



TURBO DRIVE INSTALLATION

MODEL 4400T TABLE FEED

YCI, Supermax 16 & 1-1/2

➔ **NOTE** This Turbo Drive Table Feed is configured for mounting the feed on the right hand end of the table. The lead screw pitch is 5 turns per inch. See **CAUTION** below before changing anything!

CAUTION

The Turbo Drive power cable should be left **unplugged** until the drive is properly installed on the lead screw.

See the **Operation** manual to reverse the direction of travel or to change the lead screw pitch default. Turn **off** the Turbo Drive and **remove** the power plug from the wall before you attempt to change any jumpers or reverse the top housing.

WARNINGS

DO NOT install and operate this power feed without safety handwheel Servo #58923 on **BOTH** ends of the table. This is required to prevent injury.

Check handwheel clearances before operation.

Clearances between the surfaces of the handwheel and the non-moving parts of the equipment on which the handwheel is installed must be at least one-fourth inch (1/4") to prevent injury.

Do not operate without proper clearance!

Prevent contact during fast traverses.

WARRANTY CAUTION

There are **NO** user-serviceable parts inside the center or bottom housings. Removal of the motor, keyboard, or bottom housing screws **voids** the warranty.

REFERENCE DRAWINGS ENCLOSED

NA-58496	Bevel Gear Installation
NB-58622	Turbo Drive Installation
0800-80678	Turbo Drive Operation manual

PREPARATION

Step 1: Gather together the following items that you will need to complete this installation.

- a) 3/8" electric hand drill
- b) 1/8" drill
- c) ball peen hammer & support piece
- d) flat file
- e) 3/4" socket wrench

- f) set of inch hex wrenches
- g) grease
- h) masking tape
- i) clean shop rag

Step 2: Clean the power feed mounting area completely.

Step 3: Remove the nut, handle, and dial assembly from the right hand end of the table. Keep the dial for reuse later.

MOUNTING HARDWARE INSTALLATION

Step 1: Orient and install the bearing retainer #5692 such that the feed can be mounted vertically.

Step 2: Slip the spacer #6567 followed by bearing race #1178 onto the lead screw shaft.

SHAFT EXTENSION AND TURBO DRIVE INSTALLATION

Step 1: Screw on the shaft extension #2959 onto the lead screw and tighten.

Step 2: Following the existing pilot hole, drill through the shaft extension using a 1/8" diameter drill.

Step 3: Support the other side of the hole with a heavy piece of metal and hammer in the #00564 roll pin. File smooth and clean thoroughly.

Step 4: With the spacer coupling #6563 hanging on the two Turbo Drive mounting screws #04554, slide the Turbo Drive onto the bearing race and push against the bearing housing. Tighten the two screws.

IF: If the bearing race is not flush with the needle bearing in the unit within $\pm .05$ ", then either shim behind the race or machine the spacer to correctly locate the race.

BEVEL GEAR INSTALLATION

Step 1: Follow the drawing NA-58496 for installation of the bevel gear. Adjust for proper gear backlash.

DIAL AND HANDWHEEL INSTALLATION

Step 1: After getting the proper gear 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. Three plastic (.030" thick) and five brass (.005" thick) washers are provided for this. Shim as required.

Step 2: In the following sequence, install the key, dial and dial nut #2255. Slide the handwheel #58923 in place and tighten with 1/2-20 locknut #01115.

Step 3: Replace the handwheel on the left end of the table with the handwheel #58923 provided. This is required to prevent injury.

TURBO DRIVE OPERATION

See the separate **Servo Turbo Drive Operation** manual for complete operating instructions. Plug the unit into a properly grounded three-wire outlet supplying 110 volt single phase 50/60 Hz 6 amp power. Turn the control switch ON and follow the instructions in the manual or on the **Quick Reference** sheet for setting limits.

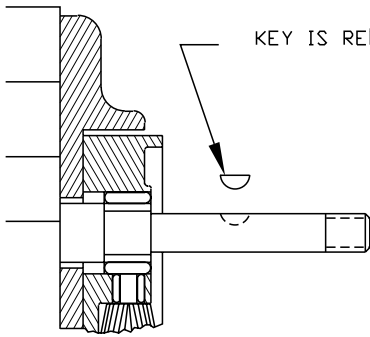
SERVO PRODUCTS COMPANY

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

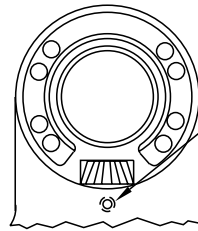
Web: www.servoproductsco.com

If service is required, call Servo Products Company.

DO NOT PLUG IN POWER UNTIL ALL STEPS ARE COMPLETED.

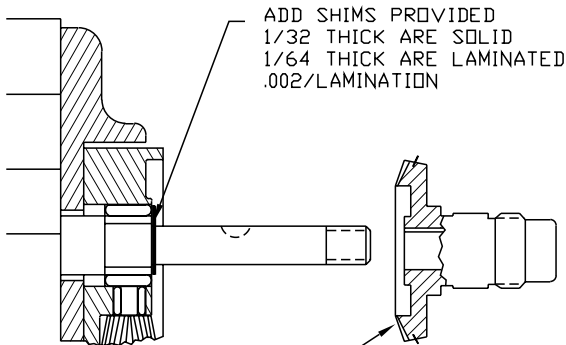


KEY IS REMOVED DURING SHIMMING

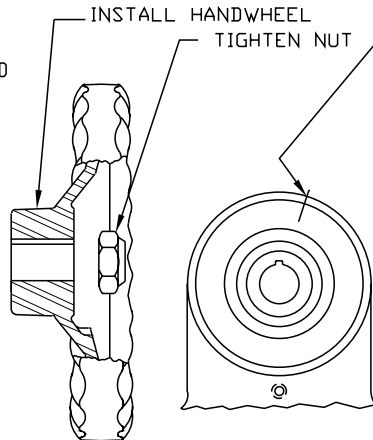


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)
(TIGHTEN UPPER ONE ONLY)

STEP 1
PREPARATION



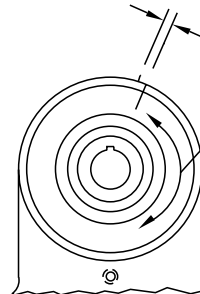
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



INSTALL HANDWHEEL

TIGHTEN NUT

SCRIBE ACROSS GEAR & HOUSING WHILE PUSHING GEAR AGAINST ONE SIDE OF THE BACKLASH



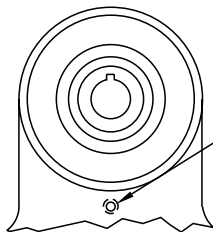
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

ROTATE GEAR ACROSS BACKLASH & MEASURE, ADD OR REMOVE SHIMS TO GET .015/.025 BACKLASH

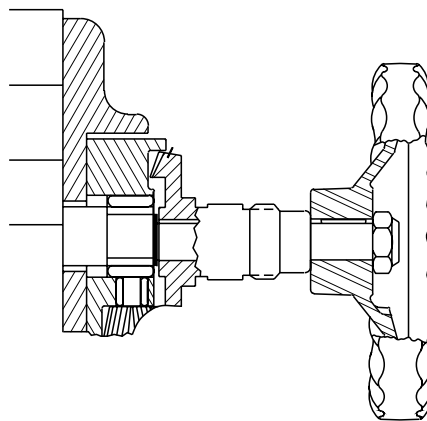
PUSH BEVEL GEAR AGAINST SHIMS.

STEP 2
SHIMMING BEVEL GEAR

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

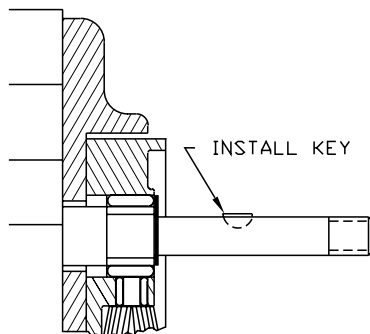


LOOSEN SETSCREW

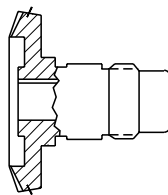


MANUALLY TURN HANDWHEEL. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED OR REMOVED, WHEN RE-SHIMMING, REPEAT STEPS 1 AND 2.

STEP 3
DOUBLE CHECK OF SHIMMING



INSTALL KEY



SEAL

STEP 4
LUBRICATION

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.



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BEVEL GEAR INSTALLATION

NA-58496

EXISTING BEARING, HOUSING & LEAD SCREW SHAFT
 CHISEL OFF PIN PROTRUSION FLUSH

#6563 SPACER COUPLING
 #04554 1/4-20X 1-1/8" S.H.C.S. X2

EXISTING DIAL
 #01251 & #01252 SHIM WASHERS

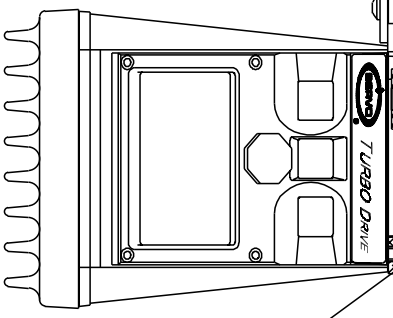
EXISTING KEY
 #3201 BEVEL GEAR
 #01787 WOODRUFF KEY, 4mm X 5mm
 #01115 1/2-20 LOCKNUT

#00675 1/4-20X 1/2" S.H.C.S. X3
 #6567 SPACER
 #5692 BEARING RETAINER

#00564 ϕ 1/8" X 5/8" ROLL PIN
 #2255 DIAL NUT
 #0589-16L & #0589-32 SHIM WASHERS
 #1178 BEARING RACE
 #58490 #10-24X3/4" SEALING SCREWS

#58923 HAND WHEEL
 #2959 SHAFT EXTENSION

- NOTES:
1. REVIEW ALL INSTALLATION INSTRUCTIONS AND OPERATION SHEETS BEFORE TURNING ON SERVO POWER FEED.
 2. REMOVAL OF MOTOR, KEY PAD OR BOTTOM HOUSING VOIDS THE WARRANTY.
 3. REPLACE TABLE LEFT SIDE HANDLE WITH EXTRA HANDWHEEL #58923 PROVIDED TO AVOID INJURY.



UNLESS OTHERWISE SPECIFIED
 SERVO PRODUCTS COMPANY
 STANDARD FINISHES
 SURFACE CONCENTRICITY CALIBRICITY TO BE WITHIN .01 TOTAL OR .040/FT.
 REMOVE SHARP CORNERS WITHIN 125°
 EDGES .005 MIN
 DRAFTING STANDARD PER ANSI Y14.5M-1982

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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & FRACTIONS ARE ANGLES ± 1/2° ± 1/64" ± .015

CONTRACT NO.	APPROVALS	DATE
	BRAVN T. KU	10/07/98
CHECKED		

SERVO SERVO PRODUCTS COMPANY
 433 N. FAIR OAKS AVE., PASADENA CALIFORNIA 91103

INSTALLATION DWG
 MODEL 4400T

SIZE	CODE IDENT NO.	DRAWING NO.	REV.
B	0800-80734	NB-58622	A
SCALE	5/8		

REVISION		DATE	DRAWN	CHECKED
ECD	LTR			

APPLICATION	USED ON	DID NOT SCALE DRAWING	COMPUTER NO.	SCALE	5/8	SHEET	OF