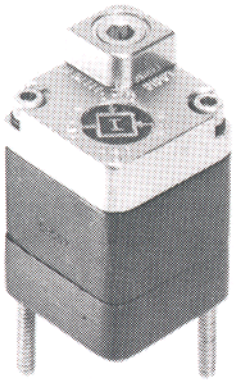
PARTS LIST

ARO PNEUMATIC LOGIC CONTROL
LOGIC FUNCTION ASSEMBLY

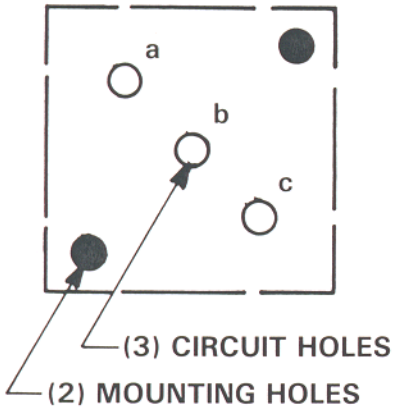
INHIBITOR LOGIC ELEMENT

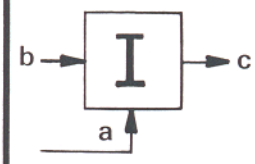
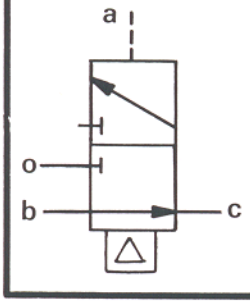
MODEL 59800

FORM 718-2
REV. 9-13-91



CIRCUIT PATTERN



LOGIC SYMBOL	LOGIC FUNCTION	PORT DESIGNATION
	$\bar{a} \cdot b \rightarrow c$ output c is on if input a is off and input b is on.	a = input b = input c = output
VALVE SYMBOL	**VALVE FUNCTION**	**PORT DESIGNATION**
	3-way passing	a = pilot b = input c = output

NOTE: THIS ELEMENT CAN BE ROTATED 180° SO POSITION a, b, c BECOMES c, b, a.

DESCRIPTION

This element performs the logic function INHIBIT with two inputs and one output. The output **c** is on if the input **b** is on and input **a** is off. The element has three bottom ports which are designated **a, b, c** and are marked on the cover to correspond to the position on the base. These ports connect to the circuit board of function bases, and thru circuit passages in the circuit module allow the required circuitry to be performed.

OPERATING PRESSURE RANGE

30 to 150 p.s.i.g.

TEMPERATURE RANGE

+32°F to +160°F

RESPONSE TIME

"a" on → "c" off = 15 ms.
"a" off → "c" on = 25 ms.

FLOW CHARACTERISTICS

Flow, b → c, at 100 p.s.i.g. = 11.3 c.f.m. free air
Capacity factor Cv = 0.19

INSTALLATION

- Pressure regulation is recommended for applications where optimum repeatability is required. Lubrication is not required.
- Filtration is recommended to assure a clean, dry air supply for optimum repeatability.
- Mandatory when element is used with timing element on timing circuits.

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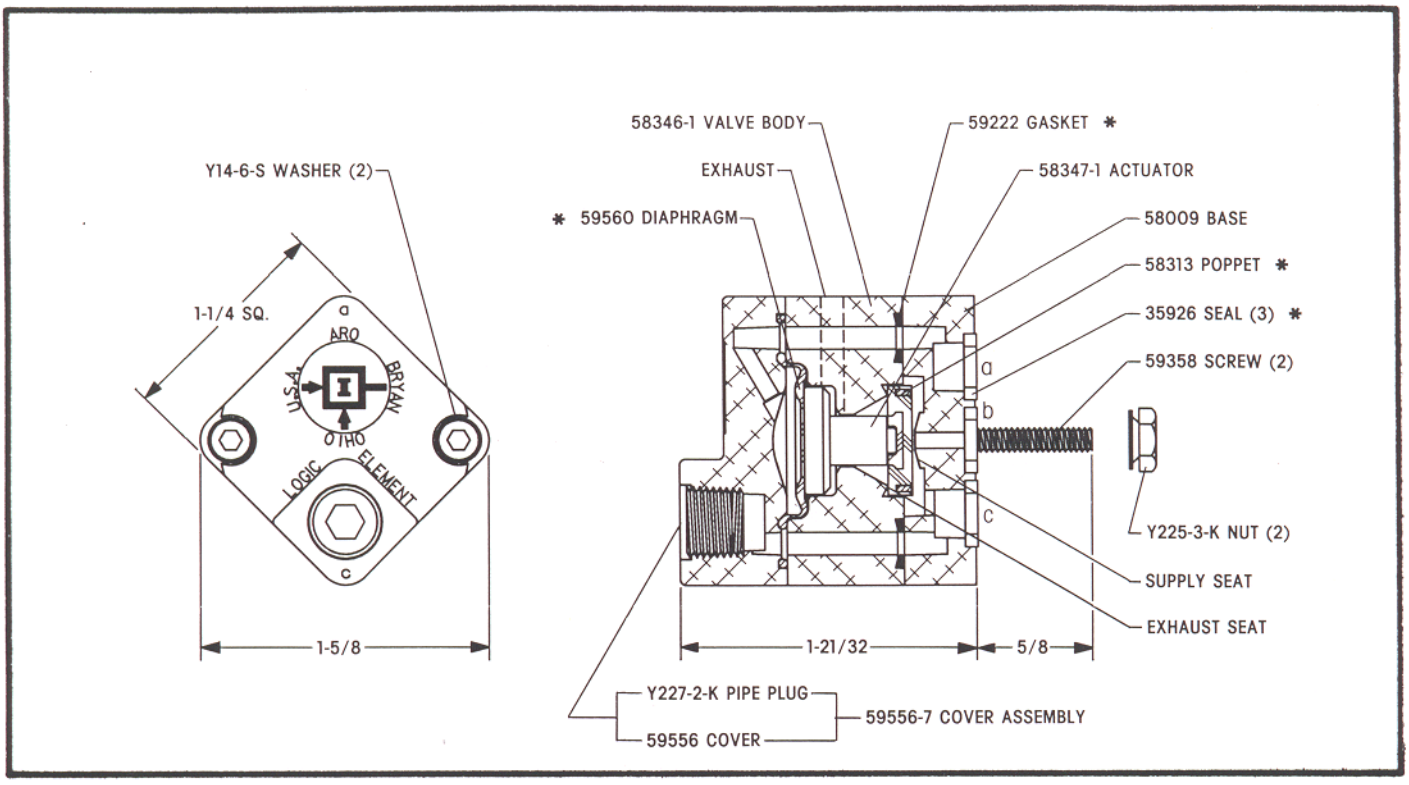
PARTS LIST



*** Parts included in repair kit.**

SERVICE (Use Repair Kit No. 58011)

OPERATING DESCRIPTION

When input **a** is off, input air from port **b** can pressurize output **c**. Exhaust seat is closed. Therefore, output **c** is on.
When input **a** is on, diaphragm 59560 forces actuator 58347-1 and poppet 58313 downward, which opens output **c** to exhaust and closes the supply seat. Therefore output **c** is off (exhausted).
The element shifts to "off" when pressure at **a** increases above approximately 70% of the pressure at port **b**. The element resets to "on" when pressure at port **a** decreases below approximately 5% of the pressure at port **b**.
Screws 59358 thread into base to assemble the element, but also extend beyond the base for insertion into mounting holes in the circuit board assembly (or function bases). Y225-3-K nuts are used to attach assembly to the circuit board. 35926 seals provide sealing between the circuit base plate and the element ports.

In the event of a malfunction:
Check diaphragm 59560 for rupture or defects.
Check poppet 58313 for excessive wear or defects.
Check supply seat and exhaust seats for damage.
Check 59222 gasket and 35926 seals for imperfections if external leakage occurs.
Check that there is not an "O" ring on the stem of actuator 58347-1.

Testing (element mounted on function base):
Apply pressure at port **b**, output pressure appears at port **c**. Apply pressure at port **a** and port **b**, pressure absent at port **c**.
Reduce pressure at port **a**; pressure comes "on" at port **c** when pressure at port **a** drops below something less than 10% of pressure at port **b**.