



# Mode 4343

## Differential Pressure Switch

### FEATURES

- EXPLOSION PROOF
- ENVIRONMENTALLY SEALED UL / CSA LISTED MICRO SWITCH
- EASY FIELD ADJUSTMENT
- 1/2" NPT CONDUIT CONNECTION OR LIGHT TIGHT HUB
- GULF PROOF FINISH



### SENSES

- COOLANT LOSS
- EXCESSIVE AERATION
- WORN PUMP IMPELLER BLADES
- WATER PUMP FAILURE
- LOSS OF PUMP PRIMING PRESSURE

### APPLICATION

Protection of engines and other industrial equipment in case of water circulation slow down or failure.

### HOW TO ORDER

To order, construct the appropriate Model Number from the Model Code Table on the back side of this form, or specify the following information

1. AMOT Model 4343, table A
2. Pressure Range, see table B
3. Pressure Connection, see table C
4. Switch Contacts, see table D
5. Electrical Connection and length, see table E
6. Cable type, see table F

This pressure switch is used for sensing loss of coolant due to hose breakage, poor water flow due to excessive cavitation or worn pump impeller blades. It senses the pressure difference between each side of the water pump. Upon a dangerous condition, the pressure differential will decrease, causing the switch to trip and shutdown the engine. This Switch is "Gulfproofed" (corrosion protection for seacoast atmospheres).

### INSTALLATION AND ADJUSTMENT

The 4343 valve is tube mounted at the highest practical point in the water system, preferably above the water line to prevent contaminants from entering the valve. Two mounting holes are provided on the valve as shown on the dimensional drawing. 4343 Valve port stamped P2 is piped to water pump discharge. The port stamped P1 is piped to water pump suction.

To adjust the Valve, remove the Seal Wire going through the adjusting screw and turn it clockwise until the engine shuts down, (with the engine running at low idle speed.) Then turn the screw counterclockwise about one-half turn. Start the engine and run it several times. When it is determined that the setting is right, install the Seal Wire and squeeze the seal with pliers to lock the seal. One turn of the adjusting screw changes the setting approximately 1 psi.

4343B A 1 1 1 C 0 MTO

Table A	
Basic Model Code	

Table B	
Pressure Range	
Code	Range
1	0.5-3.6
2	2.0-10.0

Table C	
Pressure Connection	
Code	Type
1	1/4 NPT
2	1/4 BSP (PI)

Table D	
Switch Contacts	
Code	Type
1	Gold
2	Silver

Table E		
Conduit Connection / Wire Length		
Code	Connection	Wire Length
A	1/2 NPT	18 Inches
B	1/2 NPT	15 Feet
C	1/2 NPT	25 Feet
D	Reinforced	18 Inches
E	Reinforced	15 Feet
F	Reinforced	25 Feet

Table F	
Cable Type	
Code	Cable
0	3 conductor W/Ground Beldfoil. Alum/Polyester Shield, W/85% T.C. Braid Teflon Jacket, 18 AWG

Special Requirements

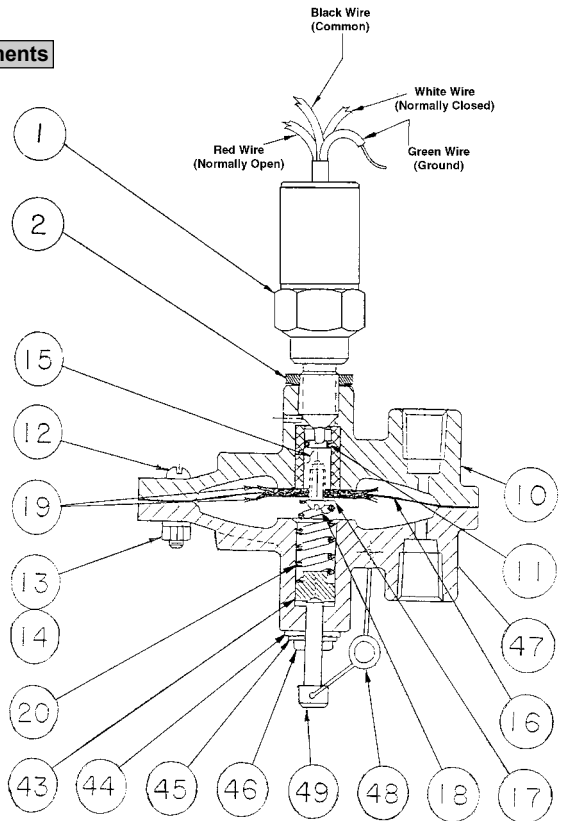
## SPECIFICATIONS

Housing Material ..... Aluminum  
 Diaphragm Material ..... Buna N  
 Maximum Pressure on Diaphragm ..... 60 psi  
 Adjustable Differential  
 Pressure Range 0.5 to 3.6 psid @ 10 psi Nominal  
 Reset Differential ..... 0.6 ± 0.1 psi  
 Maximum Pressure at Valve "In" Port ..... 90 psi  
 Net Weight ..... 1-1/4 lb  
 Wire Type ..... Shielded 4 Conductor, 20 Gauge,  
 ..... Teflon™ Jacket  
 Electrical Switch Body ..... Black Anodized Aluminum  
 Switch Body Locking Nut ..... Plated Steel  
 Switch Adaptor Body ..... Brass  
 Maximum Ambient Temp. .... 250°  
 Internal Micro Switch  
 Contact Arrangement ..... SPDT  
 Design temperature ..... -65° to 400°F  
 UL / CSA Listed  
 Gold Contacts ..... 1A @ 125 Vac  
 Silver contacts ..... 7A @ 250 Vac  
 Switch Approvals  
 Explosion Proof: CSA, Class 1, Div. 1 Groups B, C & D  
 Suitable for Div. 1 hazardous area installation with  
 Intrinsically Safe Circuits (I.S.)

### Wire Color Codes

Black ..... Common  
 Red ..... Normally Closed (N.C.)  
 White ..... Normally Open (N.O.)  
 Drain Wire ..... Grounded to Switch Body  
 All wiring should be in accordance with the governing  
 electrical code(s).

When communicating with AMOT regarding operation of a control, always  
 give the Model Number and Serial No. If ordering parts, also include the  
 Description, Part No. and quantity desired.



Parts List	Ref. No.	Part No.	Qty.	Description
1	20271XA012	1	Switch Assembly	
1	20271XA022	1	Switch Assembly	
1	20271XA032	1	Switch Assembly	
1	20271XA012	1	Switch Assembly	
1	20271XA022	1	Switch Assembly	
1	20271XA032	1	Switch Assembly	
1	20271XB012	1	Switch Assembly	
1	20271XB022	1	Switch Assembly	
1	20271XB032	1	Switch Assembly	
1	20271XB012	1	Switch Assembly	
1	20271XB022	1	Switch Assembly	
1	20271XB032	1	Switch Assembly	
2	3602	1	Nut	
10	7426X	1	Diaphragm Housing Assembly	
10	7426X001	1	Diaphragm Housing Assembly	
11	1625	1	O-Ring	
12	71L005	6	Screw	
13	101	6	Lockwasher	
14	518	6	Nut	
15	7429	1	Piston	
16	7784	1	Diaphragm	
17	853L010	1	Seal	
18	851L001	1	Screw	
19	7427	2	Diaphragm Follower	
20	6612L034	1	Spring	
20	7154L063	1	Spring	
43	7432	1	Spring Seat	
43	9919	1	Spring Seat	
44	714L003	1	Seal	
45	1521	1	Washer	
46	360	1	Nut	
47	7431	1	Diaphragm Cover	
47	7431L001	1	Diaphragm Cover	
47	9920L001	1	Diaphragm Cover	
47	9920L002	1	Diaphragm Cover	
48	209	1	Wire Seal	
49	852L001	1	Screw	

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