



TURBO DRIVE INSTALLATION

MODEL 0206T TABLE FEED

Bridgeport Mill

(replaces Bridgeport 6F and 8F electronic feed)

➔ **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

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. Modification of existing handwheel or replacement may be required.

Do not operate without proper clearance!

Prevent contact during fast traverses.

To prevent injury, this unit must not be operated without a handwheel or safety hand crank.

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-58554	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) 3/16" drill, #7 (.201") drill, 1/4" drill
- c) 1/4-20 tap
- d) 3/4" socket wrench

- e) set of inch hex wrenches
- f) grease
- g) clean shop rag

Step 2: Move the table to the extreme left.

Step 3: Remove the Bridgeport power feed from the right end of the machine, including the coupling to the lead screw. Save the cap screws that attached to feed to the table.

Step 4: Remove and retain the following parts from the Bridgeport feed: dial, dial nut, handcrank, spring, spring seat, washer, and handcrank sleeve.

Step 5: Clean the power feed mounting area completely.

MOUNTING HARDWARE INSTALLATION

Step 1: Slide the shaft extension onto the lead screw shaft.

Step 2: Lubricate the shaft with a light coat of grease then slip the bearing race #0470 onto the shaft extension.

Step 3: Snug the power feed unit to the adaptor #0239-4 with two 1/4-20 x 1" long socket head cap screws.

Step 4: Slip the unit over the race to center it with the shaft. Snug down the adaptor with cap screws saved earlier.

Step 5: Adjust the position of the shaft extension such that the front of the race #0470 is flush with the needle bearing case on the power feed. Tighten the shaft extension to the lead screw with #05894 set screw.

Step 6: Remove the adaptor + power feed assembly.

Step 7: Following the existing pilot hole, drill through the shaft extension using a 3/16" diameter drill. Finish the hole using a #7 (.201" diameter) drill. Remove the shaft extension. Open the spot face side of the hole to 1/4" diameter and tap 1/4-20 through the other side. Also open the hole on the lead screw to 1/4" through.

Step 8: Reinstall and tighten the shaft extension to the lead screw using the 1/4-20 x 1-1/2" long socket head cap screws with nyloc #05895 provided.

Step 9: Slide the felt seal #58599 onto the shaft extension followed by the adaptor + Turbo Drive assembly. Secure the adaptor with the four cap screws. Then tighten the two Turbo Drive mounting screws.

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 clutch #57449, spring, handcrank sleeve, handcrank, and washer #57487 in place and tighten with 5/16-18 x 1" long socket head cap screws with nyloc #05161.

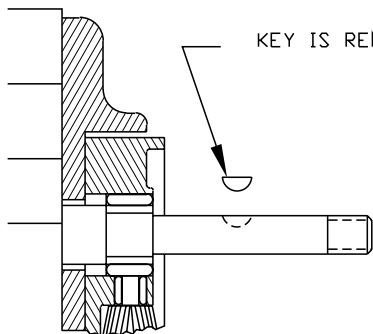
TURBO DRIVE OPERATION

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.

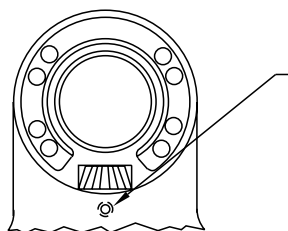
SERVO PRODUCTS COMPANY

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.

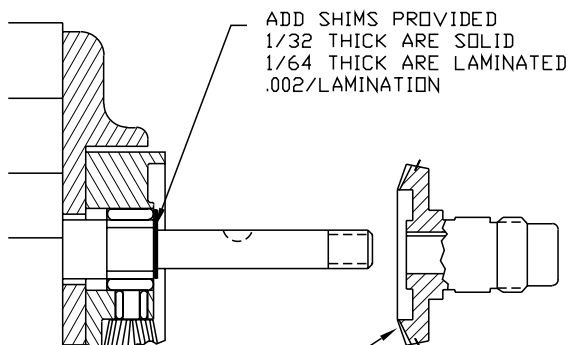


KEY IS REMOVED DURING SHIMMING

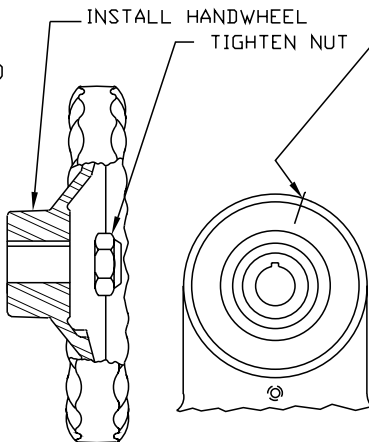


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)
(TIGHTEN UPPER ONE ONLY)

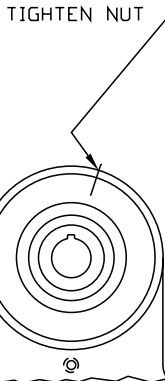
STEP 1
PREPARATION



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

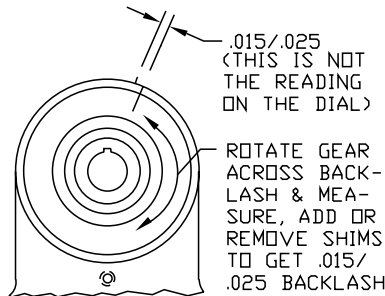


INSTALL HANDWHEEL



TIGHTEN NUT

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



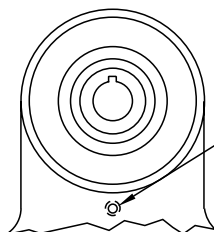
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

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

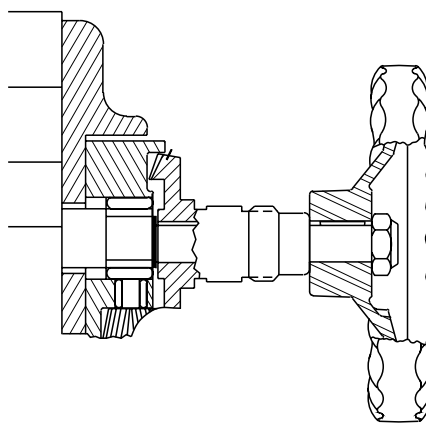
PUSH BEVEL GEAR AGAINST SHIMS.

STEP 2
SHIMMING BEVEL GEAR

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

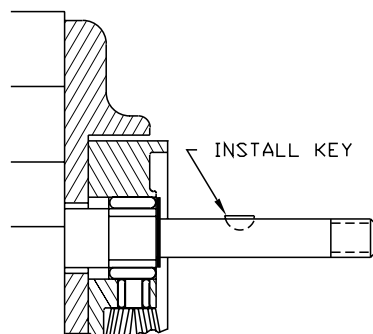


LOOSEN SETSCREW

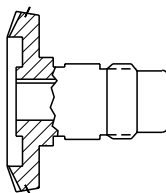


MANUALLY TURN HANDWHEEL. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED OR REMOVED, WHEN RE-SHIMMING, REPEAT STEPS 1 AND 2.

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.

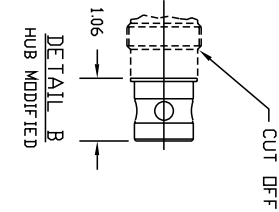
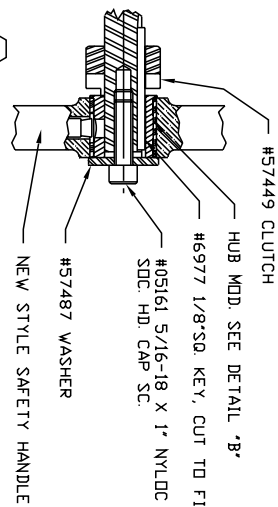
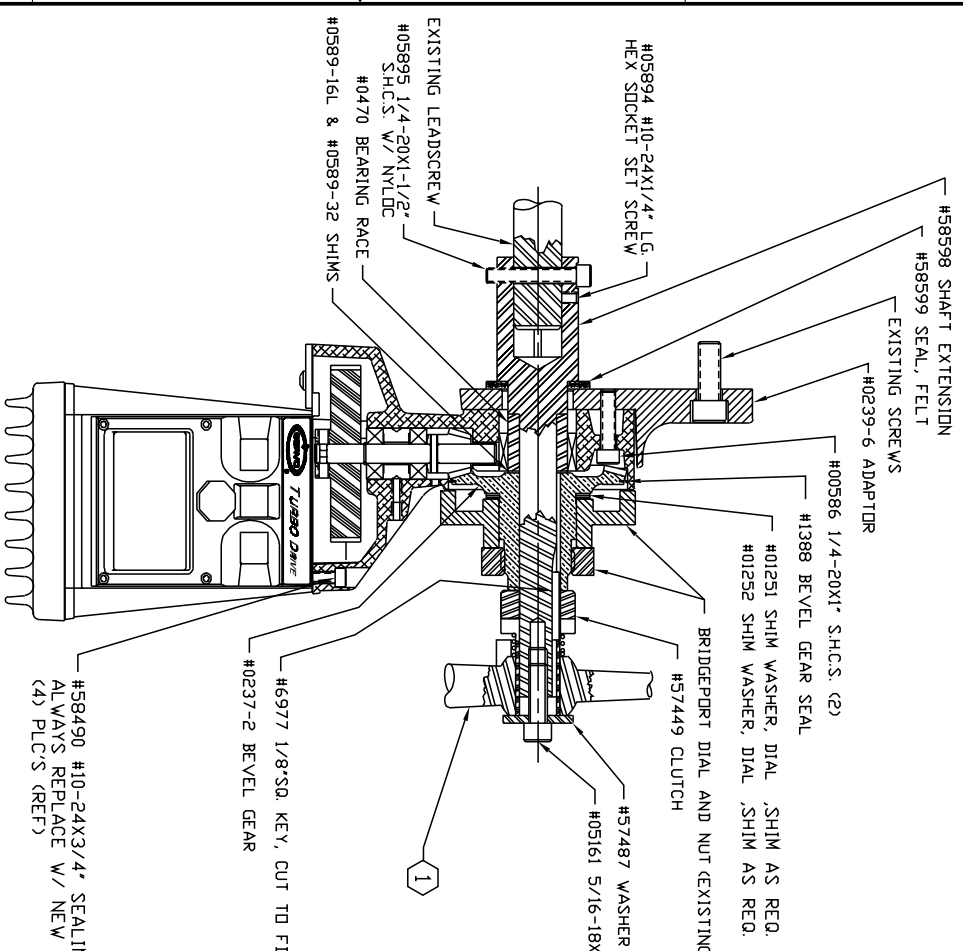


SERVO PRODUCTS COMPANY

BEVEL GEAR INSTALLATION

NA-58496

REVISION		DATE	DRAWN	CHECKED
ECD	LTR			
DESCRIPTION				



- NOTE:**
- FOR OLD STYLE (ODG) CLUTCH SAFETY HANDLE, USE EXISTING BUSHING, SPRING, AND HANDLE AS SHOWN.
 - FOR NEW STYLE SAFETY HANDLE, SEE DETAIL 'A' FOR PARTS USED AND ALSO SEE DETAIL 'B' FOR MODIFICATION OF BRIDGEPORT HUB.
 - REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED OPERATIONS BEFORE TURNING ON SERVO POWER FEED.
 - REMOVAL OF MOTOR, KEY PAD AND BOTTOM HOUSING Voids THE WARRANTY.

#58490 #10-24X3/4\"/>

UNLESS OTHERWISE SPECIFIED
SERVO PRODUCTS COMPANY
STRENGTHENED STEEL BRIDGEPORT
CONCENTRICITY CALINDRITY TO BE
WITHIN .01 TOTAL OR .040/FT.
SURFACE ROUGHNESS WITHIN 125
REMOVE SHARP CORNERS AND
EDGES .005 MIN
DRAFTING STANDARD PER ANSI Y14.5M-1982

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APPLICATOR
USED ON
APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & FRACTIONS ARE ANGLES ± 1/64 ± .015 ± 1/2°
MATERIAL
FINISH
DID NOT SCALE DRAWING

CONTRACT NO.	APPROVALS	DATE
	TKU	8/7/98
COMPUTER NO.	CHECKED	

SERVO SERVO PRODUCTS COMPANY
432 N. FAIR OAKS AVE., PASADENA CALIFORNIA 91102

INSTALLATION
MODEL 0206T
BRIDGEPORT ELECTRONIC

SIZE CODE IDENT NO. DRAWING NO. REV.
B 0800-80717 NB-58554

SCALE 1/2 SHEET OF