

3.5 AIR HAND THROTTLE (H-4 Controlair Valve - P50967-1)

Installation: The H-4 CONTROLAIR Valve is designed for either side or panel mounting and may be mounted in any position convenient for operation. The pipe bracket principle permits the valve portion to be removed for maintenance without disturbing the pipe connections.

The IN and OUT ports are equipped with strainers. These strainers will protect the internal valve from large particles of foreign material in the lines but it is recommended that a filter and lubricator be installed upstream of the H4 CONTROLAIR Valve.

Maintenance: Maintenance periods should be scheduled in accordance with frequency of use and working conditions of the H4 CONTROLAIR Valve.

One complete CONTROLAIR should be kept in stock for each four valves in service. During the maintenance period, exchange the complete valve with the "stand-by" unit. This will reduce production loss and afford inspection and replacement of worn parts at a more opportune time in a favorable location.

Notice that the operating portion of the valve can be removed without disturbing the pipe connections. Remove the valve portion by loosening screws 1.

No special tools are required to maintain the H-4 CONTROLAIR Valve.

Completely disassemble the CONTROLAIR Valve. Wash all metal parts in a non-flammable solvent and all rubber parts with soap and water. Rinse each part thoroughly and blow dry with a low pressure air jet. Arrange the parts on a clean white surface in the order of the exploded view.

Examine each part carefully. Flex the diaphragm and packing rings; if cracked or

"AIR HAND THROTTLE"

(H-4 CONTROLAIR VALVE-P50967-D Cont'd)

worn, replace them. Replace all parts that may not provide satisfactory service until the next scheduled maintenance period.

Reassemble the valve, lubricating each part before it is put into place. Use No. 107 Lubriplate on all metal to metal surfaces and Cosmolube on all rubber parts. Equivalent greases to those recommended can be used.

Store the reconditioned H-4 CONTROLAIR Valve in a moisture-proof bag.

Adjustment: The normal 240° rotation of the control knob 13 can be reduced by reduced by changing the relationship of the stop 9 with the cam brake 7. Loosen set screw 8, rotate stop 9 to the desired position; then reset the screw. The indicating arrow on the knob 13 can be reset by loosening set screw 12. Rotate the knob until the arrow points to the minimum pressure position and reset the screw.

Notice that reducing the degrees of knob rotation limits the rated minimum and maximum pressure.

Contact of the cam bracket with a stop pin on the pipe bracket 2 indicates maximum decreasing pressure position. The minimum pressure at this point is set by adjusting screw 17.

Preload Setting: This setting calls for a predetermined downstream pressure when the control knob 13 is in its normal position. After this pressure has been reached, the valve automatically assumes a closed center position (exhaust and inlet valves closed).

Use the adjusting procedure as described above.

With the control knob 13 in normal position (minimum pressure, turn adjusting screw 17 in until the test gage reads the desired preload pressure. Notice that the pressure range does not change. The minimum and maximum pressures changes a like amount.

H-4 CONTROLAIR® VALVE IDENTITY

Complete Piece Number		Pressure Range (PSI)	Control Spring (Ref. 20)
Obsolete*	Superseding		
538103	<u>P50967-1</u>	<u>0-65</u>	P55442
529254	P50967-2	0-100	526749
P50027	P50967-3	0-125	540577
P50967	P50967-4	0-150	P55441
P51173	P51173-1 (See 1)	0-65	P55442
P52583	P52583-1 (See 2)	0-65	P55442
P52742-1	P52742-8 (See 3)	0-30	510722
P53092-1	P50967-6	0-20	99478
850462	P55495-1 (See 4)	0-65	P55442

NOTE:

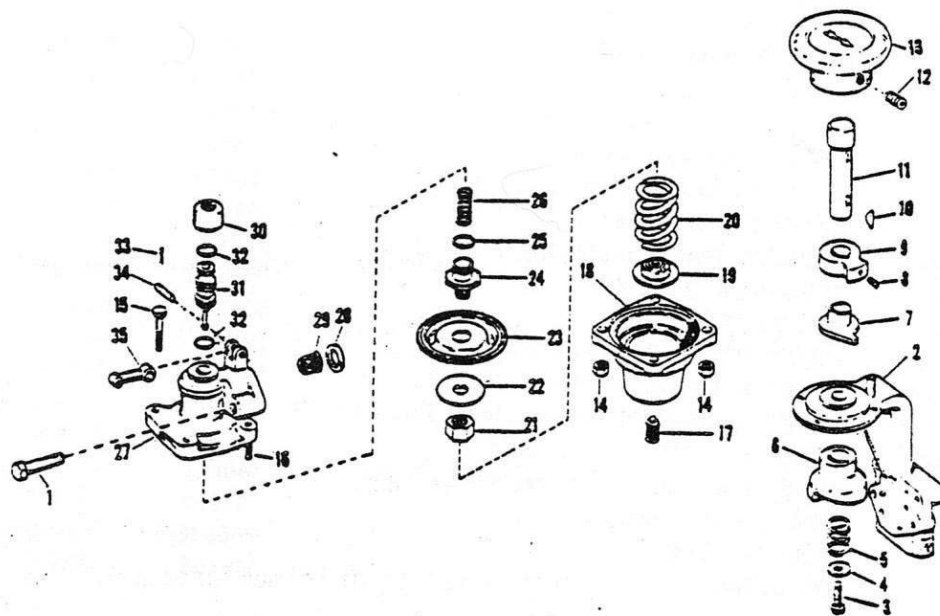
1. Knob turns counter-clockwise to increase pressure.
2. Shock Proof construction and has spline adjusting screw.
3. Arranged for -65°F operation and has spline adjusting screw.
4. Corrosion resistant, with spline adjusting screw & painted to MIL spec.

* Improved design to increase valve sensitivity necessitated obsoleting the former design. It is recommended that the obsolete valve be converted to the current vintage at the earliest convenient maintenance period.

CONVERT AS FOLLOWS:

REMOVE		REPLACE WITH		
Description	Pc. No.	Ref. No.	Description	Pc. No.
Inlet & Exhaust Valve Unit	526875	31	Inlet & Exhaust Valve Unit	545536
Exhaust Valve Seat	526487	24	Exhaust Valve Seat	P55484
-----	-----	25	Ring, 3/4" O.D. "O"	P49708-16

If additional conversion information is required, ask for SERVICE BULLETIN E4-65.00-1



EXPLODED VIEW

H-4 CONTROLAIR® VALVE PARTS LIST

Refer to the IDENTITY Schedule on Page 93 for complete valve price numbers.

REF. NO.	DESCRIPTION	PIECE NUMBER		
		Standard	Corrosion Resistant	Shock Proof
1	SCREW, 3/8 x 1-3/4 Hex (2 req'd)	562463	850563	P49902-3
2	BRACKET, Pipe	529251	529251	850169
3	SCREW, 1/4 x 3/4	93329	850560	531002
4	SEAT, Cam Spring	527165	527165	527165
5*	SPRING, Cam	901677	850559	850559
6	CAM (Clockwise)	529250	529250	529250
6a	CAM (Counter-Clockwise)	539406		
7	BRAKE, Cam	P52513	P52513	P52513
8	SCREW, 1/4 x 1/2 Set	P50283-2	850561	850561
9	STOP	529249	529249	529249
10	KEY, Woodruff (2 req'd)	119988	119988	119988
11	SHAFT, Cam	P55407	P55407	529247
12	SCREW, 5/16 x 3/8 Set	P50283-3	850562	P50283-3
13	KNOB, Control	529246	529246	529246
14	NUT, Spring Housing (4 req'd)	96500	850518	P49901-1
15	SCREW, 5/16 x 1-3/8 Hex (2 req'd)	107187	850557	P49900-9
16	STUD, 5/16 x 1-5/16 (2 req'd)	P49906-14	850514	P49906
17	SCREW, Hex Adjusting	526352		
17a	SCREW, Spline Adjusting	536005	536005	536005
18	HOUSING, Spring	545616	526350	850164
19	SEAT, Control Spring	526347	850524	851075
20*	SPRING, Control	(See Identity Schedule)		
21	NUT, 9/16-18 Hex	526489	P49976-1	P49976-1
22	FOLLOWER, Diaphragm	526345	526345	526345
23*	DIAPHRAGM	526346	526346	526346
23a	DIAPHRAGM (-65°F)	526489		
24	SEAT, Exhaust Valve	P55484	P55484	P55484
25*	RING, 3/4 O.D. "O"	P49708-16	P49708-16	P49708-16
25a	RING, 3/4 O.D. "O" (-65°F)	P49623-16		
26*	SPRING, Exhaust Valve	P54653	P54653	P54653
27	BODY, Control Portion (Incl. 16)	526874	850582	850161
28*	GASKET, Port (2 req'd)	558515	558515	558515
28a*	GASKET, Port (2 req'd -65°F)	P5103		
29	STRAINER (2 req'd)	P55382	P55382	P55382
30*	PROTECTOR, Dirt	526344	526344	526344
30a*	PROTECTOR, Dirt (-65°F)	P5101		
31*	INLET & EXHAUST Valve (Incl. 32)	545536	545536	545536
31a*	INLET & EXHAUST Valve (Incl. 32a, -65°F)	P55406		
32*	RING, 3/4 O.D. "O" (2 req'd)	531868	531868	531868
32a*	RING, 3/4 O.D. "O" (2 req'd -65°F)	546611		
33	PIN, Cotter (2 req'd)	93256	93256	93256
34	PIN, Cam Dog	P50686-9	P50686-9	P50686-9
35	DOG, Cam	526468	526468	526468

* Recommended spare parts to be retained in stock at all times.