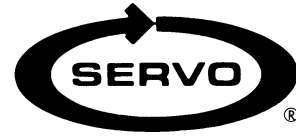


POWER FEED INSTALLATION

Model M-9522 Cross Feed

Servo Mills SV50 & SV54



REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-1538	Limit Switch Installation
NB-58632	Power Feed Installation
ND-6293	Type 150 Servo Power Feed
ND-6292	Type 140 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) 3/8" electric hand drill
- b) #7 drill, 1/8" drill, 9/32" drill
- c) 1/4-20 tap
- d) 9/32" diameter transfer punch
- e) flat file
- f) 3/4" socket wrench
- g) set of inch hex wrenches
- h) grease
- i) masking tape
- j) clean shop rag

Step 2: Clean the power feed mounting area completely.

Step 3: Remove the nut, handle, and dial assembly from the front end of the cross. Keep the dial for reuse later.

MOUNTING HARDWARE INSTALLATION

Step 1: Slip the bearing race #0334 onto the lead screw shaft.

Step 2: Slip the power feed unit over the bearing race and position against the front of the knee.

Step 3: Select two of the eight mounting holes on the unit such that it can be mounted vertically and rigidly. Using a 9/32" diameter transfer punch, transfer the mounting holes to the bearing retainer.

Step 4: Remove the unit and the bearing race. Mask the bearing in the bearing housing. Drill #7 through the bearing retainer and 1" into the bearing housing. Remove the bearing retainer to open its holes to .281" diameter clearance holes. Tap 1/4-20 UNC threads by 1/2" deep into the bearing housing.

Step 5: Lubricate the shaft with a light coat of grease. Slip the spacer #6811 followed by the bearing race onto the shaft.

SHAFT EXTENSION AND POWER FEED INSTALLATION

Step 1: Screw on the shaft extension #57226 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 and hammer in the #00594 roll pin. File smooth and clean thoroughly.

Step 4: Slide spacer #6852 and the Power Feed onto the bearing race and push against the front of the bearing housing. Secure with two 1/4-20 x 2" 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-5444 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, spacer #6811, dial and dial nut #2255. Slide the handwheel #58923 and washer #05570 in place and tighten with 1/2-20 locknut #01115.

LIMIT SWITCH INSTALLATION

Install the limit switch as shown on drawing NB-1538 enclosed.

OPERATION

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

Please read **WARNINGS** on the following page.

WARNINGS

Check hand crank clearances before operation.

Clearances between the surfaces of the hand crank and the non-moving parts of the equipment on which the hand crank is installed must be at least one-fourth inch (1/4") to prevent injury. Modification of existing hand crank or replacement may be required.

Do not operate without proper clearance!

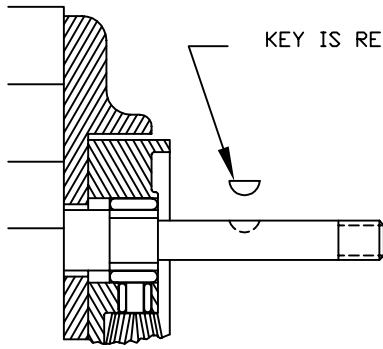
Prevent contact during fast traverses.

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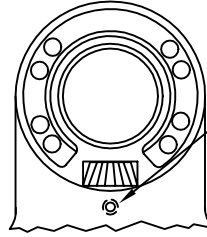
433 North Fair Oaks Avenue, Pasadena, CA 91103 USA
Phone: 800.521.7359 or 626.796.2460 Fax: 626.796.3845

Web: www.servo.cc Email: info@servo.cc

Call for the location of our regional Service Centers.

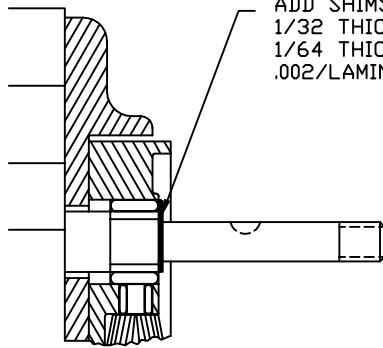


KEY IS REMOVED DURING SHIMMING

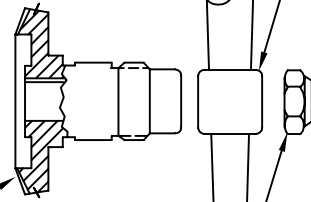


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

STEP 1
PREPARATION



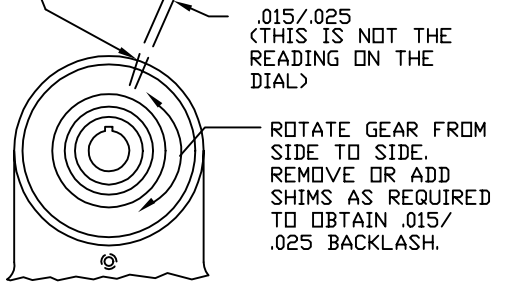
ADD SHIMS PROVIDED
1/32 THICK ARE SOLID
1/64 THICK ARE LAMINATED
.002/LAMINATION



PUSH BEVEL GEAR
AGAINST SHIMS.

INSTALL HANDCRANK.

MARK HOUSING AND BEVEL GEAR
WITH PENCIL TO CHECK BACKLASH.



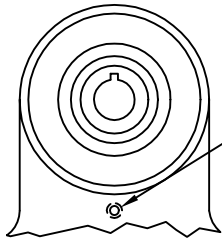
.015/.025
(THIS IS NOT THE
READING ON THE
DIAL)

ROTATE GEAR FROM
SIDE TO SIDE.
REMOVE OR ADD
SHIMS AS REQUIRED
TO OBTAIN .015/
.025 BACKLASH.

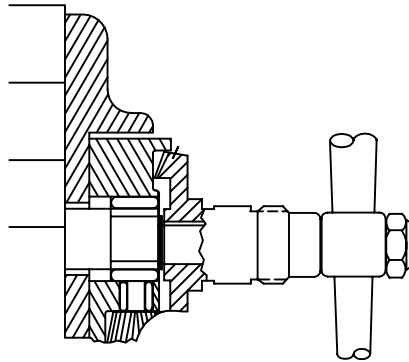
TIGHTEN NUT.

STEP 2
SHIMMING BEVEL
GEAR

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



LOOSEN SETSCREW

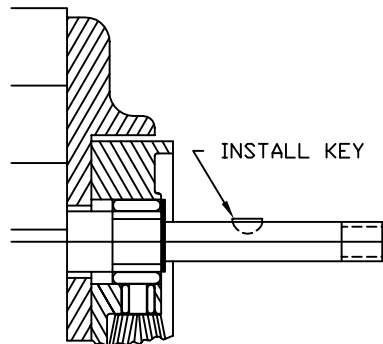


WITH POWER FEED IN
NEUTRAL POSITION, TURN
HANDCRANK. IF EXCESSIVE
GEAR NOISE OR BINDING
OCCURS, SHIMS NEED TO BE
ADDED. WHEN ADDING SHIMS,
REPEAT STEPS 1 AND 2.

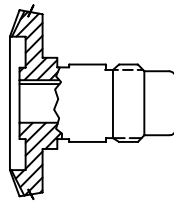


CONTROL HANDLE @
NEUTRAL POSITION

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.

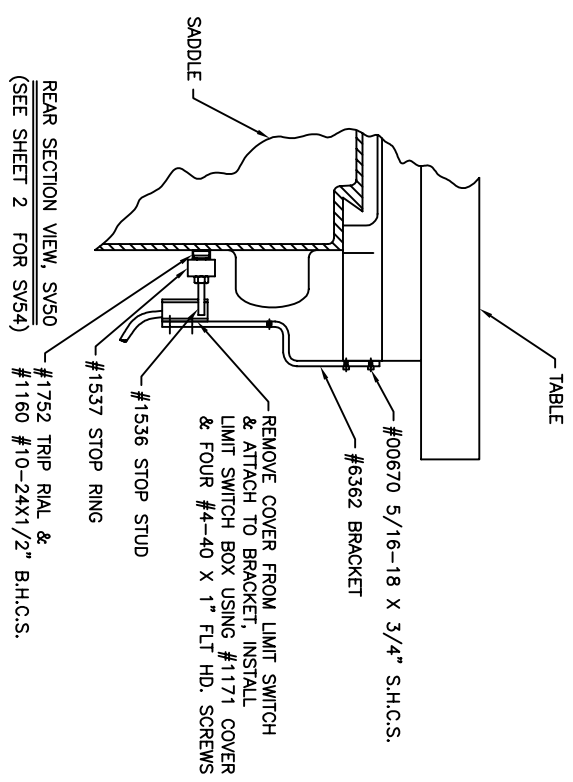
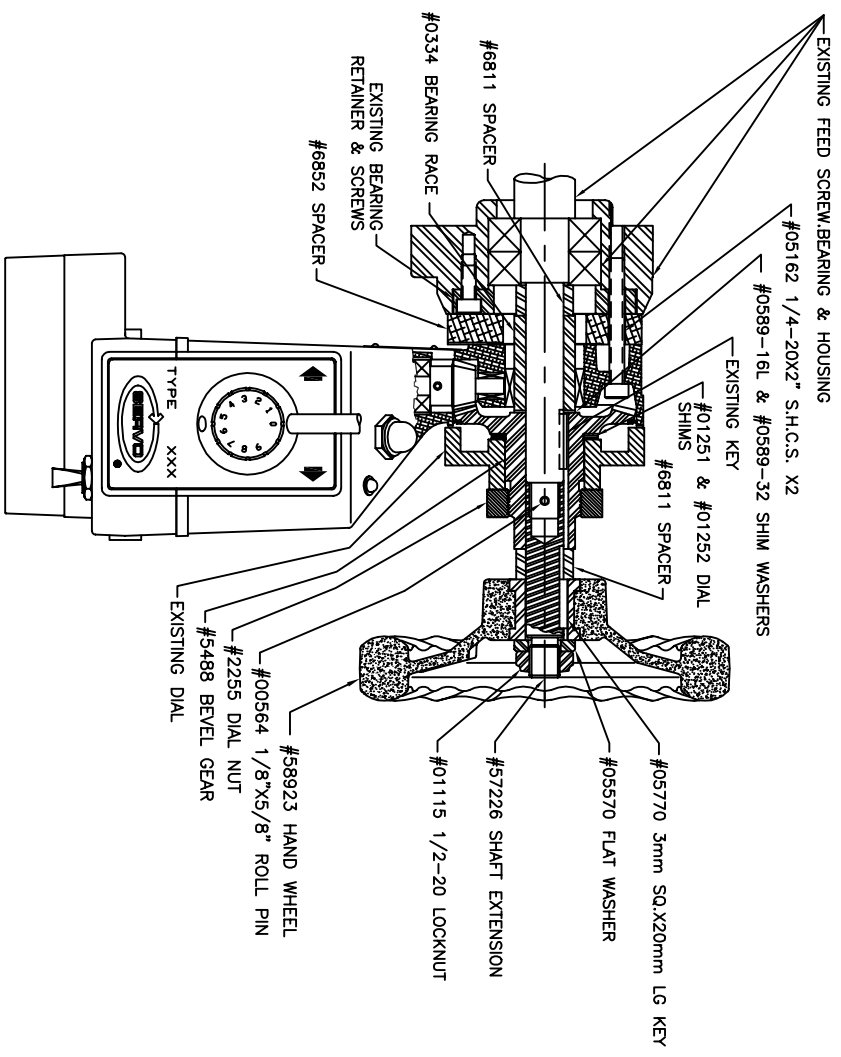
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BEVEL GEAR INSTALLATION

NA-5444 C

STEP 4
LUBRICATION

REVISION		DATE	DRAWN	CHECKED
ECD	LTR	DESCRIPTION		



NOTES:
 1. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED OPERATIONS BEFORE TURNING ON SERVO POWER FEED.

UNLESS OTHERWISE SPECIFIED PERPENDICULARITY, PARALLELISM, STRAIGHTNESS, FLATNESS, ROUNDNESS, CONCENTRICITY, CYLINDRICITY TO BE WITHIN .01 TOTAL OR .040/ft. SURFACE ROUGHNESS WITHIN 125 REMOVE SHARP CORNERS AND EDGES .005 MIN. DRAWING STANDARD PER ANSI Y14.5M-1982


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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE AS FOLLOWS: DECIMALS ± 1/64 .XX ± .005 ANGLES ± 1/2° MATERIAL FINISH

CONTRACT NO.	APPROVALS	DATE
	DRAWN J. TUCKER	01/18/99
CHECKED		

APPLICATION	USED IN	DID NOT SCALE DRAWING
NEXT ASSY		

COMPUTER NO.	SCALE
	5/8

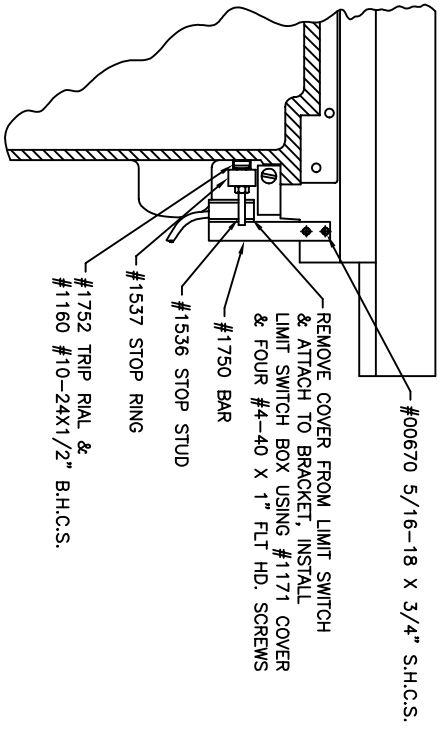
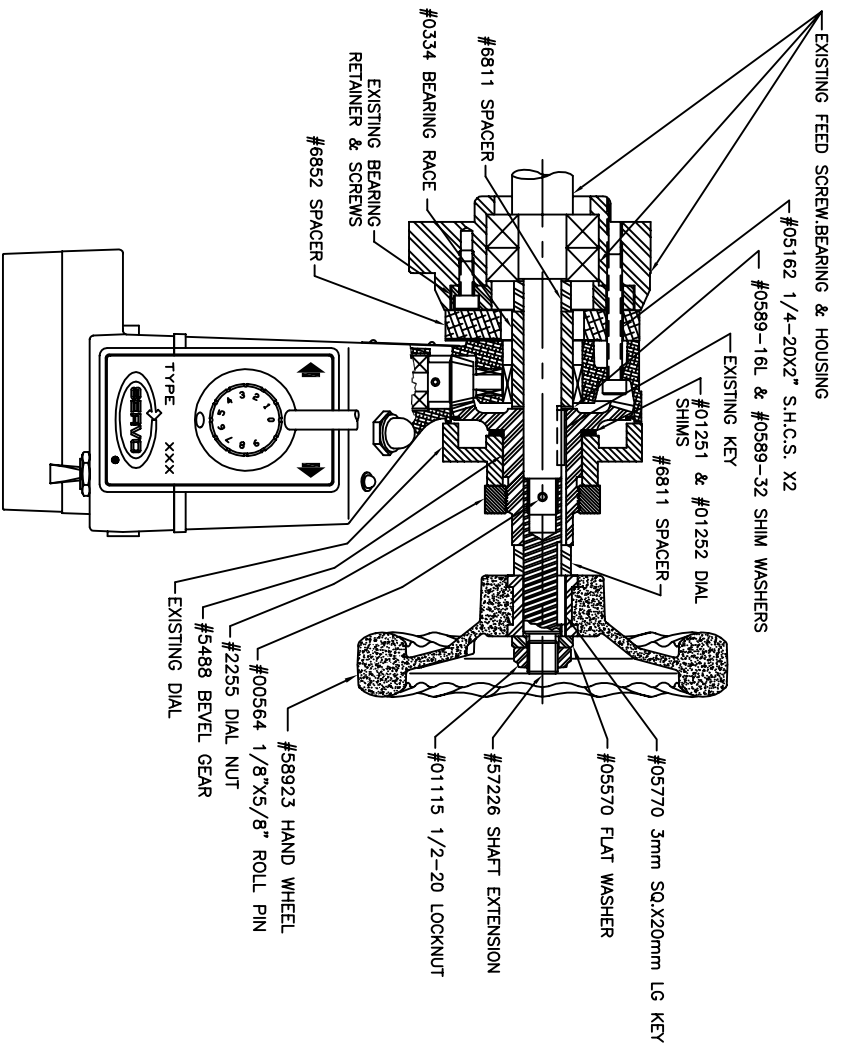

SERVO PRODUCTS COMPANY
 433 N. FAIR DAWS AVE., PASADENA, CALIFORNIA 91109

INSTALLATION DRAWING

MODEL 9522

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
B	0800-80752	NB-58632	C
SCALE	5/8	SHEET	1 OF 2

REVISION		DATE	DRAWN	CHECKED
EDD	LTR			
DESCRIPTION				



REAR SECTION VIEW, SV54
(SEE SHEET 1 FOR SV50)

- NOTES:
1. REVIEW ALL INSTALLATION INSTRUCTIONS AND POWER FEED OPERATIONS BEFORE TURNING ON SERVO POWER FEED.

UNLESS OTHERWISE SPECIFIED PERPENDICULARITY, FLATNESS, STRAIGHTNESS, CIRCULARITY, CONCENTRICITY, CYLINDRICITY TO BE WITHIN .01 TOTAL OR .040/√L. SURFACE ROUGHNESS WITHIN 125 REMOVE SHARP CORNERS AND EDGES .005 MIN. DRAWING STANDARD PER ANSI Y14.5M-1982

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ANGLES IN DEGREES. DECIMALS ± 1/64 XXX ± .005 ANGLES ± 1/2°

CONTRACT NO.	
APPROVALS	
DRAWN J. TUCKER	DATE 01/18/99
CHECKED	

SERVO PRODUCTS COMPANY
439 N. FAIR DAMS AVE., PASADENA, CALIFORNIA 91103

INSTALLATION DRAWING
MODEL 9522

SIZE B	CODE 0800-80752	IDENT NO.	DRAWING NO. NB-58632	REV. C
SCALE 5/8		SHEET 2	OF 2	

A

B

C

D

4

3

2

1

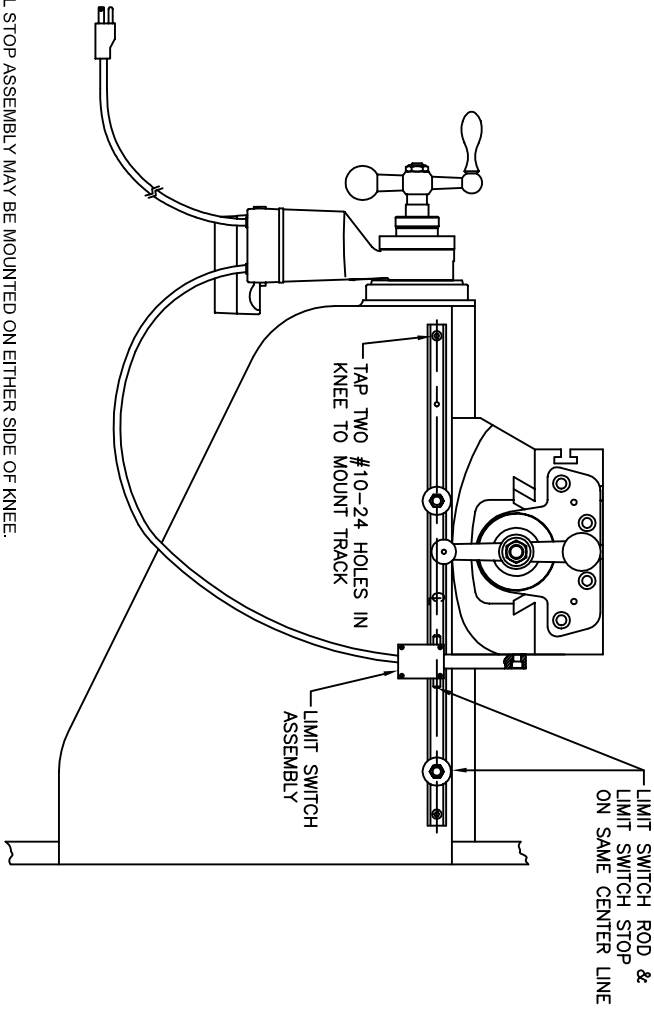
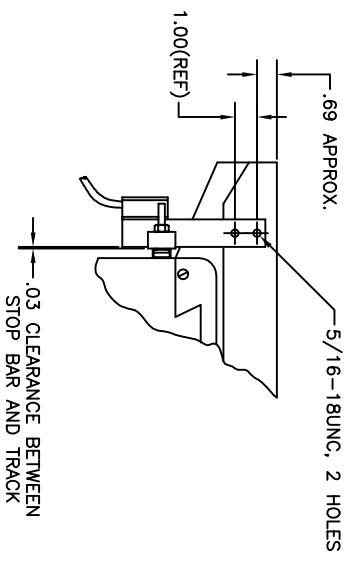
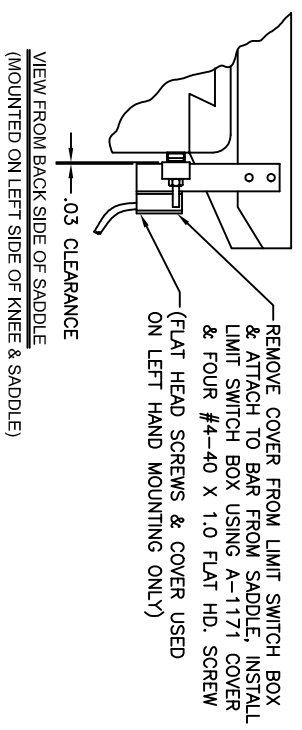
4

3

2

1

REVISION		DATE	DRAWN	CHECKED
ECC	LTR			
DESCRIPTION				



- NOTES:
1. CROSS TRAVEL STOP ASSEMBLY MAY BE MOUNTED ON EITHER SIDE OF KNEE
 2. WHEN MILL HAS MEASURING ATTACHMENT, MOUNT LIMIT SWITCH, STOPS & TRACK ON OPP. SIDE.
 3. REFERENCE DRAWING ONLY. INSTALLATION SHOWN IS A BRIDGEPORT MILL.

VIEW FROM BACK SIDE OF SADDLE
(MOUNTED ON RIGHT SIDE OF KNEE & SADDLE)

UNLESS OTHERWISE SPECIFIED
PERPENDICULARITY, PARALLELISM,
STRAIGHTNESS, FLATNESS, ROUND-
CONCENTRICITY, CYLINDRICITY TO BE
WITHIN .01 TOTAL OR .040/IN.
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:
FRACTIONS DECIMALS ANGLES
± 1/64 ± .005 ± 1/2

CONTRACT NO.	APPROVALS	DATE	CHECKED
	T. KU	02/01/01	
MATERIAL	FINISH	DO NOT SCALE DRAWING	
APPLICATION	USED ON	COMPUTER NO.	

SERVO 433 NO. FAIR OAKS AVE., PASADENA CALIFORNIA 91103

INSTALLATION DRAWING
LIMIT SWITCH, CROSS FEEDS

SIZE	CODE IDENT NO.	DRAWING NO.	REV.
B	0800-8002-1	NB-1538	A
SCALE	NONE	SHEET	OF