

# POWER FEED INSTALLATION

## Model M-3000 Table Feed

### Yen-Fu, Jet Y



#### REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-4116	Power Feed Installation
ND-6293	Type 150 Servo Drive
ND-6292	Type 140 Servo Drive
0800-80001	Servo Power Feed Operation

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#### PREPARATION

- Step 1:* Move the table to the extreme left-hand position.
- Step 2:* Remove the nut, handle, and dial assembly from the right-hand end of the table.
- Step 3:* Remove the four cap screws from the bearing housing. Save the screws for installation later.
- Step 4:* Using a soft hammer, tap the bearing housing off. Clean the end surface of the table.

#### POWER FEED INSTALLATION

- Step 1:* Slide the bearing race #3546 onto the lead screw.
- Step 2:* Slide the adaptor #0239-4 and feed onto the bearing race.
- Step 3:* Secure the assembly to the end of the table with the saved 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. Two plastic (.030" thick) and five brass (.005" thick) washers are provided for this. Shim as required.
- Step 2:* Secure the dial using the dial nut. Slide the handwheel in place and tighten 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:* Remove the two cap screws holding the T-shaped table stop bracket.

**Step 3:** Place the short spacers into the counterbored holes in the T-stop. Place the limit switch assembly on the spacers and install using the two 3/8-16 x 1" socket head cap screws.

**Step 4:** 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 5:** 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.

## **SERVO PRODUCTS COMPANY**

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Call for the location of our regional Service Centers.

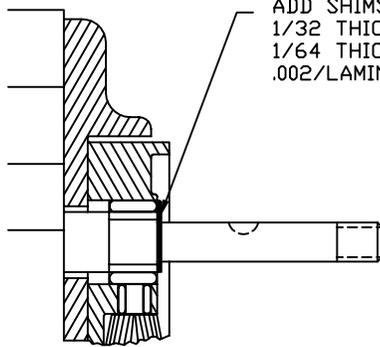


KEY IS REMOVED DURING SHIMMING

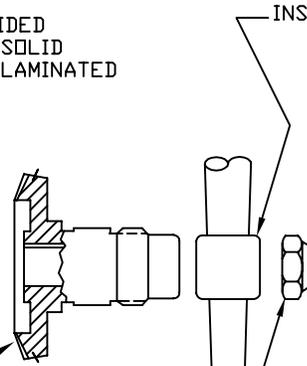


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1  
PREPARATION



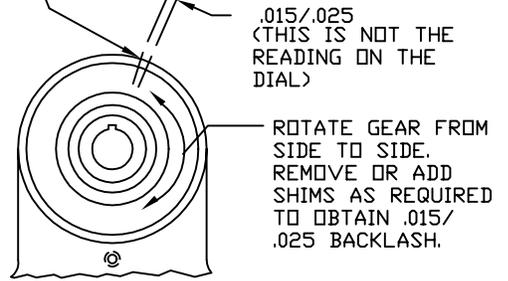
ADD SHIMS PROVIDED  
1/32 THICK ARE SOLID  
1/64 THICK ARE LAMINATED  
.002/LAMINATION



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.

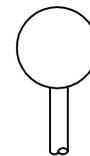
**CAUTION:** IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.



LOOSEN SETSCREW

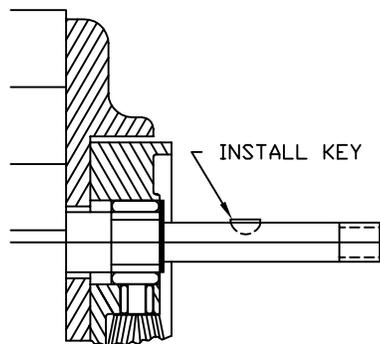


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.

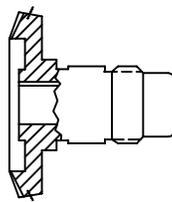


CONTROL HANDLE @ NEUTRAL POSITION

STEP 3  
DOUBLE CHECK OF SHIMMING



INSTALL KEY



SEAL

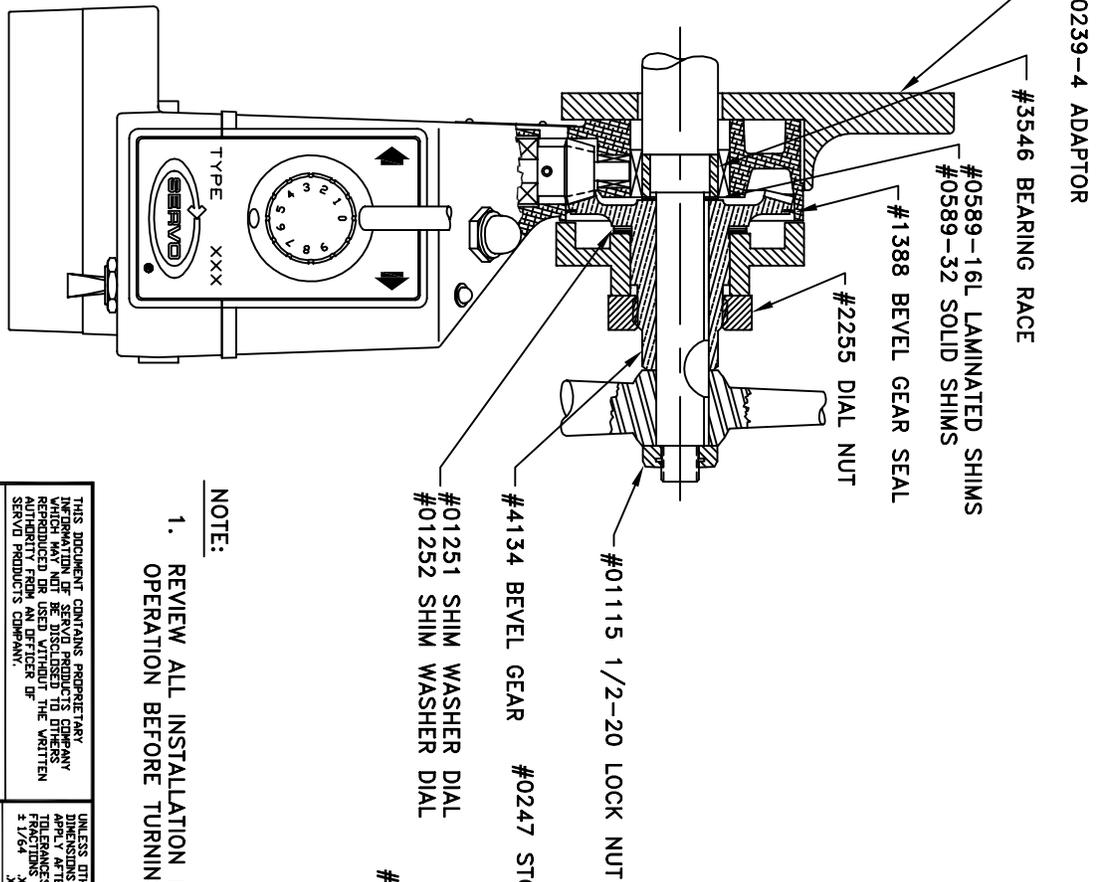
REMOVE GEAR, PACK WITH GREASE. (DO NOT USE SILICONE TYPE GREASE) REPLACE GEAR. (DO NOT LOSE ANY SHIMS)

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



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

UNLESS OTHERWISE SPECIFIED PERPENDICULARITY, PARALLELISM, STRAIGHTNESS, FLATNESS, ROUNDNESS, CONCENTRICITY, CYLINDRICITY TO BE WITHIN .01 TOTAL OR .040/ft. SURFACE ROUGHNESS WITHIN 125/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 FRACTIONS DECIMALS ANGLES ± 1/64 ± .005 ± .01 ± 1/2°

CONTRACT NO.	APPROVALS	DATE
DRAWN J. TUCKER	CHECKED	12/5/96

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**MODEL 3000**  
**INSTALLATION DRAWING**  
**YEN-FU & JET Y**

SIZE B CODE IDENT NO. 0800-80063 DRAWING NO. NB-4116 REV. A  
 SCALE SHEET OF

A

B

C

D

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