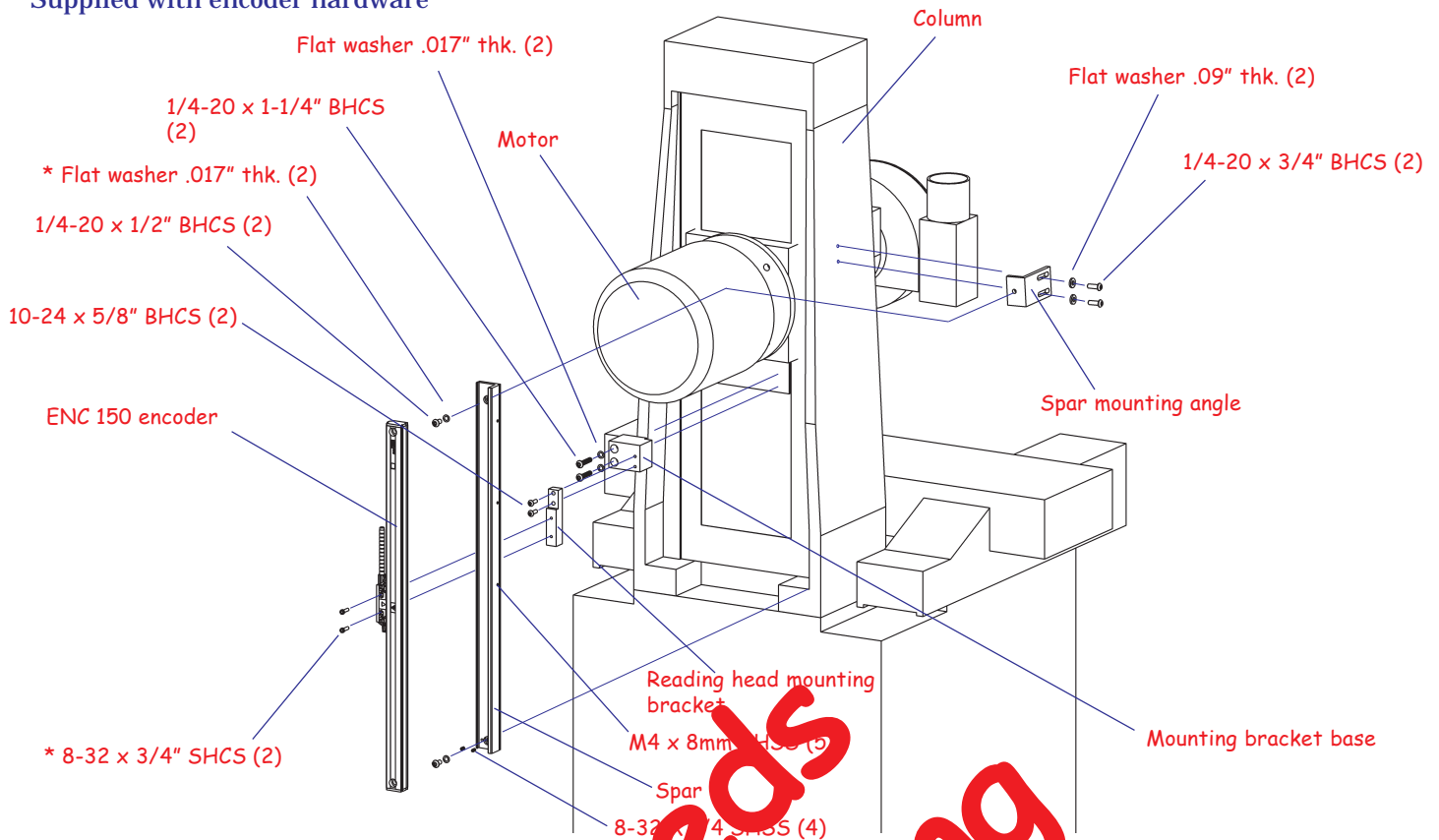


Down Feed Installation ...

* Supplied with encoder hardware



Mounting information ...

These instructions are for mounting the ENC 150 encoder to the Down Feed "Z" axis.

Before proceeding:

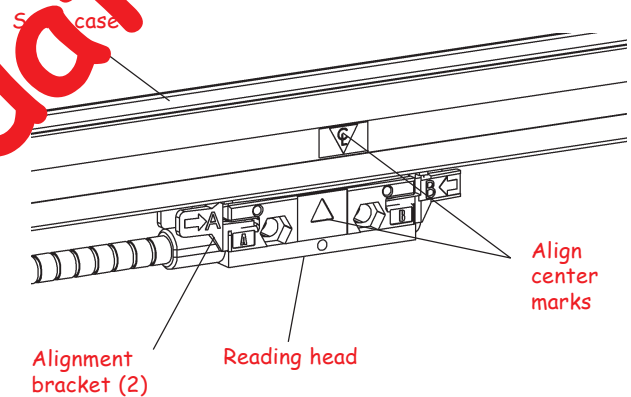
- Please read the instructions completely.
- Insure that the correct length encoder is being used for the total motor travel.
- Keep the reading head centered on the encoder, and the machine axis positioned at its center of travel when locating the encoder installation position to the axis.
- Clean all 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 ...

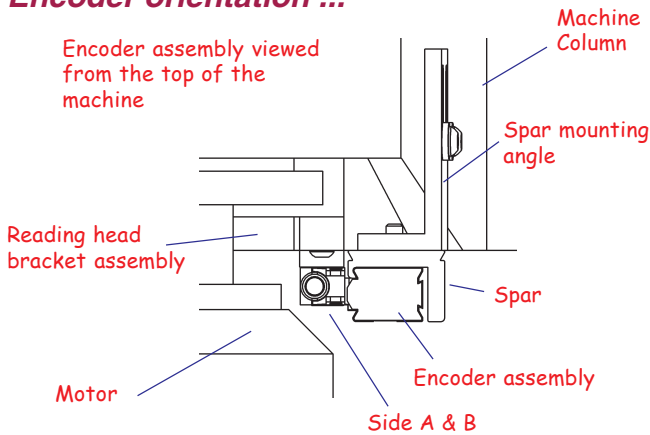


- Slide the reading head and brackets along the scale case until the center marks on the scale and the reading head are aligned.

Machine

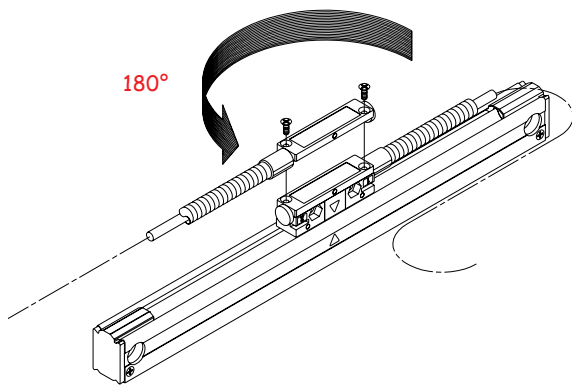
- ✓ Move the motor to its center of travel and mark the location so that it can be re-centered easily.

Encoder orientation ...



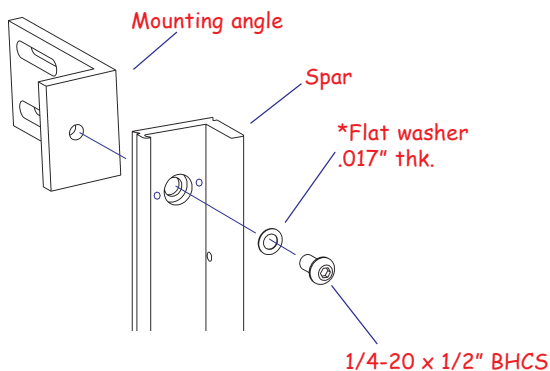
- These installation instructions will position the encoder assembly to the back side of the column and motor slide as shown.

Cable Exit ...



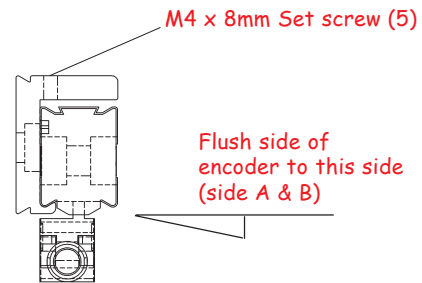
- To change the cable exit to the opposite direction, remove the base and rotate it 180°.

Spar - angle assembly ...



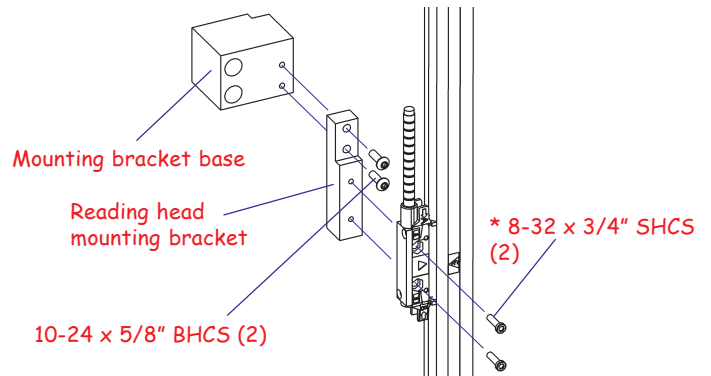
- Attach the mounting angle to the spar.
- Leave angle loose enough so that it can rotate.

Encoder / Spar assembly ...



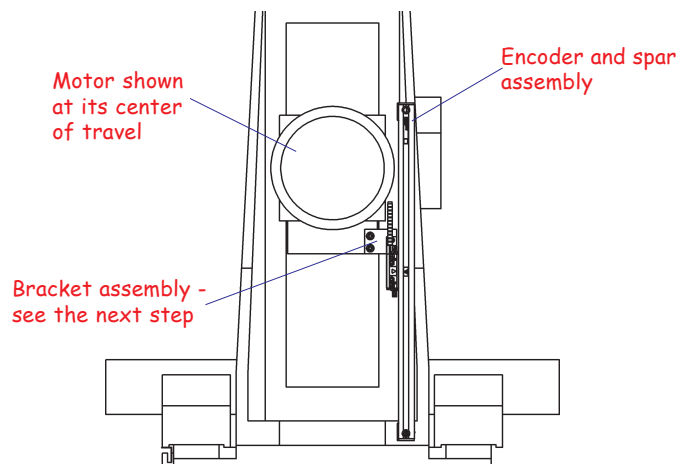
- Insert the set screws in the spar, and insert the encoder into the spar as shown. Center with ends flush.
- Tighten the center set screw only for temporary assembly.

Encoder / Read head assembly...

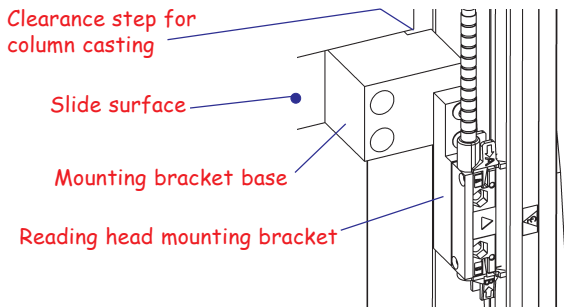


- Attach the reading head mounting bracket to the mounting bracket base.
- Attach the bracket assembly to the reading head.

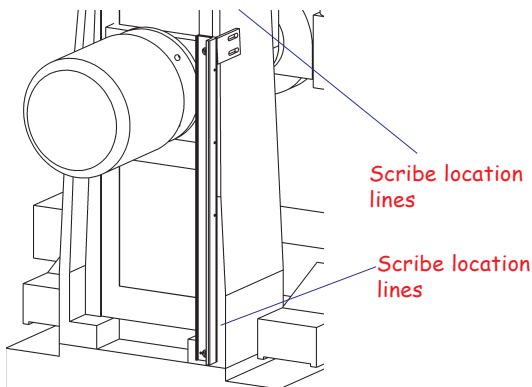
Spar Installation...



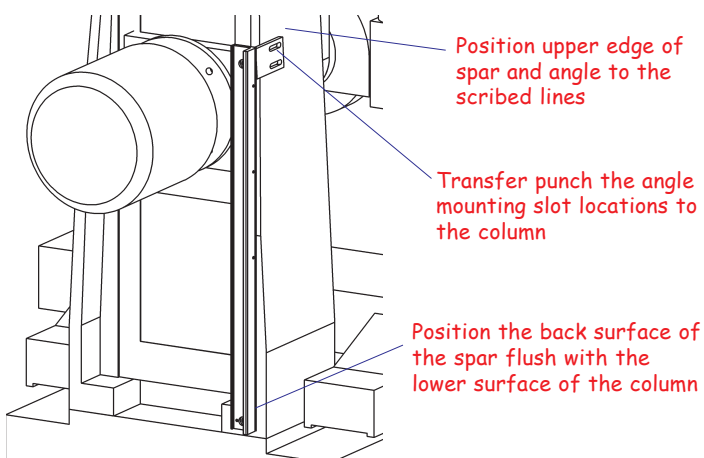
- With the motor at its center of travel, position the encoder and spar assembly to the back side of the casting with the angle set against the side of the column.



- Position the bracket assembly to the underside of the motor on the slide.
- The mounting bracket base is positioned on the slide, partly off the edge. The base mounting holes are on the slide surface.
- The base bracket is notched for clearance of the column casting.

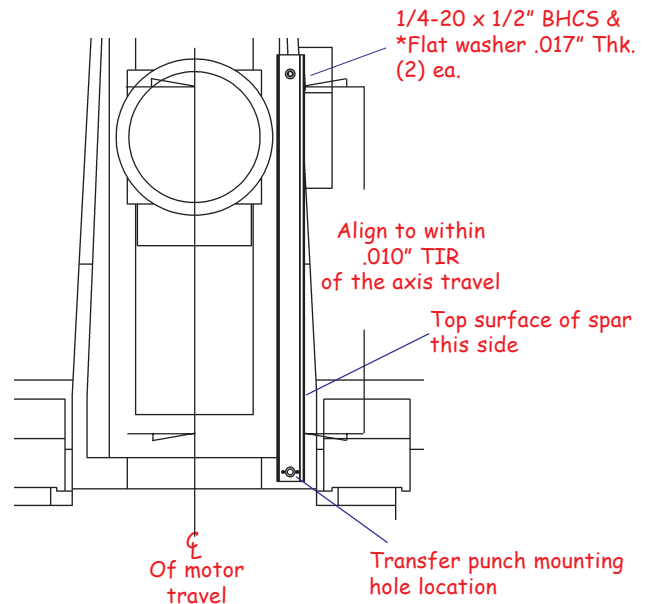


- Once properly position, scribe a line on the casting locating the angle, and the top surface of the spar.
- Remove assembly from the machine.

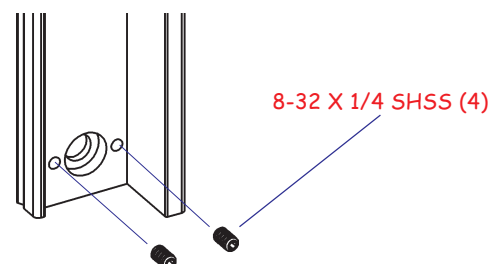


- Remove the encoder assembly from the reading head bracket.
- Remove the spar from the encoder.

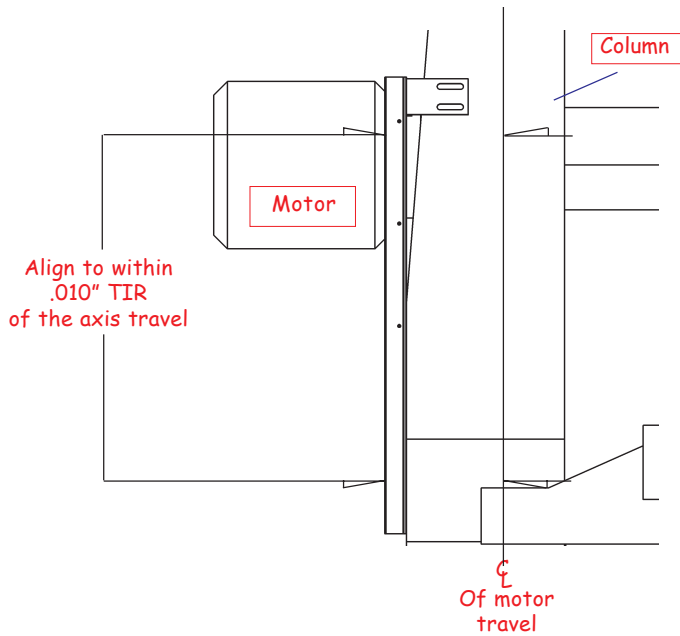
- Position the spar and angle to the scribed lines. The back surface of the spar must be flush with the lower back surface of the column.
- Transfer punch the center of the angle mounting slot locations to the side of the column.
- Remove the spar assembly; drill and tap the angle locations for a 1/4-20 x 1/2" deep.



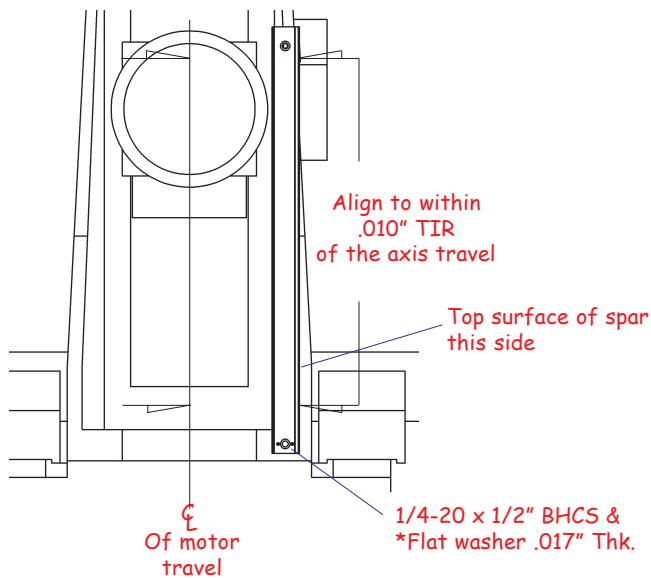
- Fasten the angle to the column, with the lower end of the spar flush with the column.
- Align the top surface of the spar to the motor travel to within .010" TIR measuring at each end mounting hole location.
- Transfer punch lower mounting hole.
- Move the spar, drill and tap location for a 1/4-20 x 1/2" deep.



- Insert the leveling set screws at each end of the spar. Insure screws are flush or below the face surface of the spar.

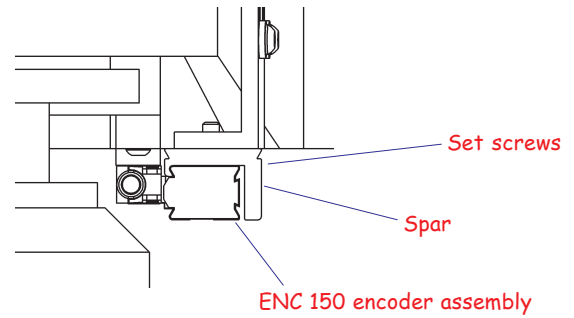


- Secure the angle in place. Align the front of the spar to the motor travel to within .010" TIR. Measuring at each end of the spar.
- Leveling screws are provided to assist with this alignment. Insure set screws are flush or below the spar face surface.



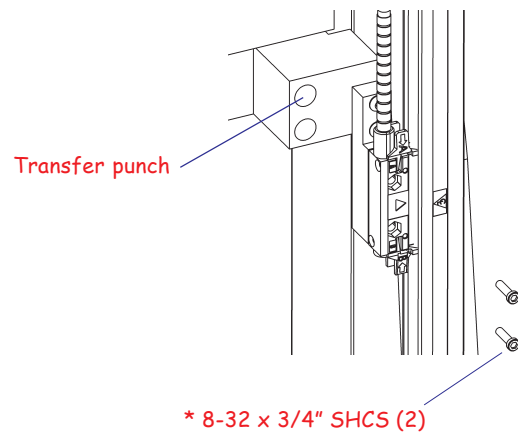
- Align the top surface of the spar to the motor travel to within .010" TIR measuring at each end mounting hole location.
- Secure spar in place maintaining both alignments.

Attaching the reading head ...

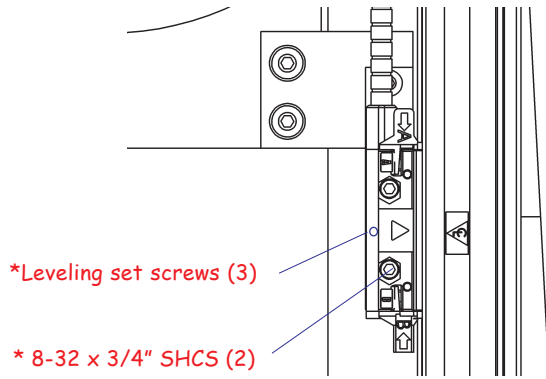


- Insert the encoder into the spar as shown and center with ends flush.
- Tighten all of the set screws.

Reading head installation ...



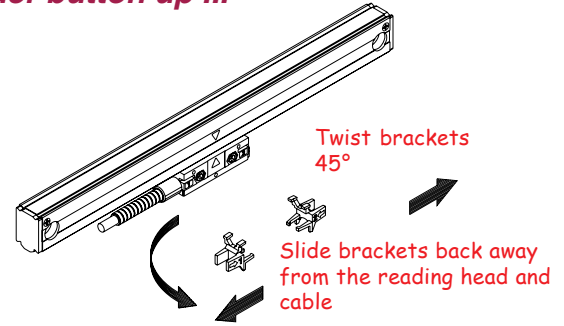
- Attach the bracket assembly to the reading head.
- Transfer punch the mounting hole location to the motor slide.
- Remove the bracket assembly and drill and tap hole locations for a 1/4-20 x 1/2" deep.
- Attach the bracket assembly to the motor slide with (2) 1/4-20 x 1-1/4" BHCS .
- Align the bracket tapped holes with the reading head mounting holes, and secure bracket in place.



- 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.

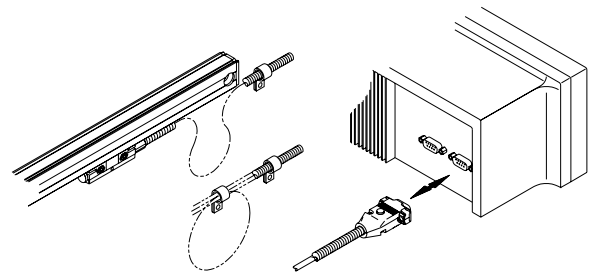


Encoder button up ...



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

Completing the installation ...



With the Down Feed installation complete:

- Route the cable providing sufficient slack loops for machine movement to the readout.
- Fasten the cable to the machine in an orderly fashion.
- Plug the cable into the back of the readout.
- Refer to the ACU-RITE Encoder Reference Manual for installation checkout and operating procedures.