



Mode 4143

Differential Pressure Valve



APPLICATION

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

SENSES

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

How to Order

Specify Model No. 4143A001.
Adjustments are made at installation.

AMOT Designs and tests all products to ensure that high quality standards are met. Carefully follow AMOT's installation and maintenance instructions; failure to do so could result in damage to equipment being protected.

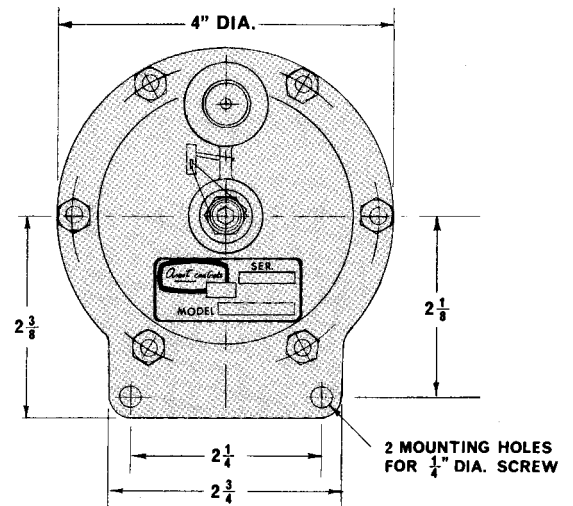
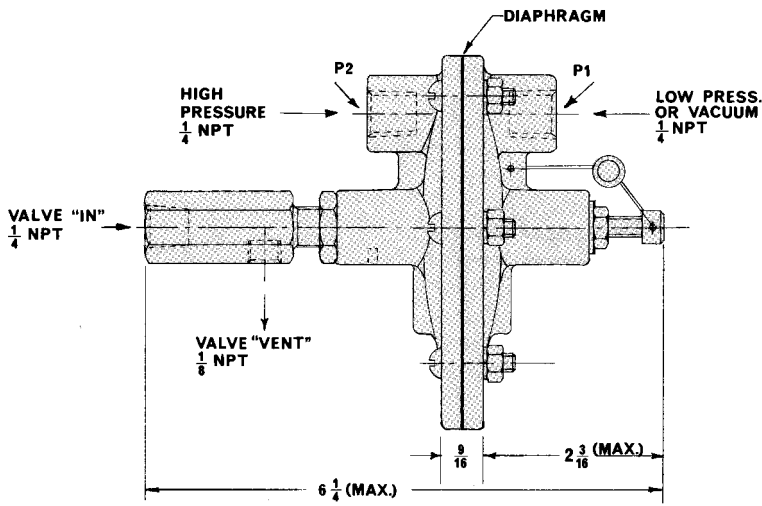
This valve is used for sensing loss of coolant due to hose breakage, poor water flow due to excessive cavitation or worn pump impeller blades. It senses the pressure difference between each side of the water pump as shown on the piping diagram on the other side of this page. Upon a dangerous condition, the pressure differential will decrease, causing the valve to vent the lubricating oil pressure supply line to the AMOT 2800 Master Safety Control, causing it to trip and shutdown the engine. When the valve is used for sensing loss of pump priming pressure, run a line from the pressure outlet of the pump to Valve Port P2, and allow Port P1 to be vented to atmosphere. This Valve is "Gulfproofed" (corrosion protection for seacoast atmospheres).

INSTALLATION AND ADJUSTMENT

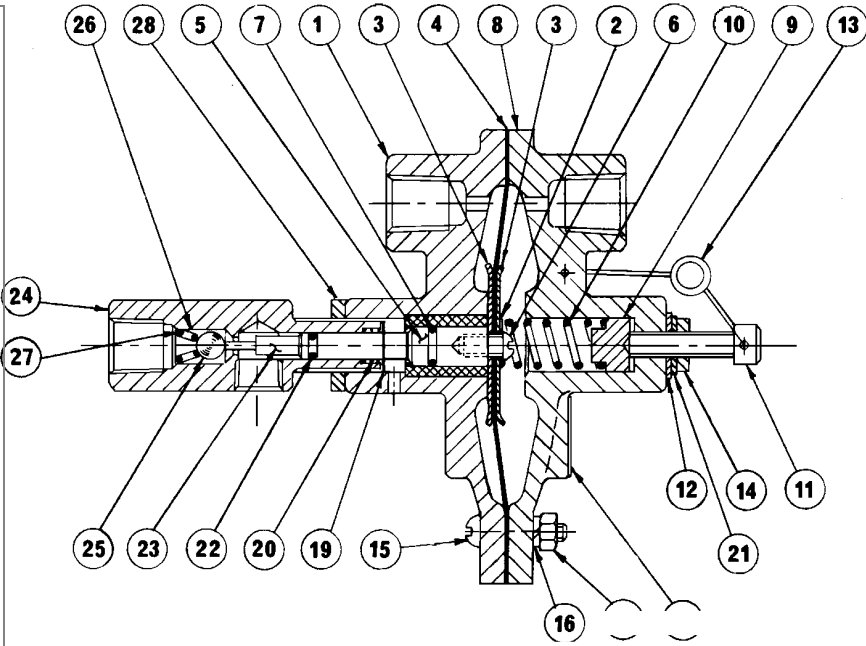
The installation should be made according to the piping diagram on the other side of this page. Two mounting holes are provided on the Valve as shown on the dimensional drawing.

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.

CAUTION: Do not turn or move Valve Body, Ref. No. 24, as this setting. If Valve Body must be removed, readjust as follows. Turn Adjusting Screw (11) in half way. With air pressure at the Valve Body IN port, screw the Valve Body in until it just starts to vent. Screw in 1 full turn and tighten lock nut (28). Functionally test to assure that the valve vents with no pressure at P2 and seals when there is pressure at P2.



Ref. No.	No. Req'd.	Description	Part No.
1	1	Diaphragm Housing Assy.	7426X
2	1	Seal	853L010
3	2	Diaphragm Follower	7427
4	1	Diaphragm	7784
5	1	Piston	7429
6	1	Screw	851L001
7	1	O-Ring	1625
8	1	Diaphragm Cover	7431
9	1	Spring Seat	7432
10	1	Spring	6612L034
11	1	Adjustable Screw	852L001
12	1	Seal	714L003
13	1	Wire Seal	209
14	1	Nut	85
15	6	Maching Screw	71L005
16	6	Lockwasher	101
17	6	Nut	518
18	1	Nameplate	7433
19	1	Retaining Ring	903L025
20	1	Spring	6612L029
21	1	Flat Washer	1521
22	1	O-Ring	251
23	1	Pushrod	7434
24	1	Valve Body	7435
25	1	Ball	687
26	1	Spring	6561
27	1	Retaining Ring	361L002
28	1	Nut	3605

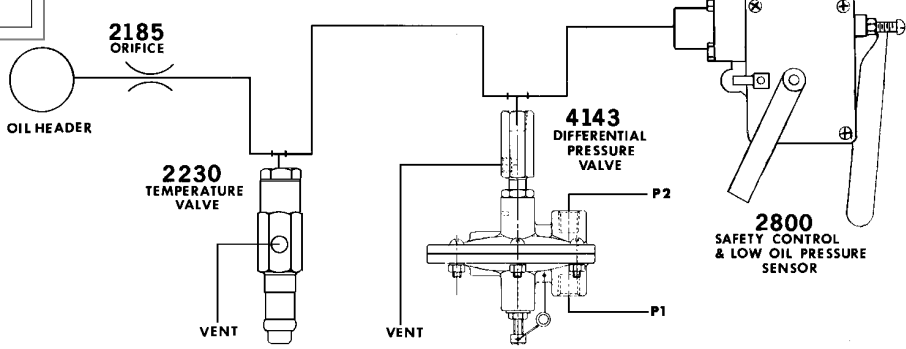


This parts list effective with Valve Serial No. B711.

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

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.



4143 Valve Port Stamped P2 is piped to water pump discharge. Port stamped P1 is piped to water pump suction. The 4143 Valve is to be mounted at the highest practical point in the water system, preferably above the water line to prevent contaminants from entering the valve.

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