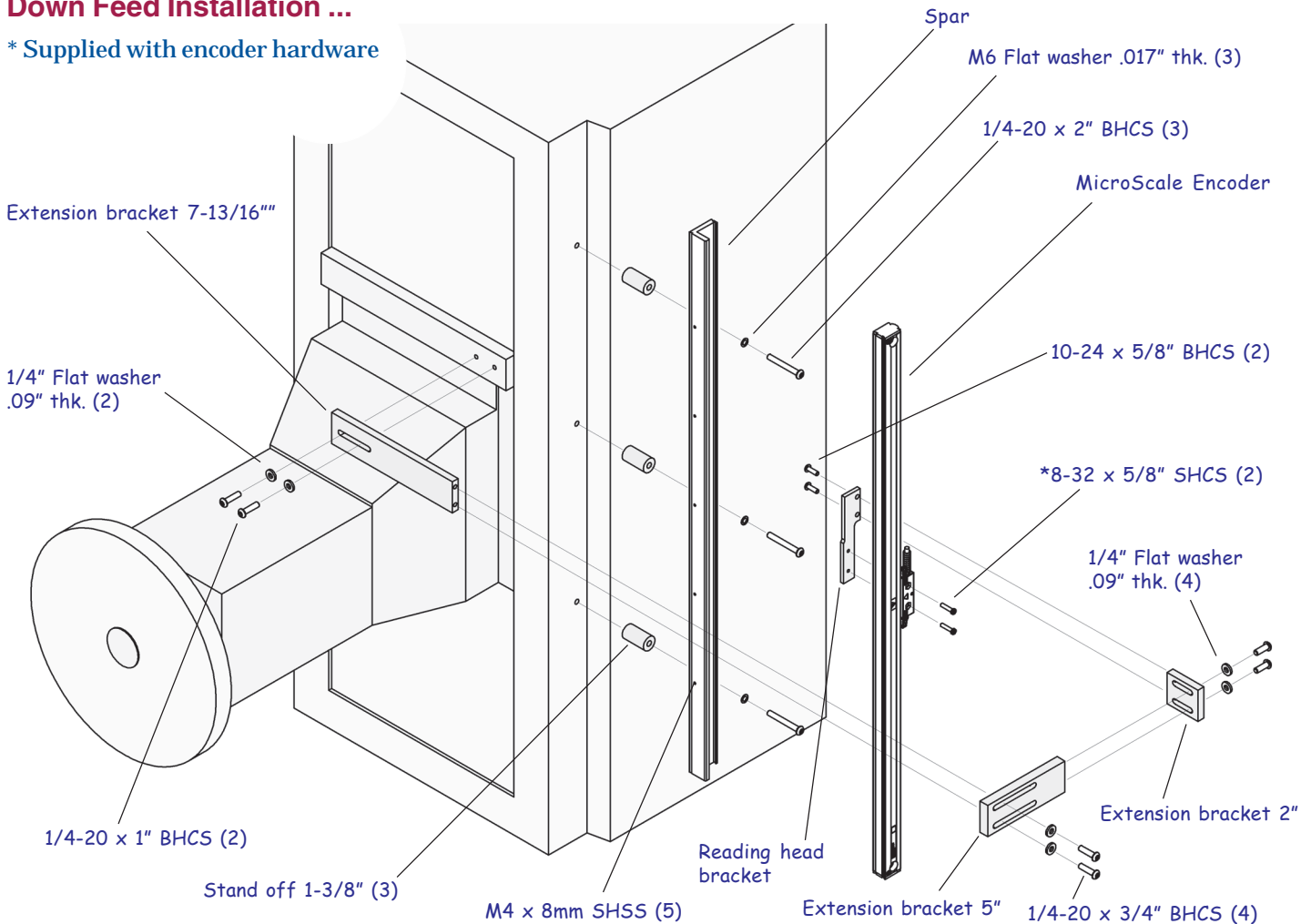


Down Feed Installation ...

* Supplied with encoder hardware



These are instructions for mounting the ENC 150 encoder to the down feed axis.

Before proceeding:

- Please read the instructions completely.
- Insure that the correct length encoder is being used for the total axis travel.
- Keep the reading head centered during installation.
- Clean all mounting surfaces.
- Save the alignment brackets with the Encoder Reference Manual after installation is completed.

First Steps ...

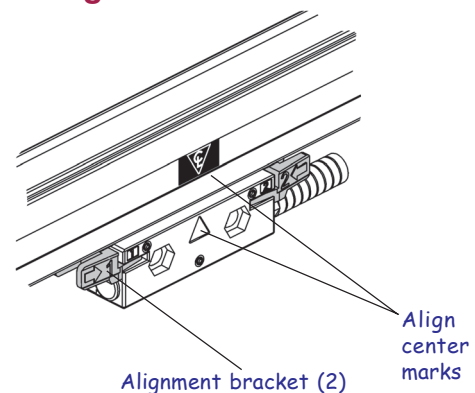
Machine

- ✓ Move the spindle housing to its center of travel.
- ✓ Mark the axis so that it can be re-centered easily.

Encoder

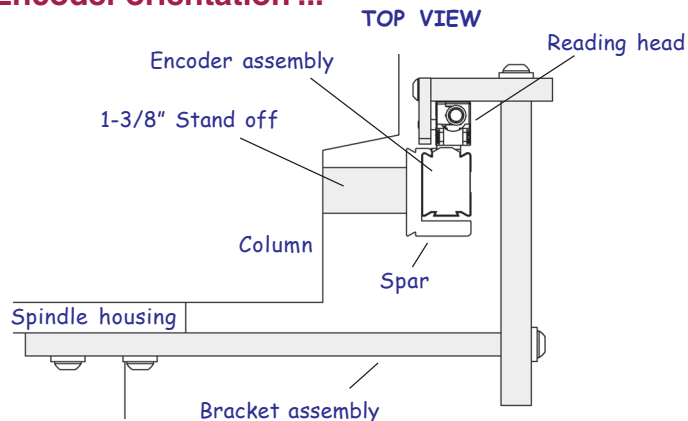
- ✓ Unpack encoder in a safe, convenient location.
- ✓ Do not remove the reading head alignment brackets until instructed.

Center reading head ...



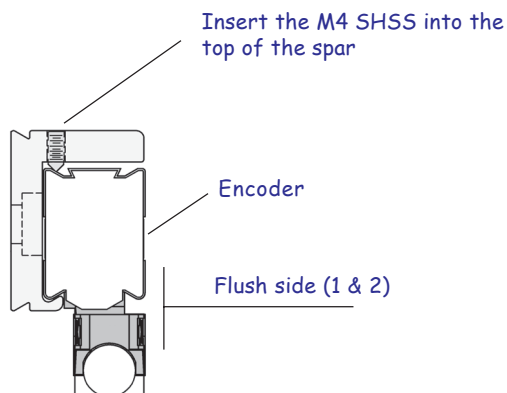
- Slide the reading head and brackets along the scale case until the center marks on the scale case and reading head are aligned.

Encoder orientation ...



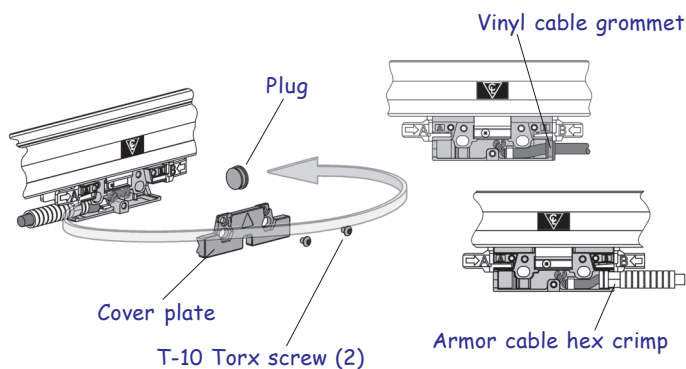
- These instructions will guide you through installing the encoder as shown in this view.

Encoder/Spar assembly ...



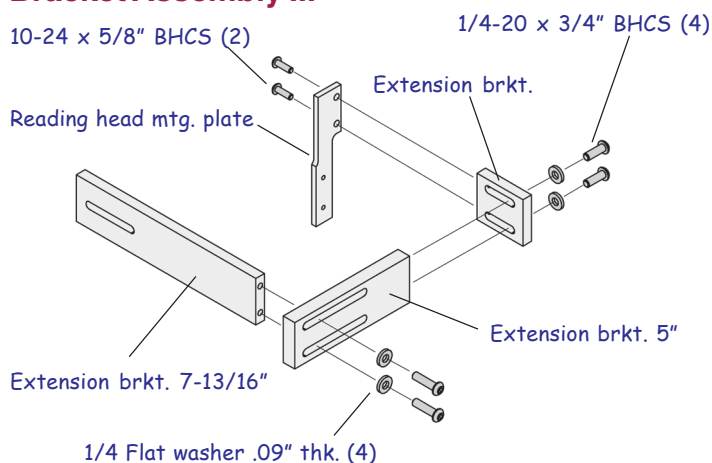
- Insert the encoder into the spar as shown, and center from end to end. Tighten the center set screw only.

Cable exit ...

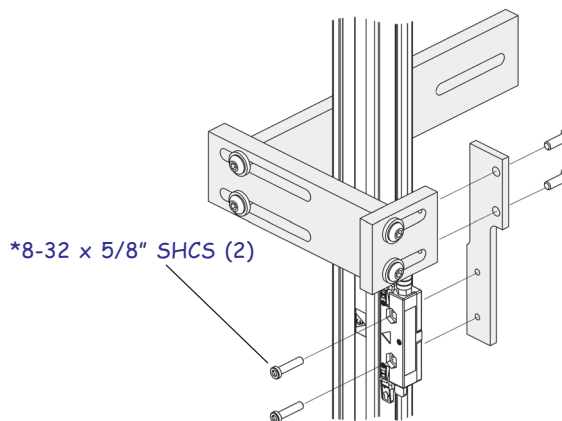


- Determine the cable exit direction before installing the encoder.
- To change the cable exit direction, remove the cover plate and rotate the cable 180°.

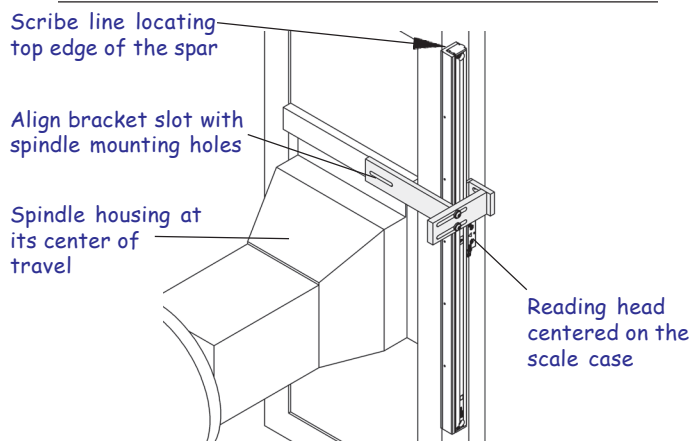
Bracket Assembly ...



- Secure the reading head mounting plate to the short extension bracket. Assemble the remaining brackets loosely together for further adjustment.

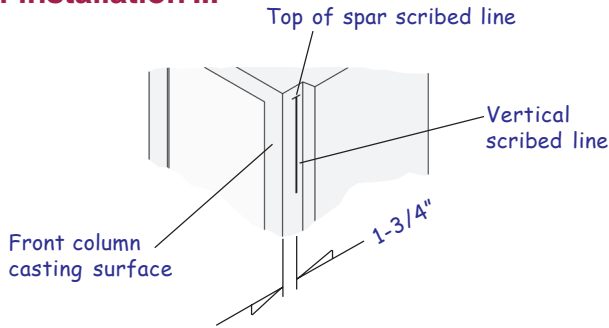


- Temporarily attach the bracket assembly to the reading head.

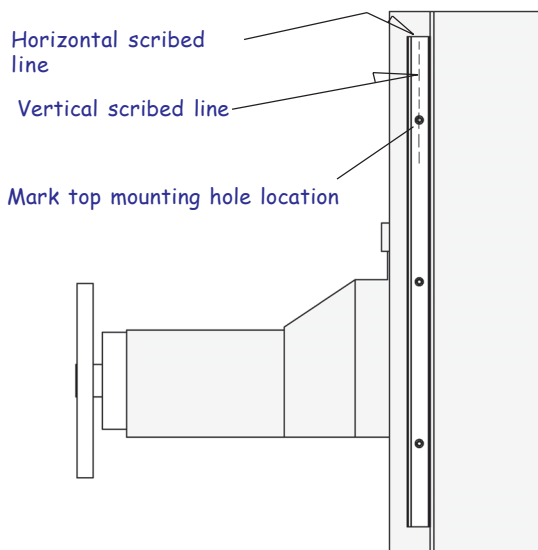


- With the spindle housing at its center of travel, position the spar on the column, and the bracket assembly to the housing.
- Insure the reading head is centered on the scale case, and scribe a mark locating the top of the spar on the column. Remove the assembly from the machine.

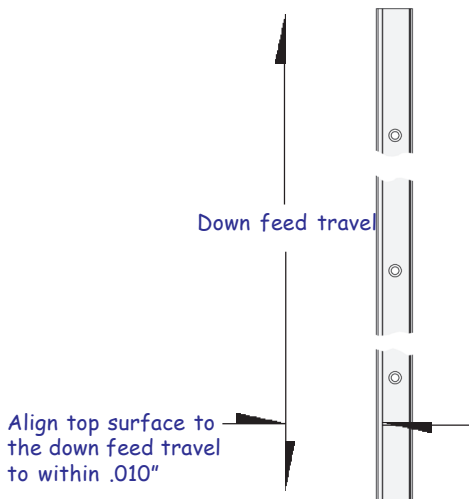
Spar installation ...



- Measure 1-3/4" back from the front of the column and scribe a vertical line at least 6" long.

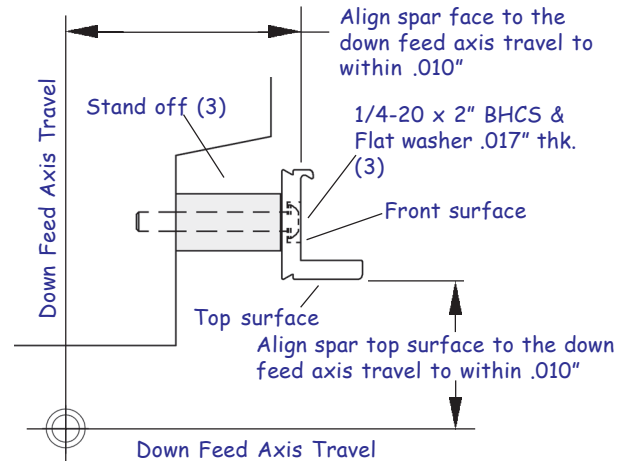


- Remove the bracket assembly from the reading head, and the encoder from the spar.
- Position the upper edge of the spar to the horizontal scribed line, and center the top mounting hole on the vertical line. Mark the top hole location to the column.
- Drill and tap location for a 1/4-20 x 1/2" deep.



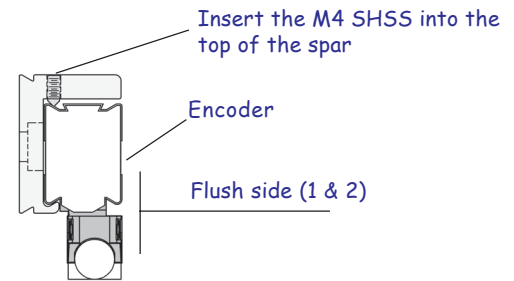
- Temporarily fasten the spar to the column with a 1/4-20 x 5/8" FHCS provided.

- Align the top of the spar to the down feed travel.
- Transfer punch the remaining mounting holes.
- Remove the spar, drill and tap locations for a 1/4-20 x 1/2" deep.



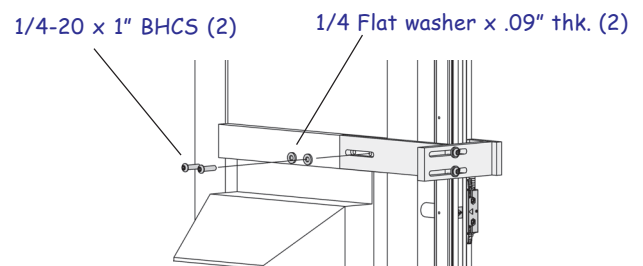
- Attach the spar with the stand offs to the column.
- Align the front surface of the spar to the axis travel, shim stand offs as necessary.
- Align the top surface of the spar and secure in place maintaining both alignments.

Encoder installation ...

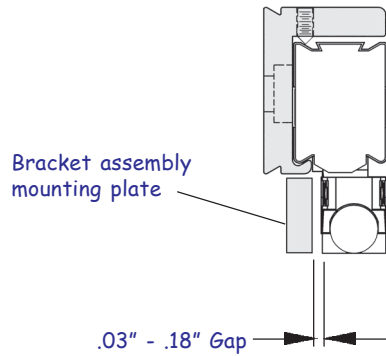


- Insert the encoder and center from end to end as done previously.
- Tighten set screws to secure in place.

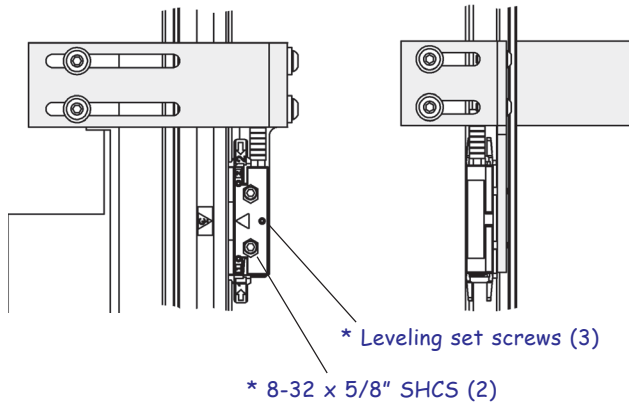
Reading head bracket installation ...



- Loosely attach the bracket assembly to the spindle housing.

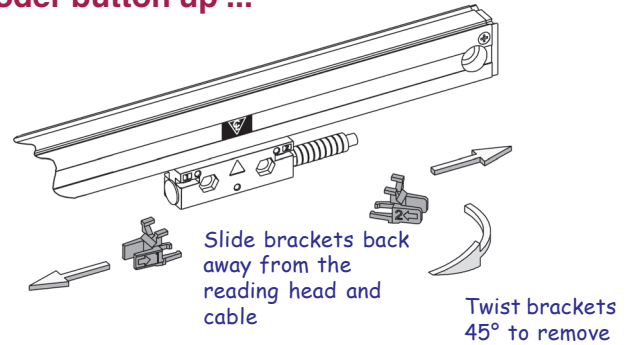


- Adjust the mounting plate clearance so that a gap of .03" - .18" exist.
- Align the reading head mounting holes with the mounting plate tapped holes.
- Secure the bracket assembly in place.

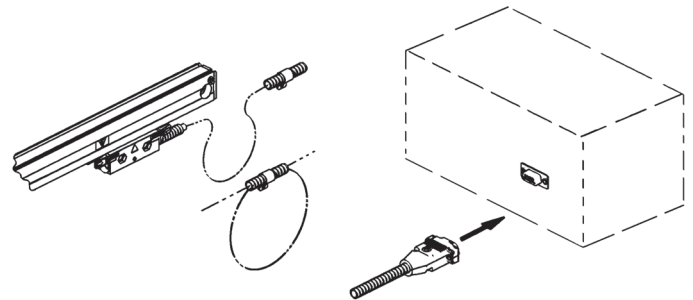


- Insert the two *8-32 x 5/8" SHCS. Insure the bracket assembly is adjusted to provide proper screw head clearance. **Do Not Tighten Screws** at this time.
- Set each leveling set screw by placing a .001" - .003" feeler gage between the set screw and the bracket.
- Adjust each set screw until a slight drag is felt on the feeler gage.
- **Evenly tighten** the two 8-32 SHCS.

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.



- With the longitudinal axis installation complete, route the cables providing sufficient slack loops for machine movement to the readout.
- Secure cables by fastening with clips or ties.
- Attach the linear encoder connectors to the readout.
- Complete the installation by following the steps in "Checking Your Installation" section in the encoder "Reference Manual".