT NO.	APPROVALS	DATE
	J. TUCKER	1/16/97
CHECKED		
COMPUTER NO.		
NB5616_C.dwg		

SERVOPRODUCTS COMPANY
 34940 LAKELAND BLVD, EASTLAKE, OHIO 44095
MODEL 4300
INSTALLATION DRAWING
 SHARP HMV
 DRAWING NO. NB-5616
 SIZE B CODE IDENT NO. 0800-80113
 SCALE 5/8
 SHEET 1 OF 1