



## PE24GVA VALVE ACTUATOR

*Installation and Operation Manual*



### SAFETY SECTION

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#### **⚠ WARNING** *Risk of Fire or Electric Shock*

- To be connected to a Class 2 circuit only.
- All wiring must comply with all state and local electrical codes including the National Electrical Code and/or Canadian Electrical Code.

### PRODUCT DESCRIPTION

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The Intermatic® PE24GVA valve actuator is designed for today's pool automation systems. It is fully adjustable with a simplified setup. This valve actuator was designed specifically with the installers and pool owners in mind. The spin and set cams make it a breeze to work with.

#### **Specifications**

Electrical Ratings:

- 24 V, 60 Hz, 0.75 A

Normal Operation Duty Cycle:

- 1 minute ON (Max), 8 minutes OFF (Min)

These values may be temporarily exceeded during installation testing and adjustment.

## INSTALLATION

### Mounting Actuator on Top of Pool and Spa Diverter Valve

1. Unscrew the hold-down knob and remove handle from valve shaft. Existing knob will be replaced with knob provided with Intermatic actuator.
2. With a Phillips screwdriver, remove the four screws from the valve body as shown in Figure 1.
3. Turn the actuator over and observe the teeth as shown in Figure 2.
4. Place the actuator over the valve shaft so the small tooth engages with the small slot in the valve shaft. See Figure 2.
5. Rotate the actuator until the actuator posts line up with the four holes so it matches one of the mounting positions shown in Figure 3.
6. Use the supplied four long stainless steel screws to attach the actuator to the valve.
7. Use hold down knob provided with Intermatic actuator to connect the handle to the actuator shaft. Do not overtighten. Finger tighten only.
8. Connect power supply cord to a CLASS 2 CIRCUIT ONLY, rated 24 V nominal, 4 A or 100 VA maximum.

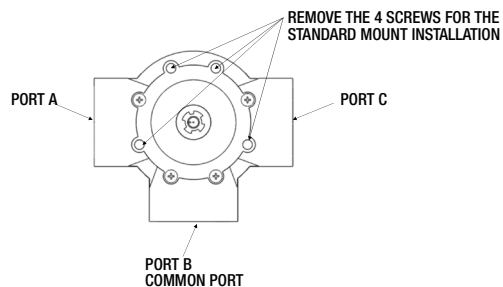


Figure 1.

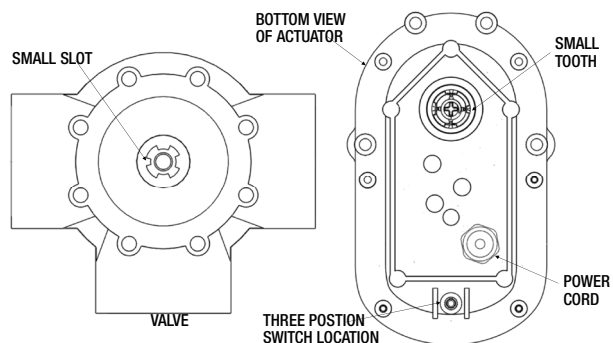


Figure 2.

### Mounting Options

Standard Plumbing - A three-port valve is the port B (middle) being the incoming (common) port and A and C ports are the outlet ports (see Figure 1).

Standard Actuator Mounting - The main body of the actuator is over port B as shown in position 1 of Figure 3.

The actuator can also be mounted on top of a valve in four different positions as shown in Figure 3. Depending on the plumbing of the valve and mounting position of the actuator, the cams inside the actuator may have to be reset. (See next section.)

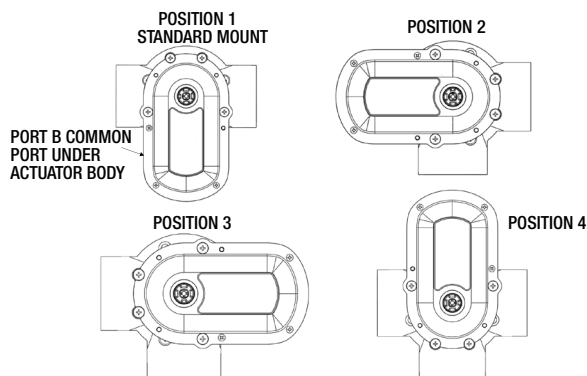


Figure 3.

### CAM SETTING

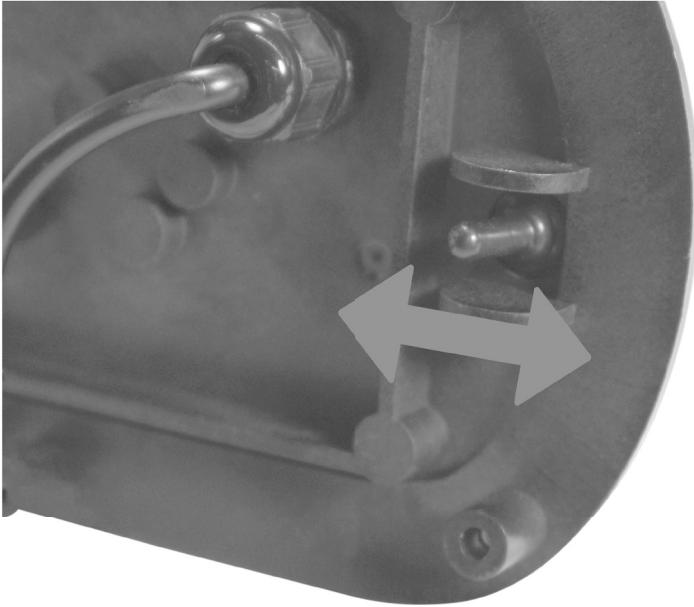
For cam adjustment first remove the hold down knob and handle (see FIG 4). Then remove four screws and actuator lid to locate the cam/motor compartment (see FIG 4). Next, follow the step by step illustrations as shown below.

**NOTE:** Factory settings: If mounted in POSITION 1 (STANDARD MOUNT in FIG 3) the cams will stop the valve blocking PORT A in one direction and PORT C in the other direction. Please be sure to adjust the cams to match your setup.

Scan for Valve Actuator Cam Setting Video

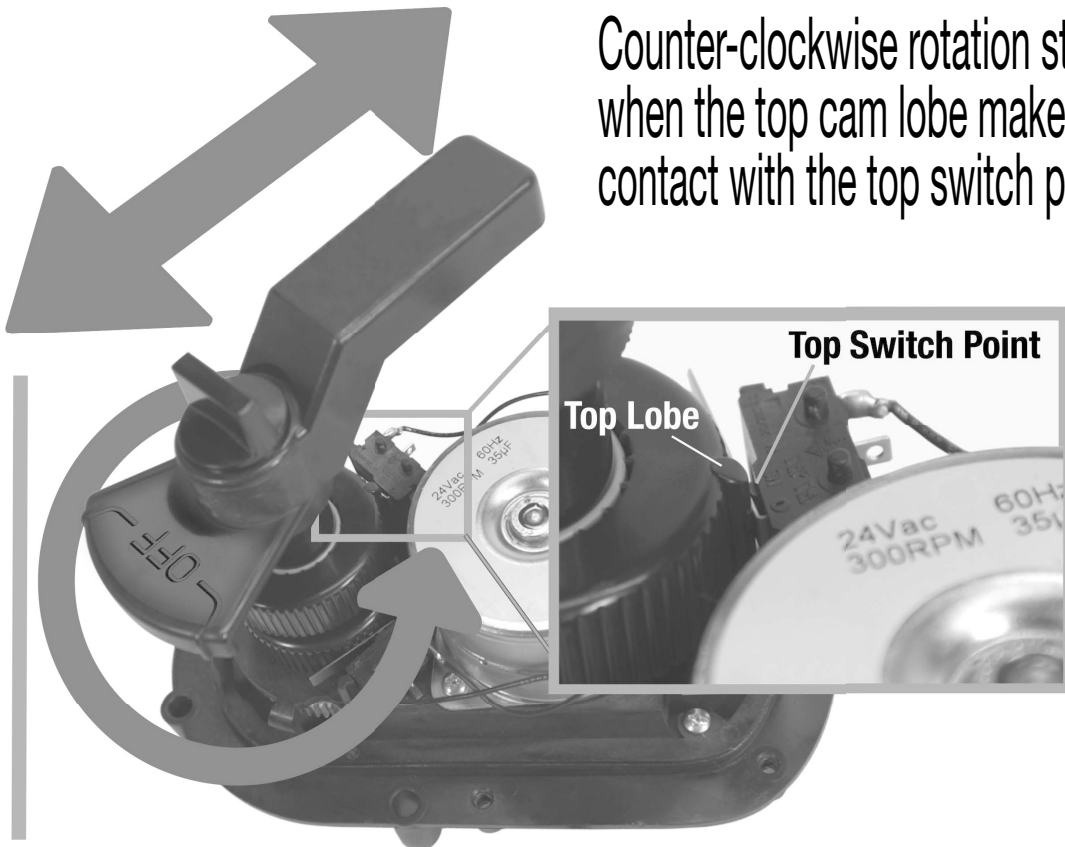


1.



Activate the bottom switch to check the counter-clockwise stopping point.

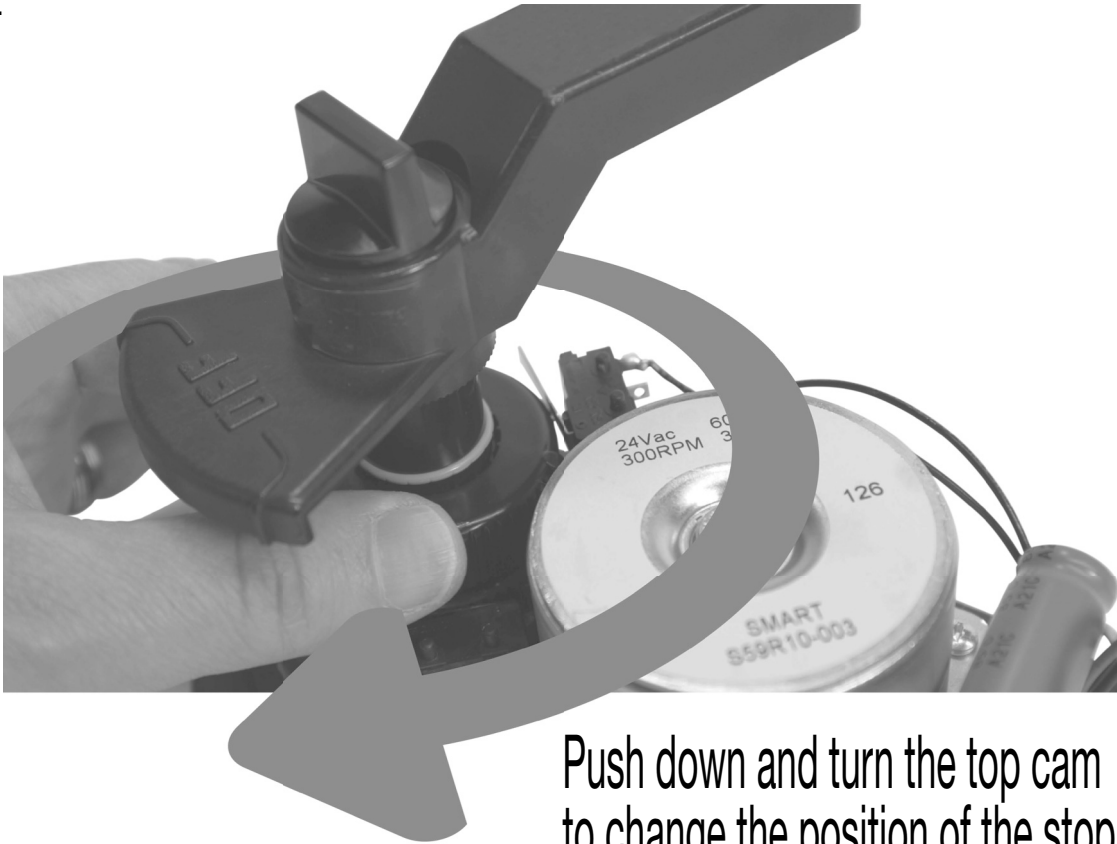
2.



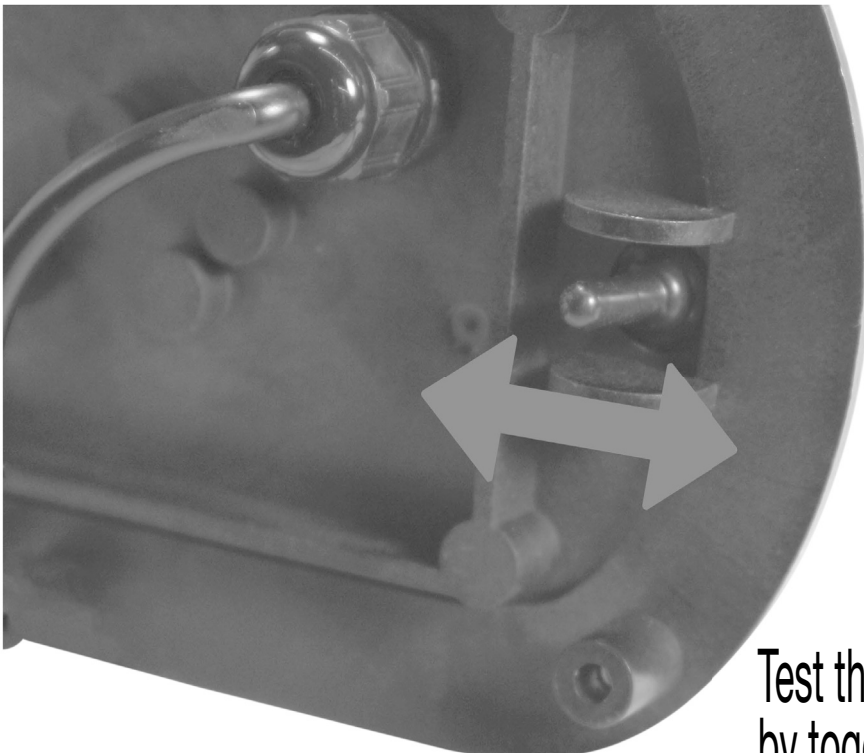
Counter-clockwise rotation stops when the top cam lobe makes contact with the top switch point.

In this example, the flow has not been completely diverted at the stopping point.

3.



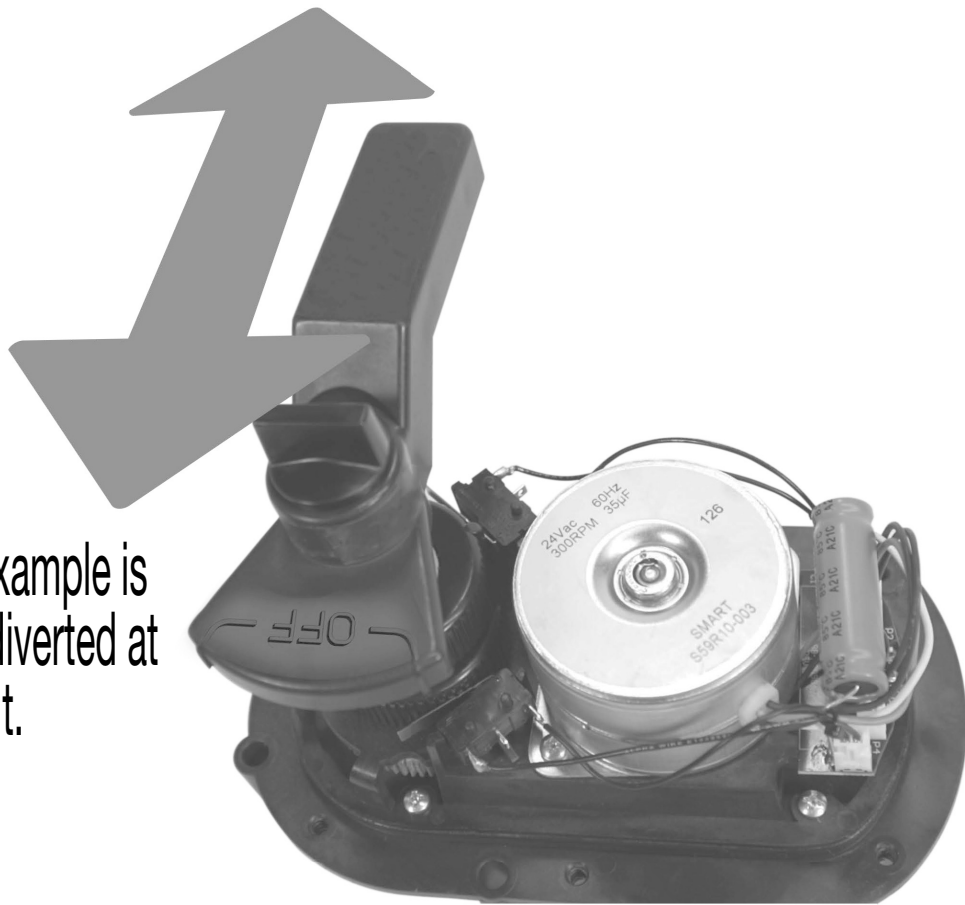
4.



Test the position of the stopping point by toggling the bottom switch.

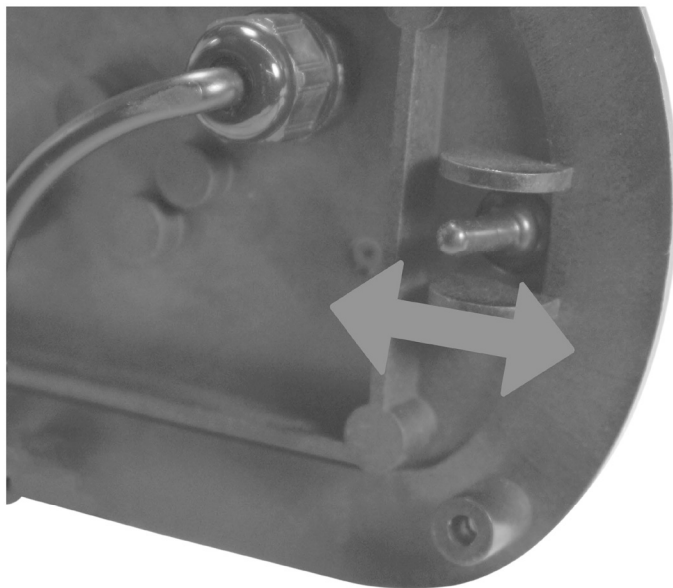
5.

The flow in this example is now completely diverted at the stopping point.

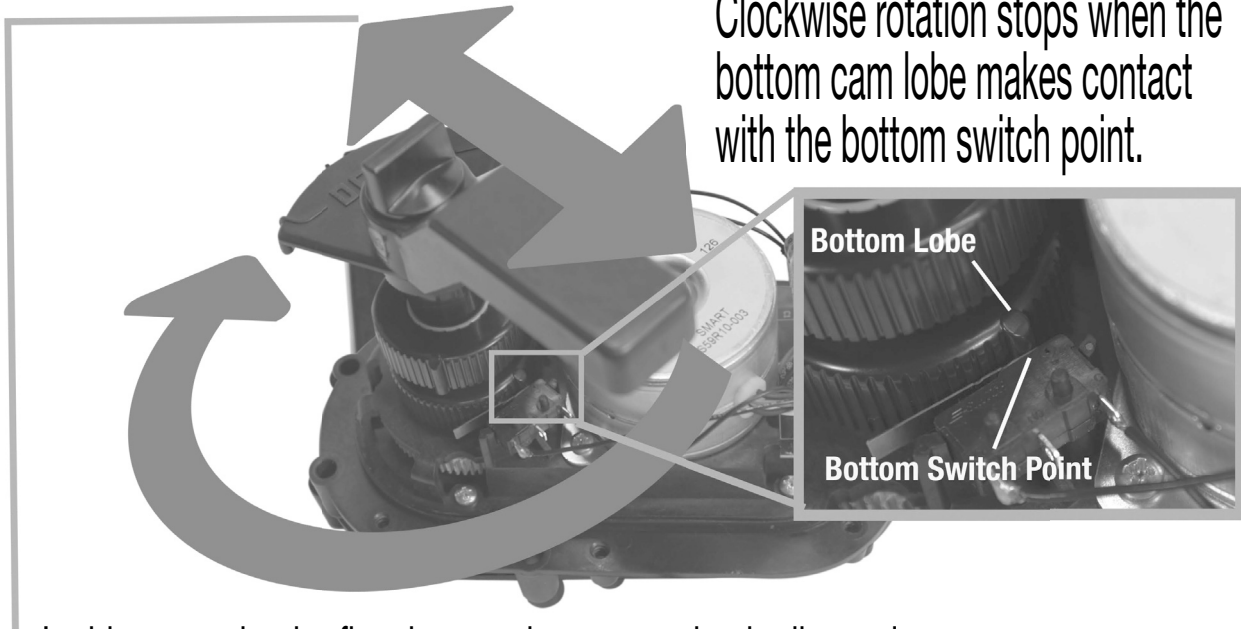


6.

To check the clockwise stopping point, activate the bottom switch in the opposite direction.



7.



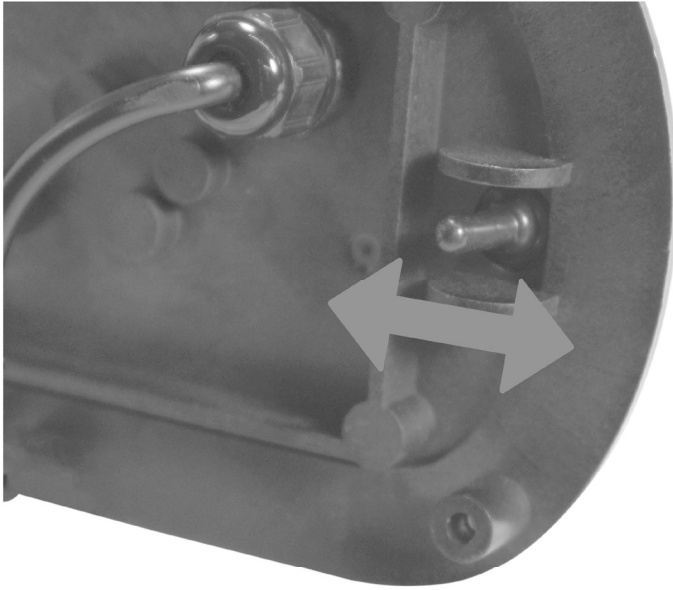
In this example, the flow has not been completely diverted at the stopping point.

8.



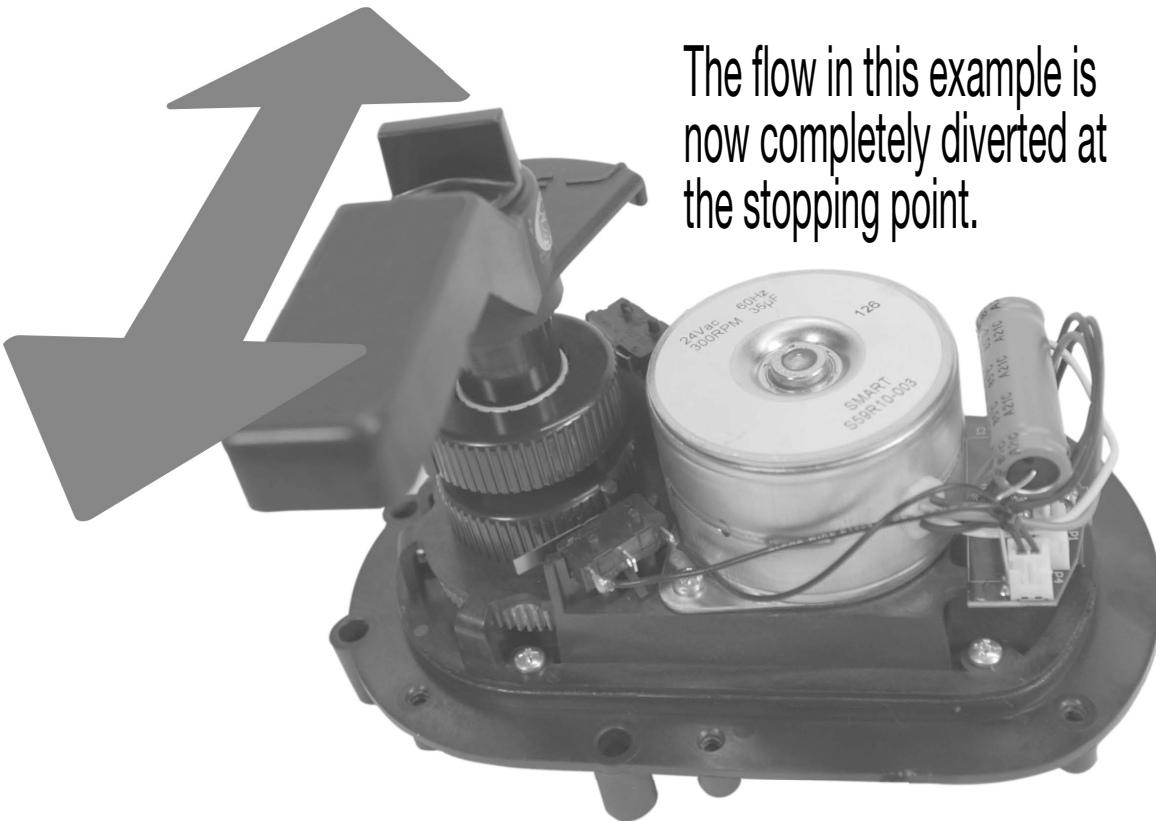
Push down and turn the bottom cam to change the position of the stopping point.

9.



Test the position of the stopping point by toggling the bottom switch.

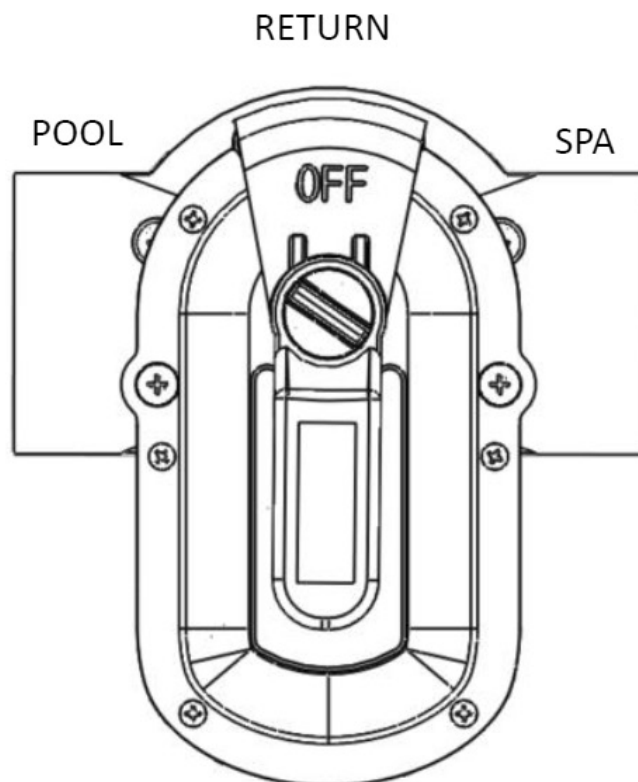
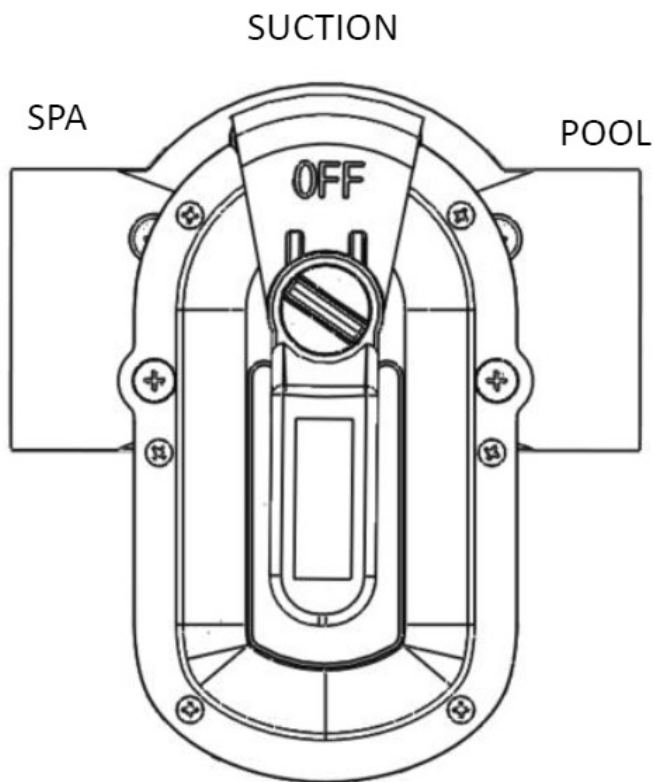
10.



The flow in this example is now completely diverted at the stopping point.

## SYNCHRONIZATION

If one or more of the valve actuators are out of sync and rotating in the opposite direction that it should, flip the three position switch located on the bottom of the actuator to the extreme opposite position to change the actuator rotation. This will make it rotate opposite of what it is. You can not fix this by just adjusting the cams.



## OPERATION

During the normal operating season, the valves may need to be rotated manually, such as draining or filling the pool/spa. The valves can be rotated electrically or manually. If the system has power, rotate electrically. If no power, rotate manually.

### Rotating Valve Actuator Electrically

1. On the bottom of the Actuator, toggle the valve switch until the desired rotation is reached. See Figure 7 on this page.
2. Toggle the switch to the center (OFF) position to stop rotation.
3. Toggle the switch back to its original position.

### Rotating Valve Actuator Manually

1. On the bottom of the valve actuator, toggle the switch to the center (OFF) position.
2. Loosen the locking knob approximately four full turns.
3. Press down firmly on the locking knob to disengage the actuator gear train from the valve shaft.
4. Turn the handle to rotate the actuator valve to an Auto ON position.
5. Pull up on the handle and turn it gently back and forth to return to the operating (drive) condition.
6. Tighten the locking knob on the top of the handle and toggle the switch to its original Auto ON position.

## MAINTENANCE

### Servicing the Valve Actuator

The valve actuator seals need to be greased once a year.

UNSCREW LOCK KNOB AND REMOVE KNOB AND HANDLE. REMOVE SCREWS AND COVER. LUBRICATE WITH SILICONE GREASE IN ONE OR BOTH OF THE LOCATIONS AS SHOWN.

**UNSCREW LOCK KNOB AND REMOVE KNOB AND HANDLE. REMOVE SCREWS AND COVER. LUBRICATE IN ONE OR BOTH OF THE LOCATIONS AS SHOWN.**

**USE BRUSH OR FINGER TO LUBRICATE THE GASKET INSIDE THE TOP COVER.**

**LUBRICATE THE SHAFT ON THIS SURFACE WITH A BRUSH OR FINGER**

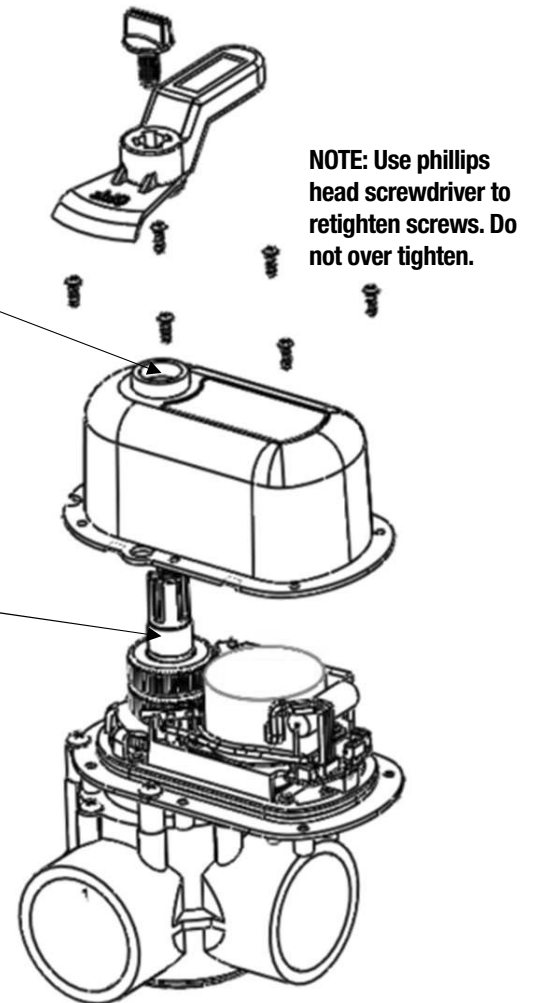


Figure 4

### LIMITED WARRANTY

Warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased or (b) completing a warranty claim online at [www.intermatic.com](http://www.intermatic.com). This warranty is made by: Intermatic Incorporated, Customer Service 1950 Innovation Way, Suite 300, Libertyville, IL 60048. For warranty service go to: <http://www.Intermatic.com> or call 815-675-7000.

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