

No. 39

January 31, 1996

Subject: Periodic Testing of Check Valve Manifolds and Check Valves

Applicability: 1H5 Series — Check Valve Manifold (Vacuum System)
1H24 Series — Check Valve Manifold (Pressure System)
1H37 Series — Check Valve (Vacuum/Pressure System)

Background:

The above referenced components supplied by Airborne for use in aircraft pneumatic systems are manufactured with elastomeric components that deteriorate with age. As these components age, it is increasingly important to periodically assure their proper operation, thus avoiding unscheduled system problems and aircraft downtime.

All maintenance personnel should familiarize themselves with the pneumatic system components listed above and perform both visual and operational checks to identify any deterioration in the performance of these components.

Recommendation:

It is recommended that beginning five years from date of manufacture, the serviceability of these components be verified every twelve months in accordance with the procedure provided on the applicable Airborne Technical Service Instruction. It is further recommended that these pneumatic system check valve manifolds and check valves be replaced ten years from date of manufacture.

The date of manufacture is encoded in the serial number located on the nameplate of these components. The numbers (1 through 12) of the serial number indicate the month (January through December) of manufacture. The following letter combinations of the serial number indicate the year of manufacture:

T = 1972	B = 1976	F = 1980	M = 1984	AD = 1988	AH = 1992
V = 1973	C = 1977	H = 1981	AA = 1985	AE = 1989	AJ = 1993
W = 1974	D = 1978	J = 1982	AB = 1986	AF = 1990	AK = 1994
A = 1975	E = 1979	K = 1983	AC = 1987	AG = 1991	AL = 1995

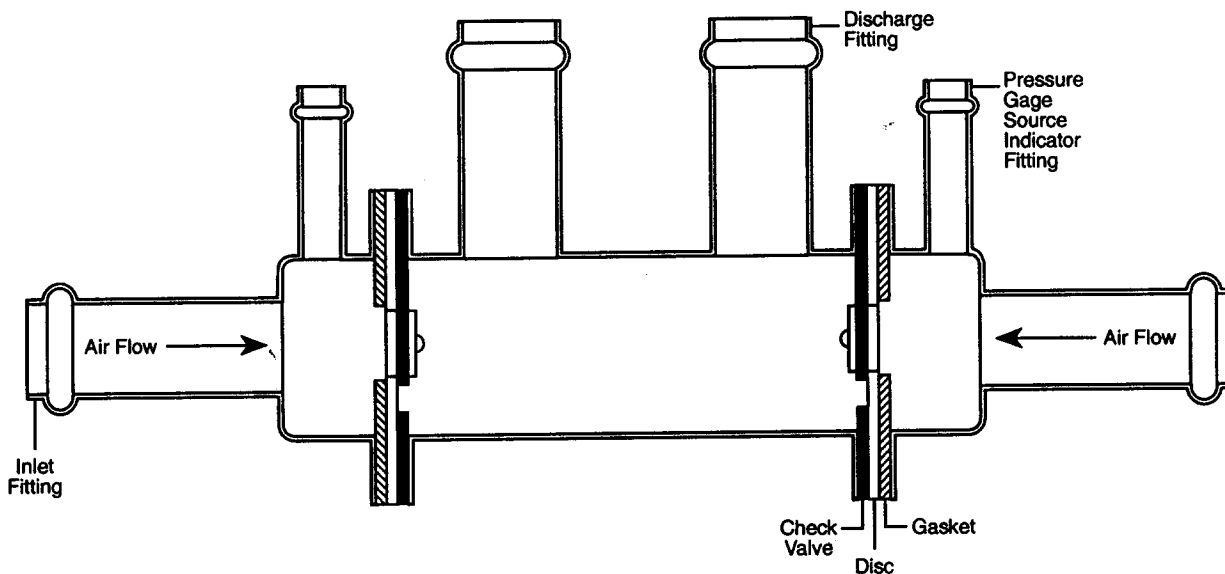
For example, a serial number of "6K" indicates a manufacture date of June, 1983.

Technical Services Hotline:
1-800-382-8422



Parker Hannifin Corporation • Airborne Air & Fuel Products
711 Taylor Street • Elyria, Ohio 44035 • 216 284-6300 • Fax: 216 322-6094

1H24 SERIES — CHECK VALVE MANIFOLD (PRESSURE SYSTEM)



Description

The 1H24 series check valve manifold provides a means of coupling dual pressure sources. More importantly, the 1H24 check valve manifold provides a means of isolating these dual pressure sources in the event that one of the sources is not in operation.

Operation

The "flapper-type" check valves are normally in the closed position. As airflow enters the manifold, the check valves open allowing airflow to the instruments. If airflow through a check valve is stopped (i.e., pressure source taken out of operation), the check valve will close in order to allow the pneumatic system to properly function utilizing the lone operating pressure source.

Troubleshooting

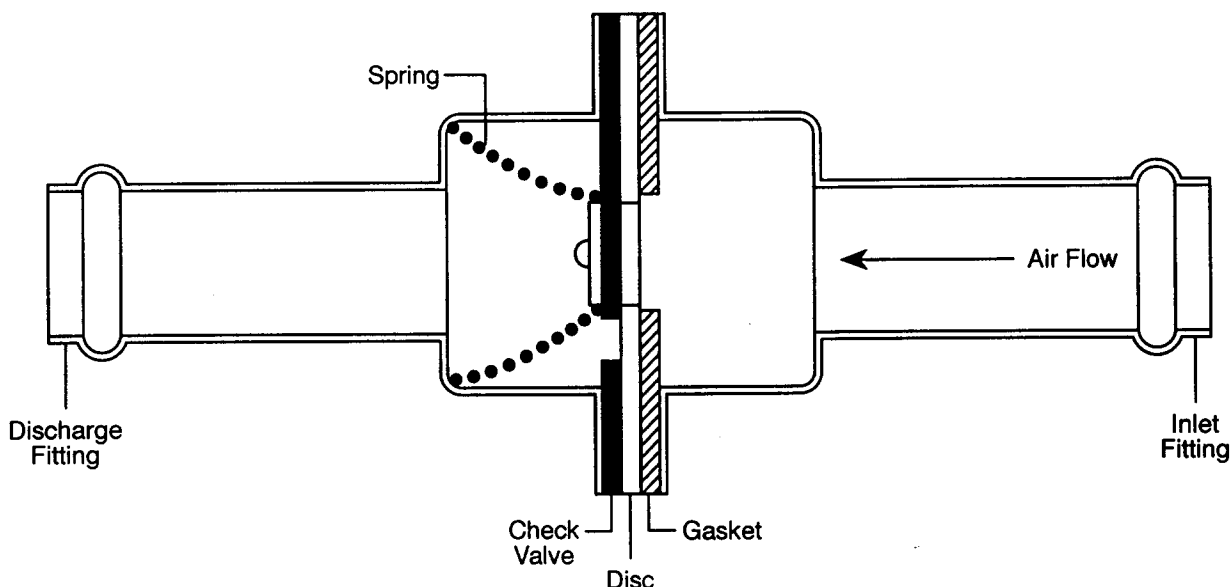
Failure of one or both of the manifold's check valves to close would prevent isolation of the dual pressure sources in the event that one of the sources is taken out of operation.

The elastomeric components utilized in the check valves deteriorate with age. Therefore, it is recommended that beginning five years from date of manufacture, the serviceability of the 1H24 series check valve manifold be verified every twelve months. It is further recommended that this check valve manifold be replaced ten years from date of manufacture.

The date of manufacture is encoded in the serial number located on the nameplate of the check valve manifold. The numbers (1 through 12) in the serial number indicate the month (January through December) of manufacture. The following letter combinations in the serial number indicate the year of manufacture:

T=1972	B=1976	F=1980	M=1984	AD=1988	AH=1992
V=1973	C=1977	H=1981	AA=1985	AE=1989	AJ=1993
W=1974	D=1978	J=1982	AB=1986	AF=1990	AK=1994
A=1975	E=1979	K=1983	AC=1987	AG=1991	AL=1995

1H37 SERIES — CHECK VALVE



Description

The 1H37 series check valve provides a means of isolating dual air sources in the event that one of the sources is not in operation.

Operation

The "flapper-type" check valve is spring loaded in the closed position. As airflow enters the valve, the check valve opens allowing airflow to continue through the system. If the airflow to the valve is stopped (i.e., air source taken out of operation), the check valve will close in order to allow the pneumatic system to properly function utilizing the lone operating air source.

Troubleshooting

Failure of the check valve to close would prevent isolation of the dual air sources in the event that one of the sources is taken out of operation.

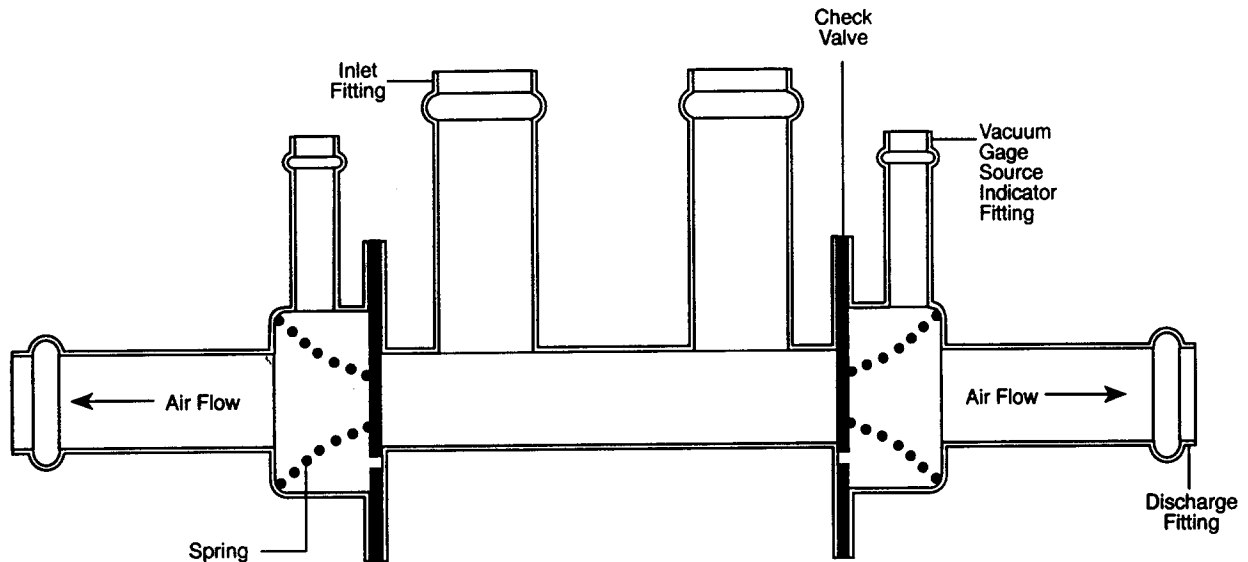
The elastomeric components utilized in the check valve deteriorate with age. Therefore, it is recom-

mended that beginning five years from date of manufacture, the serviceability of the 1H37 series check valve be verified every twelve months. It is further recommended that this check valve be replaced ten years from date of manufacture.

The date of manufacture is encoded in the serial number located on the nameplate of the check valve. The numbers (1 through 12) in the serial number indicate the month (January through December) of manufacture. The following letter combinations in the serial number indicate the year of manufacture:

T=1972	B=1976	F=1980	M=1984	AD=1988	AH=1992
V=1973	C=1977	H=1981	AA=1985	AE=1989	AJ=1993
W=1974	D=1978	J=1982	AB=1986	AF=1990	AK=1994
A=1975	E=1979	K=1983	AC=1987	AG=1991	AL=1995

1H5 SERIES — CHECK VALVE MANIFOLD (VACUUM SYSTEM)



Description

The 1H5 series check valve manifold provides a means of coupling dual vacuum sources. More importantly, the 1H5 check valve manifold provides a means of isolating these dual vacuum sources in the event that one of the sources is not in operation.

Operation

The "flapper-type" check valves are spring loaded in the closed position. As airflow is pulled through the manifold, the check valves open allowing airflow through the instruments. If airflow through a check valve is stopped (i.e., vacuum source taken out of operation), the check valve will close in order to allow the pneumatic system to properly function utilizing the lone operating vacuum source.

Troubleshooting

Failure of one or both of the manifold's check valves to close would prevent isolation of the dual vacuum sources in the event that one of the sources is taken out of operation.

The elastomeric components utilized in the check valves deteriorate with age. Therefore, it is recommended that beginning five years from date of manufacture, the serviceability of the 1H5 series check valve manifold be verified every twelve months. It is further recommended that this check valve manifold be replaced ten years from date of manufacture.

The date of manufacture is encoded in the serial number located on the nameplate of the check valve manifold. The numbers (1 through 12) in the serial number indicate the month (January through December) of manufacture. The following letter combinations in the serial number indicate the year of manufacture:

T=1972	B=1976	F=1980	M=1984	AD=1988	AH=1992
V=1973	C=1977	H=1981	AA=1985	AE=1989	AJ=1993
W=1974	D=1978	J=1982	AB=1986	AF=1990	AK=1994
A=1975	E=1979	K=1983	AC=1987	AG=1991	AL=1995



10/27/00

Extended Airborne Date Code Listing

G	1963
H	1964
J	1965
K	1966
M	1967
N	1968
P	1969
R	1970
S	1971
T	1972
V	1973
W	1974
A	1975
B	1976
C	1977
D	1978
E	1979
F	1980
H	1981
J	1982
K	1983
M	1984
AA	1985
AB	1986
AC	1987
AD	1988
AE	1989
AF	1990
AG	1991
AH	1992
AJ	1993
AK	1994
AL	1995
AM	1996
AN	1997
AP	1998
AR	1999
AT	2000
AU	2001
AV	2002
AW	2003
AY	2004