

# POWER FEED INSTALLATION

## Model M-3900 Table Feed

### Clousing Kondia FV-300, Kondia SM1 & 2, Hurco SM2



#### REFERENCE DRAWINGS ENCLOSED

NA-5444	Bevel Gear Installation
NB-5513	Power Feed Installation
ND-1481	Safety Handle Model 620
ND-6293	Type 150 Servo Drive
0800-80001	Servo Power Feed Installation

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#### PREPARATION

- Step 1:* Remove the nut, handwheel, dial, dial hub, key and M6 screws from the bearing retainer.
- Step 2:* Screw the shaft extension to the lead screw and tighten.
- Step 3:* Using the hole provided as a pilot, drill 1/8 diameter hole through and pin the shaft extension in place using 1/8 x 5/8 long roll pin. File smooth.

#### POWER FEED INSTALLATION

- Step 1:* Attach the adaptor to the bearing retainer using four M6 x 30 mm screws.
- Step 2:* Slide the bearing race spacer and the bearing race onto the lead screw.
- Step 3:* Mount the power feed to the adaptor using two 1/4-20 x 1" socket head cap screws.

#### BEVEL GEAR INSTALLATION

- Step 1:* Follow drawing NA-5444 for installation of the bevel gear. Adjust for proper gear backlash.

#### DIAL INSTALLATION

- Step 1:* After getting the proper backlash, the dial should be adjusted to obtain .005" spacing from the face of the power feed. This is important to keep chips from entering the gear train. Four washers are provided for this, two solid and two laminated. Shim as required.
- Step 2:* Put on the dial locking nut.

#### SAFETY HANDLE INSTALLATION

- Step 1:* Follow drawing ND-1481 for the installation of the safety handle kit.
- IF:* If the Kondia mill SM1 is supplied without the M-620 safety handle, install a balanced crankhandle using the 6 mm x 7.5 mm woodruff key.

## LIMIT SWITCH INSTALLATION

*Step 1:* Remove the standard table stop pieces and install the table stop pieces furnished. Put the standard stops back in a position to prevent feed stops from being set beyond extreme table travel.

*Step 2:* Remove the two cap screws holding the T-shaped table stop bracket.

*Step 3:* Install the limit switch as shown on drawing ND-5513.

*Step 4:* The T-stop is retained to act as a positive stop where required for manual operation.

**NOTE** *For proper operation, the electrical limit switch should be engaged .4 inch before the mechanical stop to allow for coasting of the table. The T-stops are often not symmetrical and may need to be ground to obtain proper operation.*

*Step 5:* Put the cable clamp on the cable and secure using the right-hand chip scraper screw.

## OPERATION

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

### 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.

## SERVO PRODUCTS COMPANY

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

### CALIFORNIA BRANCH

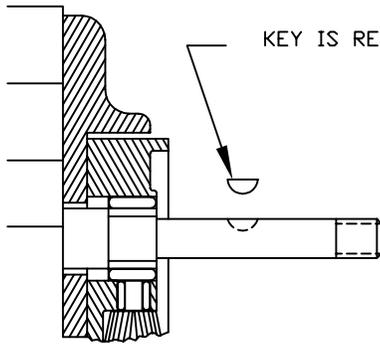
14254 Valley Blvd., Unit A  
City of Industry, CA 91746  
Ph. 626.961.7800 Fax 626.961.2444

### HEADQUARTERS

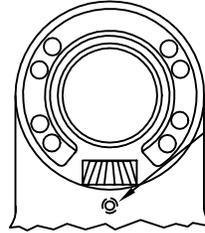
34940 Lakeland Blvd.  
Eastlake, OH 44095  
Ph. 440.942.9999 Fax 440.942-9100

### FLORIDA BRANCH

8950 131<sup>st</sup> Ave. N.  
Largo, FL 33773  
Ph. 727.585.8555 Fax 727.585.6555

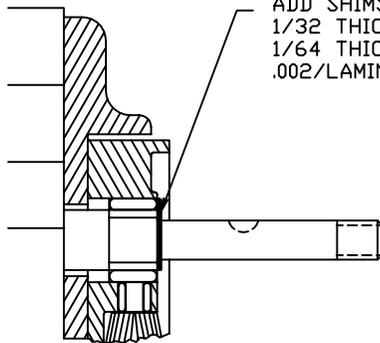


KEY IS REMOVED DURING SHIMMING

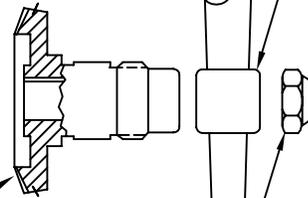


TIGHTEN SLIGHTLY (HOLDS BEVEL PINION STATIONARY DURING SHIMMING.)

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

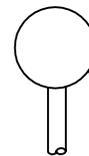
**CAUTION:** IF BACKLASH  
IS NOT PROPERLY SET  
BEFORE TURNING UNIT ON,  
BEVEL GEAR MAY BE  
DESTROYED.



LOOSEN SETSCREW

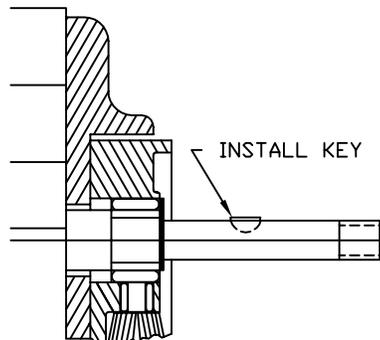


WITH POWER FEED IN  
NEUTRAL POSITION, TURN  
HANDCRANK. IF EXCESSIVE  
GEAR NOISE OR BINDING  
OCCURS, SHIMS NEED TO BE  
ADDED. WHEN ADDING SHIMS,  
REPEAT STEPS 1 AND 2.



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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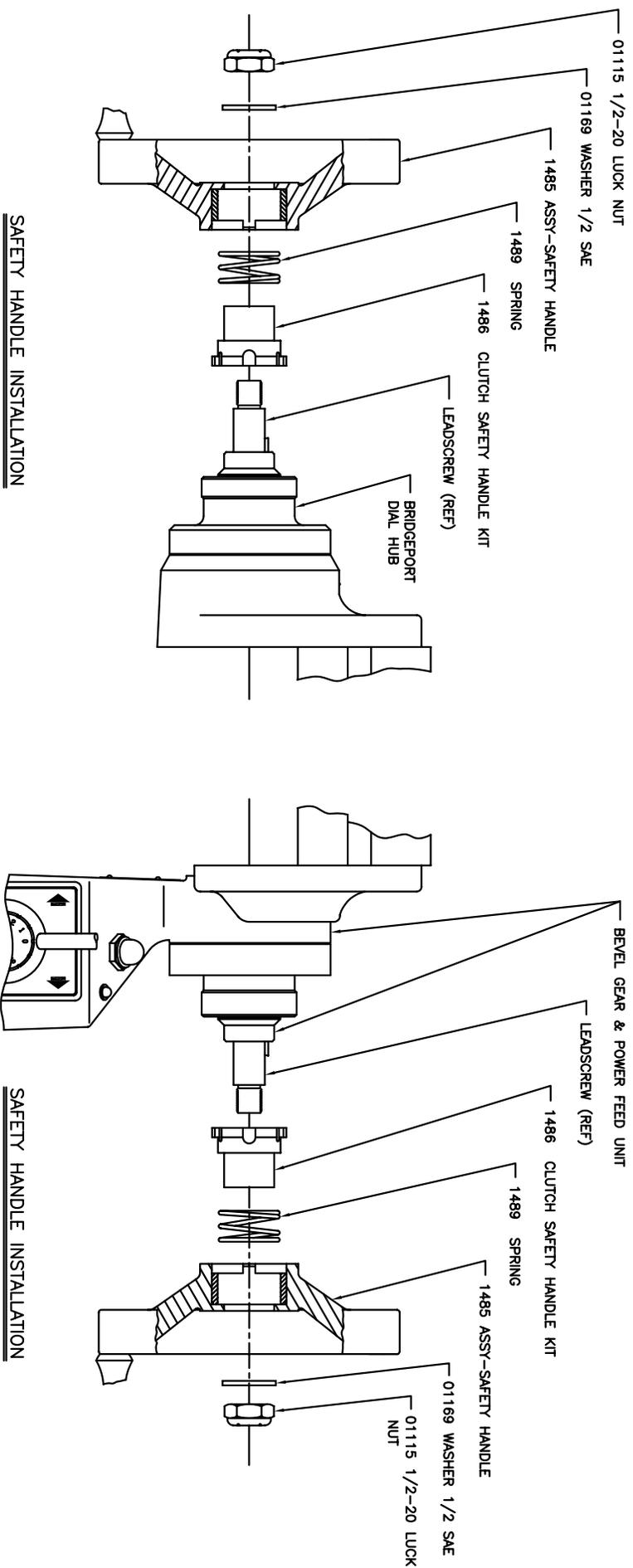
BEVEL GEAR INSTALLATION

NA-5444 C

STEP 4  
LUBRICATION



REVISION		DATE	DRAWN	CHECKED
ECD	LTR	DESCRIPTION		



**SAFETY HANDLE INSTALLATION**  
 TYPICAL FOR EITHER END OF  
 TABLE WITHOUT POWER FEED

**SAFETY HANDLE INSTALLATION**  
 WITH SERVO POWER FEED RIGHT  
 END OF MILL TABLE ONLY

NOTE: BRIDGEPORT MILL SHOWN.

UNLESS OTHERWISE SPECIFIED,  
 DIMENSIONS ARE IN INCHES &  
 TOLERANCES ARE AS FOLLOWS:  
 FRACTIONS DECIMALS ANGLES  
 ± 1/64 ± .005 ± .015 ± 1/2°  
 MATERIAL FINISH NOTED  
 CHECKED

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CONTRACT NO.	APPROVALS	DATE
	M. WU	12/28/01

**SERVO PRODUCTS COMPANY**  
 34940 LAKELAND BLVD., EASTLAKE, OH 44095

**SAFETY HANDLE, "SH" KIT  
 INSTALLATION DRAWING  
 MODEL 620**

SIZE: CODE IDENT. NO. DRAWING NO. REV.  
 B 0800-80086 NB-1481

SCALE: 1/2 SHEET DF

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 DIMENSIONS ARE IN INCHES &  
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