

# PARTS LIST

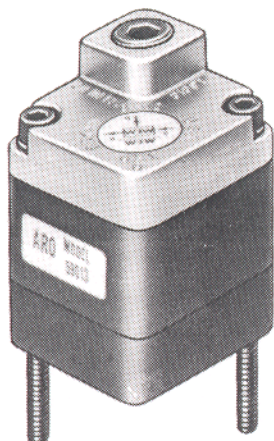
**ARO® PNEUMATIC LOGIC CONTROL  
LOGIC FUNCTION ASSEMBLY**

**"MEMORY" LOGIC ELEMENT**

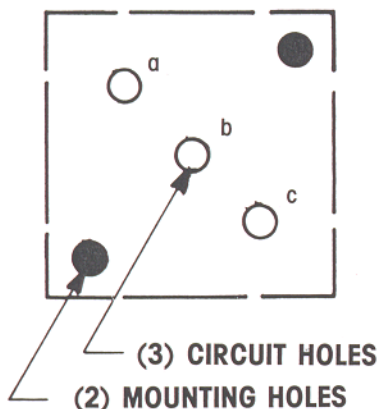
MODEL 59113

FORM 5046

REV. 3/88



## CIRCUIT PATTERN



LOGIC SYMBOL	LOGIC FUNCTION	PORT DESIGNATION
	MEMORY	a = input S (set) input R (reset) b = supply c = output
VALVE SYMBOL	VALVE FUNCTION	PORT DESIGNATION
	3-way non-passing retained	a = pilot b = supply c = output

See technical manual for detailed description.

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

## DESCRIPTION

This MEMORY element has a set and reset from the same input a. The output c switches to, and remains on, if input a is pressurized momentarily from a 2-way pilot source (set). The output c switches to, and remains off, if input a is discharged momentarily to atmosphere with a bleeder (2-way) valve (reset). Element will go to reset when pressure fails at supply b. 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, or function bases, and through 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

Shortest pressure signal to "SET" = 17 ms.

Shortest pressure signal to "RESET" = 19 ms.

## FLOW CHARACTERISTICS

Flow b → c at 100 P.S.I.G. = 9.3 C.F.M. free air  
Capacity factor  $C_v = 0.14$

## INSTALLATION

Pressure regulation is recommended for applications where optimum repeatability is required.

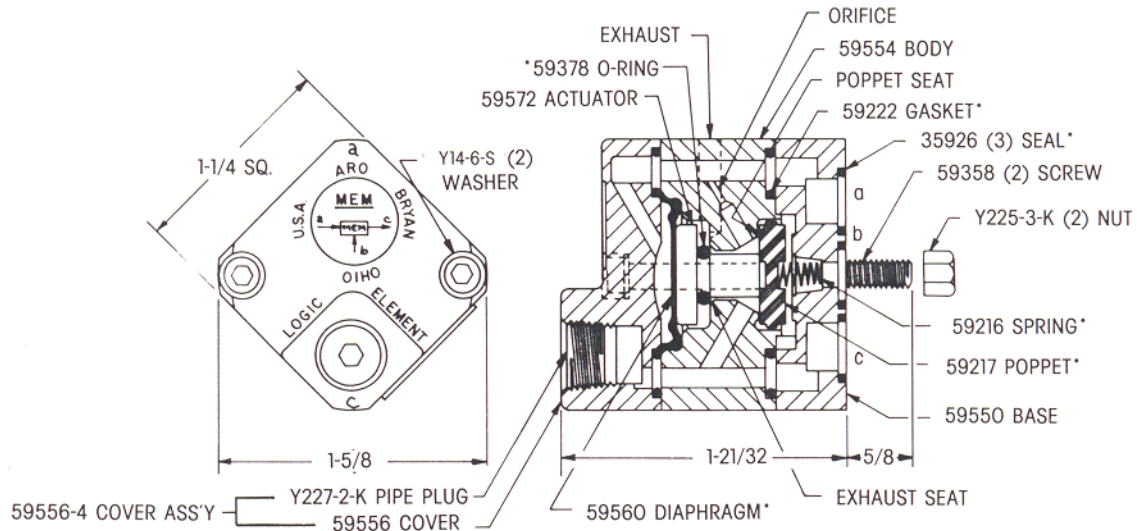
Lubrication is not required.

Filtration is recommended to assure a clean, dry air supply for optimum repeatability.

## OPERATING DESCRIPTION

When input a is pressurized, diaphragm 59560 forces actuator 59572 and poppet 59217 downward, 59378 O-ring closes the exhaust seat, and the poppet seat opens to supply and output c is pressurized. Conversely, the poppet moves upward if the input a is bled to atmosphere. Output c is then connected to exhaust. Both positions are maintained through the orifice. Screws 59358 thread into the base to assemble the element, but also extend beyond the base for insertion into the mounting holes in circuit board assembly (or function bases). Y225-3-K Nuts are used to attach assembly to the circuit board. 35926 Seals provide sealing between circuit base plate and element ports.

## PARTS LIST



\*Parts included in repair kit.

## Service (Use Repair Kit No. 59573)

In the event of a malfunction:

Check diaphragm 59560 for rupture or defects.

Check poppet 59217 for excessive wear or defects.

Check O-ring 59378 for wear or rupture.

Check poppet and exhaust seats for damage.

Check orifice for possible plugging.

Check 59222 gasket and 35926 seals for imperfections if external leakage occurs.

Testing (element mounted on function base)

Apply pressure at port b, no output appears at port c. Then apply pressure at port a (using a two-way valve) and output should appear at port c. Bleed off pressure at port a and output c should disappear.

## CIRCUIT FOR USE WITH MODEL 59181 SET-RESET GATE

