

Valvcon™ universal ADC-series lithium ion back-up battery upgrade kit

Installation, maintenance and
operating instructions

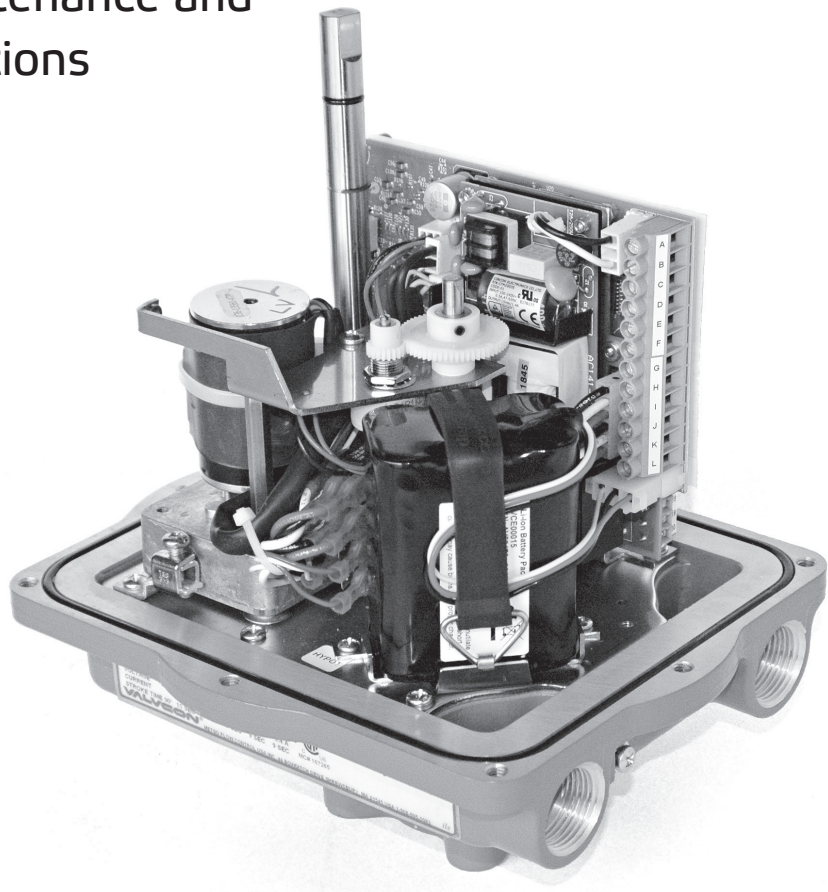


Table of contents

GENERAL	3
Scope of the Manual	3
Safety Precautions	3
PARTS VERIFICATION AND INSTALLATION	3
Parts Verification	3
Parts Verification and LADC-Series Installation	6

READ THESE INSTRUCTIONS FIRST!

These instructions provide information about safe handling and operation of the valve.

If you require additional assistance, please contact the manufacturer or manufacturer's representative.

SAVE THESE INSTRUCTIONS!

Addresses and phone numbers are printed on the back cover.

1. GENERAL

1.1 SCOPE OF THE MANUAL

This instruction manual contains important information regarding the sequential steps required to add a back-up battery to a Universal ADC or LADC Series electric actuator. Please read these instructions carefully and save them for future reference.

1.2 SAFETY PRECAUTIONS

WARNING

DANGEROUS VOLTAGES ARE PRESENT INSIDE THE ACTUATOR COVER UNLESS THE POWER SUPPLY TO THE ACTUATOR HAS BEEN SHUT OFF OR DISCONNECTED. USE EXTREME CAUTION WHENEVER WORKING ON THE ACTUATOR WITH THE COVER REMOVED.

WARNING

WHEN REMOVING DC SUPPLY POWER, THE POSITIVE LEAD MUST BE DISCONNECTED FIRST; FAILURE TO HEED THIS WARNING MAY RESULT IN A BLOWN FUSE IN THE PROTECTION CIRCUIT ON THE BOARD.

WARNING

WHENEVER WORKING INSIDE THE ACTUATOR BE SURE TO FOLLOW ALL GUIDELINES, AND HEED ALL WARNINGS IN THIS OPTION KIT MANUAL. AS WELL AS TO READ AND FOLLOW THE INSTRUCTIONS SUPPLIED WITH THE ORIGINAL PRODUCT CAREFULLY AND HEED ANY ADDITIONAL WARNINGS.

WARNING

WHEN BATTERY IS CONNECTED TO BOARD, THE UNIT MAY DRIVE! BEWARE OF MOVEMENT OF THE FINAL DRIVE ELEMENT AND ANY LINKAGE BETWEEN IT AND THE ACTUATOR!

KEEP HANDS, OTHER PARTS OF THE BODY, TOOLS AND OTHER OBJECTS OUT OF THE WAY OF MOVING PARTS. FAILURE TO DO THIS MAY RESULT IN DAMAGE OR PERSONAL INJURY!

2. PARTS VERIFICATION AND INSTALLATION

2.1 PARTS VERIFICATION

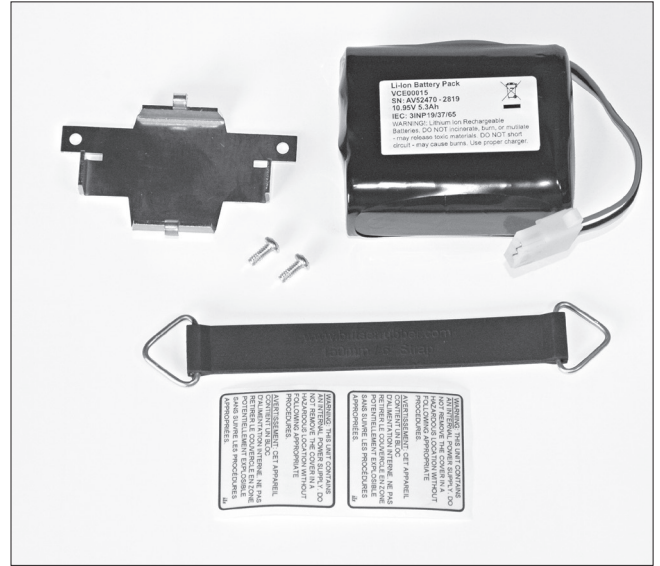


Figure 1.

Table 1 - VCK00020 ADC -Series (All)

Item #	Parts #	Description	QTY
1	VC001032	Screw, #6-32x3/8", Phillips, Self-tapping	2
2	VC001035	Label, "Battery Warning"	2
3	VCE00015	Battery, ADC-Series, Lithium Ion	1
4	VCM00074	Bracket, Battery Holder	1
5	VCM00075	Battery Hold-Down Strap	1

ADC-SERIES INSTALLATION (150-600 LB-IN)

1. Locate the VCK00020 upgrade kit for an ADC (if installing into a model beginning with "LADC", refer to LADC section of this manual).
2. Verify parts received to **Figure 1**, and **Table 1** shown above.
3. Inspect all parts and hardware to be certain that they are free of damage that may have occurred in shipping.
4. Collect the tools required, refer to the **Table 2**.

Table 2 - Tools Required

5 mm Hex wrench (ADC-Series)	9/64 inch Hex wrench
#1 Phillips screwdriver	Small Flat Blade Screwdriver
1/16 inch Hex wrench	#2 Phillips screwdriver
6 mm Hex wrench (LADC-Series)	

Step by step instructions for the addition of a battery to a Universal ADC-Series actuator:

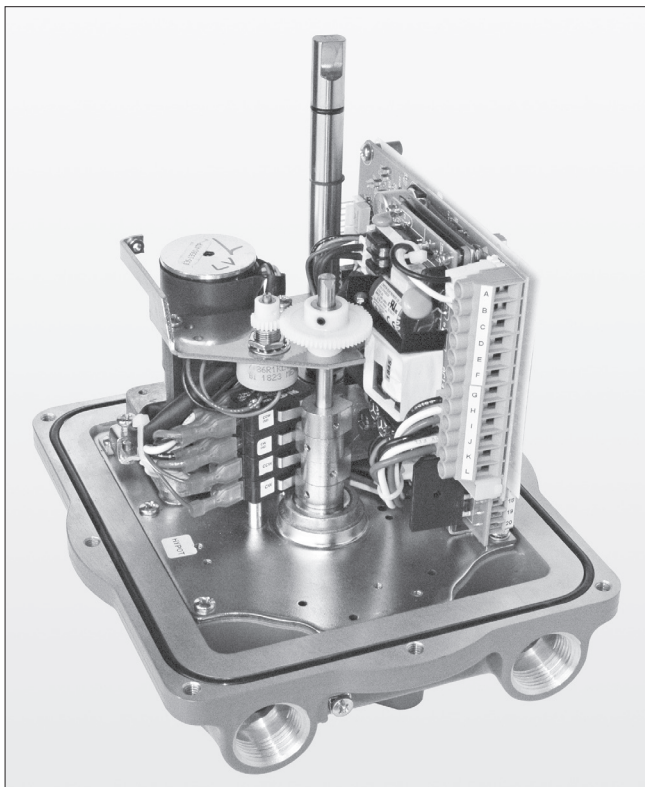


Figure 2.

Remove the actuator cover, using a 5 mm hex wrench to loosen the cover screws (note that the cover retains the screws; they do not need to be completely removed from the cover). The actuator will resemble **Figure 2** above.



Figure 3.

Locate the bracket mounting holes on the motor support plate (see **Figure 3**).

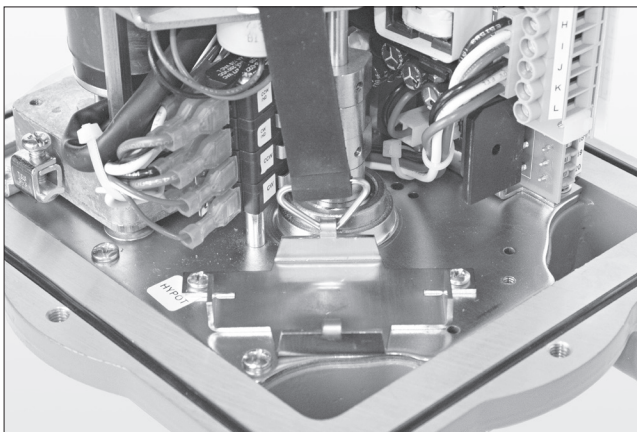


Figure 4.

Attach one side of the battery strap to the inner "hook" on the bracket. Using the supplied 6-32x3/8" screws, install the bracket for the ADC as shown.

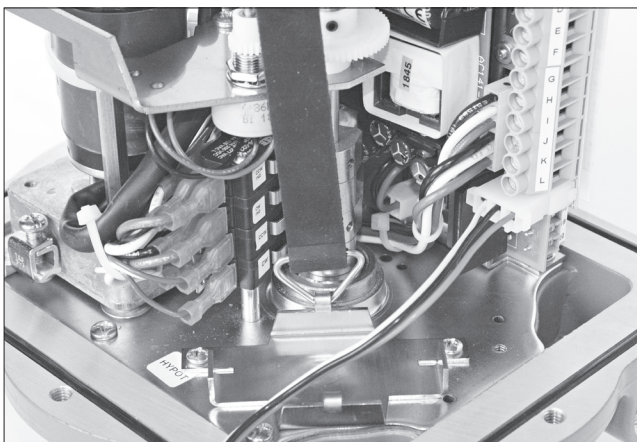


Figure 5.

Connect battery harness to the Universal control board, as shown. (Note the connector is "keyed" and can only be inserted one way)

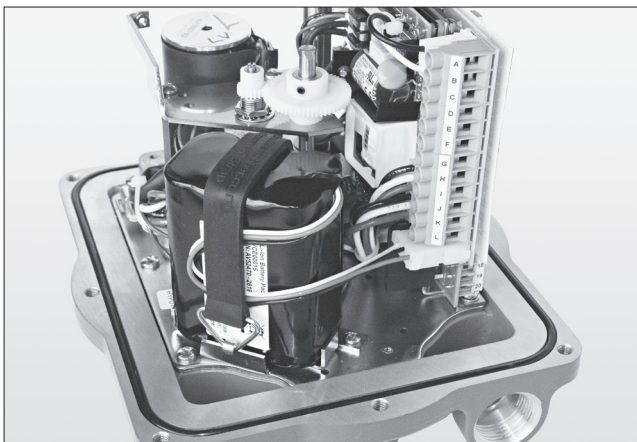


Figure 6.

Install the battery. Capture the excess battery harness underneath the battery strap and secure the strap to the outer 'hook' on the bracket, as shown.

The actuator is now ready to be re-calibrated and set up for your application. Please refer to product IMO for calibration and set up procedures.

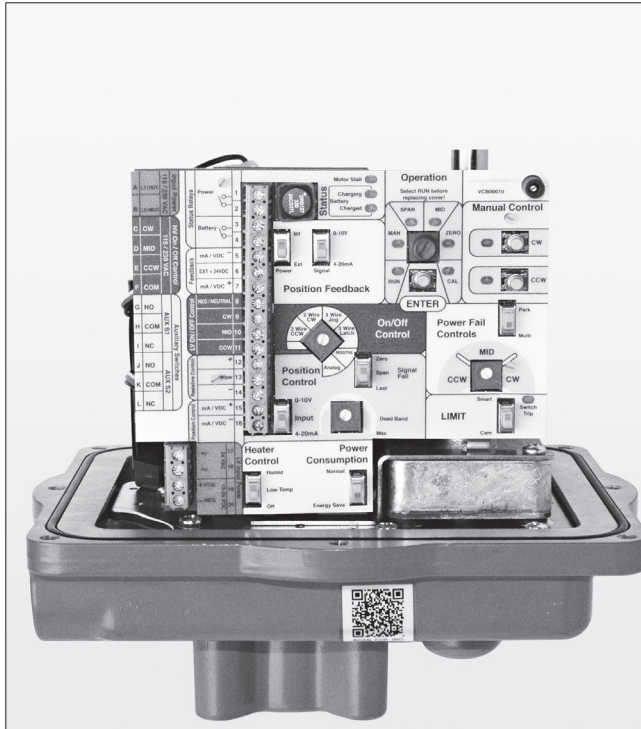


Figure 7.

Once the actuator is calibrated and set for the application you need to re-install the cover. Locate and remove the override shaft from the cover, and install it on the square shaft of the motor (if actuator is equipped with a handwheel override, place the bottom half of the two- piece shaft on the motor, and then the top half onto the bottom half before installing cover).

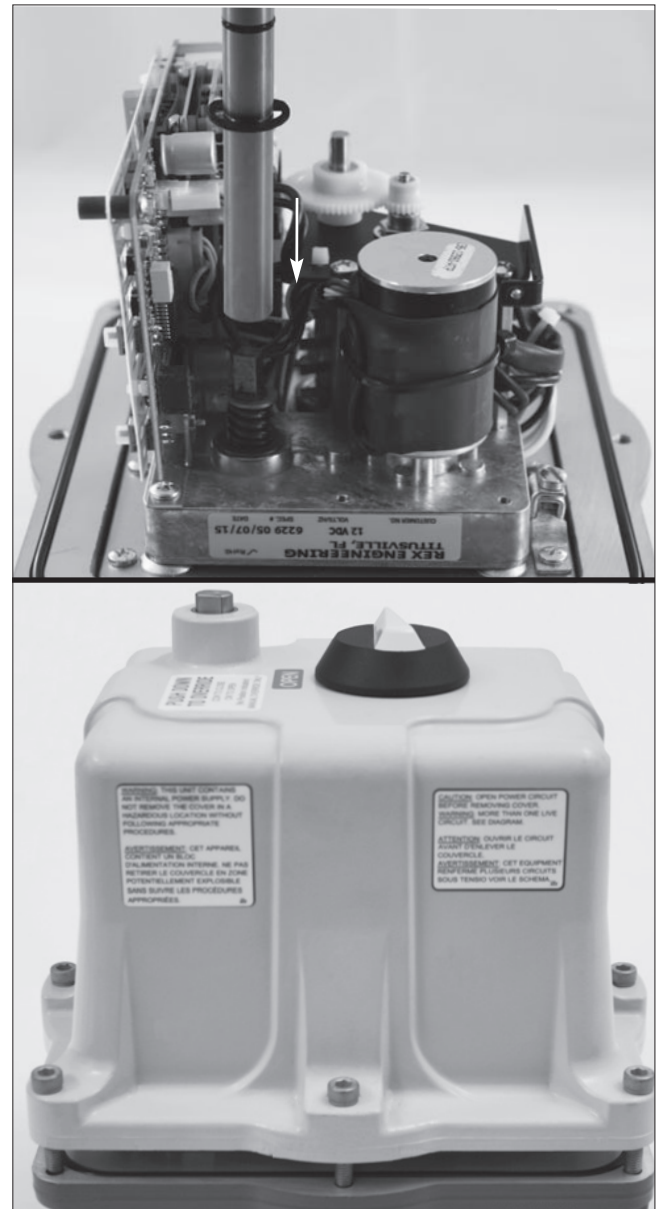


Figure 8.

Use the shaft to guide the cover onto the base and secure it with the screws that were previously loosened. Take care to ensure o-ring remains in groove and that it and any wires are not pinched when securing cover.

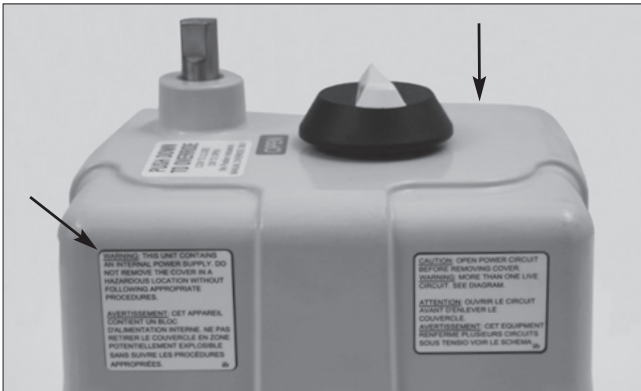


Figure 9.

Affix the "Battery Warning" labels to the cover at opposite corners, as shown.

2.2 PARTS VERIFICATION AND LADC-SERIES INSTALLATION (1000-3000 LB-IN)

1. Locate the VCK00020 upgrade kit for ADC (if installing into model beginning with "ADC", refer to ADC section of this manual).
2. Verify parts received to **Figure 1**, and **Table 1** shown above.
3. Inspect all parts and hardware to be certain that they are free of damage that may have occurred in shipping.
4. Collect the tools required, refer to the **Table 2**.

Step by step instructions for the addition of a battery to a Universal LADC-Series actuator:

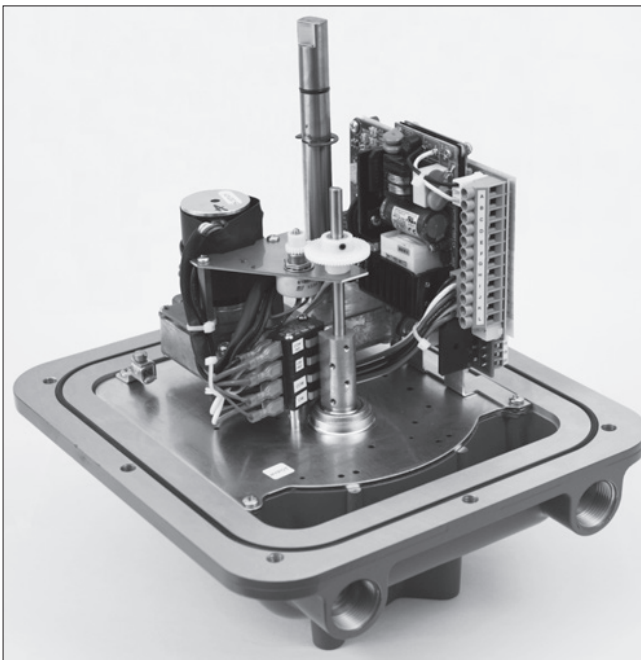


Figure 10.

Remove the actuator cover, using a 6 mm hex wrench to loosen the cover screws (note that the cover retains the screws; they do not need to be completely removed from the cover). The actuator will resemble **Figure 10**.

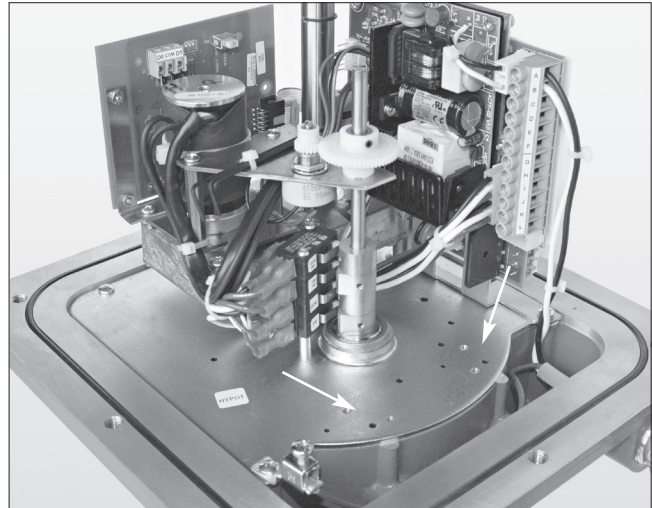


Figure 11.

Locate the bracket mounting holes on the motor support plate (see **Figure 11**).

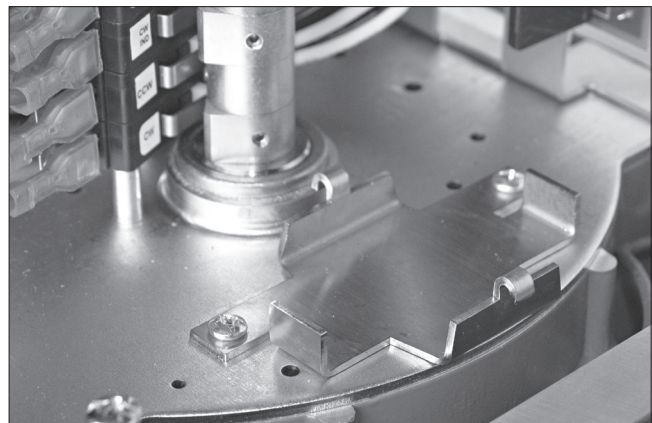


Figure 12.

Using the supplied 6-32x3/8" screws, install the bracket for the LADC as shown. Bracket must be mounted as shown in **Figure 12** above.

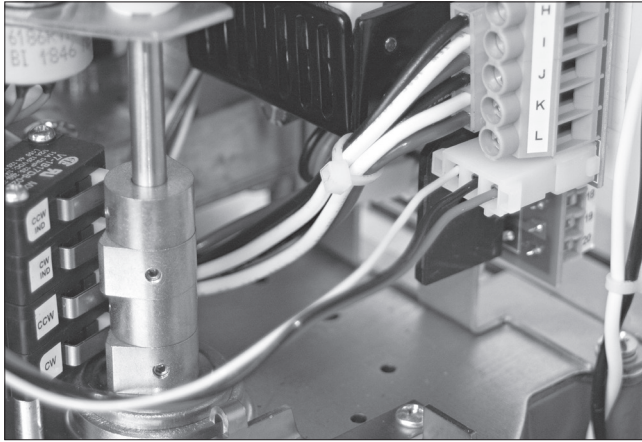


Figure 13.

Connect battery harness to the Universal control board, as shown. (Note the connector is "keyed" and can only be inserted one way)

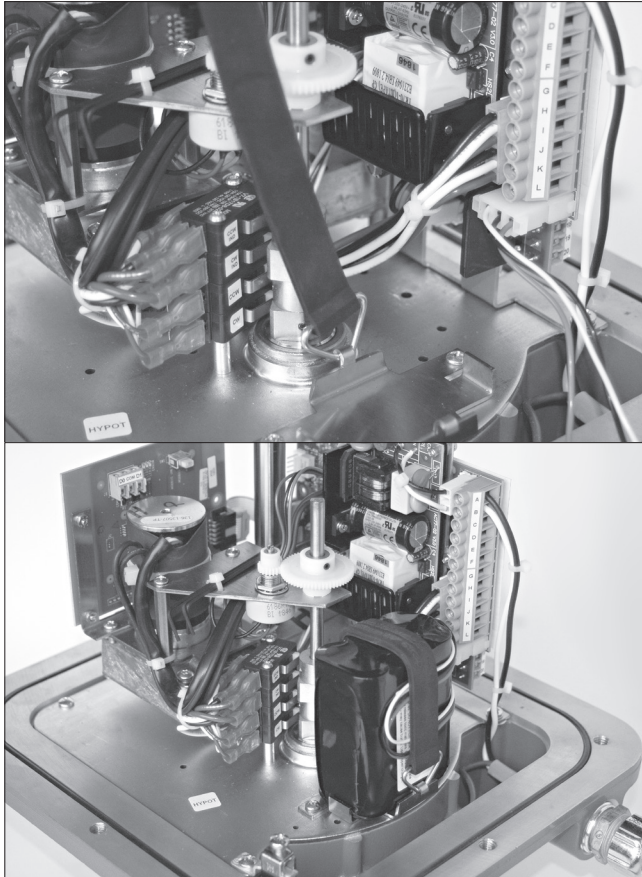


Figure 14.

Install the battery. Secure one side of the battery strap to the bracket, capture the excess harness underneath the strap, and then secure the strap to the other side of the bracket, as shown.

The actuator is now ready to be re-calibrated and set up for your application. Please refer to product IMO for calibration and set up procedures.

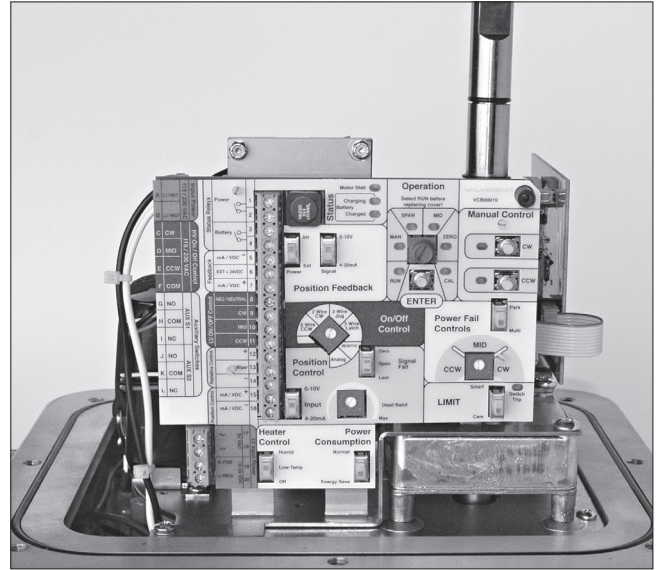


Figure 15.

Once the actuator is calibrated and set for the application you need to re-install the cover. Locate and remove the override shaft from the cover, and install it on the square shaft of the motor (if actuator is equipped with a handwheel override, place the bottom half of the two-piece shaft on the motor, and then the top half onto the bottom half before installing cover).

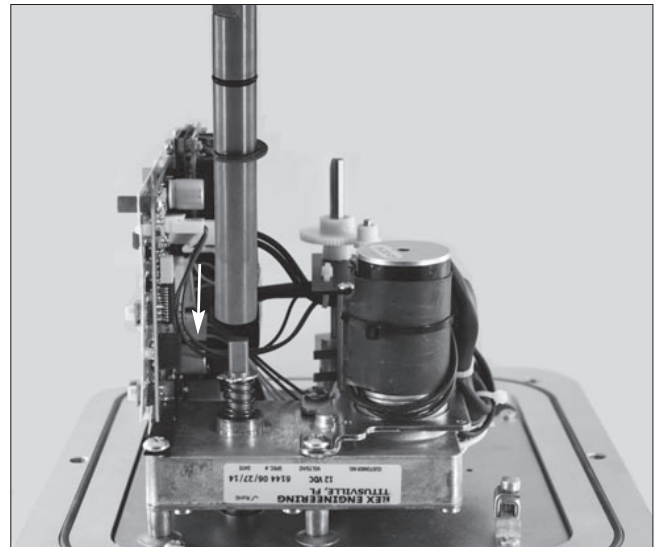


Figure 16.



Figure 17.

Use the shaft to guide the cover onto the base and secure it with the screws that were previously loosened. Take care to ensure o-ring remains in groove and that it and any wires are not pinched when securing cover.



Figure 18.

Affix the "Battery Warning" labels to the cover at opposite corners, as shown.

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