



TURBO DRIVE INSTALLATION

MODEL 9122T TABLE FEED

Servo Mills SV 50 & SV 54

➔ **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-58625	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) #7 drill, 1/8" drill
- c) 1/4-20 tap
- d) 9/32" diameter transfer punch
- e) ball peen hammer & support piece

- f) flat file
- g) 3/4" socket wrench
- h) set of inch hex wrenches
- i) grease
- j) masking tape
- k) 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 the bearing race #0714 onto the lead screw shaft.

Step 2: Slip the adaptor #57237 over the bearing race and slide both together to locate the adaptor against the table bracket.

Step 3: Line up the mounting holes on the adaptor such that the power feed can be mounted vertically. Using a 9/32" diameter transfer punch, transfer the three mounting holes to the bracket.

Step 4: Remove the adaptor and the bearing race. Mask the bearing in the bracket. Then drill and tap 1/4-20 UNC threads to 1/2" deep. Clean thoroughly. Do **not** use air.

Step 5: Lubricate the shaft with a light coat of grease. Slip the bearing race back onto the shaft. Then slip the adaptor over the race to center it with the shaft. Keeping the portion of the race sticking out beyond the counterbored end of the adaptor so that it can be removed later, slide both pieces to locate the adaptor against the table bracket. Secure the adaptor with three 1/4-20 x 1-1/2" long socket head cap screws provided. Remove the bearing race.

Step 6: Slip spacer #6836 onto the shaft followed by the bearing race as shown on drawing NB-58625.

SHAFT EXTENSION AND TURBO DRIVE INSTALLATION

Step 1: Screw on the shaft extension #0333 onto the lead screw and tighten.

Step 2: Following the existing pilot hole, drill through the shaft extension using an 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: Slide the Turbo Drive onto the bearing race and push against the adaptor. Secure with two 1/4-20 x 1-1/8" 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 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.

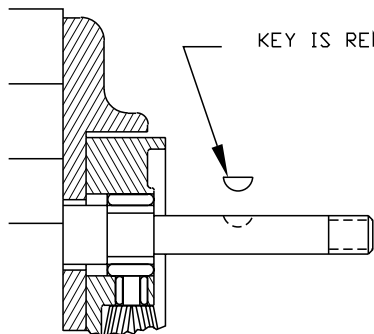
SERVO PRODUCTS COMPANY

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

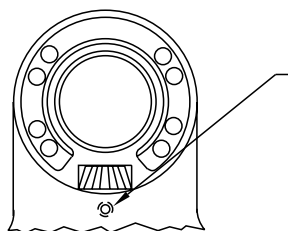
Web: www.servoproductsco.com

If service is required, call Servo Products Company.

DO NOT PLUG IN POWER UNTIL ALL STEPS ARE COMPLETED.

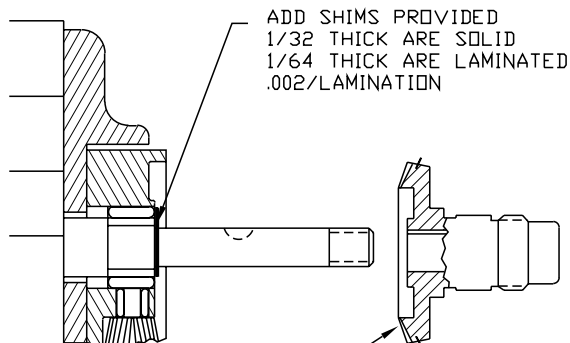


KEY IS REMOVED DURING SHIMMING

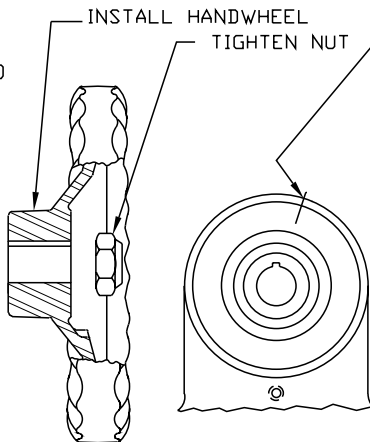


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)
(TIGHTEN UPPER ONE ONLY)

STEP 1
PREPARATION



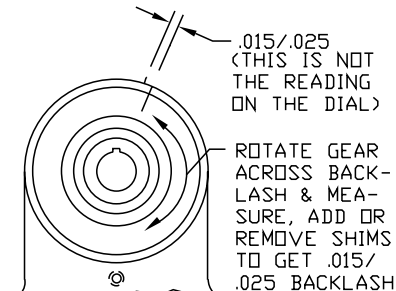
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



INSTALL HANDWHEEL

TIGHTEN NUT

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



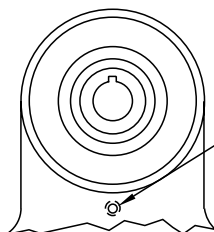
.015/.025
(THIS IS NOT THE READING ON THE DIAL)

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

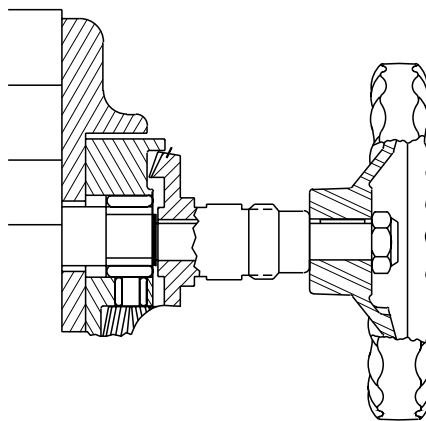
PUSH BEVEL GEAR AGAINST SHIMS.

STEP 2
SHIMMING BEVEL GEAR

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

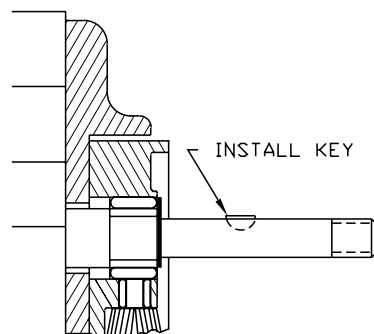


LOOSEN SETSCREW

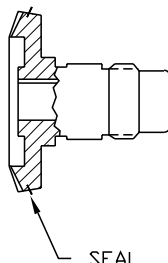


MANUALLY TURN HANDWHEEL. IF EXCESSIVE GEAR NOISE OR BINDING OCCURS, SHIMS NEED TO BE ADDED OR REMOVED, WHEN RE-SHIMMING, REPEAT STEPS 1 AND 2.

STEP 3
DOUBLE CHECK OF SHIMMING



INSTALL KEY



SEAL

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

STEP 4
LUBRICATION

EXISTING BEARING, HSG & LEAD SCREW SHAFT

#57237 ADAPTOR (INSERT INTO SMALLER BORE OF THE ADAPTOR TO ALIGN IT WITH CENTERLINE, REMOVE AFTER TIGHTENING THE ADAPTOR)

#6836 SPACER

#0714 BEARING RACE

#04554 1/4-20X1-1/8 S.H.C.S. X3

EXISTING KEY & DIAL

#0589-32 SHIM

#01115 1/2-20 LOCK NUT

#58923 HAND WHEEL

#0333 SHAFT EXTENSION

#00614 WOODRUFF KEY

#00564 1/8"X5/8" ROLL PIN

#2255 DIAL NUT

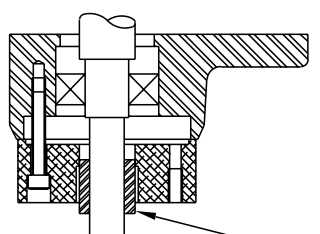
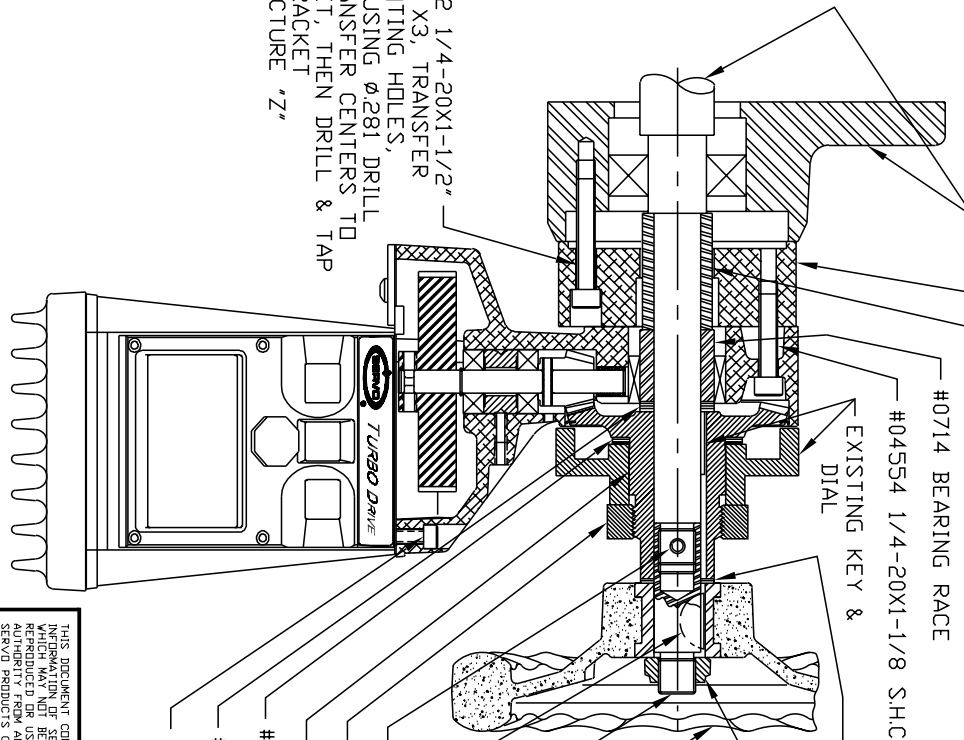
#5844 BEVEL GEAR

#01251 & #01252 SHIM WASHERS, DIAL

#0589-16L & #0589-32 SHIM WASHERS

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

#00602 1/4-20X1-1/2" S.H.C.S. X3, TRANSFER 3 MOUNTING HOLES, DRILL USING ϕ .281 DRILL TO TRANSFER CENTERS TO BRACKET, THEN DRILL & TAP THE BRACKET SEE PICTURE "Z"



USE RACE #0714 TO ALIGN THE ADAPTOR, REMOVE THE RACE AFTER THE ADAPTOR IS BOLTED, RE-INSTALL AS SHOWN IN THE MAIN PICTURE

PICTURE "Z"
SCALE: 15/32

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 #58923 HANDWHEEL PROVIDED.

UNLESS OTHERWISE SPECIFIED STRENGTH AND FINISH SHALL BE WITHIN 0.1 TOTAL DR 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 ° ± 0.05 ° ± 0.15 ° ± 1/2°

CONTRACT NO.	APPROVALS	DATE
	T. KU	10/06/98
CHECKED		

SERVOD 433 ND FAIR BANKS AVE. PASADENA CALIFORNIA 91103

INSTALLATION DRAWING
MODEL 9122T

SIZE B CODE 0800-80740 DRAWING NO. NB-58625 REV. B

SCALE 5/8 SHEET OF

REVISION		DATE	DRAWN	CHECKED
ECD	LTR			
	DESCRIPTION			

