



# TURBO DRIVE INSTALLATION

## MODEL 9108T TABLE FEED

Acer 3VS/3VK, Kent 3/4/5VK,  
Kingston KTM 3V Mills & Others

➔ **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.

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### REFERENCE DRAWINGS ENCLOSED

NA-58496	Bevel Gear Installation
NB-58609	Turbo Drive Installation
0800-80678	Turbo Drive Operation manual

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### PREPARATION

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

- 3/8" electric hand drill
- 11/64" drill, 3/16" drill
- ball peen hammer & support piece

- d) flat file
- e) 3/4" socket wrench
- f) set of inch hex wrenches
- g) 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:* Slip spacer #6567 followed by bearing race #0470 onto the lead screw shaft.

*Step 2:* Replace the existing bearing retainer with bearing retainer #6544 supplied.

*Step 3:* Orient the power feed mounting holes on the bearing retainer such that the unit can be mounted vertically. Secure the bearing retainer with the existing screws.

## **SHAFT EXTENSION AND TURBO DRIVE INSTALLATION**

*Step 1:* Screw on the shaft extension #1556 onto the lead screw and tighten.

*Step 2:* Following the existing pilot hole, drill through the shaft extension using an 11/64" diameter drill. Finish the hole using a 3/16" diameter drill.

*Step 3:* Support the other side of the hole with a heavy piece of metal and hammer in the #00596 roll pin. File smooth and clean thoroughly.

*Step 4:* Slide the Turbo Drive onto the bearing race and push against the bracket. Secure with two 1/4-20 x 1" long socket head cap 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 spacer #57716 and 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.

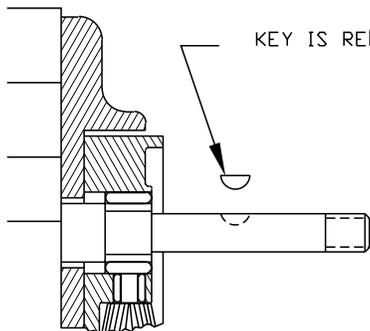
### **SERVO PRODUCTS COMPANY**

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

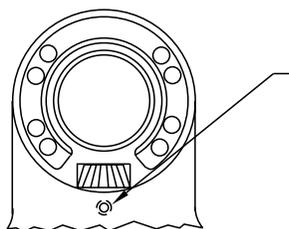
Web: [www.servoproductsco.com](http://www.servoproductsco.com)

If service is required, call Servo Products Company.

DO NOT PLUG IN POWER UNTIL ALL STEPS ARE COMPLETED.

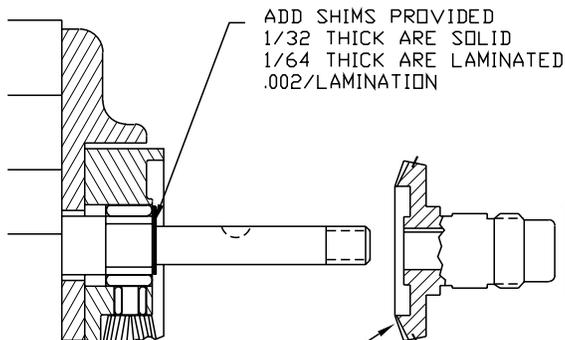


KEY IS REMOVED DURING SHIMMING

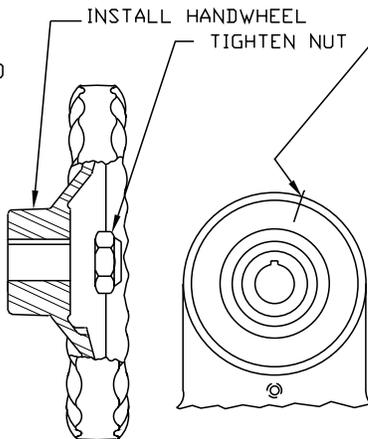


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)  
(TIGHTEN UPPER ONE ONLY)

**STEP 1**  
**PREPARATION**



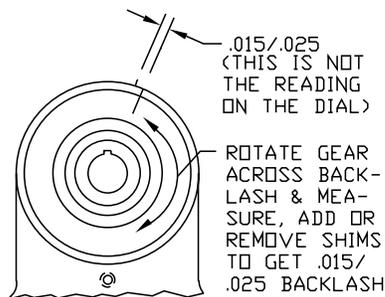
ADD SHIMS PROVIDED  
1/32 THICK ARE SOLID  
1/64 THICK ARE LAMINATED  
.002/LAMINATION



INSTALL HANDWHEEL

TIGHTEN NUT

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



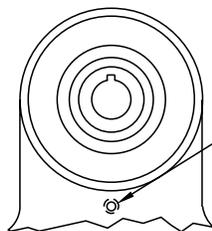
.015/.025  
(THIS IS NOT THE READING ON THE DIAL)

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

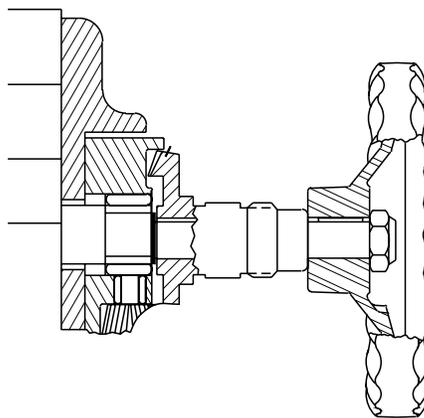
PUSH BEVEL GEAR AGAINST SHIMS.

**STEP 2**  
**SHIMMING BEVEL GEAR**

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

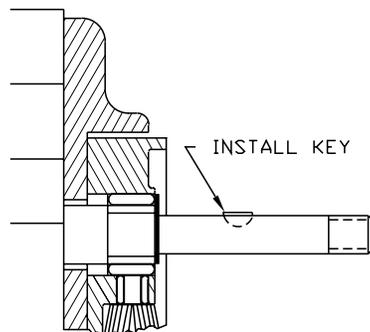


LOOSEN SETSCREW

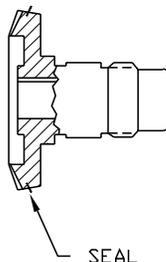


MANUALLY TURN HANDWHEEL. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED OR REMOVED, WHEN RE-SHIMMING, REPEAT STEPS 1 AND 2.

**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

#00586 1/4-20X1" SHCS  
 DO NOT BOTTOM OUT, ADD WASHER  
 #04964 IF REQ'D

#06544 BEARING RETAINER

EXISTING HSG &  
 LEAD SCREW

EXISTING BEARING  
 #06567 SHAFT SPACER  
 EXISTING SCREWS  
 #0470 BEARING RACE

#0589-16L & 0589-32 WASHERS

#01251 & #01252 SHIM WASHERS

EXISTING DIAL

#2255 DIAL NUT

#58923 HAND WHEEL

#04986 3MM SQ X 12MM KEY

#1556 SHAFT EXTENSION

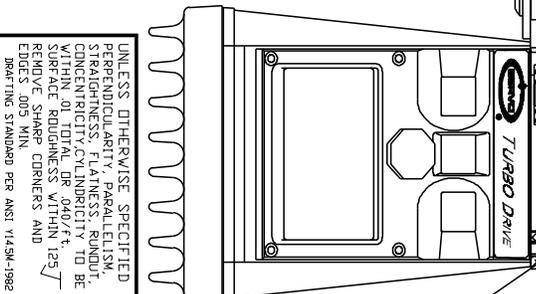
#01115 1/2-20 LOCK NUT  
 #00564 1/8X5/8 ROLL PIN

EXISTING KEY

#5488 BEVEL GEAR

#58490 #10-24X3/4" SEALING SCREWS

NOTES: 1. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER  
 FEED OPERATIONS 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  
 STRONGHOLDERS, PASADENA, CALIFORNIA 91102  
 CONCENTRICITY CALUMBRICITY 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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UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES &  
 TOLERANCES ARE ANGLES  
 ± 1/64" .xx ± .015  
 .xxx ± .015

CONTRACT NO.	APPROVALS	DATE
	BRAUN T. KU	9/9/98
CHECKED		

SERVO  
 432 ND FAIR GMS AVE., PASADENA CALIFORNIA 91102  
**INSTALLATION DRAWING**  
 MODEL 9108T

SIZE	CODE IDENT NO.	DRAWING NO.	REV.
B	0800-80723	NB-58609	A
SCALE 5/8			

REVISION		DATE	DRAWN	CHECKED
ECD	LTR			
DESCRIPTION				

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