



# SERVICE LETTER

No. 783

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

September 20, 1976 M

Subject:

Inspection of Air Conditioning System  
Capillary Sensor

Models Affected:

PA-31P Pressurized Navajo

PA-31T Cheyenne

Serial Numbers Affected:

31P-7400200 to 31P-7400229 Inclusive,  
31P-7530001 to 31P-7630004 Inclusive, and  
31P-7630006 to 31P-7630009 Inclusive.  
31T-7400002 to 31T-7620027 Inclusive.

Compliance Time:

At owner/operators discretion; recommended  
at the next Programmed Inspection event.

Purpose:

The capillary sensor is a self contained sensing device mounted against the air conditioning system evaporator outlet (from the evaporator to the evaporator control valve) line, to detect the temperature of the system refrigerant. It has been brought to our attention that the capillary sensor may not be securely mounted in its proper position (i.e., under the insulation) on the evaporator outlet line. This condition could cause improper refrigerant temperature readings, with possible system refrigerant exhaustion and/or freon compressor oil starvation.

This service release provides instructions to inspect and properly mount (if necessary) the capillary sensor to insure capillary sensor mounting security and proper sensor function.

Instructions:

Refer to attached sketch/instruction data.

Material Required:

Not Applicable (Clamp and Presstite Insulating Tape specified on attached sketch/instruction sheet, Instructions numbers 2.b. 2 and 3 are common Service Facility items or may be obtained locally).

Availability of Parts:

Not Applicable (see above).

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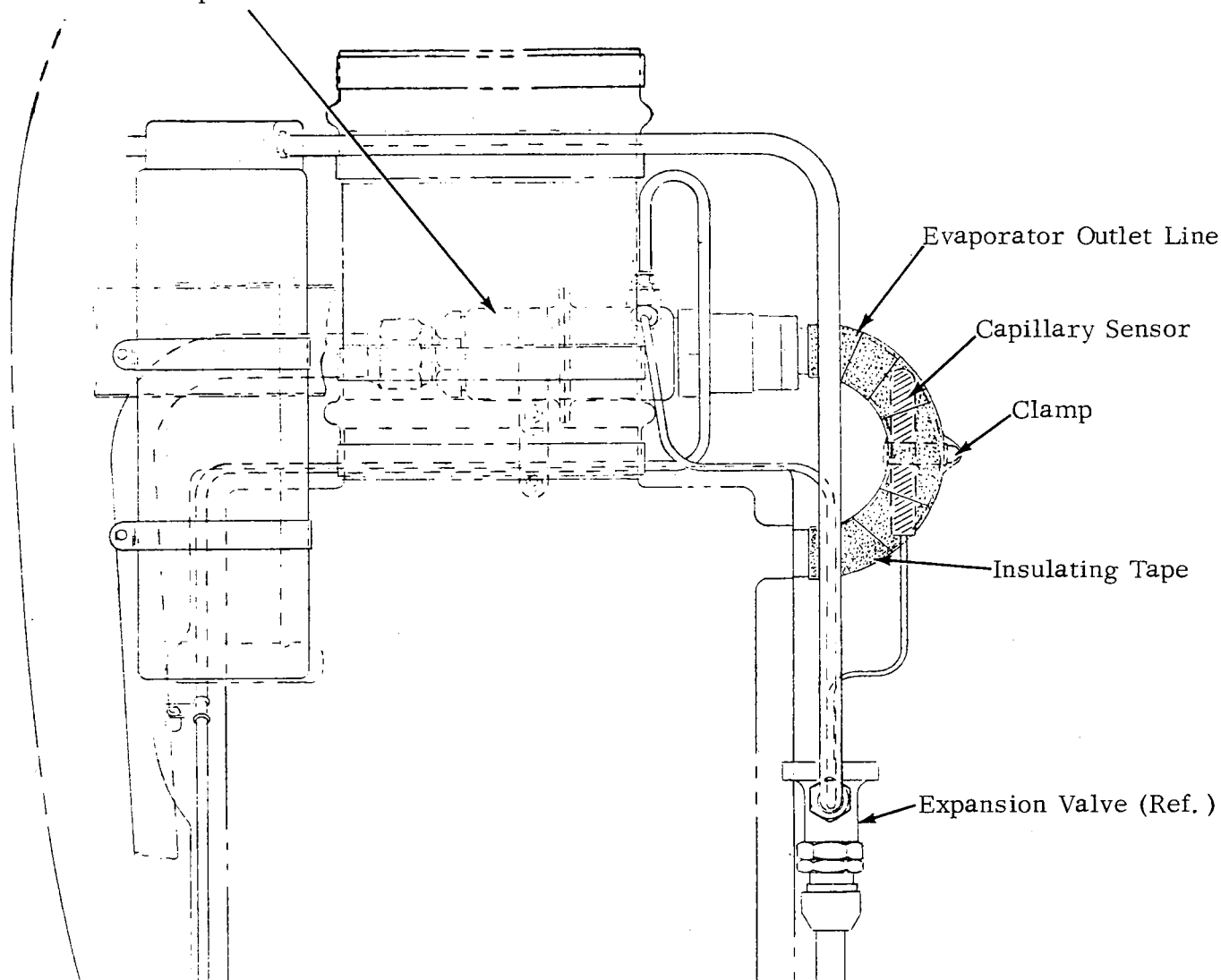
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Effectivity Date:

This service release is effective upon receipt.

Summary:

Please contact your Piper Field Service Facility to arrange for the inspection described in this service release in accordance with the recommended Compliance Time, above.



VIEW LOOKING AFT AT EVAPORATOR UNIT

### INSTRUCTIONS

1. Remove access panels from both sides of fuselage nose section to gain access to the evaporator unit.
2. Inspect capillary sensor to determine if it is properly positioned and clamped against the evaporator outlet line as shown above.
  - a. If clamp is present and capillary sensor does not protrude above the curvature of the evaporator outlet line, no further action is required.
  - b. If clamp is not present and/or if capillary sensor protrudes above the curvature of the evaporator outlet line, proceed as follows.
    1. Carefully remove insulating tape from evaporator outlet line and capillary sensor. Clean tape residue from line and sensor using MEK or acetone.
    2. Secure sensor to line, as shown above, using clamp P/N 454 921 (SAE Type 10 or Breeze #QS100-M10).
    3. Apply insulating tape P/N 189 777 (P. T. I. Prestite Insulating Tape 1/8" x 2") over outlet line, capillary sensor and clamp.
3. Reinstall access panels and make proper logbook entry of Service Letter 783 compliance.