

POWER FEED INSTALLATION

Model M-9100 Table Feed

Enco Mills



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-57055	Power Feed 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 extreme left.
- Step 2:* Remove the nut, handle, dial assembly, and key from the right-hand end of the table.

POWER FEED INSTALLATION

- Step 1:* Slide the bearing race onto the lead screw.
- Step 2:* Slide the power feed onto the bearing race and against the bearing bracket.
- Step 3:* Using the power feed as a template, spot two holes.
- Step 4:* Remove the bearing bracket.
- Step 5:* Drill and tap 1/4-20 through two places.
- Step 6:* Reinstall the bearing bracket.
- Step 7:* Slide the spacer and the bearing race onto the lead screw.
- Step 8:* Slide the power feed over the bearing race and secure to the bearing bracket using two 1/4-20 x 1" 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. Two plastic (.030" thick) and five brass (.005" thick) washers are provided for this. Shim as required.
- Step 2:* In the following sequence, replace the key (if removed) and dial locking nut. Slide the handle 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 two cap screws holding the T-shaped table stop. Place limit switch spacers into the T-stop and install the limit switch using 3/8-16 x 1-1/4" socket head cap screws.

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!

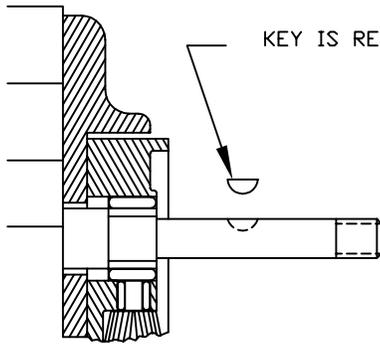
Prevent contact during fast traverses.

SERVO PRODUCTS COMPANY

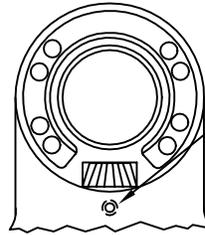
433 North Fair Oaks Avenue, Pasadena, CA 91103 USA
Phone: 800.521.7359 or 626.796.2460 Fax: 626.796.3845

Web: www.servoproductsco.com

Call for the location of our regional Service Centers.

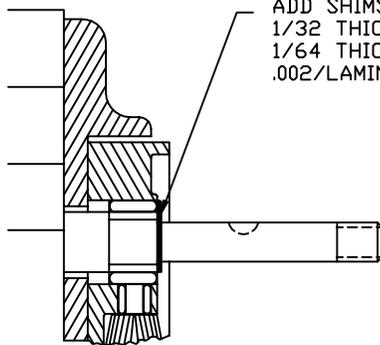


KEY IS REMOVED DURING SHIMMING

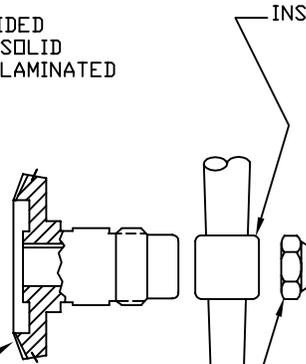


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



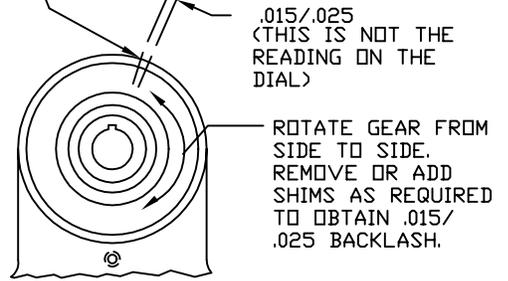
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR WITH PENCIL TO CHECK BACKLASH.



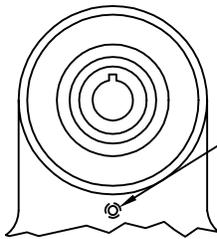
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

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

STEP 2
SHIMMING BEVEL GEAR

TIGHTEN NUT.

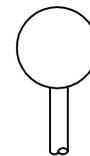
CAUTION: IF BACKLASH IS NOT PROPERLY SET BEFORE TURNING UNIT ON, BEVEL GEAR MAY BE DESTROYED.



LOOSEN SETSCREW

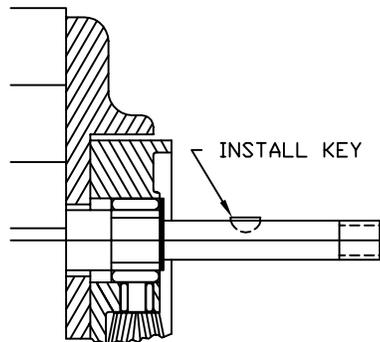


WITH POWER FEED IN NEUTRAL POSITION, TURN HANDCRANK. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED. WHEN ADDING SHIMS, REPEAT STEPS 1 AND 2.

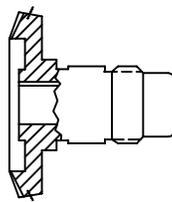


CONTROL HANDLE @ NEUTRAL POSITION

STEP 3
DOUBLE CHECK OF SHIMMING



INSTALL KEY



SEAL

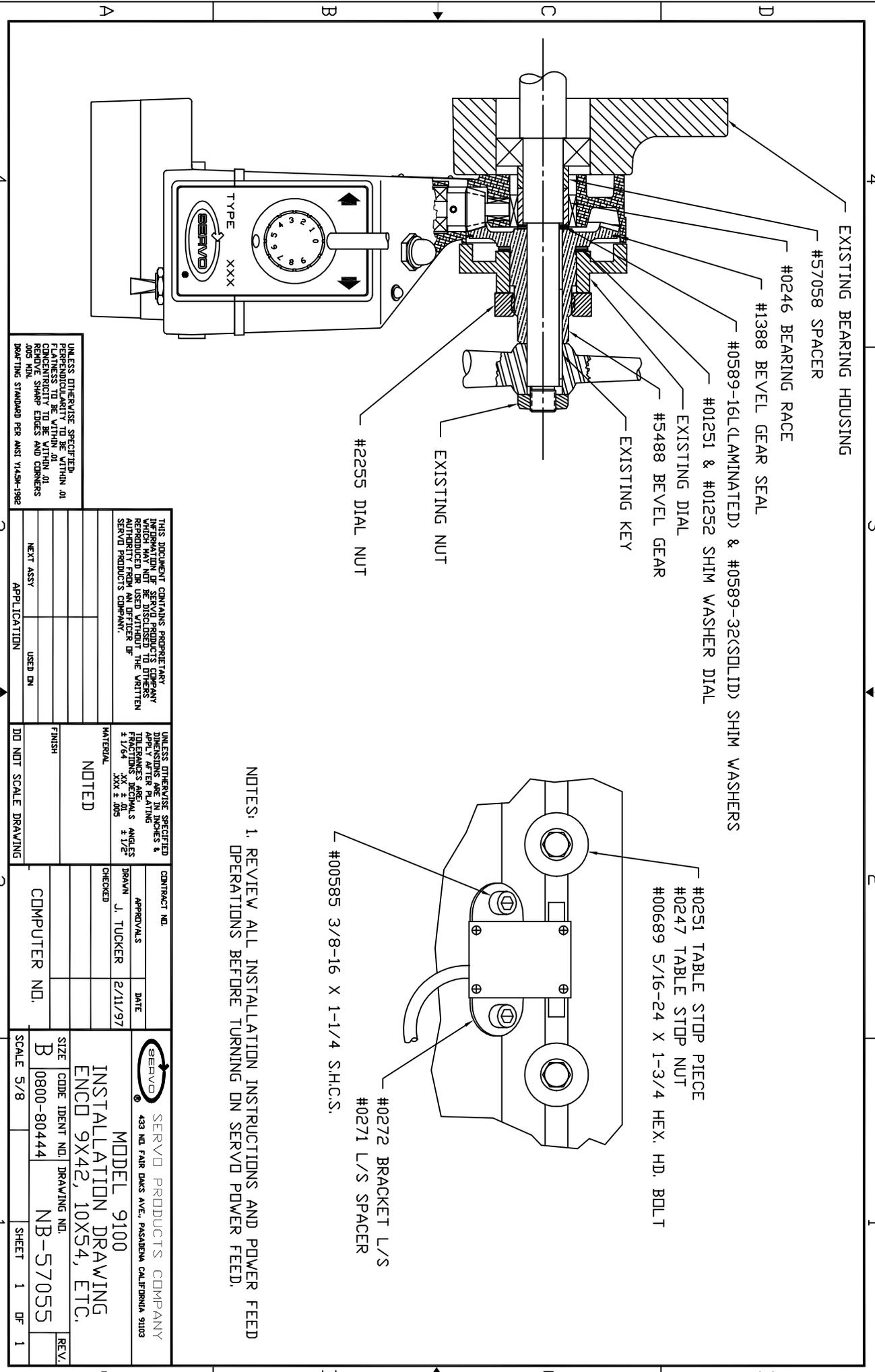
REMOVE GEAR, PACK WITH GREASE. (DO NOT USE SILICONE TYPE GREASE) REPLACE GEAR. (DO NOT LOSE ANY SHIMS)

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



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

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE WITHIN 0.1 MILLIMETER FLATNESS TO BE WITHIN 0.1 MILLIMETER CONCENTRICITY TO BE WITHIN 0.1 MILLIMETER REMOVE SHARP EDGES AND CORNERS 0.005 MIN. DRAWING STANDARD PER ANSI Y43M-1982

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

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

CONTRACT NO.	APPROVALS	DATE
	DRAWN J. TUCKER	2/11/97
CHECKED		


SERVO PRODUCTS COMPANY
 433 N. FAIR OAKS AVE., PASADENA CALIFORNIA 91103
MODEL 9100
INSTALLATION DRAWING
 ENCD 9X42, 10X54, ETC.
 SIZE CODE IDENT. NO. DRAWING NO. REV.
 B 0800-80444 NB-57055
 SCALE 5/8 SHEET 1 OF 1

APPLICATION	USED ON
NEXT ASSY	