



# SERVICE LETTER

No. 736 2210

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

December 3, 1974 M

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Subject: M4D Automatic Flight Control System Modifications

Models Affected:  
PA-31T Cheyenne

Serial Numbers Affected:  
31T-7400005 to 31T-7400008 incl.

Compliance Time:

Recommended at the next regularly scheduled inspection interval.

Purpose:

There have been several product refinement modifications incorporated into the subject system on current production Cheyennes. These refinement features are being made available to owners/operators of the above referenced aircraft, and are described below in detail.

I. Inadvertent HDG flag in horizontal situation display ---  
HDG flag drops into view while the compass system is operating normally.

A. Instructions:

1. Add a 56K ohm 1/2W 10% resistor in the HDG flag line. This resistor is to be added inside the gyro junction box in the tail of the aircraft between terminal 11 of the terminal board and pin 11 of P-48. Reference attached sketch/instruction sheet.

B. Material Required:

One (1) each per aircraft 56K ohm 1/2W 10% resistor, Piper part number 484 509.

C. Availability of Parts:

Enclosed with affected CORPAC copies of this Service Release

II. DH-861 glass fogging; instrument glass may "fog" -- particularly when operating in areas of high humidity.

2210

Purpose: (continued)

A. Instructions:

1. Remove one (1) of the two screws located on the bottom rear of the unit (these screws will be found under the black sealing tape and are a bristol head).
2. Remove and discard one only of the screws leaving the hole open to the case for venting purposes.

III. Altitude controller water sump assembly; there is a possibility of moisture contamination of the altitude controller by water introduced through the static air vents by a pressure washer unit.

A. Instructions:

Contained in PA -31T Static Air Sump Installation Kit (Bendix altitude controller) -- copy of kit data attached.

B. Material Required:

One (1) each per aircraft PA-31T Static Air Sump Installation Kit (Bendix altitude controller).

C. Availability of Parts:

To be provided to affected CORPAC's, under separate cover, on a no charge, automatic factory distribution basis.

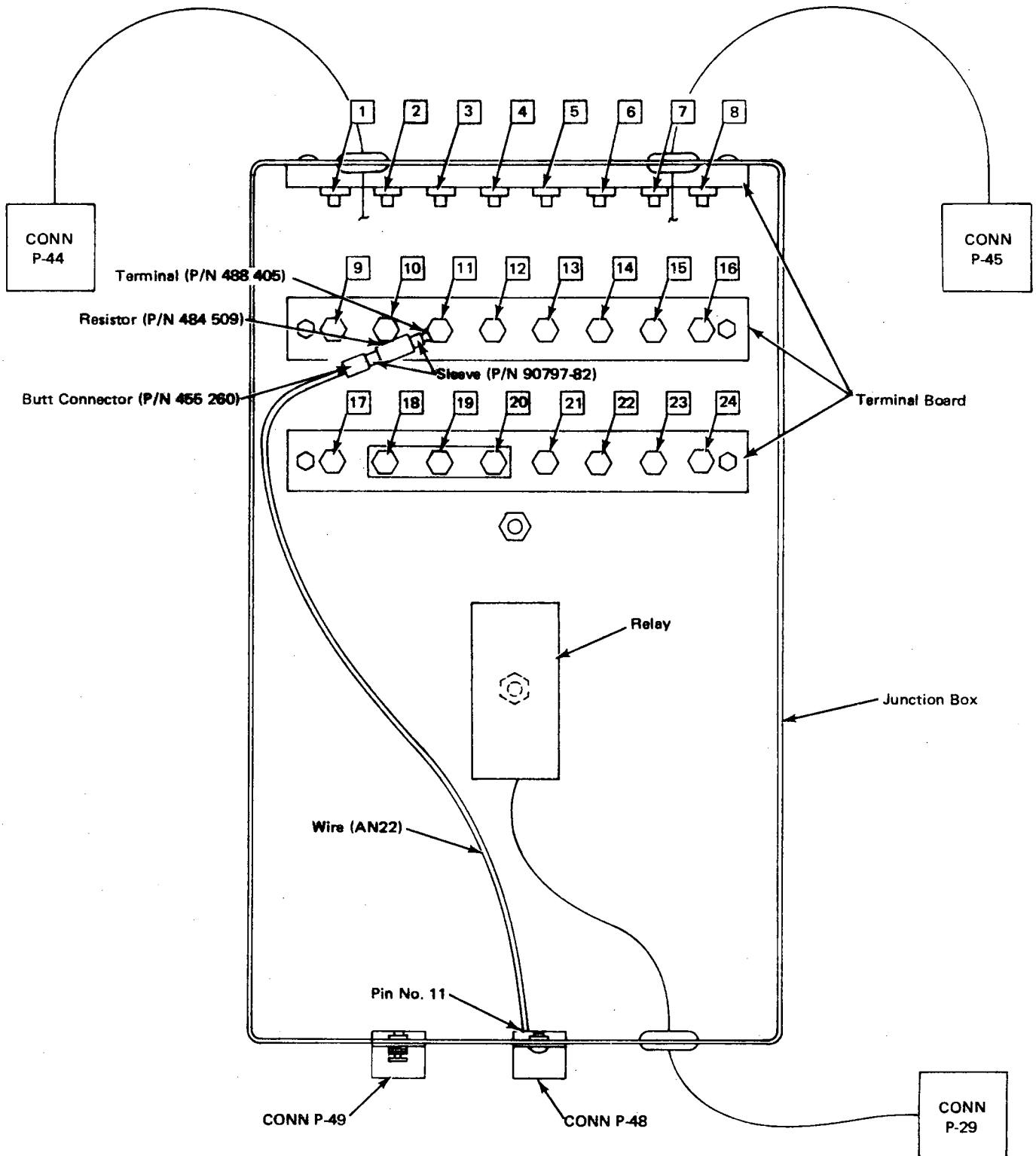
Subsequent to completion of the above referenced modifications record a log book entry indicating compliance with this Service Release.

Effectivity Date:

This Service Release is effective upon receipt.

Summary:

Modification material relative to Sections I and III above, is available as stated in each Section.



### INSTRUCTIONS

1. Locate AN22 wire between pin 11 on connector P-48 and terminal board post No. 11.
2. Remove this wire from No. 11 post and cut off terminal. (Do not remove other wire from No. 11 post.)
3. Attach resistor to AN22 wire using butt connector with sleeve over resistor lead.
4. Slide a sleeve over other resistor lead and attach new terminal.
5. Attach terminal to No. 11 post on terminal board along with other wire.

## STATIC AIR SUMP INSTALLATION - (Bendix Altitude Controller)

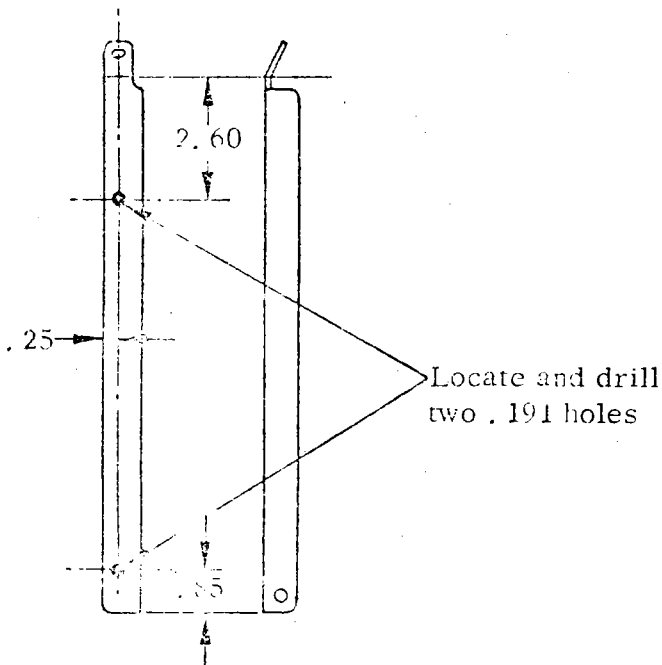
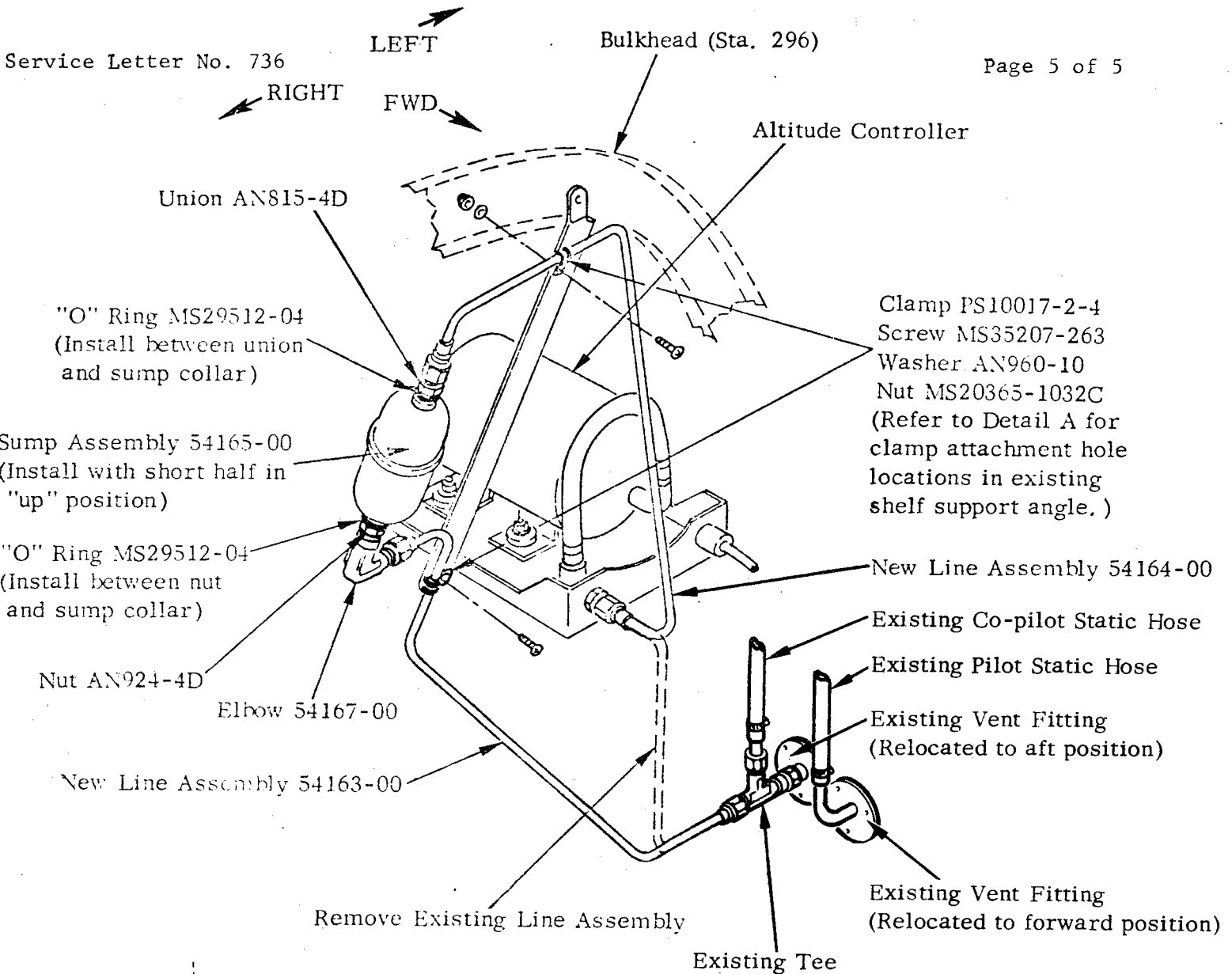
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PA-31T

| <u>PART NO.</u> | <u>QUANTITY</u> | <u>NOMENCLATURE</u>   |
|-----------------|-----------------|-----------------------|
|                 | 1               | Kit List              |
|                 | 1               | Sketch "A" (741003)   |
| 54163-00        | 1               | Line Assembly         |
| 54164-00        | 1               | Line Assembly         |
| 54165-00        | 1               | Sump Assembly         |
| 54167-00        | 1               | Elbow - Special       |
| 404 887         | 2               | Nut - MS20365-1032C   |
| 407 564         | 2               | Washer - AN960-10     |
| 411 532         | 2               | Screw - MS35207-263   |
| 420 704         | 8               | Rivet - MS20426AD3-4  |
| 454 929         | 2               | Clamp - PS10017-2-4   |
| 462 058         | 2               | "O" Ring - MS29512-04 |
| 477 618         | 1               | Nut - AN924-4D        |
| 491 050         | 1               | Union - AN815-4D      |

INSTRUCTIONS

1. Gain access to the altitude controller, which is located aft of the rear baggage compartment on the left side of the fuselage, by removing the access plate between Sta. 274 and Sta. 296 from left side of fuselage.
2. Remove existing static air line located between the altitude controller and static vent fitting.
3. Disconnect hoses from both vent fittings on left side of fuselage.
4. Relocate the aft vent fitting to the forward position and the forward vent fitting to the aft position as shown on Sketch "A". Use new MS20426AD3-4 rivets to attach fittings to skin.
5. Connect existing static hoses as shown on Sketch "A".
6. Install kit components per Sketch "A".
7. Reinstall access plate and make proper Logbook entry of Kit Installation.



DETAIL A  
(Clamp Attachment Holes)

**NOTE**

The static air system must be tested in accordance with requirements of F. A. R. 91, 170 after this installation has been completed.

|                              |        |
|------------------------------|--------|
| STATIC AIR SUMP INSTALLATION |        |
| Sketch "A"                   | PA-31T |
| PIPER AIRCRAFT CORPORATION   |        |
| LOCK HAVEN, PENNSYLVANIA     |        |