

HercuLine 2001 Actuator Upgrade to Non Contact Position Sensor Replacement Instructions 50018180- 501

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Overview

These instructions apply to the following kit: **HercuLine 2001 upgrade to non-contact position sensor kit** and its application to the HercuLine 2001 Actuators. This kit allows you to replace the existing pot assembly with a non contact position sensor.

Summary

This kit contains a Non Contact Position Sensor and associated parts for your HercuLine 2001 Actuator.

Tools Needed

To perform the installation procedure, you will need the following tools:

- Medium Flat-blade screwdriver
- Medium Phillips screwdriver
- Small needle-nosed pliers
- Allen key screw driver set

Procedure



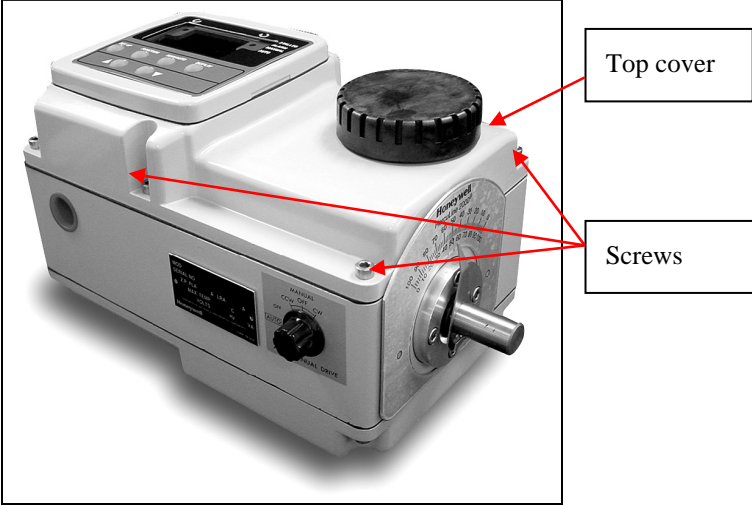
WARNING


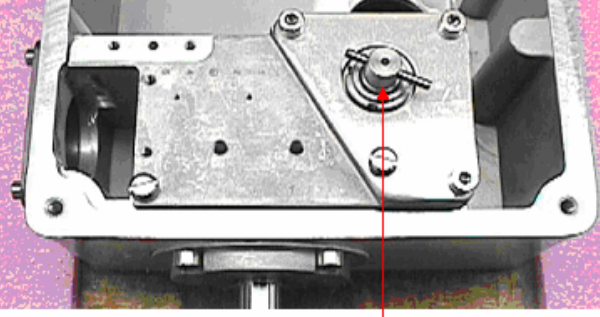
Disconnect power before accessing components inside the actuator. Failure to do so may result in death or serious injury.

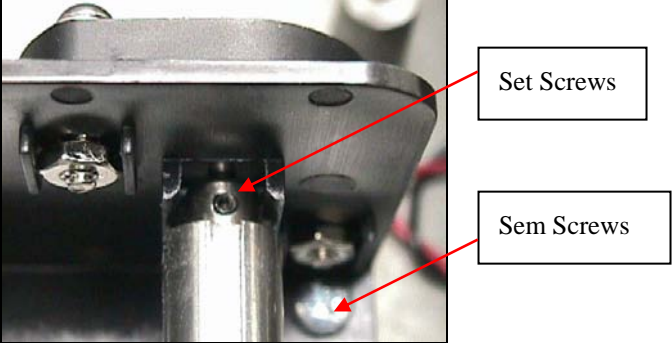
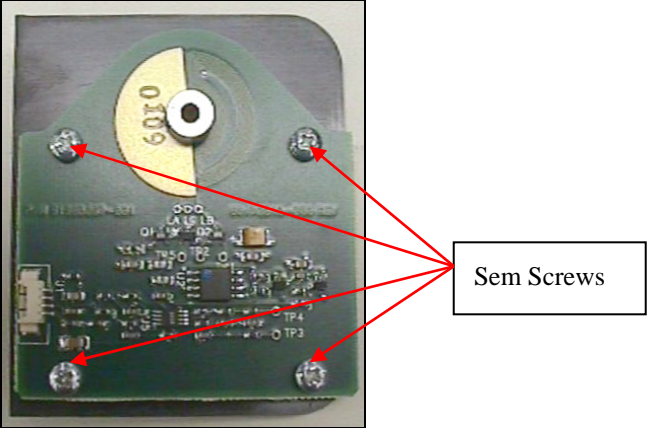
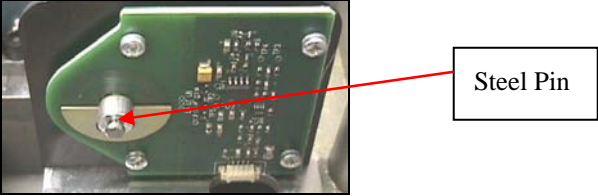
ATTENTION

When working with Printed Wiring Assemblies (PWAs) always protect against electrostatic discharge by wearing a grounded wrist strap. Failure to do so may result in equipment damage.

Table 1 NCS Installation Procedure

Step	Action
1	Disconnect power from the actuator.
2	<p>Remove the 6 screws and the extended top cover of the actuator case.</p>  <p>The diagram shows a white actuator case with a black top cover and a black knob. Red arrows point from the labels 'Top cover' and 'Screws' to the corresponding parts of the actuator. The 'Screws' label points to six screws on the top cover, and the 'Top cover' label points to the top cover itself.</p>

Step	Action
3	<p data-bbox="345 252 836 283">Move the actuator output shaft to 50%.</p> <p data-bbox="345 304 1388 367">If the actuator has a hand wheel, rotate the hand wheel until the pointer is at 50% on the scale.</p> <p data-bbox="345 388 1429 451">If the actuator does not have a hand wheel, remove the top cover and rotate the shaft at the bearing retainer plate until the pointer is at 50% on the scale.</p> <div data-bbox="345 462 868 934"><p data-bbox="503 472 714 504">Move pointer to 50%</p></div> <div data-bbox="345 955 958 1323"><p data-bbox="665 1291 812 1323">Shaft to rotate</p></div>

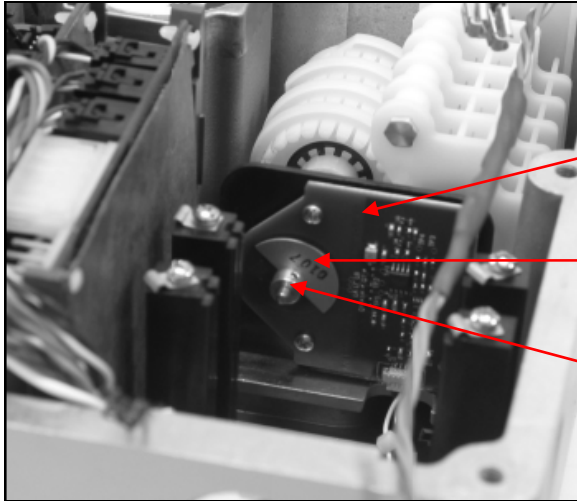
Step	Action
<p>4</p>	<p>Removing the Potentiometer Assembly</p> <p>Locate the pot assembly.</p> <p>Remove the (50002635-403) set screw which secures the pot shaft to the CAM shaft.</p>  <p>Remove 2-(51109695-312) sems screws that secure the bracket to the casting and then remove the mounting bracket.</p> <p>Slide out the pot shaft and remove the pot assembly.</p>
<p>5</p>	<p>Assembling the Rvit-z board on the mounting bracket.</p> <p>Mount a (51500657-001) Rvit-Z Board to a (51451441-001) mounting bracket using 4-(23000) sems screws.</p>  <p>Install a (51451384-001) steel pin through the end of the Rvit-Z riser & secure with a (51452604-001) set screw through the CAM Shaft.</p> 

Step	Action
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6

Mounting the Rvit-Z assembly.

Locate the place to mount the Rvit-z assembly.

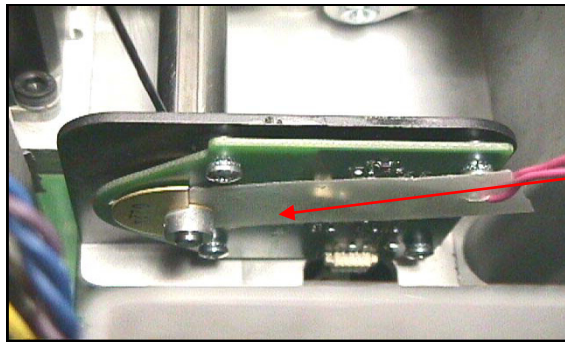


NCS PWA

NCS Spoiler

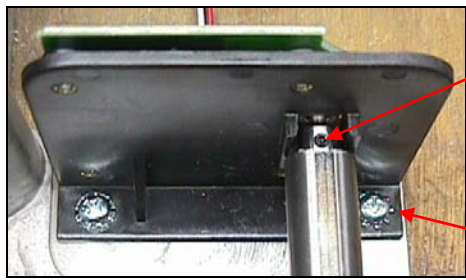
NCS Set Screw

Slide the Rvit-Z assembly over the end of the CAM Shaft.
Secure the bracket to the casting using 2-(51109695-312) sem screws.



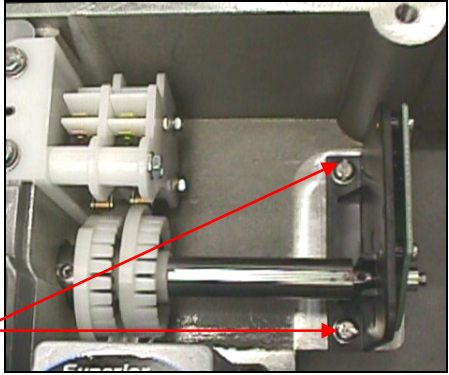
Spacer

Use the plastic Rvit-Z Spacers to set an equal gap between the Risers on each side of the Rvit-Z board.

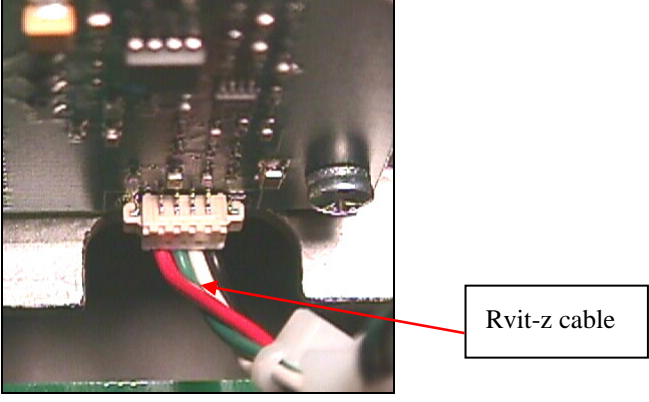


Set screw

Sem Screws



Install a (50002635-403) set screw. Hold the risers and secure the assembly through the CAM Shaft with the set screw.

Step	Action
	 <p data-bbox="289 646 1307 678">Install (51500553-005) Rvit-Z cable to the board which completes the Rvit-z assembly.</p>
7	<p data-bbox="289 758 703 789">NCS Position Sensor Calibration</p> <p data-bbox="289 800 1369 888">See document 62-86-25-10 HercuLine 2000 Series Actuator Installation, Operation and Maintenance Manual. Refer to Table 28 in the Setup and Calibration Procedures section for the NCS position sensor calibration.</p>
8	<p data-bbox="289 911 524 942">Replace the gasket.</p>
9	<p data-bbox="289 959 881 991">Reattach the top cover and secure with the screws.</p>

Warranty/Remedy

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Industrial Measurement and Control

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