Aligning the Encoder

Product

All Magnus VLF Devices

Background

There are two different versions of encoders installed on Magnus VLF devices. The old style encoder is black in color and has a dampening collar mounted around the encoder. The newer style encoder is silver in color and does not have the dampening collar installed. The alignment of the two encoder versions is the same—only the mounting is different.

Tools required

- Old style encoder toolkit (514-00095A)

  OR
- New style encoder toolkit (90-1191B)
- 1.5 mm non-ball tip hex key
- Loctite® 242

Identification

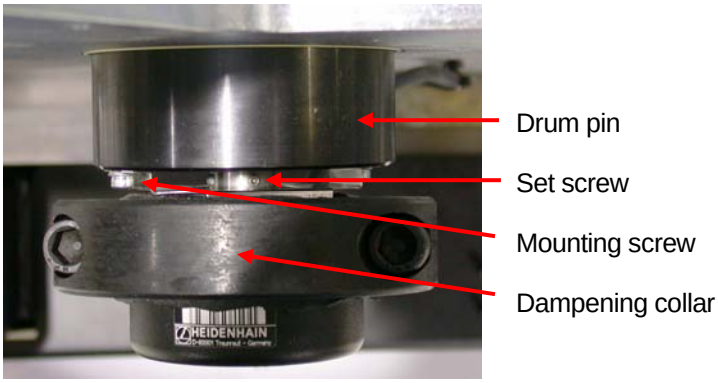


Figure 1: Old style encoder with dampening collar

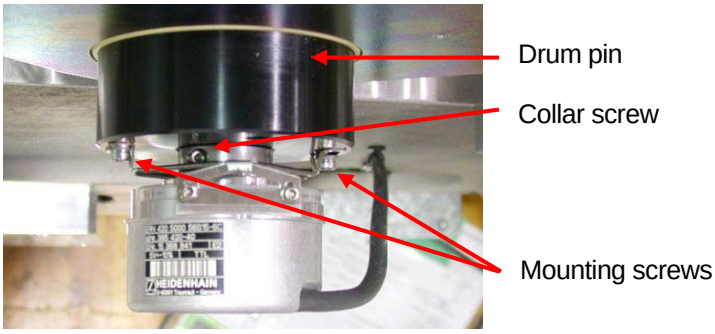


Figure 2: New style encoder without dampening collar

Procedure

1. Place the drum zero position block on the carriage track and rotate the drum until the LECs are resting on the block.

   Note: The block must be in the upright orientation for all drum sizes.

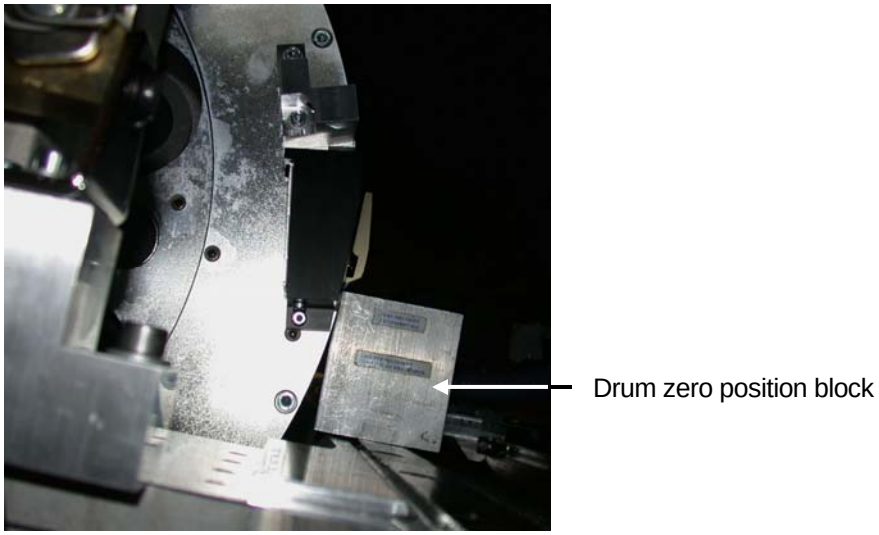


Figure 3: Drum zero position

2. Place the drum supporting tool under the home side of the drum and jack the screw down until the supporting tool is tight against the drum. Ensure that the drum remains in the drum zero position while supporting it with the tool.
3. Connect the encoder to the encoder alignment tool and turn the tool on.
4. To find the encoder index position, rotate the encoder shaft until both green lights on the alignment tool light up—the buzzer will also sound.
5. Carefully mount the encoder on the encoder shaft while keeping the encoder in the index position (green LEDs and buzzer should stay on). The slots in the encoder mounting brackets should be centered over the holes in the drum pin and the encoder cable should point down. This is a rough alignment only and the encoder only needs to be as close to the zero position as possible.

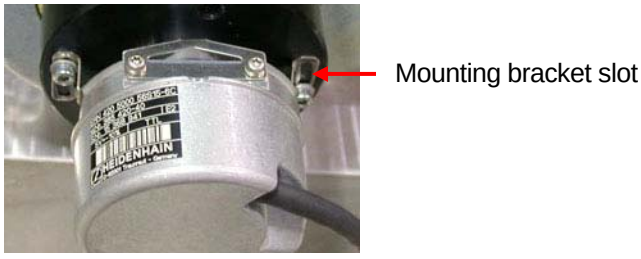


Figure 4: Mounting bracket slots

6. On old style encoders, use a 1.5 mm non-ball tip hex key to tighten the two set screws to secure the encoder to the encoder shaft. Ensure that the encoder is still in the zero position (buzzer on) after tightening the screws.
   On new style encoders, use the 1.1 Nm torque wrench and 2 mm hex key adapter to tighten one of the collar screws.

7. Apply Loctite 242 to the encoder mounting screws and secure the encoder brackets to the drum pin. Do not tighten the screws yet.
8. For the encoders final zero adjustment, rotate the encoder body until both green LEDs are lit on the alignment tool and tighten the two mounting screws.
   To check that the encoder is not under tension and that the zero position is stable, tap on the body of the encoder with the handle of a T-handle hex key to ensure that the zero position does not change.
9. Remove the drum support tool and the drum zero position block.
10. On old style encoders only, apply Loctite 242 to the dampening collar screws and install the collar over the encoder.

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