

POWER FEED INSTALLATION

Model M-0253 Cross Feed

Bridgeport Mill after 8/1/10



Note: Older Bridgeport mills have the Y-axis leadscrew bearings held by a retaining ring, mounted with three screws, which presses against the outer races of the bearing pair. These instructions cover the new mills having no retaining ring; instead, a nut on the leadscrew tightens against the inner races of the bearing pair.

REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-59676	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:* Move the table to the front of the knee.
- Step 2:* Remove the nut, crank, dial assembly, and key from the lead screw.
- Step 3:* Slide the bearing race onto the lead screw. Place the 59675 spacer in the bearing housing. Then slide the power feed over the bearing race, and against the spacer.
- Step 4:* Line the feed up vertically. Using the power feed as a template, spot two mounting holes.
- Step 5:* Remove the power feed and bearing race from the lead screw.
- Step 6:* Drill and tap two holes 1/4-20 x 3/8" deep. Take special care to prevent contaminating the bearings.
- Step 7:* Screw the shaft extension to the lead screw and tighten.
- Step 8:* Using the hole provided as a pilot, drill 1/8 diameter hole thru and pin using 1/8 diameter x 5/8" long roll pin. File smooth.

POWER FEED INSTALLATION

- Step 1:* Slide the bearing race onto the lead screw.
- Step 2:* Slide the power feed onto the bearing race and secure with two 1/4-20 x 1-1/2" long socket head cap screws.

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

Step 2: In the following sequence, replace dial and dial locking nut, slide the crank onto shaft extension and secure with 1/2-20 lock nut. Do not over-tighten, just barely snug will ensure the leadscrew turns freely. A smaller diameter crank is supplied in order to have clearance between the cross feed crank and the knee crank.

LIMIT SWITCH INSTALLATION

Step 1: See the limit switch installation drawing NB-1538. Check Note 4 and Detail A on the drawing to modify the trip rail for various cross travel distances.

NOTE *For mills equipped with the Bridgeport optical measuring system or the measuring attachment, install limit switch assembly on the left-hand side of the mill.*

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

Web: www.servoproductsco.com

CALIFORNIA BRANCH

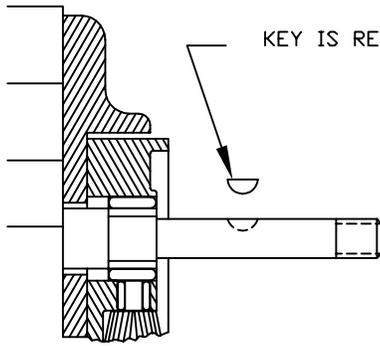
14254 Valley Blvd., Unit A
City of Industry, CA 91746
Ph. 626.961.7800 Fax 626.961.2444

HEADQUARTERS

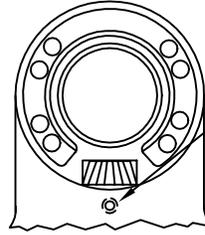
34940 Lakeland Blvd.
Eastlake, OH 44095
Ph. 440.942.9999 Fax 440.942-9100

FLORIDA BRANCH

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

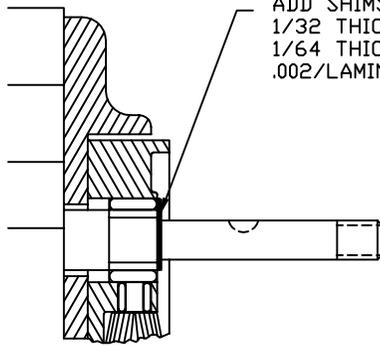


KEY IS REMOVED DURING SHIMMING

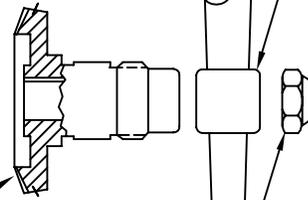


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



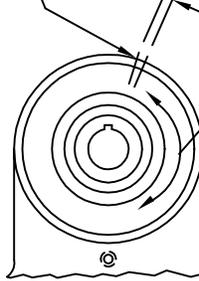
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR
AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR
WITH PENCIL TO CHECK BACKLASH.



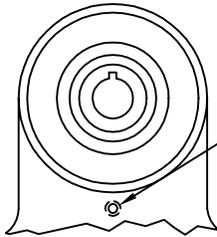
.015/.025
(THIS IS NOT THE
READING ON THE
DIAL)

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

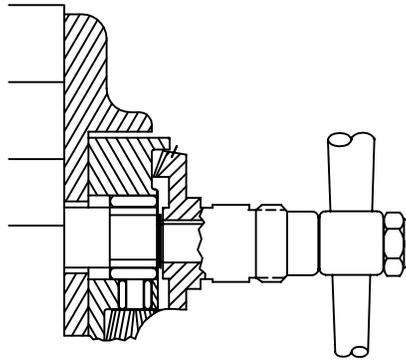
TIGHTEN NUT.

STEP 2
SHIMMING BEVEL
GEAR

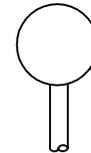
CAUTION: IF BACKLASH
IS NOT PROPERLY SET
BEFORE TURNING UNIT ON,
BEVEL GEAR MAY BE
DESTROYED.



LOOSEN SETSCREW

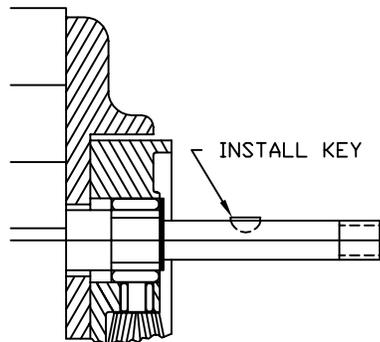


WITH POWER FEED IN
NEUTRAL POSITION, TURN
HANDCRANK. IF EXCESSIVE
GEAR NOISE OR BINDING
OCCURS, SHIMS NEED TO BE
ADDED. WHEN ADDING SHIMS,
REPEAT STEPS 1 AND 2.

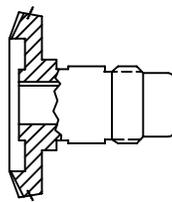


CONTROL HANDLE @
NEUTRAL POSITION

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)

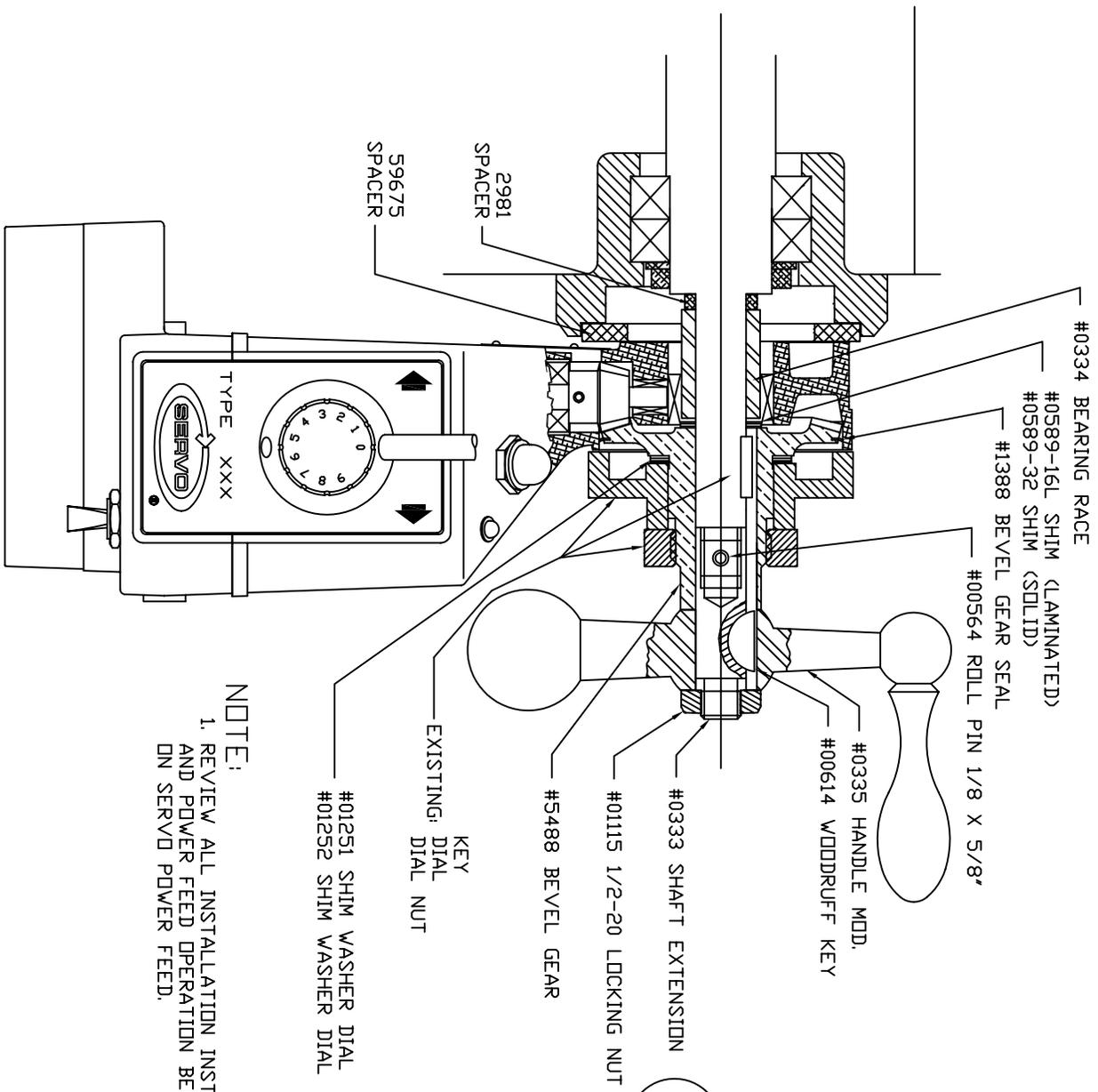
PICTURES IN THIS DRAWING ARE FOR
REFERENCE ONLY. SEE INSTALLATION
DRAWING OF CORRESPONDING MODEL
FOR EXACT PARTS CONFIGURATION.

SERVO PRODUCTS COMPANY

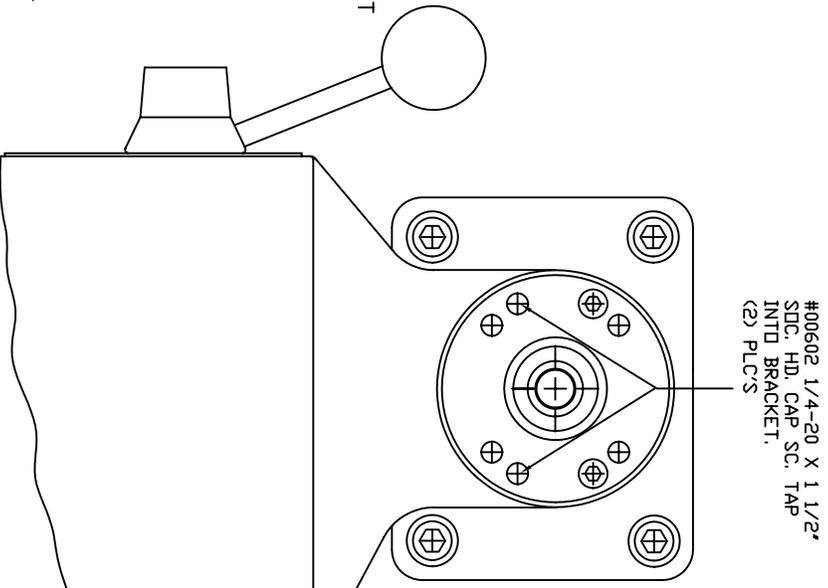
BEVEL GEAR INSTALLATION

NA-5444 C

STEP 4
LUBRICATION

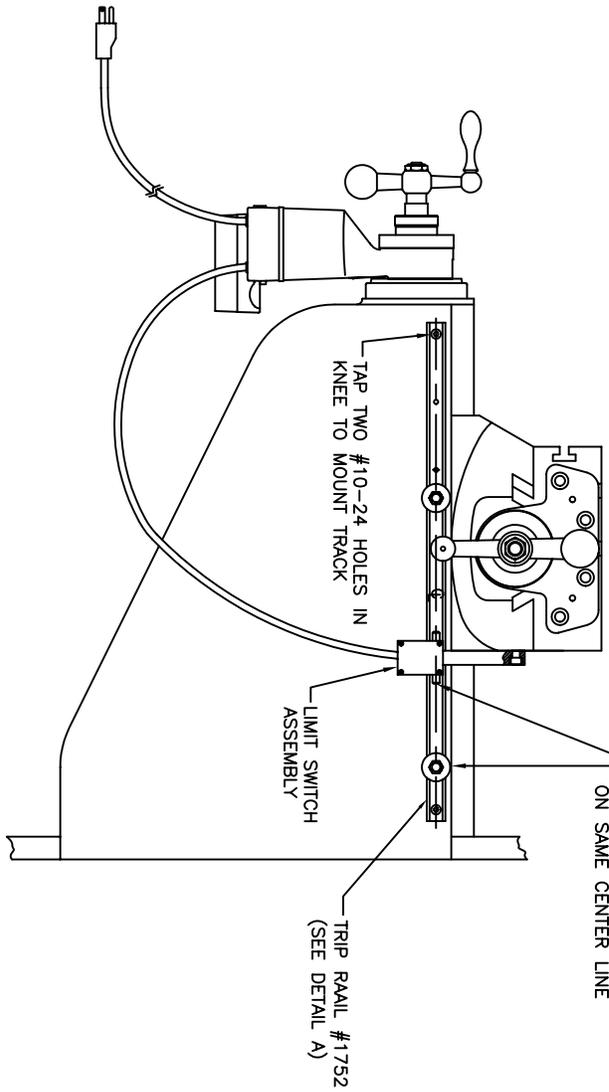
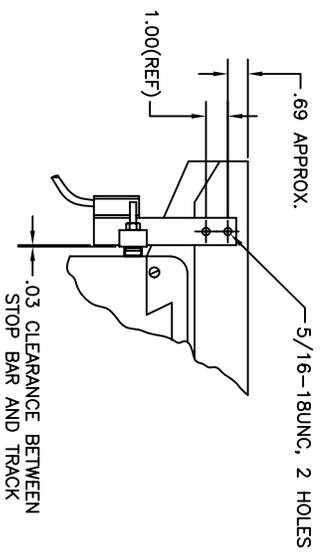
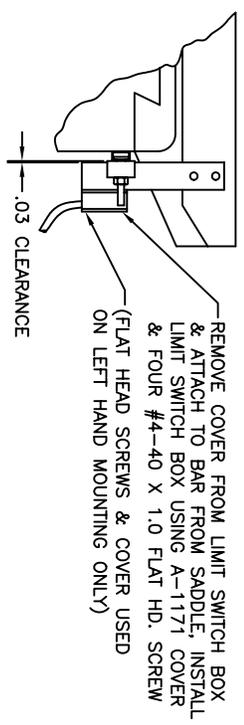


NOTE:
 1. REVIEW ALL INSTALLATION INSTRUCTIONS
 AND POWER FEED OPERATION BEFORE TURNING
 ON SERVO POWER FEED.

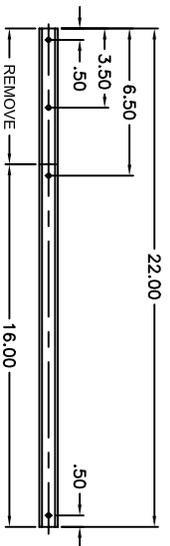


		SERVO PRODUCTS COMPANY 3490 LANGLAND BLVD., EASTLAKE, OH 44095	
BRIDGEPORT Y-AXIS INSTALLATION DRAWING MODEL 253			
SIZE	CODE IDENT NDL	DRAWING NDL	REV.
B	0800-81018	NB-59676	B
SCALE 5/8		SHEET	DF

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



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

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF SERVO PRODUCTS COMPANY WHICH IS NOT TO BE DISCLOSED TO OTHERS WITHOUT THE WRITTEN AUTHORITY FROM AN OFFICER OF SERVO PRODUCTS COMPANY.

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	DO NOT SCALE DRAWING	COMPUTER NO.
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 REV.: B

SCALE: NONE SHEET: OF

4 3 2 1

A B C D



M-0253 CROSS FEED PARTS IDENTIFICATION LIST

- 00579 Clamp Qty = 1
- 01050 Clamp Qty = 1
- 01095 Phil Flat Head Screw Qty = 1
- 1171 Limit Switch Bracket Qty = 1
- 0266 Limit Switch Gasket Qty = 1
- 0361 Limit Switch Bracket Qty = 1
- 00613 Phil Flat Head Screw Qty = 2
- 06928 Phil Pan Head Screw Qty = 4
- 1750 Limit Switch Bar Qty = 1
- 00670 Soc Head Cap Screw Qty = 2



1752 Trip Rail Qty = 1

01161 Button Head Cap Screw Qty = 2

- 00614 Key Qty = 1
- 00564 Roll Pin Qty = 1

- 01115 Lock Nut Qty = 1
- 0333 Shaft Extension Qty = 1

- 1536 Stop Stud Qty = 2

- 1537 Stop Ring Qty = 2

- 01082 Hex Nut Qty = 2

- 59675 Spacer Qty = 1

- 2981 Spacer Qty = 1



0335 Handcrank Assembly Qty = 1



01251 Brass Shim Qty = 5



01252 Plastic Shim Qty = 2



5488 Bevel Gear Qty = 1



0589-32 .032 Shim Qty = 2



0589-16L .016 Shim Qty = 2



0334 Bearing Race Qty = 1



00602 Soc Head Cap Screw Qty = 2