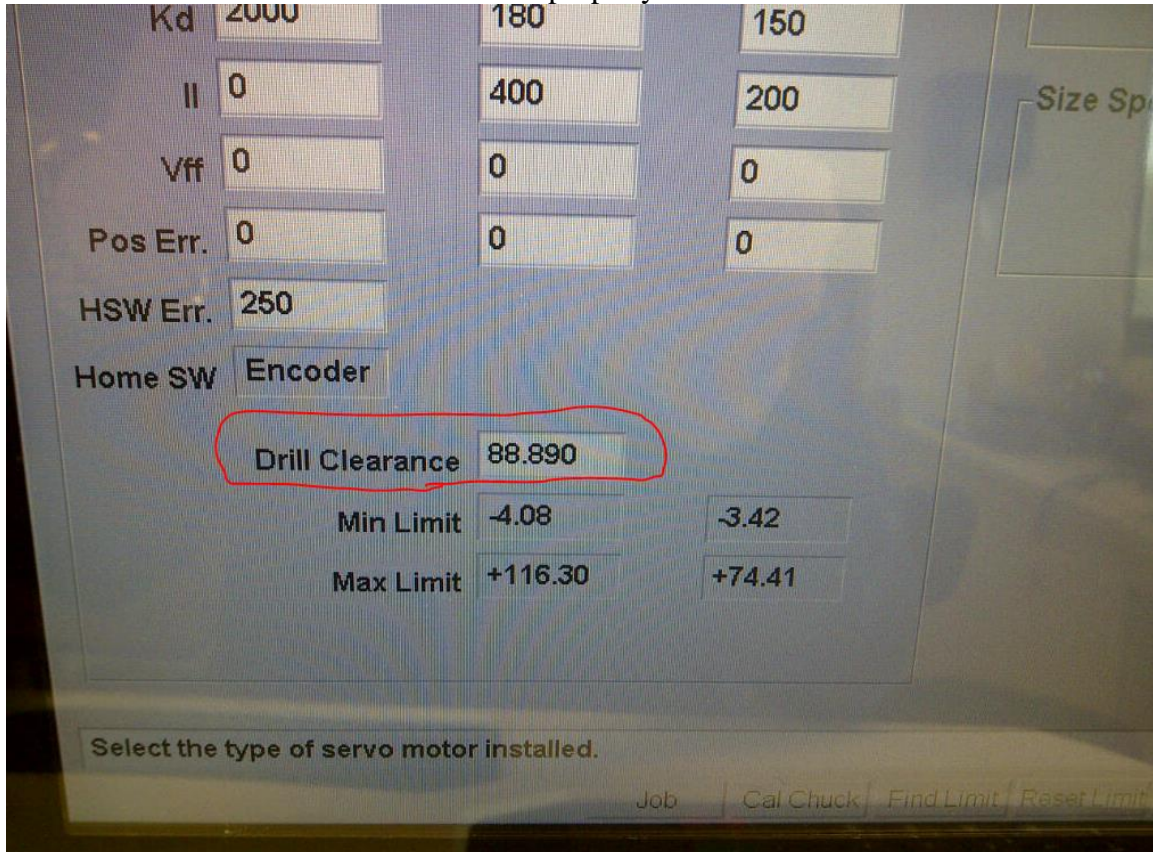If one of the latest versions of 7EX/ES-versa software (1.31 and higher) is being updated onto a machine in the field, immediately after updating the machine, the following **must be done first**; before use and before calibration of the 7EX.

A number on the servo screen must be set properly. See below.

Kd	2000	180	150	
II	0	400	200	Size Sp
Vff	0	0	0	
Pos Err.	0	0	0	
HSW Err.	250			
Home SW	Encoder			
Drill Clearance	88.890			
Min Limit	-4.08	-3.42		
Max Limit	+116.30	+74.41		

Select the type of servo motor installed.

Job   Cal Chuck   Find Limit Reset Limit

The Min. and Max. limits should be Found and established correctly first before attempting to set the "Drill Clearance" number.

The "Drill Clearance" value on the Servo screen, when set correctly, is to prevent the carriage and the pattern blank from colliding with the drill assembly and/or breaking the drill bit. See two pictures below.
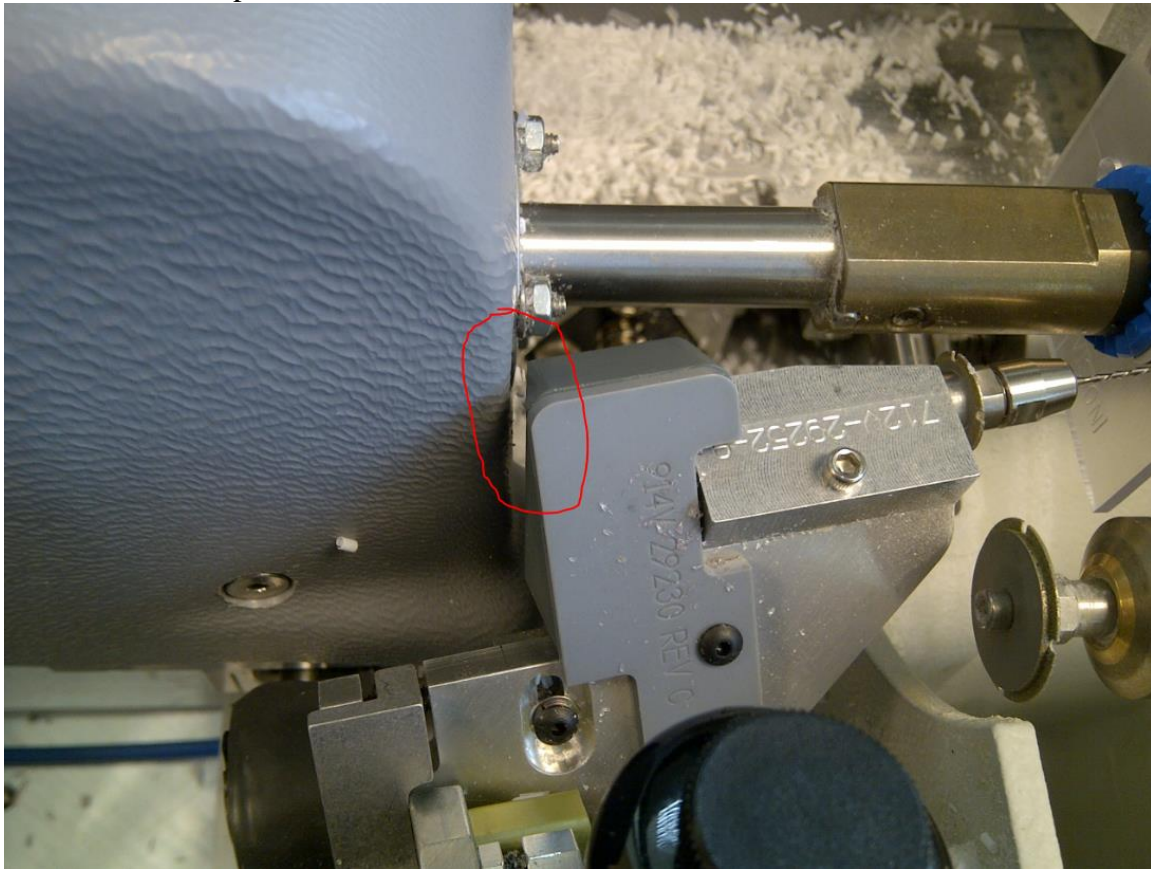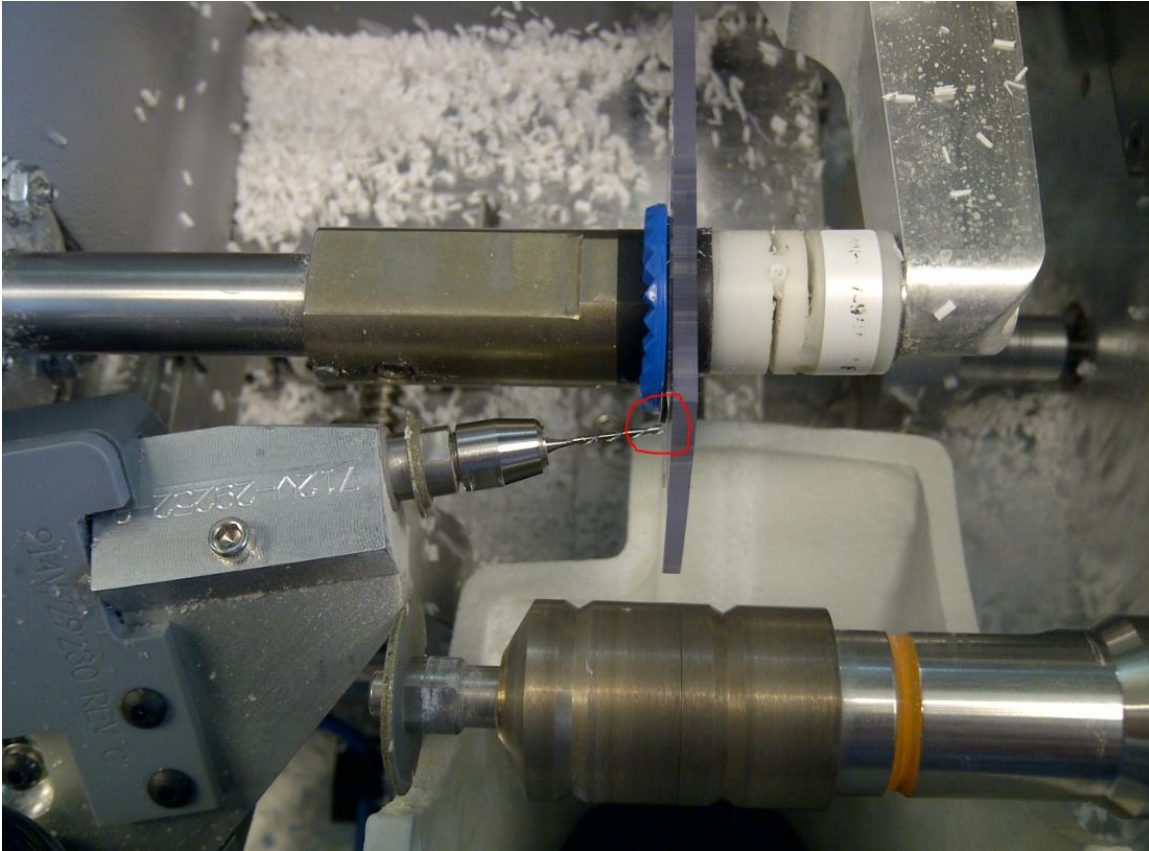
Using the 7E "Diagnostic Screen," one must move the Bevel and Size carriages into position as shown in the photo below. At some point the carriages must be moved manually and the machine needs to remain on and on the Diagnostic screen.
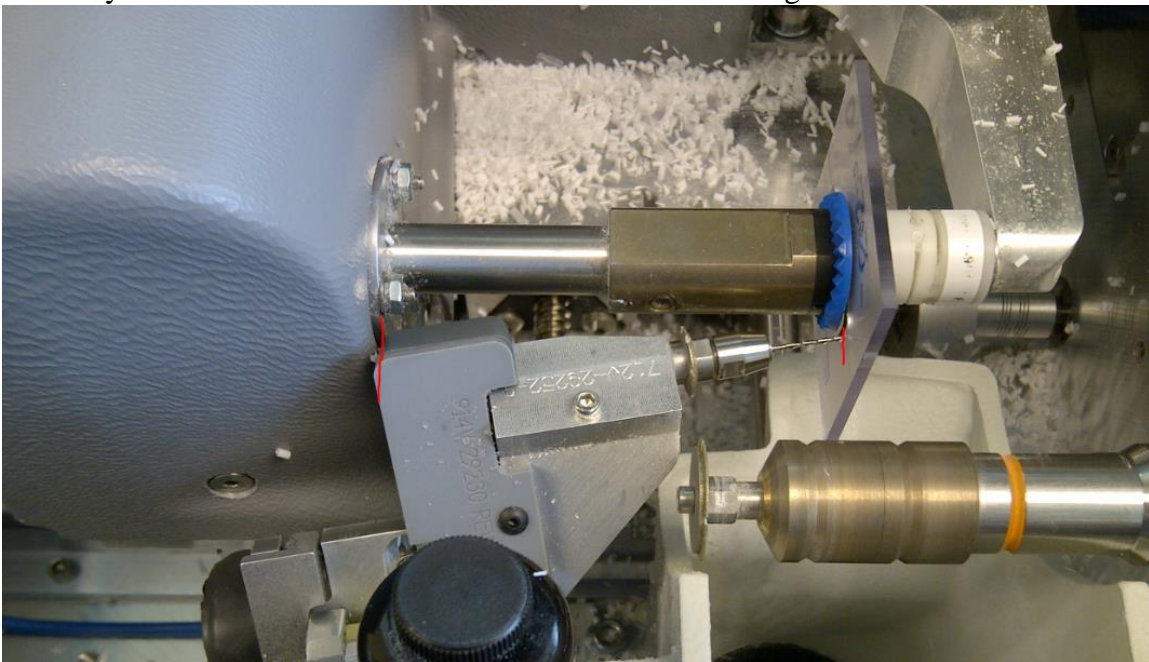
The drill assembly with drill bit will be centered between the chucked pattern blank and the cover over the axis gearbox. (SEE Next page).

AT this point read the Bevel Position number displayed near the left side of the 7Ex Diagnostic screen.   Write it down. This will be the number that must be entered in the "Drill Clearance" box on the Servo screen.

PLEASE NOTE: Drill Height adjustments may cause this positioning and the number to change slightly.

BY HAND, BE SURE TO MOVE THE SIZE CARRIAGE ALL THE WAY BACKWARD AND OUT OF THE WAY BEFORE ATTEMPTING TO PRESS THE "DRILL DOWN" KEY.

PLEASE ALSO BE CERTAIN TO PUT THE DRILL AWAY (DRILL DOWN) BEFORE ATTEMPTING TO MOVE OR HOME THE CARRIAGES UNDER MACHINE POWER.

(Please continue to the next page.)

Servo Gains Section

Use of servo motor configuration and gains are generally restricted to service technicians or users under their advisement.

Drill Clearance: Number used to ensure proper drill assembly clearance. When raised, the left side of the drill assembly should clear the lens drive assembly while the drill bit simultaneously clears a 0-base lens or pattern. Increase this number to gain more clearance for the drill bit; decrease this number to gain more clearance for the left side of the drill assembly.

Note: This number may need adjustment if the drill height is altered.
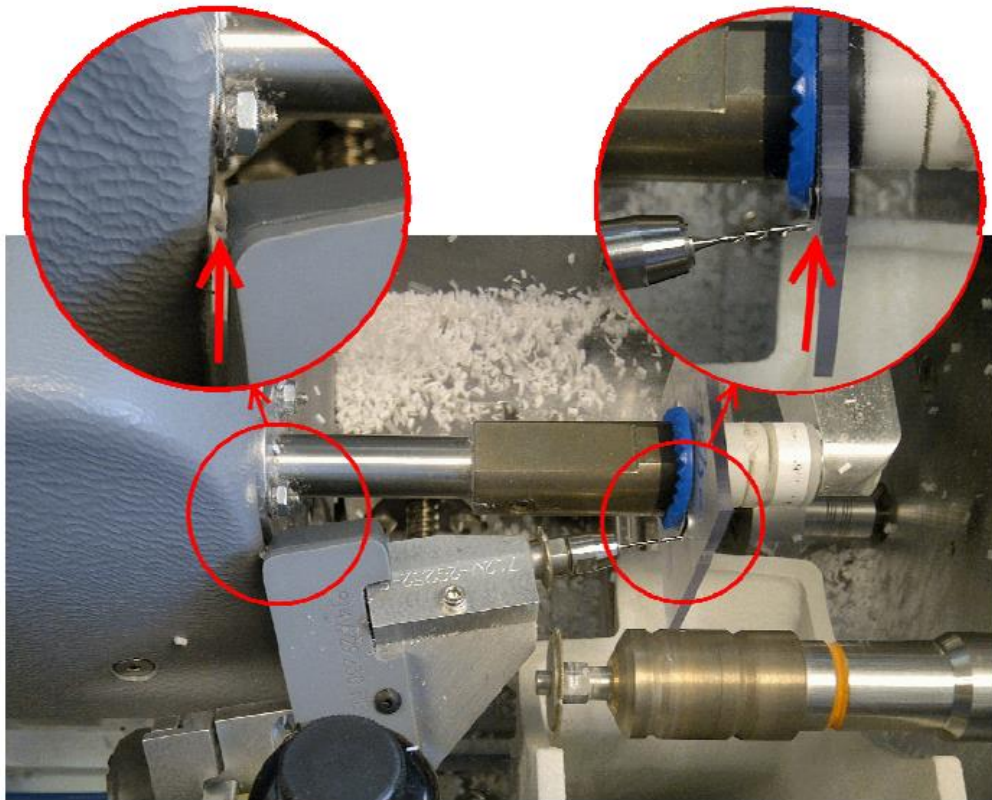
After updating software and setting the "Drill Clearance" as shown above:

1. Calibrate the lens (shape) axis of the edger.

2. Do the mechanical adjustment to calibrate the drill height.
3. Calibrate the groove axis.

Groove Section of the Calibration Screen

Depth: Defines the depth of the groove in millimeters for the standard or wide groove.

Placement: Adjusts the front-to-back position of the groove on the lens. Increasing this number will move the groove toward the front of the lens. Decrementing or incrementing this field may be confusing if there are negative numbers. For example, if the setting is –4.00 mm, an increase by 0.50 would be –3.5 mm.

Wheel Radius: Defines the cutting radius of the grooving wheel in millimeters. This is factory set and should not be altered.

Wheel Width: Width of the grooving wheel in millimeters.

Axis: Sets the groove axis on the drill/groove combo assembly. This is a relative axis offset to the shape *Axis* under Arbor Calibration. Adjust this number to ensure consistent groove depth around the lens. This field only appears if *Drill Usage* is set to "Groove" or "Both". Increasing this number will rotate the groove axis CCW when viewed from the front of the lens.