

<b>Date</b>	04 Dec 2014	<b>Service Note #</b>	4300-2029	<b>Updated</b>	NA
<b>Product</b>	EVO/DS 4300		<b>Created By</b>	J. Yangco	
<b>Description</b>	Replacing the Carriage Motor Encoder				

<b>Release</b>	<input checked="" type="checkbox"/>	<b>Internal</b>	<input checked="" type="checkbox"/>	<b>Distributors</b>	<input checked="" type="checkbox"/>	<b>Customers</b>
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Parts Required	Serial Numbers Affected
1. Encoder (3200-0092) 2. 3/32" Shrink tubing	All

## Replacing the Carriage Motor Encoder

**Reason:** The needles on the autosampler do not line up consistently with the test tubes or vials due to the carriage drive positioning.



**Pre-requisite:**


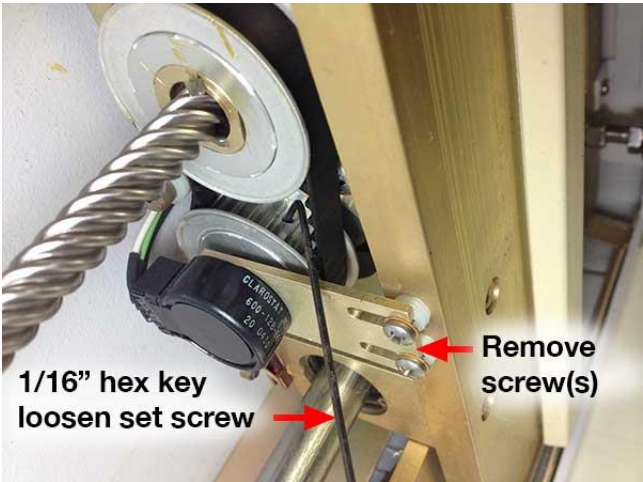

Service Engineer or person performing this service must have proper training in servicing the instrument.

### Solution / Action



**Before proceeding, discharge any static electricity from your body by touching a bare screw from the instrument. Turn off the instrument and disconnect the AC power cord.**

<p><b>Step 1</b></p>	<p>Carefully position the carriage forward as shown below. This will give you a better access to the encoder.</p> <div data-bbox="553 432 1192 909" data-label="Image"><p>Move the carriage forward for easy access</p></div> <p><b>Step 1</b></p>
<p><b>Step 2</b></p>	<p>Carefully turn the autosampler on its side (preferably on the right side panel). Please be sure that there are no other items that can damage the side panel.</p> <hr/> <div data-bbox="350 1188 436 1285" data-label="Image"></div> <p><b>It is also possible to remove the side panel to prevent the side panel from being damage.</b></p> <hr/>

<p><b>Step 3</b></p>	<p>With the instrument on its side, locate the encoder as shown below. Check to see if you can access the set-screw as shown. If not, manually rotate the motor pulley until you can access the set-screw.</p>  <p style="text-align: center;"><b>Step 3</b></p>
<p><b>Step 4</b></p>	<p>Using a 1/16 inch hex key, loosen the set-screw about 2 to 3 full turns. Remove the screw (s) that secures the encoder bracket. Carefully pull the encoder assembly away from the motor pulley.</p>  <p style="text-align: center;"><b>Step 4</b></p> <p> You may need to use a soldering iron (or appropriate size heat gun) to heat up the set-screw to get it loose.</p>

<p>Step 5</p>	<p>Carefully pull the encoder assembly until you can access the wiring. Slice the shrink tubing with a sharp utility knife, and then unsolder the wires from the encoder. Remove the nut that secures the encoder.</p> <div data-bbox="581 432 1166 869" data-label="Image"> </div> <p style="text-align: center;">Step 5</p> <p><b>HINT: Do not remove the encoder from the bracket when disconnecting the wires. Once the shrink tubing are stripped, wedge the bracket on the side panel then unsolder all wires.</b></p>
<p>Step 6</p>	<p>Replace the encoder. Repeat the steps above in reverse order.</p> <div data-bbox="349 1096 438 1192" data-label="Image"> </div> <p>When securing the encoder with the motor pulley, be sure that the keyed (flat) part of the encoder stem is where the set screw should contact as shown below.</p> <div data-bbox="324 1241 860 1644" data-label="Image"> </div> <p>Wiring position:</p> <ol style="list-style-type: none"> <li>1. Black</li> <li>2. Red</li> <li>3. Green</li> <li>4. White</li> </ol> <p style="text-align: center;">Step 6</p>