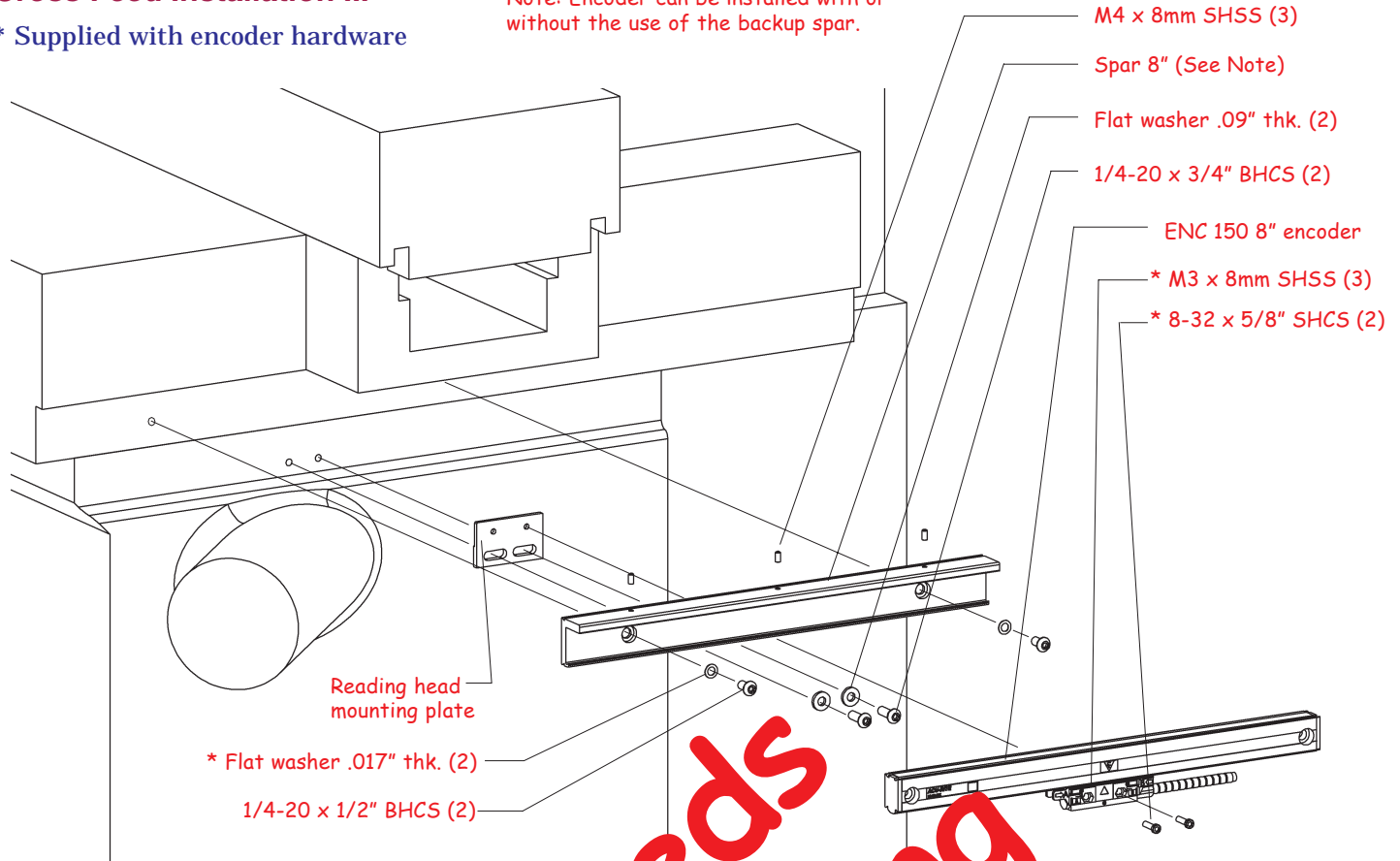


Cross Feed Installation ...

* Supplied with encoder hardware

Note: Encoder can be installed with or without the use of the backup spar.



Mounting information ...

These instructions mount the ENC 150 8" encoder to the Cross Feed "Y" axis on the Model B surface grinder.

Before proceeding:

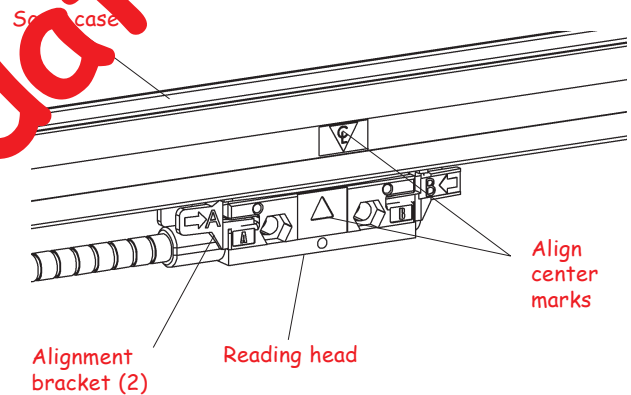
- Please read the instructions completely.
- Insure that the correct length encoder is being used for the total carriage travel.
- Keep the reading head centered on the encoder and the machine axis at its center of travel when locating the installation position.
- Clean all of the mounting surfaces.
- Save the alignment brackets with the Encoder Reference Manual following the completion of the installation.

First Steps ...

Encoder

- ✓ Unpack the encoder in a safe, convenient location.
- ✓ Do not remove the reading head alignment brackets until instructed.

Center the reading head ...



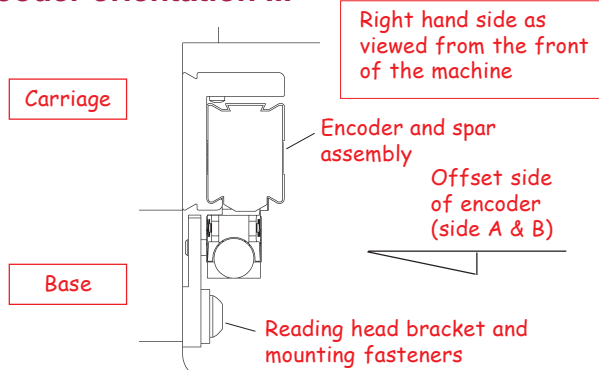
- Slide the reading head and brackets along the scale case until the center marks on the scale and the reading head are aligned.

Machine

- ✓ Move the carriage to its center of travel and mark the location so that it can be re-centered easily.

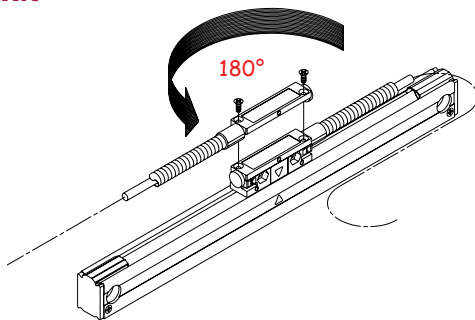
Needs Updating

Encoder orientation ...



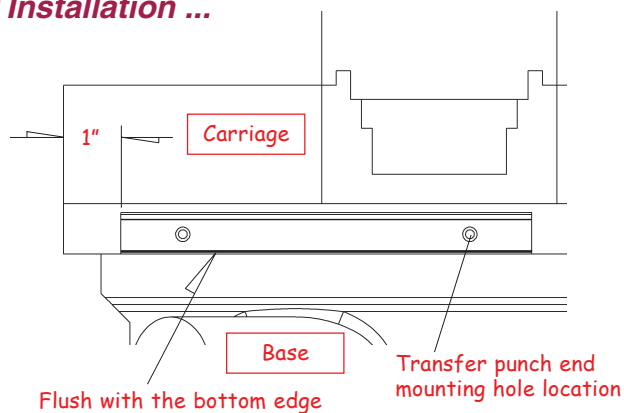
- Encoder will be positioned on the right hand side of the carriage as shown. Note the orientation for the encoder assembly.

Cable Exit

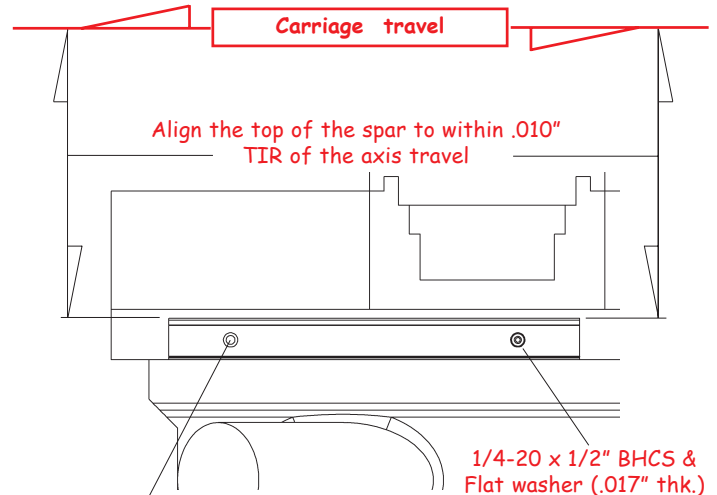


- Determine the cable exit direction preferred before installing the encoder.
- To change cable exit direction; remove the base and rotate it 180°.

Spar Installation ...

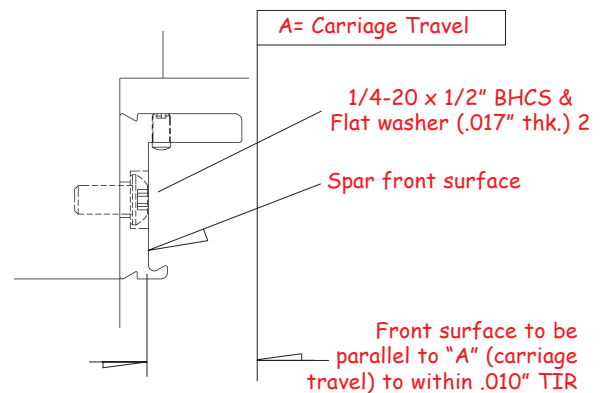


- Position the spar approximately 1" back from the front edge of the carriage.
- The bottom edge of the spar to be flush with the lower edge of the casting.
- Transfer punch one spar mounting hole to the carriage.
- Remove the spar, drill and tap hole location for a 1/4-20 x 1/2" deep.

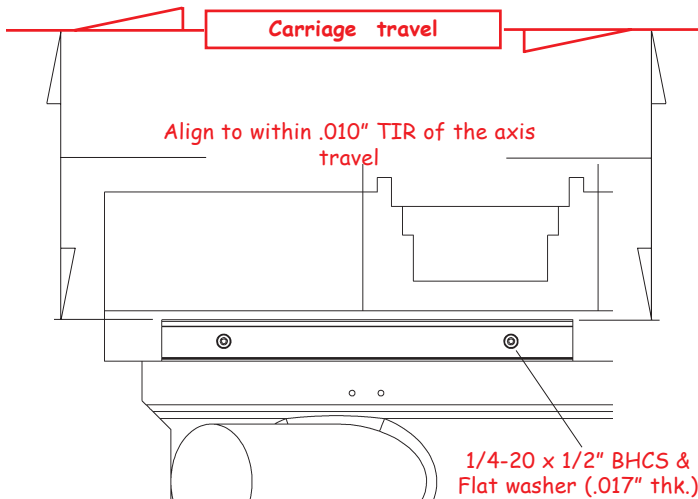


Transfer punch other end mounting hole location

- Fasten the spar at one end.
- Align the top of the spar to the carriage travel.
- Transfer punch the other end mounting hole.
- Remove the spar, drill and tap for a 1/4-20 x 1/2" deep.

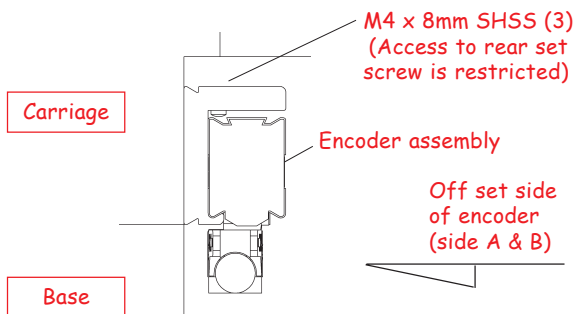


- Attach the spar to the carriage.
- Align the front of the spar to the carriage travel to within .010" TIR. Measure along spar face, next to each end mounting hole location.
- If necessary, shim spar (between the spar and the machine) to obtain this alignment.



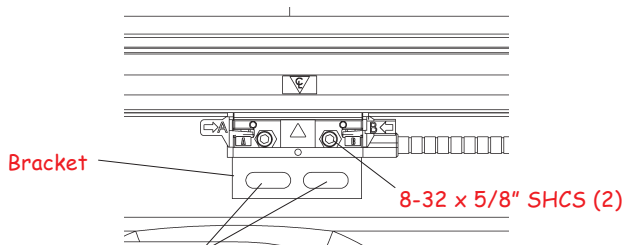
- Align the top surface of the spar to the carriage travel to within .010" TIR measuring over each end mounting hole location.
- Secure the spar in place maintaining both alignments.

Encoder / Spar assembly ...



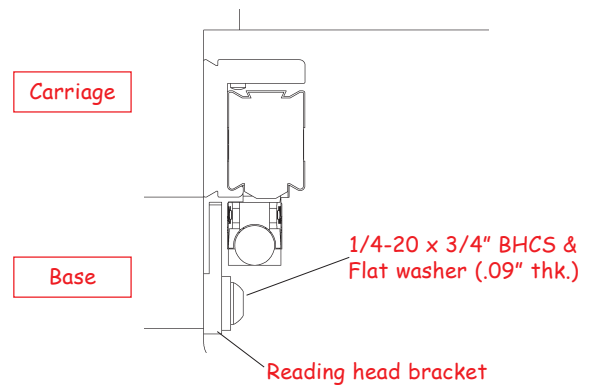
- Insert the encoder into the spar as shown and center with ends flush.
- Lock in place by tightening the front and center spar set screws.

Bracket install ...

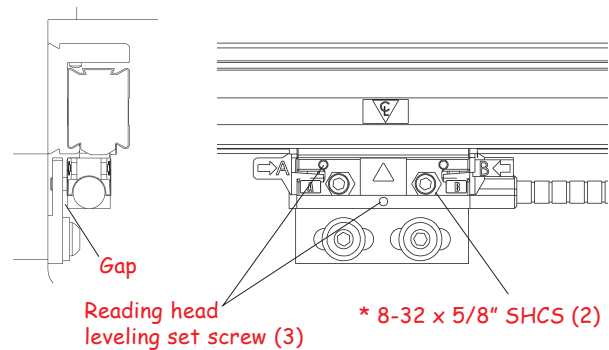


Transfer punch slot centers

- Return the axis to its center of travel .
- Attach the bracket to the reading head.
- Transfer punch bracket slot centers to the machine base.
- Remove bracket from the reading head, drill and tap locations for a 1/4-20 x 1/2".

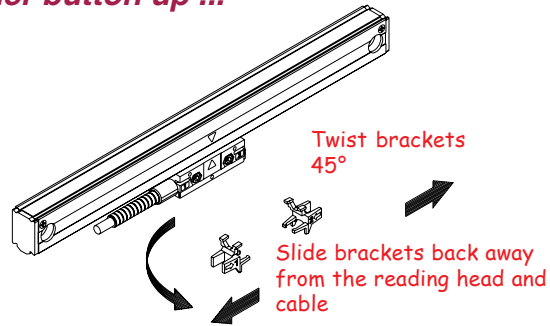


- Attach the reading head bracket to the machine base.
- Move the axis to its center of travel, adjust bracket to align mounting hole centers.
- Secure the bracket to the machine base.



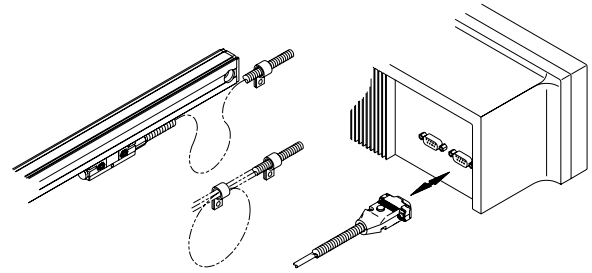
- A gap will exist between the reading head and the bracket.
- Attach the reading head with two 8-32 x 5/8" SHCS, but **Do Not Tighten**.
- Set each reading head leveling screw by placing a .001 - .003" feeler gage between the screw and reading head mounting plate.
- Adjust each screw until a slight drag is felt on the feeler gage.
- **Evenly tighten** the two 8-32 SHCS to secure the reading head in place.

Encoder button up ...



- Use allen wrench from set screw adjustment to slide alignment brackets away from the reading head.
- Remove alignment brackets and save with the "Encoder Reference Manual".
- Move the axis through its full travel. Confirm that the assembly does not interfere with the machine movement.

Completing the installation ...



- Secure the cables from the encoder by fastening with clips or ties.
- Route the cable providing sufficient slack loops for machine movement to the readout.
- Attach the encoder connector to the readout.