

POWER FEED INSTALLATION

MODEL 9824 KNEE FEED Servo SAM 3 & Servo SV 54



WARNINGS

DO NOT install and operate this power feed without the 8" safety handwheel Servo #1685-1 for the knee feed. 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.

REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-57658	Limit Switch Installation
NB-58726	Power Feed Installation
59584	Type 200 Servo Power Feed
0800-80001	Servo Power Feed Operation

PREPARATION

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

- a) lathe
- b) 3/8" electric hand drill
- c) #7 drill, 1/8" drill, #H drill, #Q drill
- d) 1/4-20 tap, 3/8-24 tap
- e) 9/32" diameter transfer punch
- f) flat file
- g) 3/4" socket wrench
- h) set of inch hex wrenches
- i) grease
- j) clean shop rag

Step 2: Clean the power feed mounting area completely.

Step 3: Remove the drive clutch from the elevating jack shaft.

Step 4: Remove the dial nut, dial, and dial carrier. (Turn the dial carrier counterclockwise to remove.) Keep the dial for reuse later.

Step 5: Slip bearing race #6901 onto the jack shaft as shown. Slide the Power Feed over the bearing race and locate against front of the knee.

Step 6: Using a 9/32" diameter transfer punch, transfer two mounting holes from the feed to the bearing retainer. Remove the unit and the bearing

race just installed. Then drill .201 diameter (#7 drill) through the bearing retainer and bearing housing and 1" into the knee casting.

Step 7: Remove the bearing retainer.

Step 8: Pull jack shaft out of knee. Hold inboard end up while removing to avoid damage to the pinion gear.

Step 9: Open up the drilled holes on the bearing retainer and the bearing housing to .266" diameter (#H drill) clearance holes. Tap 1/4-20 UNC x 1/2" deep into the knee casting.

Step 10: Press the bearing off the jack shaft.

Step 11: Drill and tap the end of the jack shaft 3/8-24 UNF x 3/4" deep. The .332" diameter must be concentric to the shaft O.D. within .002" T.I.R. Chamfer 1/32" x 1/2" diameter. **For best results, machining should be done in a lathe.**

Step 12: Place the shaft extension #58537 into the end of the jack shaft. Drill a 1/8" diameter hole along the pilot hole and through the threaded joint. Pin with the 1/8" diameter x 5/8" long roll pin. File smooth.

Step 13: Reassemble and replace the jack shaft in the machine.

Step 14: Replace the bearing retainer.

POWER FEED INSTALLATION

Step 1: Slide the bearing race back onto the jack shaft.

Step 2: Slide the Power Feed onto the bearing race and push against the knee. Secure with two 1/4-20 x 1-3/4" 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, bevel gear, dial and dial nut #59254. Install key #05966, spacers #57277 and #2981 and slide the handwheel #1685-1 in place. Tighten with 1/2-20 locknut #01115.

LIMIT SWITCH INSTALLATION

Install the limit switch as shown on drawing NB-57658 enclosed.

OPERATION

See separate *Servo Power Feed Operation* sheet. Plug the unit into a source of 120 volt, 50 or 60 cycle power.

SERVO PRODUCTS COMPANY

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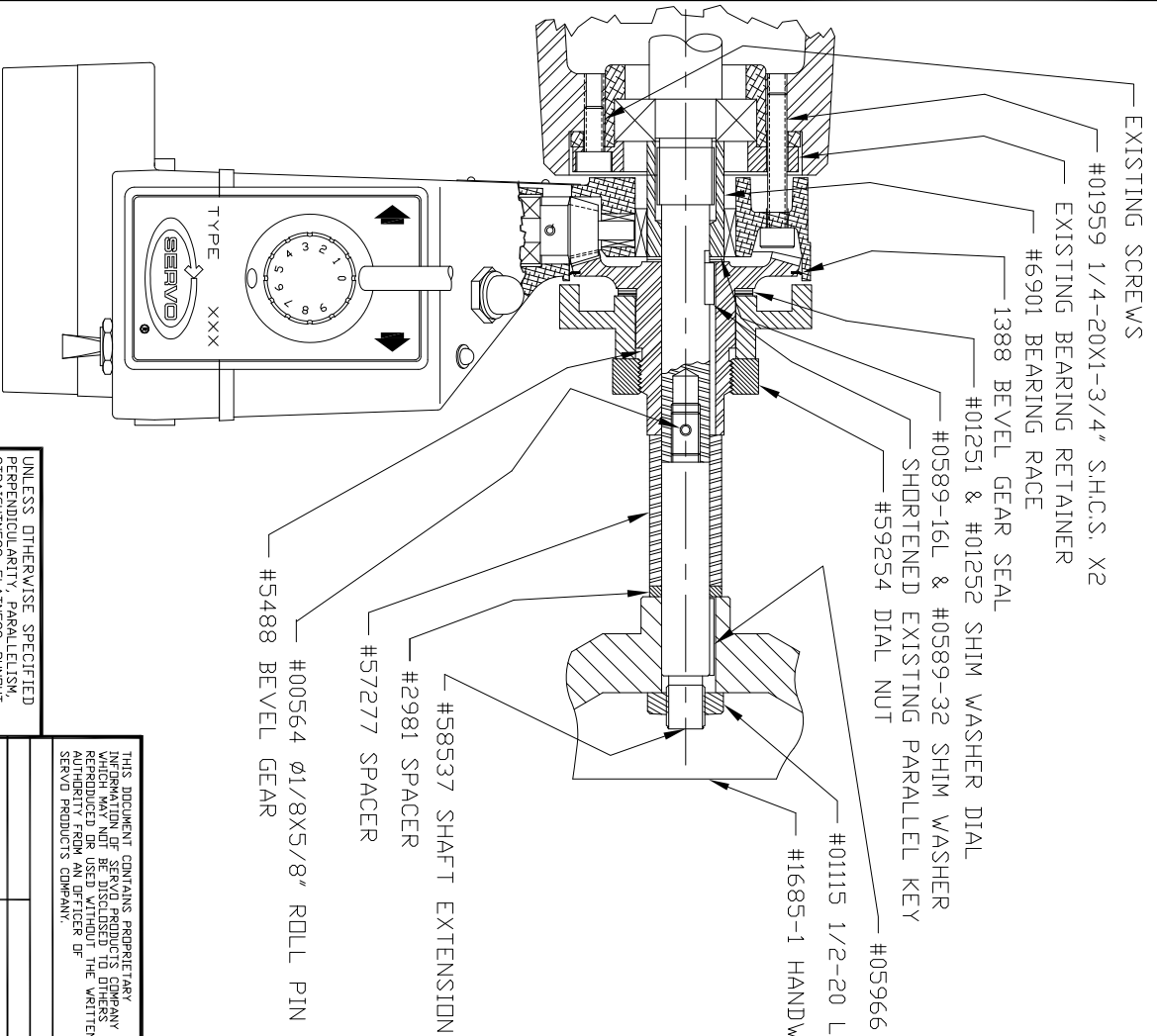
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REVISION		DATE	DRAWN	CHECKED
ECD	LTR			
DESCRIPTION				



SYMBOL	A-1	A-2	B	C	D
P/N	57660	-	1861	05245	1752
DESCRIP.	STANDOFF	-	BRACKET	1/4-20 S.H.C.S.	TRIP RAIL
LENGTH	3.0	-	-	3.75	-

NOTE:
 1. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED OPERATION INSTRUCTION BEFORE TURNING ON SERVO POWER FEED.
 2. SEE DRAWING NB-57658 FOR KNEE LIMIT SWITCH INSTALLATION. USE FOLLOWING TABLE TO RELATE PART NUMBERS WITH LETTER SYMBOLS ON DWG NB-57658.

UNLESS OTHERWISE SPECIFIED PERPENDICULARITY, PARALLELISM, STRAIGHTNESS, FLATNESS, ROUNDT, CONCENTRICITY, CYLINDRICITY TO BE WITHIN .01 TOTAL OR .040/√R SURFACE ROUGHNESS WITHIN 1257 REMOVE SHARP CORNERS AND EDGES .003 MIN. DRAFTING STANDARD PER ANSI Y14.5M-1992

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE:
 DECIMALS .005
 FRACTIONS 1/64
 ANGLES XXX ± .005
 FINISH

CONTRACT NO.	DATE
APPROVALS	
DRAWN J. TUCKER	01/14/99
CHECKED	

SERVO PRODUCTS COMPANY
 433 ND. FAIR OAKS AVE., PASADENA CALIFORNIA 91003
INSTALLATION DRAWING
 MODEL 9824
 SIZE CODE IDENT NO. DRAWING NO. REV.
 B 0800-80778 NB-58726 A
 SCALE 5/8 SHEET OF

4 3 2 1