

VSP-15
December 5, 1979

To: All Piper CORPAC's and Affected Owners

Subject: Garrett AiResearch Manufacturing Company of California
Service Bulletin No. 5-2243 dated November 1, 1979;
"Outflow/Safety Valve - Immediate Inspection for
Broken Diaphragm Retention Ring".

Models Affected:

Serial Numbers Affected:

PA-31T Cheyenne, Cheyenne II

31T-7820067, 31T-7920001 through
31T-8020024, 31T-8020026 through
31T-8020028

PA-31T1 Cheyenne I

31T-7904001 through 31T-8004015

Purpose:

To provide distribution of the attached Service Publication (identified in Subject, above) to Piper Field Service Facilities and to affected Piper owners/operators.

Detailed instructions relative to compliance action are specified on the attached Service Publication; any additional/supplemental data, if necessary, is contained in the following "Special Instructions" section.

SPECIAL INSTRUCTIONS

Make appropriate aircraft logbook entry relative to Garrett AiResearch Manufacturing Company of California Service Bulletin No. 5-2243 subsequent to applicable compliance action.

NOTE:

The aircraft Serial Numbers Affected above were equipped with Garrett AiResearch Pressurization Systems at the factory. Reference the "Effectivity" section of the attached Service Release and the aircraft maintenance records to determine whether this release applies.



AIRESEARCH MANUFACTURING COMPANY
OF CALIFORNIA

TO: HOLDERS OF SERVICE BULLETIN NO. 5-2243 DATED NOV 1/79

REVISION NO. 1 DATED DEC 1/79

BULLETIN NO. 5-2243

HIGHLIGHTS

Pages which have been revised are outlined below together with the highlights of the revision. NOTE: This is a complete publication; all pages of prior issue dated Nov 1/79 are to be removed from files and destroyed.

Bulletin and Page No.	Description of Change	Effectivity
5-2243 Page 1	Revised to correct title, part numbers AC application.	All Models
5-2243 Page 2	Revised to clarify Description, Approval, and Tooling.	All Models
5-2243 Page 3	Revised to correct part numbers and A/C application and update procedures.	All Models
5-2243 Pages 4 and 5	Revised to change titles of figures 1 and 2.	All Models
5-2243 Page 6	Revised to update procedures.	All Models



AIRESEARCH MANUFACTURING COMPANY
OF CALIFORNIA

SERVICE BULLETIN

OUTFLOW/SAFETY VALVE - Inspection for broken diaphragm retention ring

SECTION 1

PLANNING INFORMATION

A. Effectivity

This service bulletin is applicable to the following Outflow/Safety Valves installed in aircraft delivered from the original aircraft manufacturer or purchased as replacement parts during the period of 1 April 1979 to 15 October 1979.

<u>Part No.</u>	<u>Dash No.</u>	<u>Aircraft Application</u>
103570	All	Aero Commander 690, A,B,C Aero Commander 695
103598	All	Beech C-12 Beech 58P Beech 60 Beech F-90 Beech H-90 Beech 90/100 Beech 200 Beech T-44
103576	All	Cessna 340 Cessna 414 Cessna 421 Cessna 441 Cessna 500 Cessna 550
102850	All	Learjet 24/25
130406	All	Learjet 24/25 Learjet 28/29 Learjet 35/36
103638	All	Piper PA31T Piper PA31T1 Piper PA42
103570	All	Mitsubishi MU-2 Mitsubishi MU-300

B. Reason

AiResearch has become aware of a potential problem which may be experienced with the outflow and safety valves used in the aircraft listed in this service bulletin.

The problem area is centered around the balance diaphragm retention ring cracking and breaking away from the diaphragm assembly. If this occurs, the valve will close and may not perform its normal pressure relief and depressurization functions.

Because of these circumstances, we are alerting our customers to perform the inspection check of the outflow and safety valves which is described in this service bulletin.

C. Description

This service bulletin provides instructions for inspection of outflow/safety valves for a broken diaphragm retention ring and return of valve to AiResearch Manufacturing Company of California if broken ring is found.

For aircraft having an operating time of less than 100 hours, perform inspection for broken ring now and at the 100-Hour Check. Perform functional system safety check each 200 hours thereafter.

NOTE: As an alternate, functional system safety check may be performed at the 100-Hour Check.

For aircraft having an operating time of more than 100 hours, perform inspection for broken ring now; perform functional system safety check each 200 hours thereafter.

D. Approval

Governmental approval not required.

E. Manpower

Not determined.

F. Materials - Cost and Availability

Return outflow/safety valve to The Garrett Corporation, AiResearch Manufacturing Company of California, 18825 Van Ness Blvd, Torrance, California 90509, Attention: H. F. Pair, for replacement of diaphragm retention ring at no charge.

Valves returned to AiResearch will be turned around within five working days from date that valve is received.

G. Tooling - Price and Availability

Not applicable.

H. Weight and Balance

None.

I. References

This service bulletin was prepared in accordance with ATA 100 requirements.

J. Other Publications Affected

None.

SECTION 2

ACCOMPLISHMENT INSTRUCTIONS

A. Access for Inspection

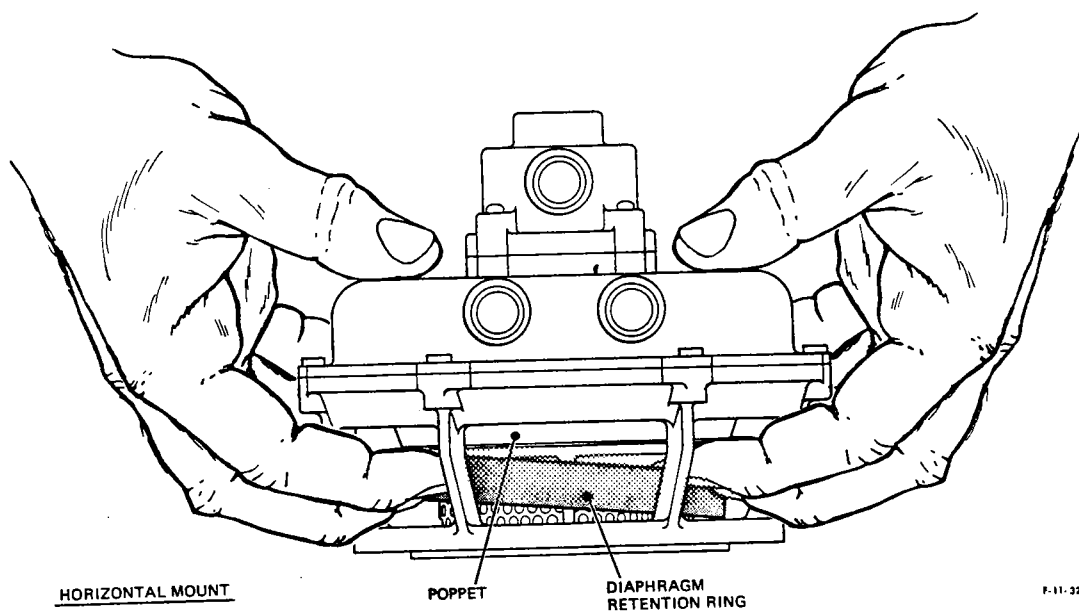
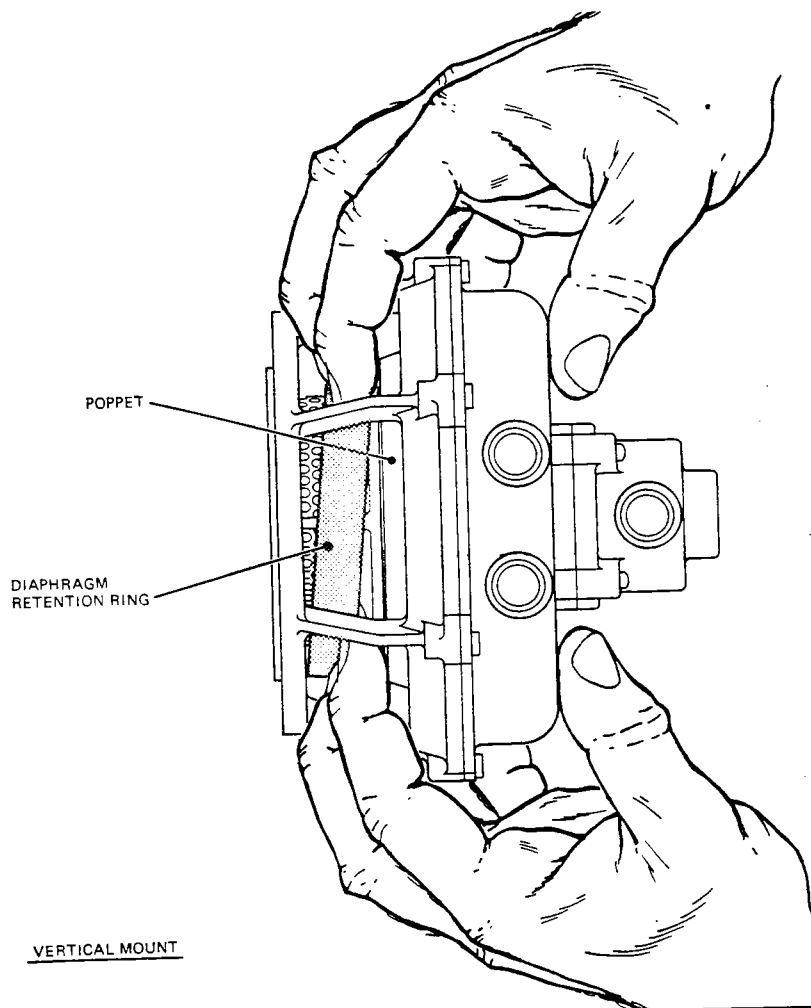
- (1) Determined by Aircraft Manufacture's procedures.

B. Method of Valve Inspection

- (1) Inspect all installed (vertical and horizontal mounted) outflow/safety valves, except Part No. 130406, as follows:
 - (a) Carefully raise poppet evenly by grasping with hands about 180 degrees apart as shown in figure 1.
 - (b) Visually check to determine if diaphragm retention ring is displaced from diaphragm support to poppet seating area as shown in figure 1.
 - (c) If diaphragm retention ring is found in poppet seating area, remove and replace outflow/safety valve. Return valve to AiResearch Manufacturing Company of California as specified in Section 1.
- (2) Inspect Outflow/Safety Valves Part, No. 130406 as follows:
 - (a) Remove valve from aircraft as shown in figure 2.

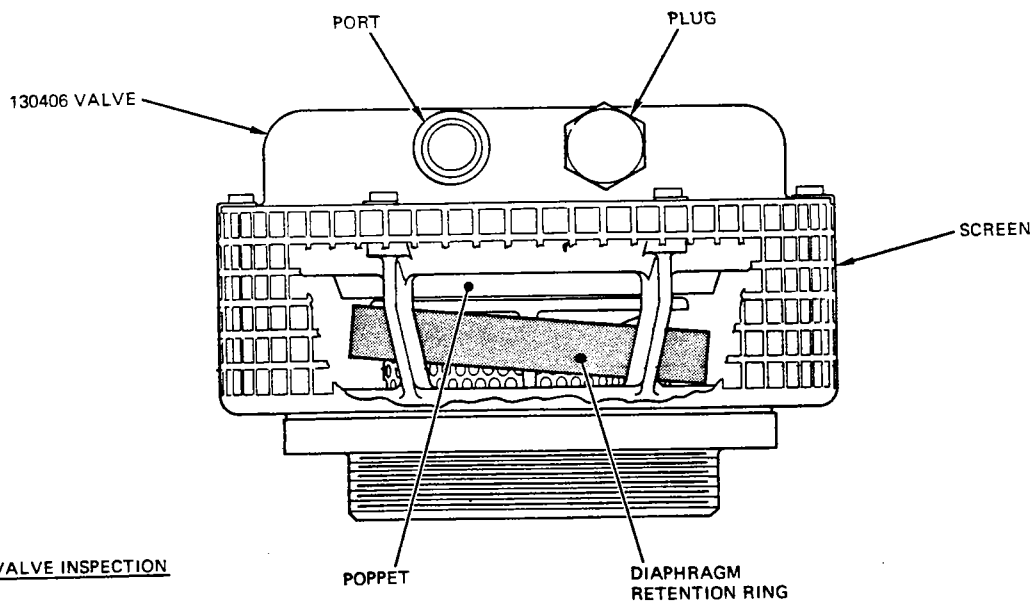
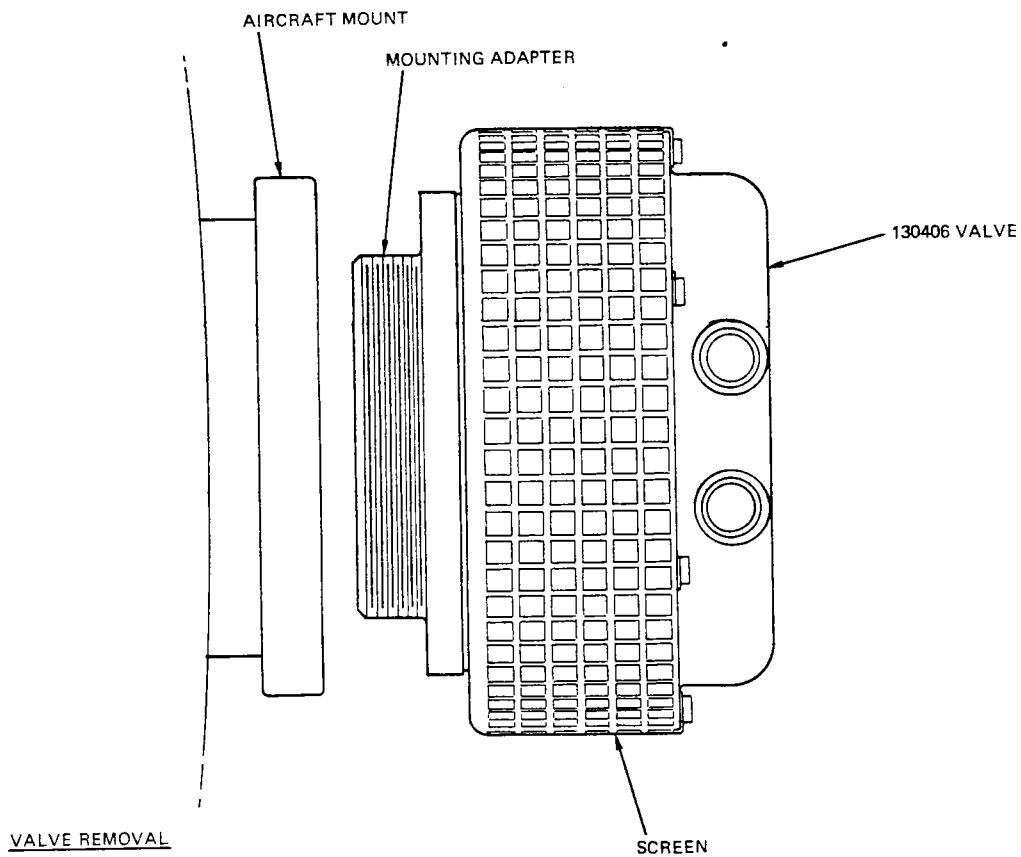
CAUTION: DO NOT ATTEMPT TO REMOVE SCREEN FROM VALVE. REMOVAL OF ATTACHING SCREWS WILL RELEASE HEAD SECTION FROM BASE, REQUIRING RETEST OF VALVE.

- (b) Install a plug in number "1" or number "2" port and apply a vacuum to opposite port of eight inches water to raise poppet from seat as shown in figure 2.
- (c) Visually check to determine if diaphragm retention ring is displaced from diaphragm support to poppet seating area as shown in figure 2.



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Inspection of Typical Outflow/Safety Valve Except Part No. 130406
Figure 1



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Inspection of Typical Outflow/Safety Valve Part No. 130406
Figure 2

- (d) If diaphragm retention ring is found in poppet seating area, replace outflow/safety valve. Return valve to AiResearch Manufacturing Company of California as specified in Section 1.

B. Reidentification Instructions

None.

SECTION 3

MATERIAL INFORMATION

Not applicable.