

# POWER FEED INSTALLATION

## Model M-4400 Table Feed

### Supermax 1-1/2, 16VA



#### REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-5693	Power Feed Installation
ND-6293	Type 150 Servo Drive
ND-6292	Type 140 Servo Power Feed
0800-80437	Parts List I.D. Sheet K-4400
0800-80001	Servo Power Feed Installation

---

#### PREPARATION

- Step 1:* Remove the nut, crank, dial assembly and key from the right-hand side of the mill. Using the bearing retainer as a template, spot three holes.
- Step 2:* Drill and tap 1/4-20 x 1/2" socket head cap screw.
- Step 3:* Screw the shaft extension onto the lead screw and tighten.
- Step 4:* Using the hole provided as a pilot, drill 1/8" diameter hole through and pin in place using the 1/8 x 5/8" diameter roll pin. File smooth.

#### POWER FEED INSTALLATION

- Step 1:* Secure bearing retainer B-5692 to table with three 1/4-20 x 1/2" long socket head cap screws.
- Step 2:* Slide the spacer and bearing race onto the lead screw.
- Step 3:* Slide the power feed over the bearing race and secure with two 1/4-20 x 1.0" 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.
- Step 2:* When shimming of the bevel gear is complete, replace the key.

#### 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 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 and the dial locking nut. Insert the 4 mm woodruff key and slide the handle in place. Tighten with the 1/2-20 locking nut.

## LIMIT SWITCH INSTALLATION

*Step 1:* Remove the T-shaped table stop bracket and, using the same screws, install the limit switch.

*Step 2:* Put the cable clamp on the cable and secure, using 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.

## SERVO PRODUCTS COMPANY

Web: [www.servoproductsco.com](http://www.servoproductsco.com)

### CALIFORNIA BRANCH

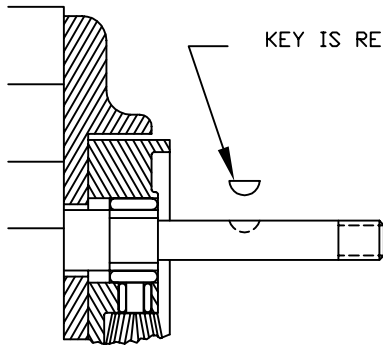
14254 Valley Blvd., Unit A  
City of Industry, CA 91746  
Ph. 626.961.7800 Fax 626.961.2444

### HEADQUARTERS

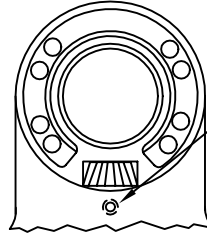
34940 Lakeland Blvd.  
Eastlake, OH 44095  
Ph. 440.942.9999 Fax 440.942-9100

### FLORIDA BRANCH

8950 131<sup>st</sup> Ave. N.  
Largo, FL 33773  
Ph. 727.585.8555 Fax 727.585.6555

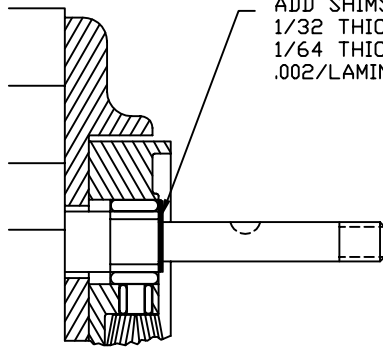


KEY IS REMOVED DURING SHIMMING

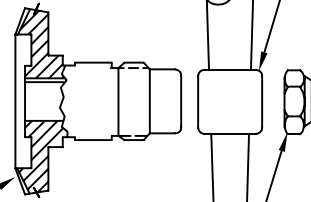


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1  
PREPARATION



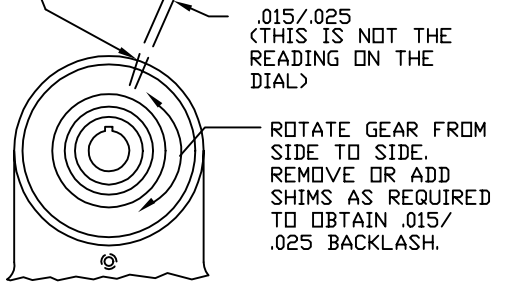
ADD SHIMS PROVIDED  
1/32 THICK ARE SOLID  
1/64 THICK ARE LAMINATED  
.002/LAMINATION



PUSH BEVEL GEAR  
AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR  
WITH PENCIL TO CHECK BACKLASH.



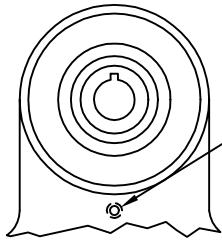
.015/.025  
(THIS IS NOT THE  
READING ON THE  
DIAL)

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

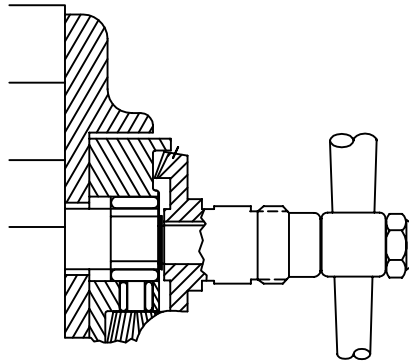
TIGHTEN NUT.

STEP 2  
SHIMMING BEVEL  
GEAR

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



LOOSEN SETSCREW

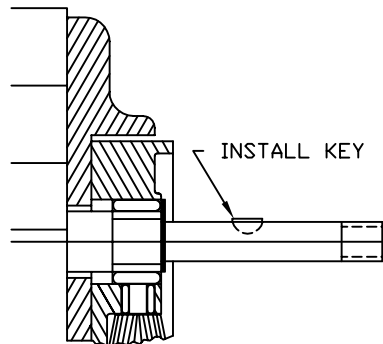


WITH POWER FEED IN  
NEUTRAL POSITION, TURN  
HANDCRANK. IF EXCESSIVE  
GEAR NOISE OR BINDING  
OCCURS, SHIMS NEED TO BE  
ADDED. WHEN ADDING SHIMS,  
REPEAT STEPS 1 AND 2.

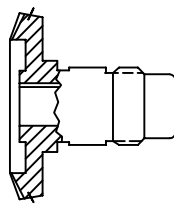


CONTROL HANDLE @  
NEUTRAL POSITION

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

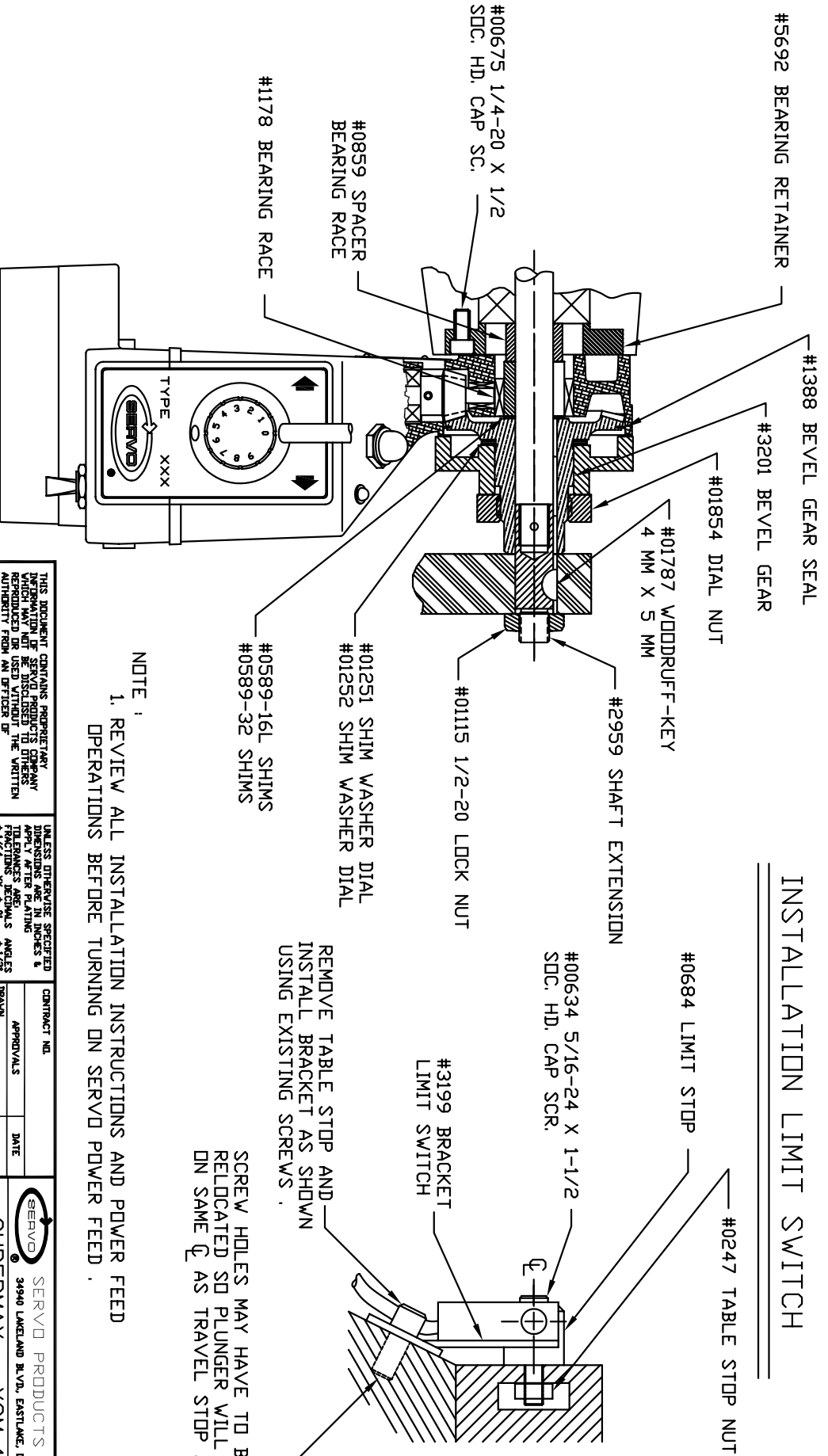
BEVEL GEAR INSTALLATION

NA-5444 C

STEP 4  
LUBRICATION

4 3 2 1

# INSTALLATION LIMIT SWITCH



REMOVE TABLE STOP AND  
INSTALL BRACKET AS SHOWN  
USING EXISTING SCREWS.  
SCREW HOLES MAY HAVE TO BE  
RELOCATED SO PLUNGER WILL BE  
ON SAME Q AS TRAVEL STOP.

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

UNLESS OTHERWISE SPECIFIED,  
PERPENDICULARITY, PARALLELISM,  
STRAIGHTNESS, FLATNESS, ROUND-  
NESS, CONCENTRICITY, CYLINDRICITY TO BE  
WITHIN .01 TOTAL OR .040/.04.  
SURFACE ROUGHNESS WITHIN 125  
REMOVE SHARP CORNERS AND  
EDGES .005 MIN.  
DRAWING STANDARD PER ANSI Y46.9-1982

THIS DOCUMENT CONTAINS PROPRIETARY  
INFORMATION OF SERVO PRODUCTS COMPANY  
WHICH MAY NOT BE REPRODUCED OR  
TRANSMITTED IN ANY FORM OR BY ANY  
MEANS, ELECTRONIC OR MECHANICAL,  
INCLUDING PHOTOCOPYING, RECORDING,  
OR BY ANY INFORMATION STORAGE AND  
RETRIEVAL SYSTEM, WITHOUT THE WRITTEN  
AUTHORITY FROM AN OFFICER OF  
SERVO PRODUCTS COMPANY.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES &  
TOLERANCES ARE IN  
FRACTIONS. DECIMALS ARE  
1/64 .XX ± .05  
MATERIAL NOTED  
FINISH

CONTRACT NO.	APPROVALS	DATE
BRAUN J. TUCKER	9/30/96	
CHECKED		
APPLICATION	USED IN	
NEXT ASSY		

APPROVALS	DATE
BRAUN J. TUCKER	9/30/96
CHECKED	
COMPUTER NO.	

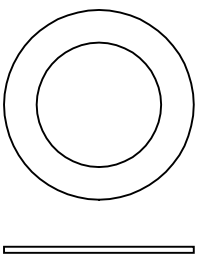
SERVO PRODUCTS COMPANY  
34940 LAKELAND BLVD., EASTLAKE, OH 44095

**SUPERMAX YCM 16VA**  
INSTALLATION DRAWING  
MODEL 4400

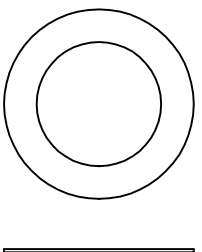
SIZE CODE IDENT. NO. DRAWING NO. REV.  
B 0600 80126 NB-5693 A

SCALE SHEET DF

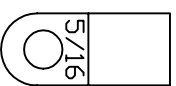
A B C D



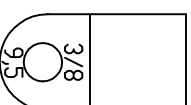
0589-32 (2)  
SHIM WASHER  
SOLID BRASS



0589-16L (2)  
SHIM WASHER  
LAMINATED BRASS



00579 (1)  
CLAMP  
70



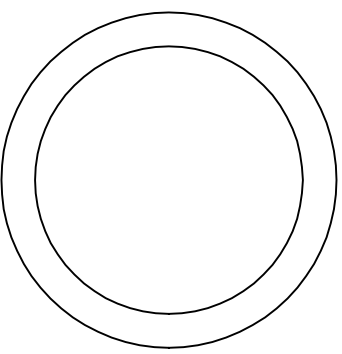
01050 (1)  
CLAMP FOR  
L/S CORD



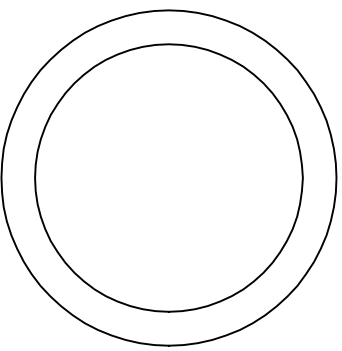
00564 (1)  
ROLL PIN  
1/8 X 5/8



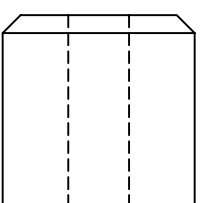
00596 (2)  
ROLL PIN  
3/16 X 5/8  
(ALREADY INSTALLED  
IN 0239-4 ADAPTOR)



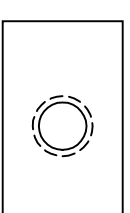
001251 (5)  
WASHER  
.005 X 1.395 X 1.748  
BRASS



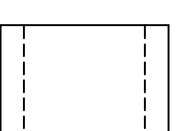
01252 (2)  
WASHER  
.030 X 1.395 X 1.748  
PLASTIC



0684 (2)  
L/S STOP



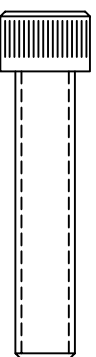
0247 (2)  
STOP NUT



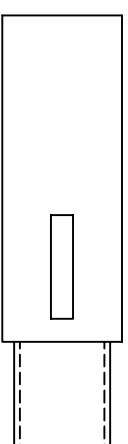
0859 (1)  
SPACER  
BEARING RACE



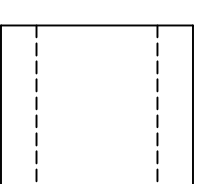
00675 (3)  
1/4-20 X 1/2  
SDC. HD. CAP. SC.



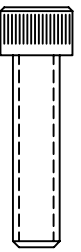
00634 (2)  
5/16-24 X 1-1/2  
SDC. HD. CAP. SC.



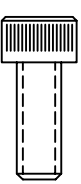
2959 (1)  
SHAFT  
EXTENSION



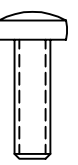
1178 (1)  
BEARING RACE



00586 (2)  
1/4-20 X 1  
SDC. HD. CAP. SC.



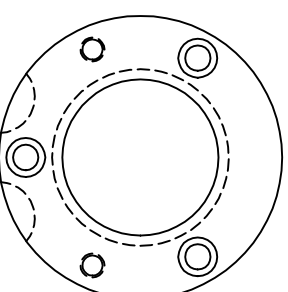
03594 (3)  
6MM - 1.00 X 16MM  
SDC. HD. CAP. SC.



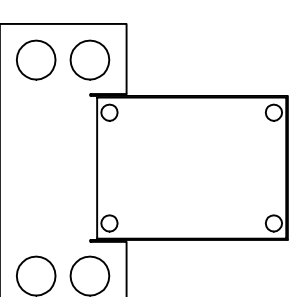
00688 (1)  
10-32 X 5/8  
PHIL. PAN HD. SC.



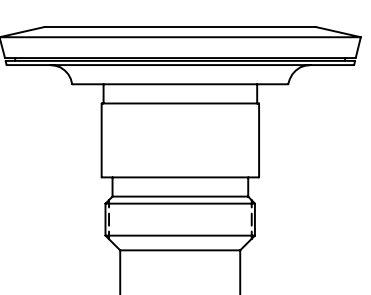
01787 (1)  
WOODRUFF KEY  
4MM X 5MM



5692 (1)  
ADAPTOR  
1/2 SCALE



3199 (1) / 0266 (1)  
BRACKET L/S / GASKET L/S  
1/2 SCALE



3201 (1)  
BEVEL GEAR  
1/2 SCALE