



VSP - 110

DATED: November 2, 1995 (M)

VENDOR SERVICE PUBLICATION

TO: All Affected Owners/Operators, Piper International Distributors, Parts Distributors and Piper Parts Distributors/Service Centers.

SUBJECT: Distribution of: **ALLIEDSIGNAL AEROSPACE Service Bulletin No. 103638-21-4062**
"Cracked Polycarbonate - Plastic Outflow Valve Poppet"

MODELS AFFECTED: (All serial numbers affected by spare parts. See current Piper Parts Catalog for part application and location.)

PA-31T1	<i>Cheyenne I</i>
PA-31T	<i>Cheyenne II</i>
PA-31T2	<i>Cheyenne IIXL</i>
PA-42	<i>Cheyenne III</i>
PA-42-720	<i>Cheyenne IIIA</i>
PA-42-720R	<i>Cheyenne IIIA</i>
PA-42-1000	<i>Cheyenne 400</i>

COMPLIANCE TIME: At the next regularly scheduled inspection event but not to exceed 100 hours time in service and in accordance with the attached ALLIEDSIGNAL AEROSPACE Service Bulletin No. 103638-21-4062 "Cracked Polycarbonate - Plastic Outflow Valve Poppet" Check the attached publication for subject, purpose and compliance time.

PURPOSE: To provide distribution of ALLIEDSIGNAL AEROSPACE Service Bulletin No. 103638-21-4062 "Cracked Polycarbonate - Plastic Outflow Valve Poppet"

NOTE: The estimated manpower requirement for section (F) of the AlliedSignal Publication is approximately 1.5 hours of labor for removing and replacing the suspect valve. (No Piper participation.)

(END)

ATA CODE: 2130

SERVICE BULLETIN

AIR CONDITIONING -- Outflow/Safety Valve -- Identification of valves that require replacement

1. Planning Information

A. Effectivity

This service bulletin is applicable to the outflow/safety valves having serial numbers listed below, except as follows:

- Service bulletin is not applicable to valves with identification plate MOD RECORD block stamped "PCA" (Poppet Change Accomplished).
- Service bulletin is not applicable to valves with an inked ATD Quality Assurance "Functional Test (FT)" stamp dated June 1992, or later.

<u>Part No.</u>	<u>Serial No.</u>	<u>Application</u>
103638-1	110-979 thru 110-984 110-986 110-987	Piper Cheyenne
103638-3	91-256	
103638-4	80-397 thru 80-399	
103638-7	109-226	

B. Reason

- (1) Condition: The valves identified in this service bulletin may experience fracture or cracking of the poppet.
- (2) Background: The condition has been traced to one of two lots (or batch-runs) of molded poppets installed in valves during 1991. The lot(s) exhibited brittleness that is characteristic of improper processing during injection molding. Installation of the poppet created tensile stress in the poppet, which led to the development of hairline cracks that were observed in approximately 1% of the poppets on these valves. Many of these cracks would have no observable effect, but the larger cracks might cause a shift in the valve operating point (increase in valve operating pressure or a cabin pressure "bump") or could cause cabin depressurization.

The cracked poppets can produce a worst case condition of an open valve with an effective flow area of 4.4 sq in., or the valve may close and remain closed.

- (3) Action: Replace affected valves with serviceable valves.

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C. Description

This service bulletin identifies valves requiring replacement.

D. Compliance

AlliedSignal will replace the poppet in all affected valves date stamped January 1, 1991 through August 30, 1991 upon first return to our Tucson facility for repair or overhaul. The replacement of the poppet will be part of the repair or overhaul.

E. Approval

This service bulletin contains no modification information that revises the approved configuration; and therefore, does not require FAA or other Regulatory Agency approval.

F. Manpower

TBD.

G. Materials - Price and Availability

Information regarding the availability of parts may be obtained from AlliedSignal Inc., Aerospace Equipment Systems, Tucson, Arizona. Replacement of the poppet will be provided at no cost to the customer as part of the repair or overhaul of the valve. For repair ship valve to AlliedSignal Inc., Aerospace Equipment Systems, 11100 N. Oracle Road, Tucson, AZ 85737. Call or fax to the number below, identifying the company and your name, telephone and fax number, valve part number and serial number, date shipped, carrier, and bill of lading number.

Telephone: (520) 469-5603

FAX: (520) 469-5971 or (520) 469-6577

H. Tooling - Price and Availability

Not applicable.

I. Weight and Balance

Not affected.

J. Electrical Load Data

Not affected.

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K. References

The sources of information used in the preparation of this service bulletin include AlliedSignal engineering documentation.

L. Other Publications Affected

None.

2. Accomplishment Instructions

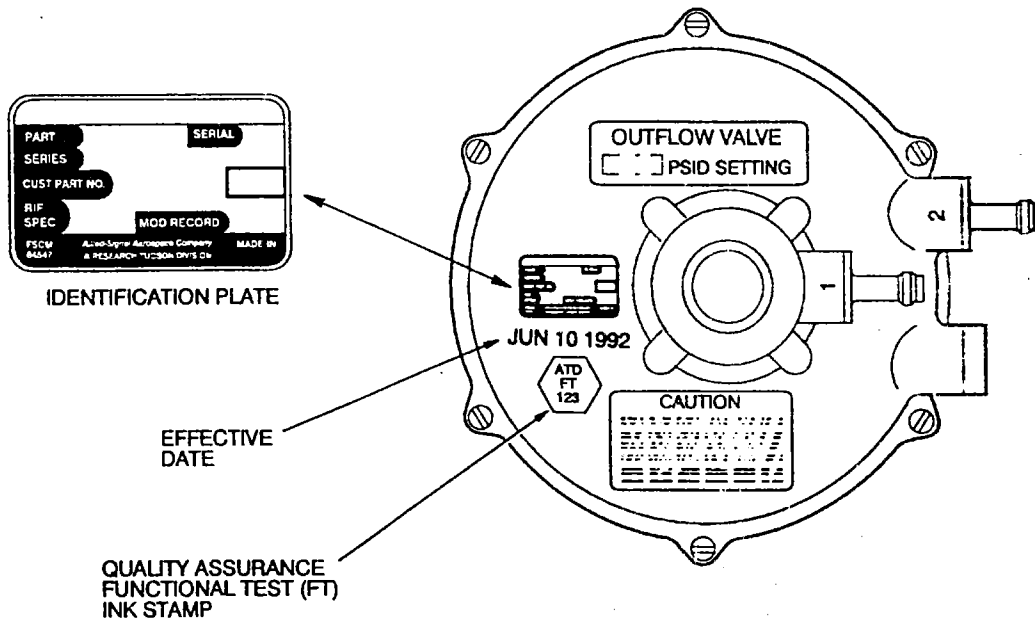
- A. Visually check the valve serial number appearing on the identification plate against the effectivity list. (See figure 1.) If the serial number of the valve appears on the effectivity list, replace valve in accordance with aircraft manufacturers instructions, unless one of the following conditions is satisfied.
- B. If the serial number of the valve appears on the effectivity list, but the identification plate MOD RECORD block contains "PCA," no further action is required and the valve is considered serviceable.
- C. If the serial number of the valve appears on the effectivity list, but the valve cover has an inked ATD Quality Assurance "Functional Test (FT)" stamp dated June 1992, or later, no further action is required and the valve is considered serviceable. (See figure 1.)
- D. Reidentification

No field reidentification of the valve is required.

3. Material Information

Not Applicable.

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H-28-944

Outflow/Safety Valve Identification Plate
Figure 1