# DYNAMO FEED INSTALLATION D1000-9818 Knee Feed Alliant RT2-50



### **PREPARATION**

- Step 1: Remove the handle, key, dial, dial nut, and dial carrier from the elevating jack shaft. (Turn counter-clockwise to screw off the dial carrier.)
- Step 2: Remove the screws from the bearing retainer.
- Step 3: Pull the jack shaft out of the knee. *Hold inboard end up* while removing to avoid damage to the pinion gear.
- Step 4: Remove the bearing housing and press the bearing off the shaft. **Do not** press across the balls of the bearing as this will damage the bearing.
- Step 5: Drill and tap the end of the jack shaft 3/8-24 UNF x 13/16" deep. The threads must be concentric to shaft o.d. within .002 TIR. The end of the jack shaft must be square with the shaft centerline within .001. For best results, machining should be done in a lathe.
- Step 6: Screw the shaft extension into the jack shaft and tighten. Use the handwheel and key on the shaft extension to apply torque. Using the hole provided as a pilot, drill 1/8" diameter through the shaft and pin the extension with the 1/8 diameter x 5/8" long roll pin. File smooth.
- Step 7: Reassemble the jack shaft.
- Step 8: Replace the jack shaft in the machine.

#### **POWER FEED INSTALLATION**

- Step 1: Replace the bearing retainer.
- Step 2: Slide the spacer #6740 followed by the bearing race onto the jack shaft.
- *Step 3:* Place the shroud onto the power feed and slide the unit onto the bearing race and against the boss.
- Step 4: Transfer three hole centers to the bearing retainer. Remove the power feed, shroud and bearing race.
- Step 5: Drill and tap 1/4-20 thread through the bearing retainer. Clean out all metal chips.
- Step 6: Replace the bearing race.
- Step 7: Install the shroud and the power feed using three  $1/4-20 \times 1-3/8$ " long socket head cap screws.

#### BEVEL GEAR INSTALLATION

- Step 1: Install two of the thickest shim washers, then the bevel gear. Measure the gap between the back face of the gear and the front face of the power feed, as shown in Fig. A. of the INSTALLATION & OPERATION MANUAL. Add, remove or replace shims to obtain the .080/.085 in. (2.0 / 2.16 mm) dimension. Install the spacer, handcrank, and nut. Check that the dimension is still ok after the nut is tightened.
- Step 2: With feed in neutral, turn hand crank. If it turns freely in one direction but catches in the other, the backlash is too large. Reduce the thickness of the shims. If rough engagement is heard or felt in BOTH directions you need additional shims.

#### DIAL AND HANDWHEEL 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 in order to keep chips from entering the gear train. Two plastic (.030" thick) and five brass (.005" thick) washers are provided for this. Shim as required.
- Step 2: In the following sequence, put on the dial locking nut and spacer #57728. Place the woodruff key in the shaft extension, and slide the handwheel in place. Add the washer and locknut.

#### LIMIT SWITCH INSTALLATION

Refer to the D-1000Z INSTALLATION & OPERATION MANUAL

NOTE: MILLS HAVING COLUMNS WIDER THAN THE KNEE MAY NEED LONGER STANDOFFS AND SCREWS, OR DIFFERENT MOUNTING. DEPENDING ON WHICH SIDE OF THE KNEE THE SWITCH IS MOUNTED, THE SWITCH MAY HAVE TO BE TURNED OVER TO WORK CORRECTLY. TEST THE SWITCH STOPPING DIRECTION MANUALLY BEFORE MOUNTING.

#### **OPERATION**

See the INSTALLATION & OPERATION MANUAL

#### **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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