

**RAP R61: Limit Switch Adjustment Procedure**

Limit Switch-107640-SW4

05/09/11

# **SW4 Series Limit Switch Adjustment Procedure**

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## ***SERVICE***

Shafer rotary position indicating switches, Switchpak Models SW4, are supplied with a maximum of 8 switches, adjustable through 360 angular degrees of shaft rotation. The enclosure is suitable for installation in Class I, Div. 1 Group C and D Hazardous Locations.

## ***SETPPOINT ADJUSTMENT***

**WARNING:** *Disconnect Electrical Power Supply Before Beginning Procedure*



1. Determine valve operator position, open or closed, by comparing arrows on the Switch Position Indicator to name tags on operator.
2. Once position is determined, remove the limit switch assembly's Dome Cover by rotating counter clockwise from base.
3. Located on the actuator shaft are both Actuator Cams and Spacer Rings. The Spacer Rings have a smooth finish on the outer edge while the Actuator Cams have teeth around the edge and an extended lobe on a portion of the edge to cam actuate the switch. (See illustrations on sheet 2 and 3.)
4. Setpoints are factory set per wiring diagram. To adjust, loosen the top Jam Nut by  $\frac{1}{4}$  to  $\frac{1}{2}$  turns counter-clockwise. Flats are provided on the camshaft for loosening the Jam Nut.
5. The Actuator Cams are spaced so that they will operate one limit switch only. The limit switches should be actuated from the Ramp Side of the actuating lever on the switch.
6. With the valve operator position determined, rotate the Actuator Cams so they trip the limit switches on the appropriate side. The Actuator Cams can be adjusted by hand, using a standard screwdriver. The Spacer Rings are keyed to the shaft. This allows one Actuator Cam to be adjusted without disturbing the Cam above or below.

**NOTE:** *The operator will rotate in a clockwise direction to close and counter-clockwise to open the valve. Open Side switches are identifies as ZSOA through ZSOD and Close Side switches as ZSCA through ZSCD.*

7. With one set of cams positioned, partially tighten the Jam Nut and rotate the valve operator to the end of the opposite stroke.

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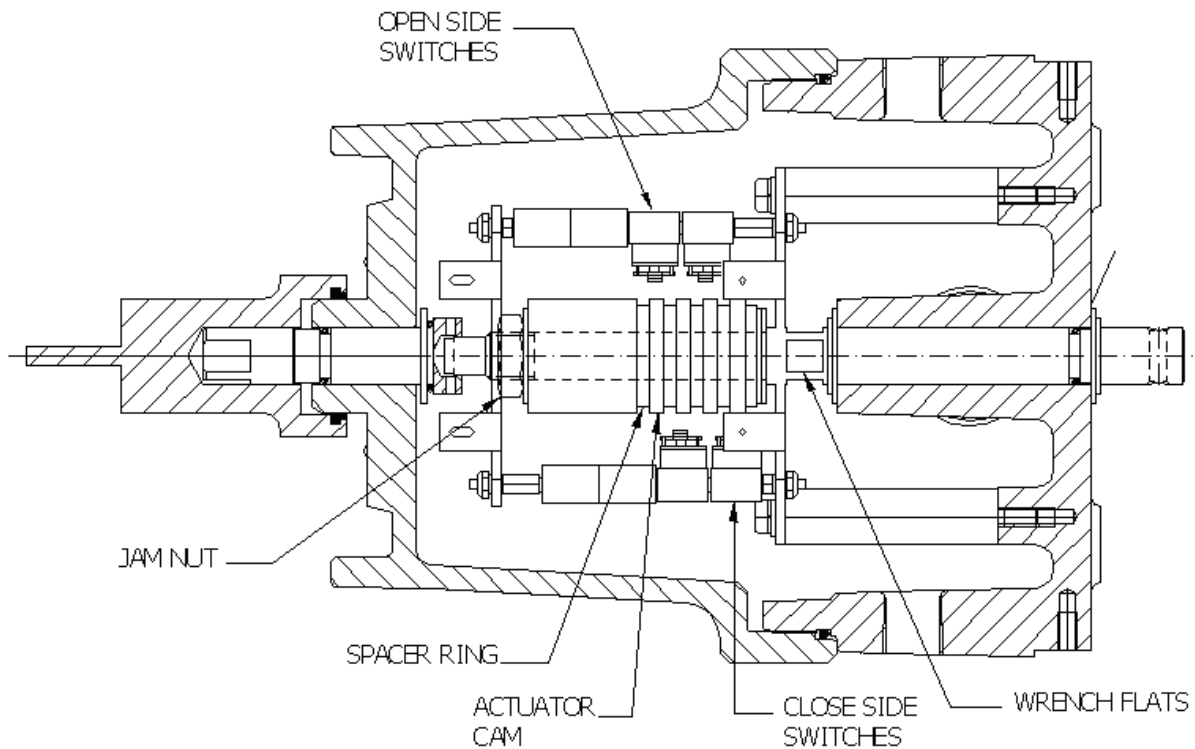
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# Sw4 Series Limit Switch Assembly

8. Loosen the Jam Nut and repeat step #6.
9. With both sets of Cams positioned properly, tighten the Jam Nut. Torque the Jam Nut to 35 Foot Lbs.
10. Before reassembling the Limit switch assembly, rotate the valve operator open and closed to verify proper switch settings.
11. If the switch settings are found to be proper, reinstall the limit switch Dome Cover, Weather Seal and Position Indicator.
12. Should the switch settings not be correct, loosen the Jam Nut and readjust accordingly.

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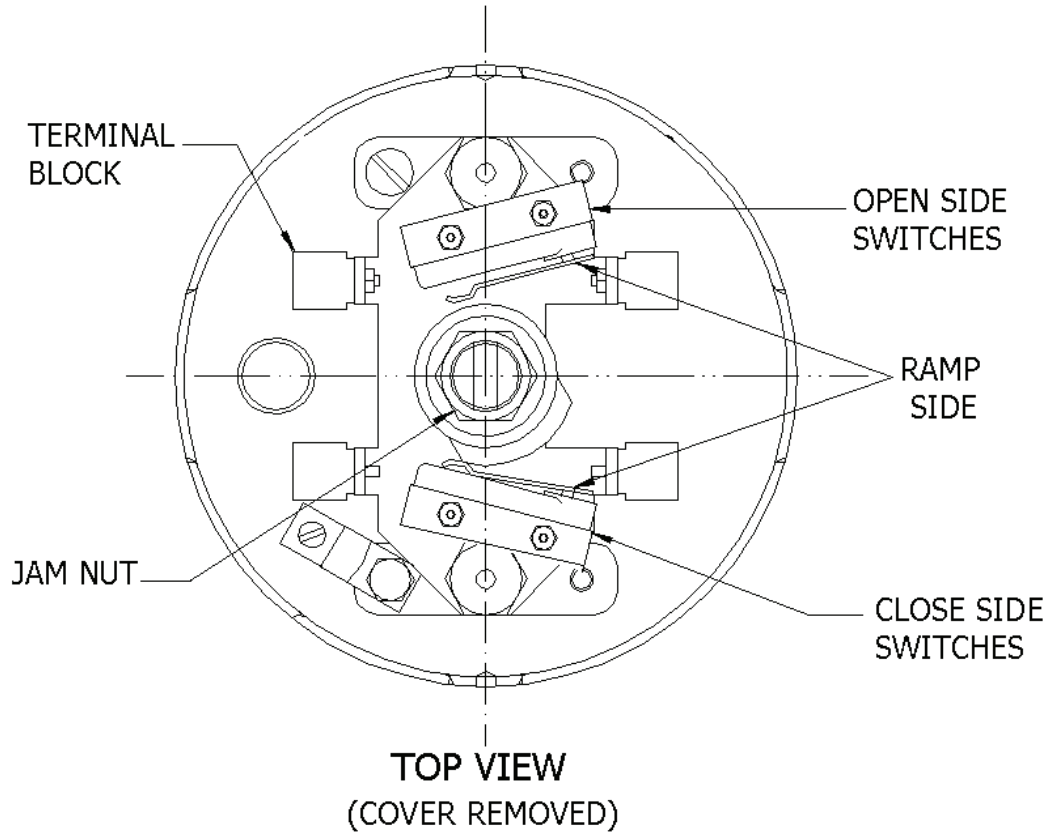


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If any further information is required, please feel free to contact:

EMERSON PROCESS MANAGEMENT VALVE AUTOMATION, INC.  
2500 Park Avenue West  
Mansfield, Ohio 44906  
Phone: (419) 529-4311  
Fax (419) 529-3688

Please visit our website for up to date product data. [www.shafervalve.com](http://www.shafervalve.com)

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