

R-12DC RELAY VALVE

RELAY VALVE WITH
BIASED DOUBLE-CHECK

CATALOG
03-B-4L

Relay valves are air operated, graduating directional control valves of high capacity and fast response. Upon receipt of signal pressure from the service brake valve, the relay valve will graduate, hold and release air pressure from the brake chambers to which it is connected.

The relay valve is also used to balance the time of brake applications on heavy duty vehicles. They are especially needed where large volumes of air are required or long service lines cause the capacity of the brake valve to be exceeded. Relay valves can be remote or reservoir mounted and differ primarily in the design.

The R-12DC relay valve is primarily used on long wheel base vehicles (e.g. straight trucks and buses) to apply and release rear axle(s) service or parking brakes.

The piston operated R-12DC is available with either vertical or horizontal delivery ports for convenient frame mounting.

The R-12DC features a double check valve, located in the cover, with two control ports. When the brake valve is operated, it supplies both primary and secondary air to the relay valve control port. In normal conditions the double check valve is biased to allow the primary air supply to supply control air, but in the event of loss of air pressure in the primary service port, the double check valve allows air pressure from the secondary to supply control air pressure.

For service/maintenance information, see Service Data Sheet: SD-03-1068 (form number BW1933).

MAINTENANCE KIT IS PC. NO. 5004910

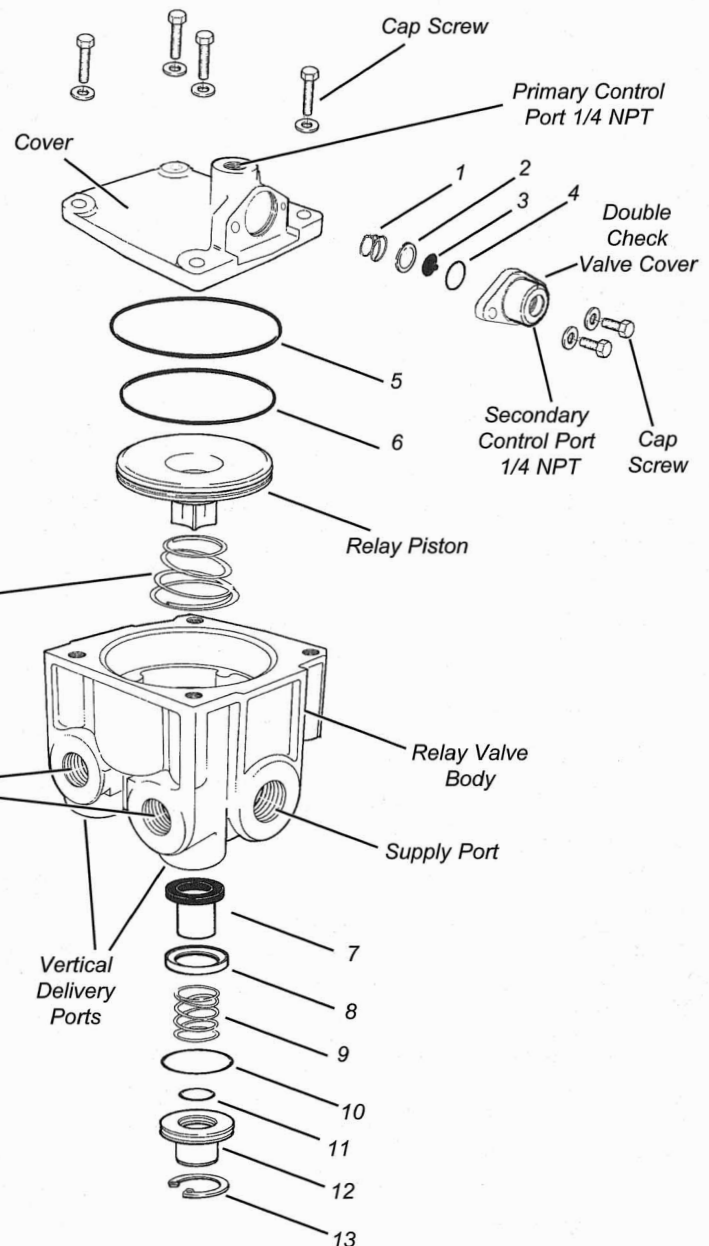
WEIGHT -- 2.25 LBS.

VMRS. NO. IS 13-010-009.

DEVICE CODE IS 1068.

MAINTENANCE KIT 5004910		
Key No.	Qty	DESCRIPTION
1	1	VALVE SPRING
2	1	CHECK VALVE GUIDE
3	1	CHECK VALVE
4	1	O-RING
5	1	O-RING
6	1	O-RING
7	1	INLET & EXHAUST VALVE
8	1	VALVE RETAINER
9	1	SPRING
10	1	O-RING
11	1	O-RING
12	1	EXHAUST COVER
13	1	RETAINING RING
not shown	1	SILICONE GREASE

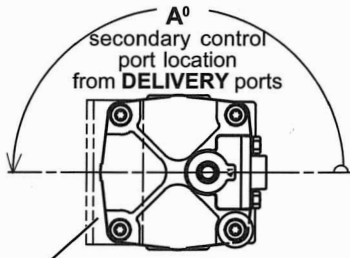
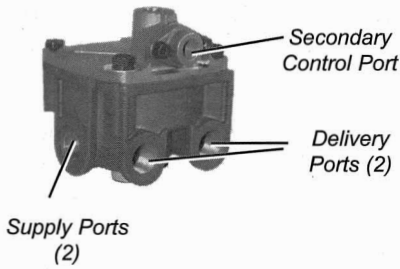
For Differential Springs (if required) see below.



Differential Spring
(controls Crack Pressure*)
(Not required for most models.
See below.)

Differential Springs	
*Crack Pressure is the amount of control pressure required by the valve to initiate air delivery. For Crack pressures other than 4 psi, a differential spring is used in the assembly to produce the required valve response.	
Crack Pressure (PSI)	Differential Spring
4	None
5.5	296340
7.5	297991

R-12DC WITH 2 HORIZONTAL DELIVERY PORTS

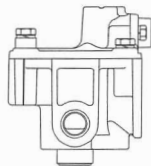
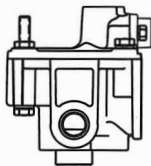
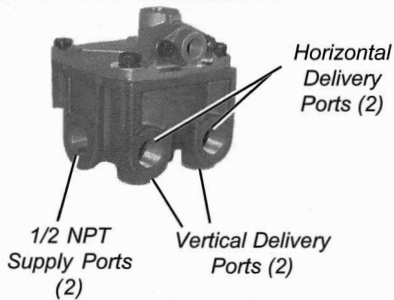


Bracket shown for ref. only **TOP VIEW**

Service Pc. No.	Crack Pressure	Supply Ports NPT	Delivery Ports NPT	A° Cover Position	Bracket Pc. No. (Included)
800470	4	1/2	1/2	0	296010
800471	5.5	1/2	1/2	0	294649
800472	4	1/2	1/2	90	294649
800473	4	1/2	1/2	270	102846
800474	5.5	3/4	1/2	0	none ⁽¹⁾
800475	7.5	3/4	1/2	0	none ⁽¹⁾
800476	4	3/4	1/2	90	102846
800491	4	3/4	1/2	90	294649
800554	4	1/2	3/8	90	102846
800625	7.5	1/2	1/2	0	294649
800626	4	1/2	1/2	0	5002416
800627	4	1/2	1/2	0	294649

⁽¹⁾ Bracket not used. Valve mounts to reservoir.

R-12DC WITH 2 HORIZONTAL AND 2 VERTICAL DELIVERY PORTS

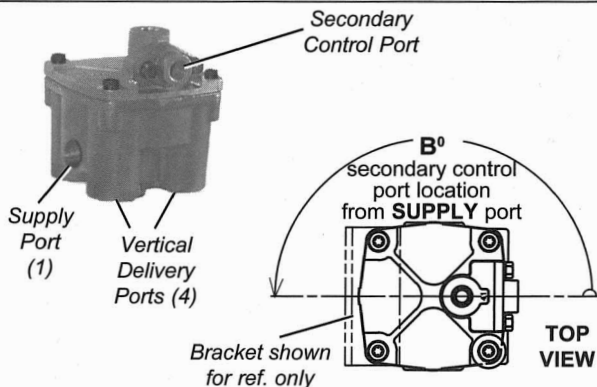


⁽²⁾ Piece number 800481

⁽³⁾ Piece number 800535

Service Part No.	Crack Pressure	Horizontal Delivery Ports NPT	Vertical Delivery Ports NPT	Bracket Pc. No. (Included)
800480	4	3/8	3/8	102846
800481	4	1/2	3/8	none ⁽²⁾
800492	4	1/2	3/8	5001356
800535	4	1/2	3/8	none ⁽³⁾
800559	7.5	1/2	3/8	5001356
800648	5.5	1/2	3/8	298175
800649	4	1/2	3/8	298175
800650	5.5	1/2	3/8	294649
800651	4	1/2	3/8	294649
800652	5.5	1/2	3/8	102846
800653	4	1/2	3/8	102846

R-12DC WITH 4 VERTICAL DELIVERY PORTS



Bracket shown for ref. only

TOP VIEW

Service Pc. No.	Crack Pressure	Vertical Delivery Ports (NPT)	B° Cover Position	Bracket Pc.No. (Included)
800477	4	1/2	0	102846
800478	4	3/8	90	294649
800479	4	1/2	0	294649
800546	4	1/2	90	294649

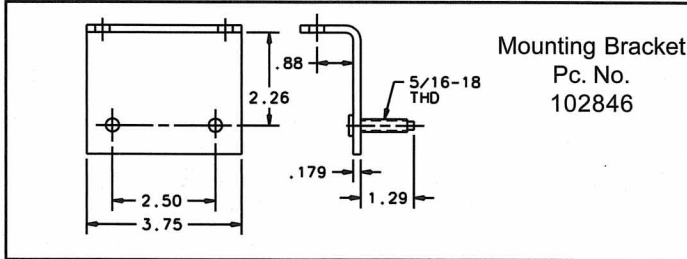
Differential Springs

Crack Pressure (PSI)	Differential Spring
4	None
5.5	296340
7.5	297991

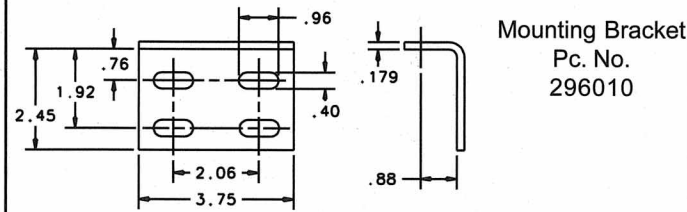
R-12DC RELAY VALVE

BRACKETS &
O.E. CHANGEOVER

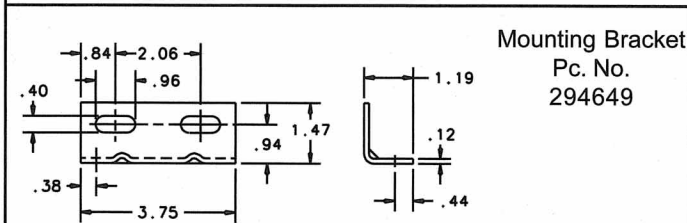
CATALOG
03-B-4N



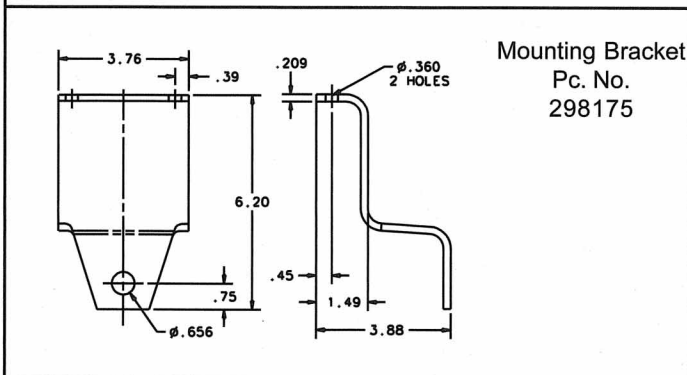
Mounting Bracket
Pc. No.
102846



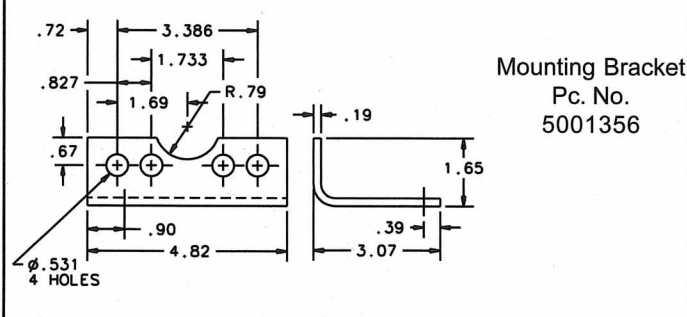
Mounting Bracket
Pc. No.
296010



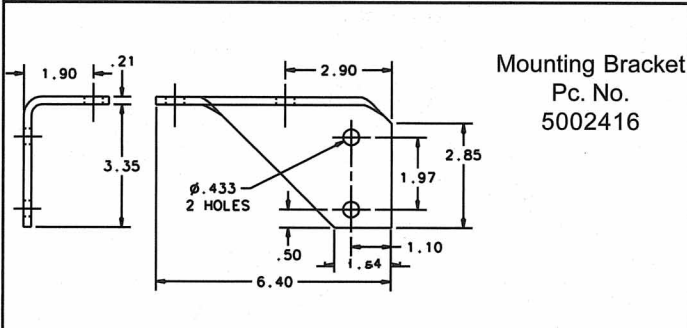
Mounting Bracket
Pc. No.
294649



Mounting Bracket
Pc. No.
298175



Mounting Bracket
Pc. No.
5001356



Mounting Bracket
Pc. No.
5002416

O.E. to Service Piece Number Changeover

O.E. Part Number	O.E.	Service Pc. No.
5004060	GMC	800470
5004097	Oshkosh	800477
5004620	Orion	800627
5004621	Orion	800471
5004622	GMC	800626
5004623	Pierce	800472
5004624	Prevost Car	800473
5004625	NovaBus	800474
5004626	NovaBus	800475
5004627	NewFlyer	800476
5004628	Neoplan	800476
5004629	MCI	800479
5004630	Volvo	800478
5004631	MCI	800479
5004632	Mack	800481
5004633	Blue Bird	800480
5004697	Crane Carrier	800477
5004823	Gillig Bus	800627
5004824	El Dorado	800491
5004828	Mack	800535
5004829	Mack	800492
5004867	Mack	800492
5004925	-	800535
5005232	-	800546
5005233	Volvo	800546
5005302	-	800554
5005303	-	800554
5005306	Mack	800559
5005367	-	800559
5006316	-	800625
5006317	-	800625
5006446	Paccar	800648
5006447	Paccar	800649
5006448	Paccar	800650
5006449	Paccar	800651
5006450	Paccar	800652
5006451	Paccar	800653

Note: Reducer bushings may be required to facilitate changeover. See page 07-A-4 for piece numbers.