

POWER FEED INSTALLATION

Model M-2350/2358 Cross Feed

Exacto, Maxmill, Supermax (2350)
Do All (2358)



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-1538	Limit Switch Installation
NB-3268	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, 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. 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.
- Step 3:* Remove the power feed and bearing race.
- Step 4:* Remove the four screws securing the bearing housing and remove from the mill. (The lead screw can now be used to jack the housing off the pins. The lead screw does not have to be removed from the mill.)
- Step 5:* Drill and tap two holes 1/4-20 x 7/8 deep.
- Step 6:* Reinstall the bearing housing back onto the mill.

POWER FEED INSTALLATION

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

Step 2: In the following sequence, replace the dial and dial locking nut. Place the 4 mm key in the shaft extension and slide the handwheel onto shaft extension. Secure with the washer and locking nut provided.

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

Web: www.servoproductsco.com

CALIFORNIA BRANCH

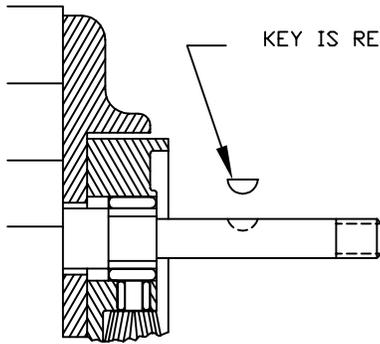
14254 Valley Blvd., Unit A
City of Industry, CA 91746
Ph. 626.961.7800 Fax 626.961.2444

HEADQUARTERS

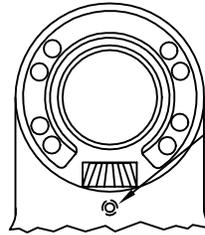
34940 Lakeland Blvd.
Eastlake, OH 44095
Ph. 440.942.9999 Fax 440.942-9100

FLORIDA BRANCH

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

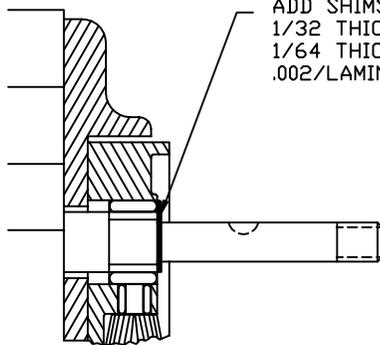


KEY IS REMOVED DURING SHIMMING

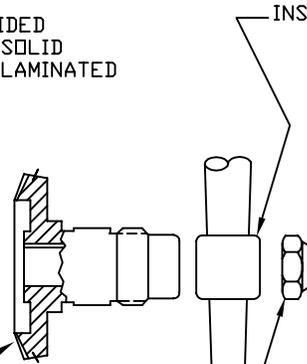


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



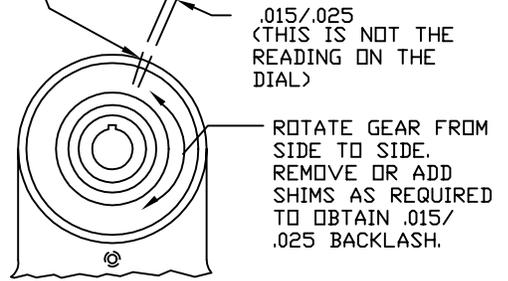
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR WITH PENCIL TO CHECK BACKLASH.



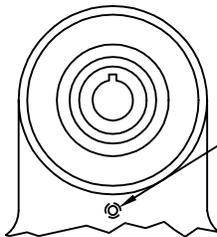
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

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

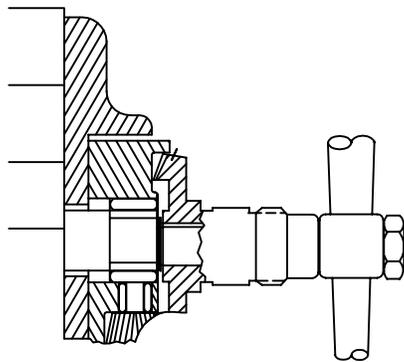
STEP 2
SHIMMING BEVEL GEAR

TIGHTEN NUT.

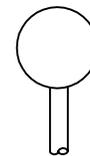
CAUTION: IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.



LOOSEN SETSCREW

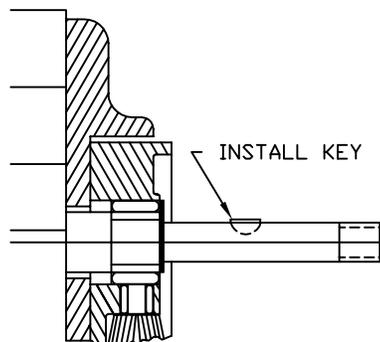


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.

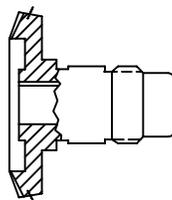


CONTROL HANDLE @ NEUTRAL POSITION

STEP 3
DOUBLE CHECK OF SHIMMING



INSTALL KEY



SEAL

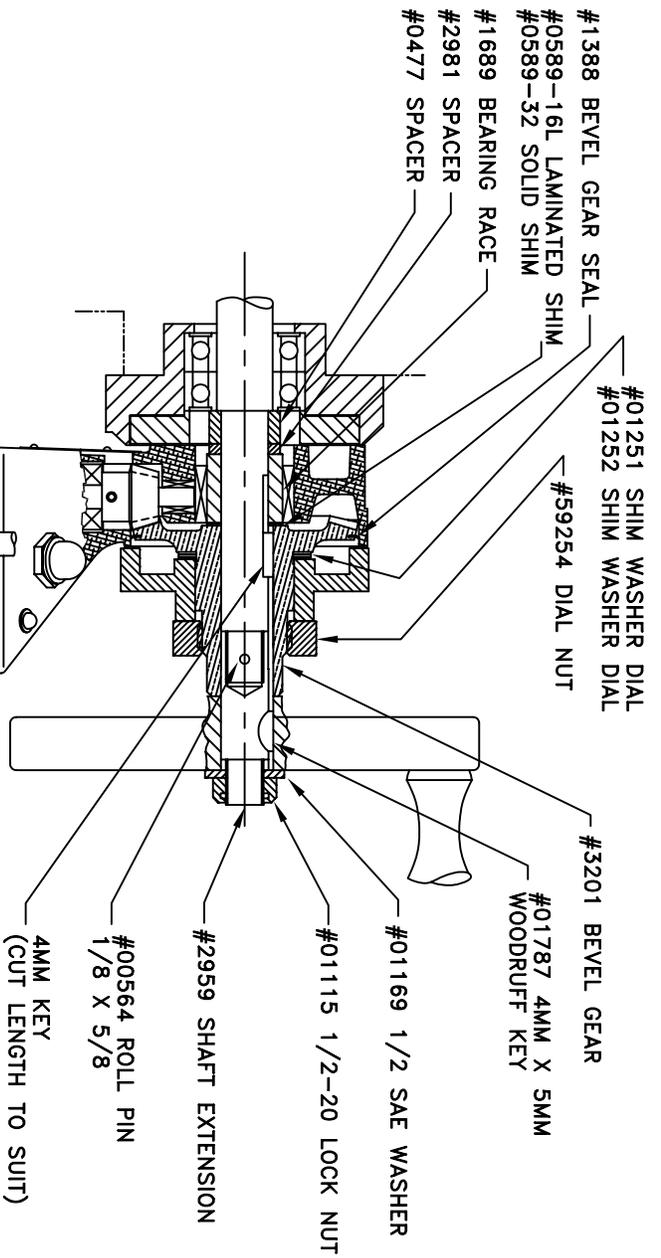
REMOVE GEAR, PACK WITH GREASE. (DO NOT USE SILICONE TYPE GREASE) REPLACE GEAR. (DO NOT LOSE ANY SHIMS)

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

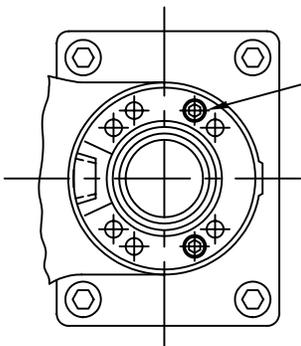
SERVO PRODUCTS COMPANY

BEVEL GEAR INSTALLATION

NA-5444 C



① #00602 1/4-20 X 1-1/2 SOC. HD. CAP SC.



- NOTE:
- ① DRILL AND TAP TWO HOLES 1/4-20 X 7/8 DEEP INTO BRACKET WITH CLEARANCE HOLES IN BEARING CAP (2 PLC'S.)
 - ② REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER 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/√R. SURFACE ROUGHNESS WITHIN 125/√R. REMOVE SHARP CORNERS AND EDGES .005 MIN. DRAWING STANDARD PER ANSI Y14.5M-1982

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

CONTRACT NO.	APPROVALS	DATE
	BRAUN J. TUCKER	1/10/97
CHECKED		

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

MODEL 2350 & MODEL 2358
INSTALLATION DRAWING
 Do ALL, EXACTO, MAXMILL, SUPERMAX

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
B	0800-80036	NB-3268	A

APPLICATION	USED IN	DID NOT SCALE DRAWING

NEXT ASSY

4

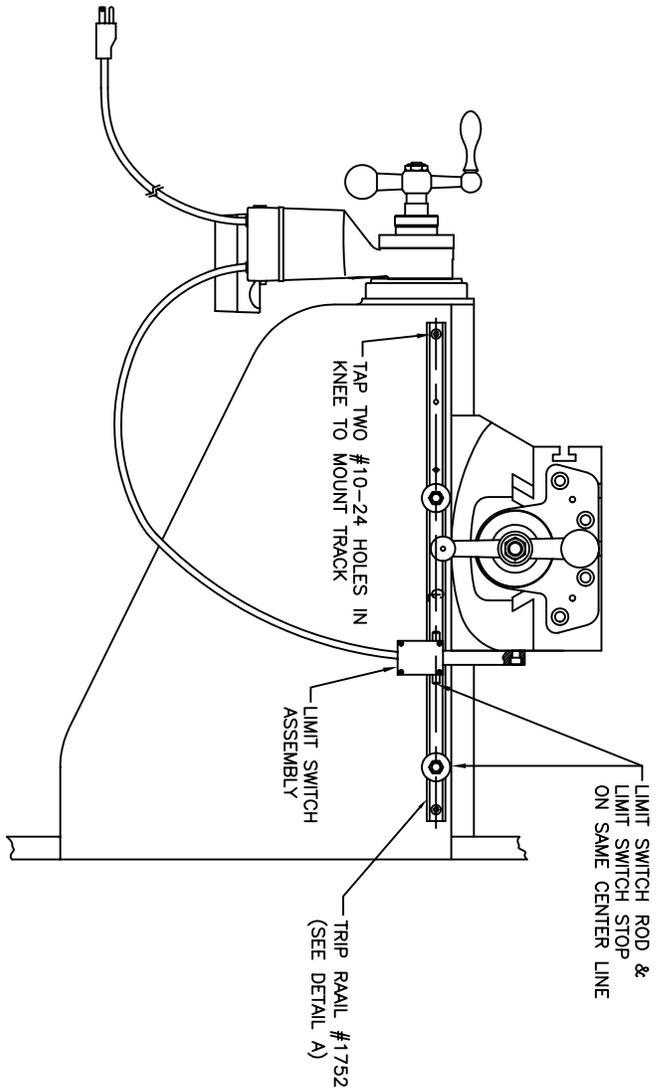
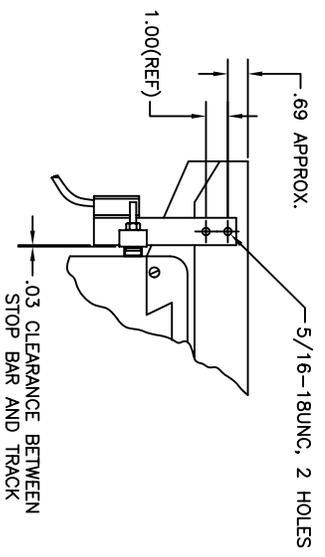
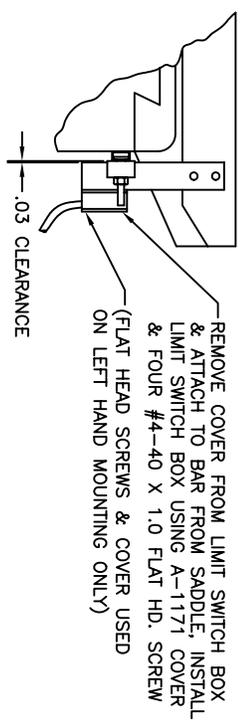
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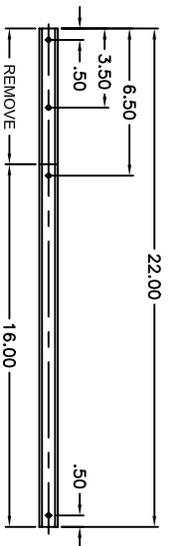
1

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

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE: ANGLES ± 1/2° MATERIAL ± .005	CONTRACT NO.	DATE
FINISH	APPROVALS	02/01/01
DO NOT SCALE DRAWING	DRAWN T. KU	CHECKED

APPLICATION	USED ON	COMPUTER NO.
NEXT ASSY		

SERVO 34940 LAKELAND BLVD., EASTLAKE, OH 44095

INSTALLATION DRAWING

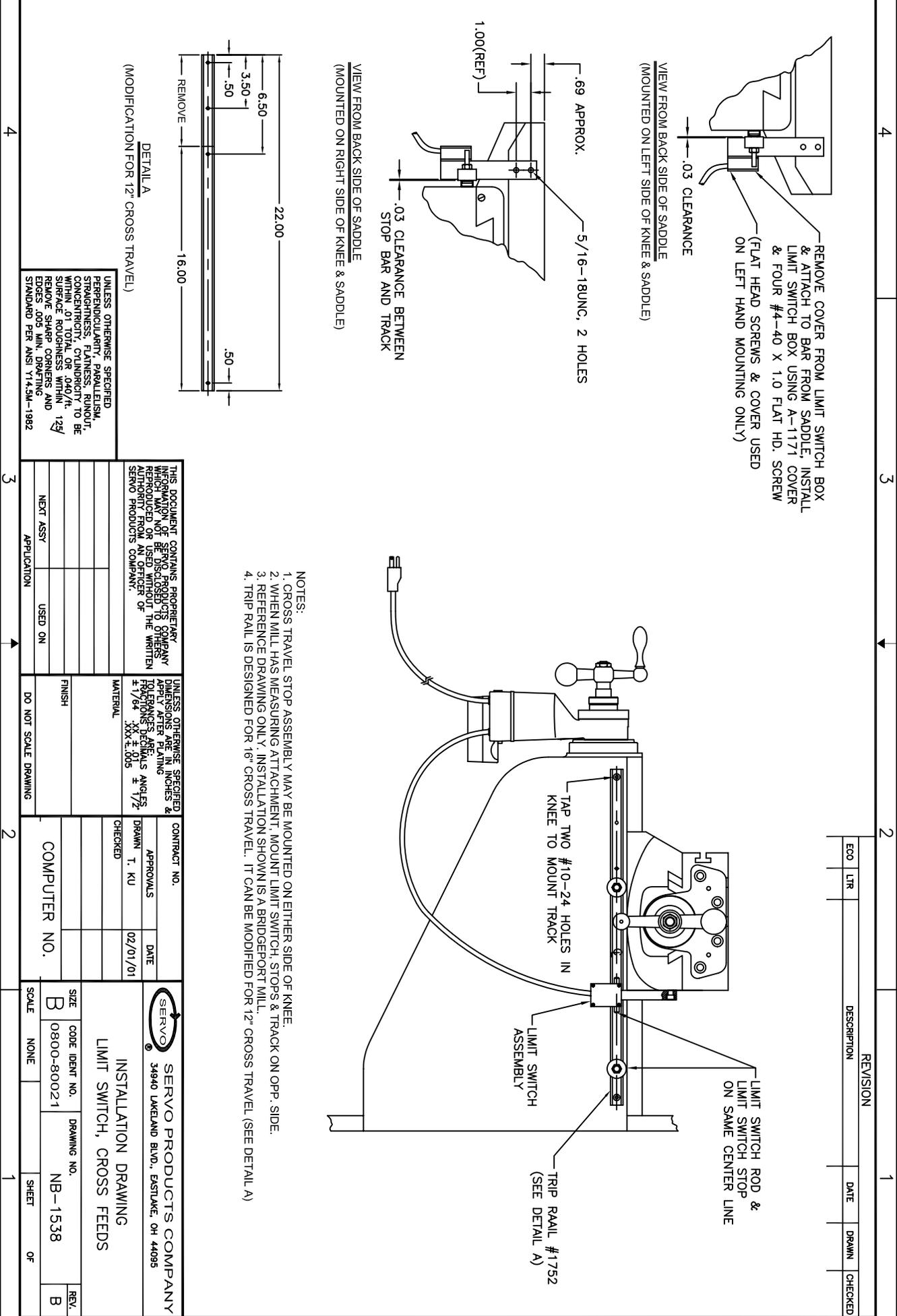
LIMIT SWITCH, CROSS FEEDS

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

SCALE NONE SHEET OF

4 3 2 1

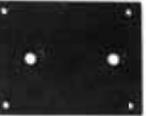
A B C D



A B C D



M-2350 CROSS FEED PARTS IDENTIFICATION LIST

	00579 Clamp Qty = 1		01050 Clamp Qty = 1		01095 Phil Flat Head Screw Qty = 4		1171 Limit Switch Cover 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
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1752
Trip Rail
Qty = 1

01161
Button Head
Cap Screw
Qty = 2

01787 Key Qty = 1
00564 Roll Pin Qty = 1

59254 Dial Nut Qty = 1
06111 Key Qty = 1

1536 Stop Stud Qty = 2

1537 Stop Ring Qty = 2

01082 Hex Nut Qty = 2

0477 Spacer Qty = 1

2981 Spacer Qty = 1

00596 Roll Pin Qty = 2

01115 Lock Nut Qty = 1

01169 SS Washer Qty = 1

2959 Shaft Extension Qty = 1



01251
Brass Shim
Qty = 5



01252
Plastic Shim
Qty = 2



3201
Bevel Gear
Qty = 1



0589-32
.032 Shim
Qty = 5



0589-16L
.016 Shim
Qty = 4



1689
Bearing Race
Qty = 1



00602
Soc Head
Cap Screw
Qty = 2