



# SERVICE BULLETIN

No. 507

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

"Modification DOA EA-1 Approved"

November 10, 1976 M

Subject:

Inspection of Fuel System Control Cables at Swivel Fittings .

Models Affected:

Serial Numbers Affected:

PA-23 and PA-23-160 Apache .....	23-1 to 23-2046 Inclusive (with Auxiliary Fuel System <u>Only</u> )
PA-23-235 Apache, PA-23-250 and PA-23-250 (6 place) Aztec .....	27-1 to 27-7654053 Inclusive .
PA-31, PA-31-300 and PA-31-325 Navajo .....	31-2 to 31-7612065 Inclusive .
PA-31P Pressurized Navajo .....	31P-1 to 31P-7630017 Inclusive .

Compliance Time:

On aircraft with 300 hours or more time in service, at the next regularly scheduled inspection interval (100 hours, annual or Programmed Inspection Event), not to exceed the next 100 hours of operation . Subsequent inspections shall be in accordance with the respective aircraft service manual inspection data .

Purpose:

An investigation of fuel selector valve malfunction reports shows a direct relationship between fuel selector valve difficulties and control cable failures at the swivel fittings . Fatigue failures of the control cable occur from over stress at the swivel fittings attachments due to selector valve binding or misrigging . Previous routine inspections of the control cables at these points may not show impending cable breakage .

This service release provides instructions to inspect the fuel system control cables at the swivel fitting attachment points to detect binding, kinking or bending of the control cable inner wire, and to replace cable(s) exhibiting these conditions at the swivel fitting attachments . Note: PA-23, PA-23-235 and PA-23-250 Series - Left and Right Fuel Selector Cable Assembly (From Arm to Valve) only affected; refer to attached illustration .

Instructions:

Refer to attached illustration which depicts locations of affected fuel system control cable/swivel fitting attachment points to be inspected, and identifies control cable assembly/aircraft model application.

1. Refer to appropriate service manual Fuel System section to insure fuel selector valve controls are properly rigged, and to gain access to control cable/swivel fittings.
2. Visually check control cable wires at the related swivel fittings for indications of binding, kinking or bending: have someone in the cockpit operate fuel controls while mechanic inspects the swivel fittings for indications of binding, kinking, and/or bending.
  - a. Replace cables(s) exhibiting any of above conditions.
  - b. Check system rigging per service manual, make proper log book entry indicating compliance with this bulletin and prepare aircraft for return to service.
  - c. If no binding, kinking or bending appears at the cable attachment points, check rigging per service manual, make proper log book entry indicating compliance with this bulletin and prepare aircraft for return to service.

Material Required:

Fuel Control Cables to be replaced per Instructions number 2a above, may be identified in each respective aircraft model parts catalog and procured accordingly.

Availability of Parts:

Your Piper Field Service Facility.

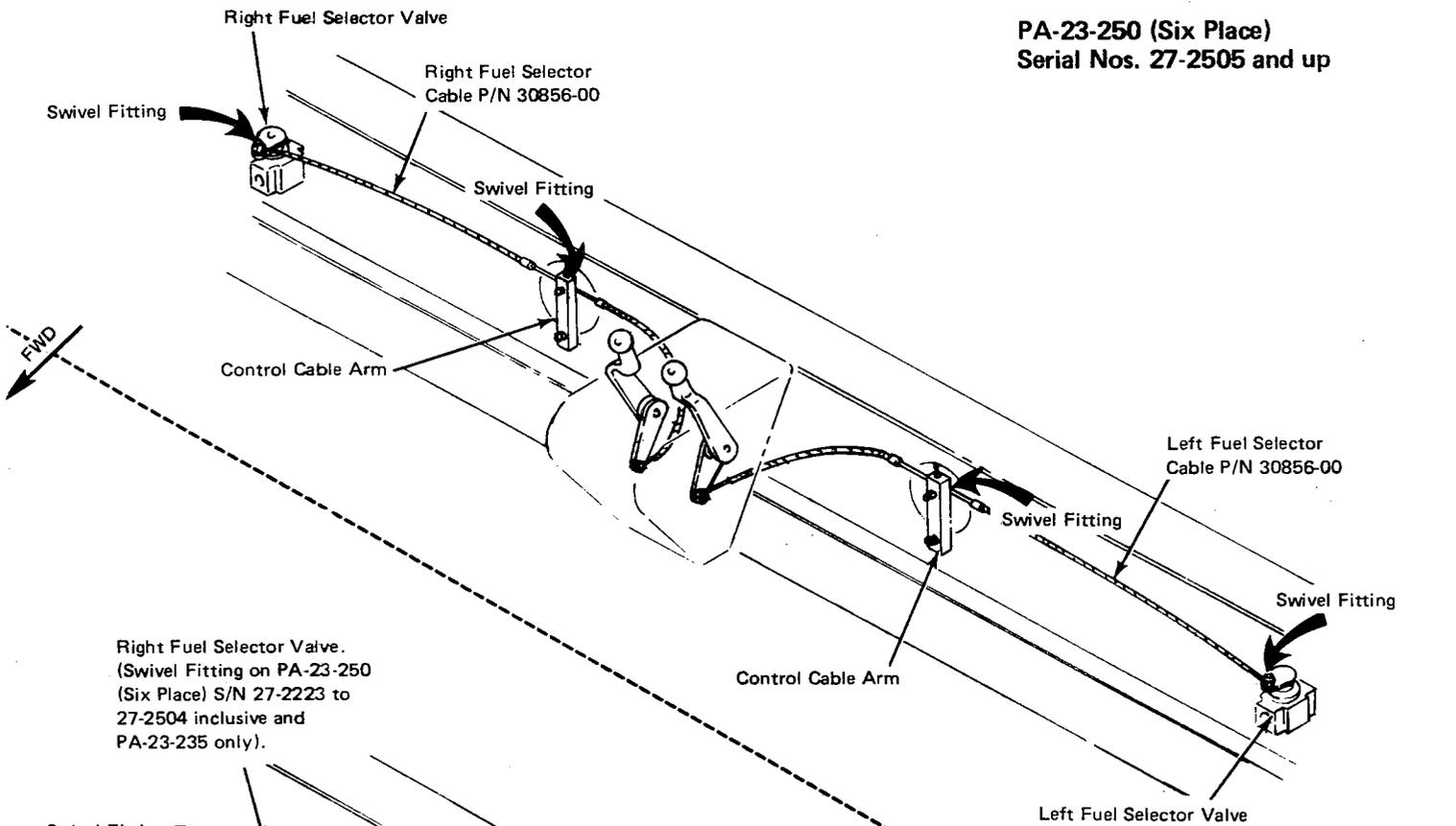
Effectivity Date:

This service release is effective upon receipt.

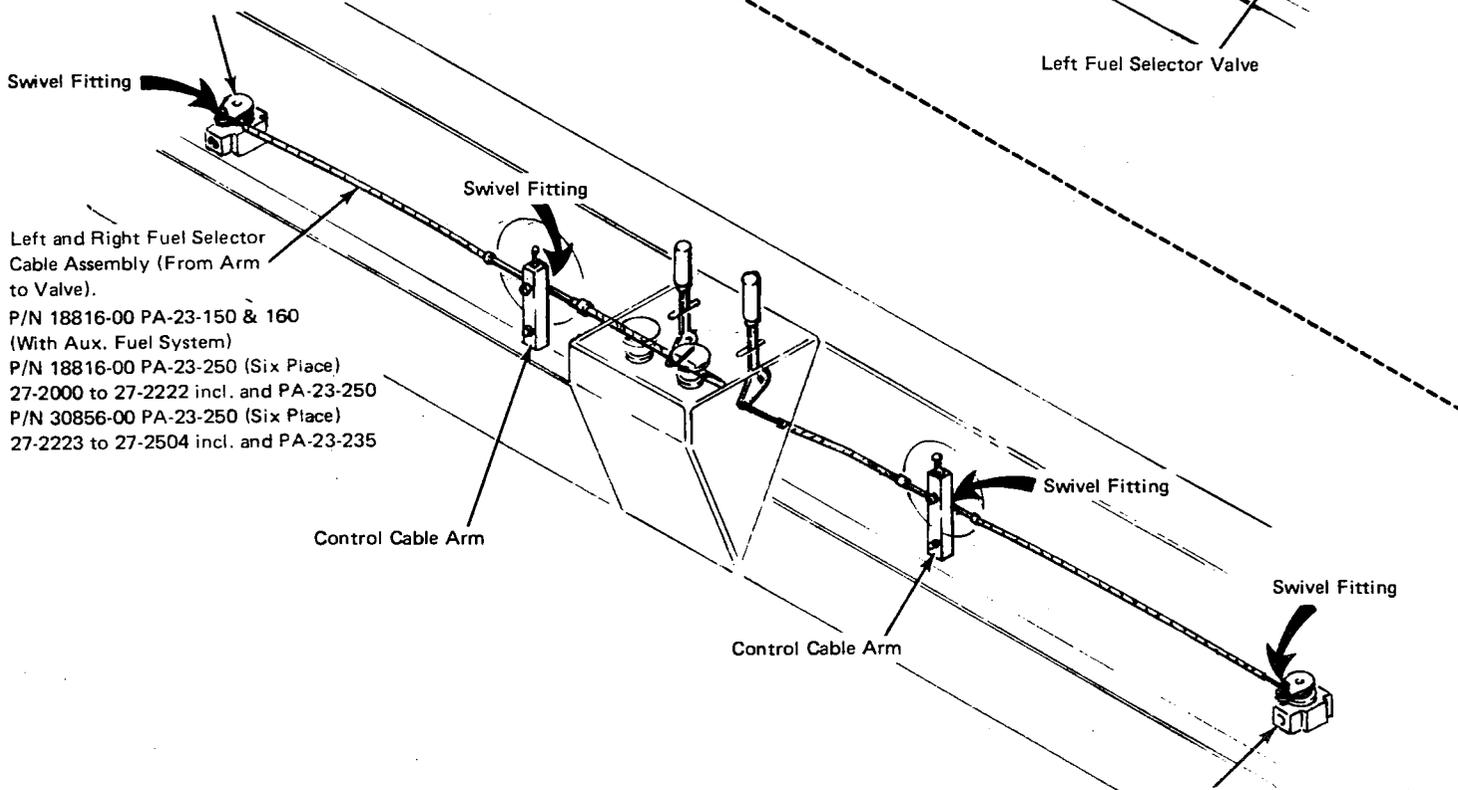
Summary:

Please contact your Piper Field Service Facility to make arrangements for compliance with the provisions of this service release in accordance with Compliance Time, above. Although current Piper published inspection procedures refer to fuel system control cables/attachments, it is felt that it is in the best interests of the subject aircraft owner/operators that the importance of thorough inspection in this area be reiterated.

**PA-23-250 (Six Place)  
Serial Nos. 27-2505 and up**



Right Fuel Selector Valve.  
(Swivel Fitting on PA-23-250  
(Six Place) S/N 27-2223 to  
27-2504 inclusive and  
PA-23-235 only).

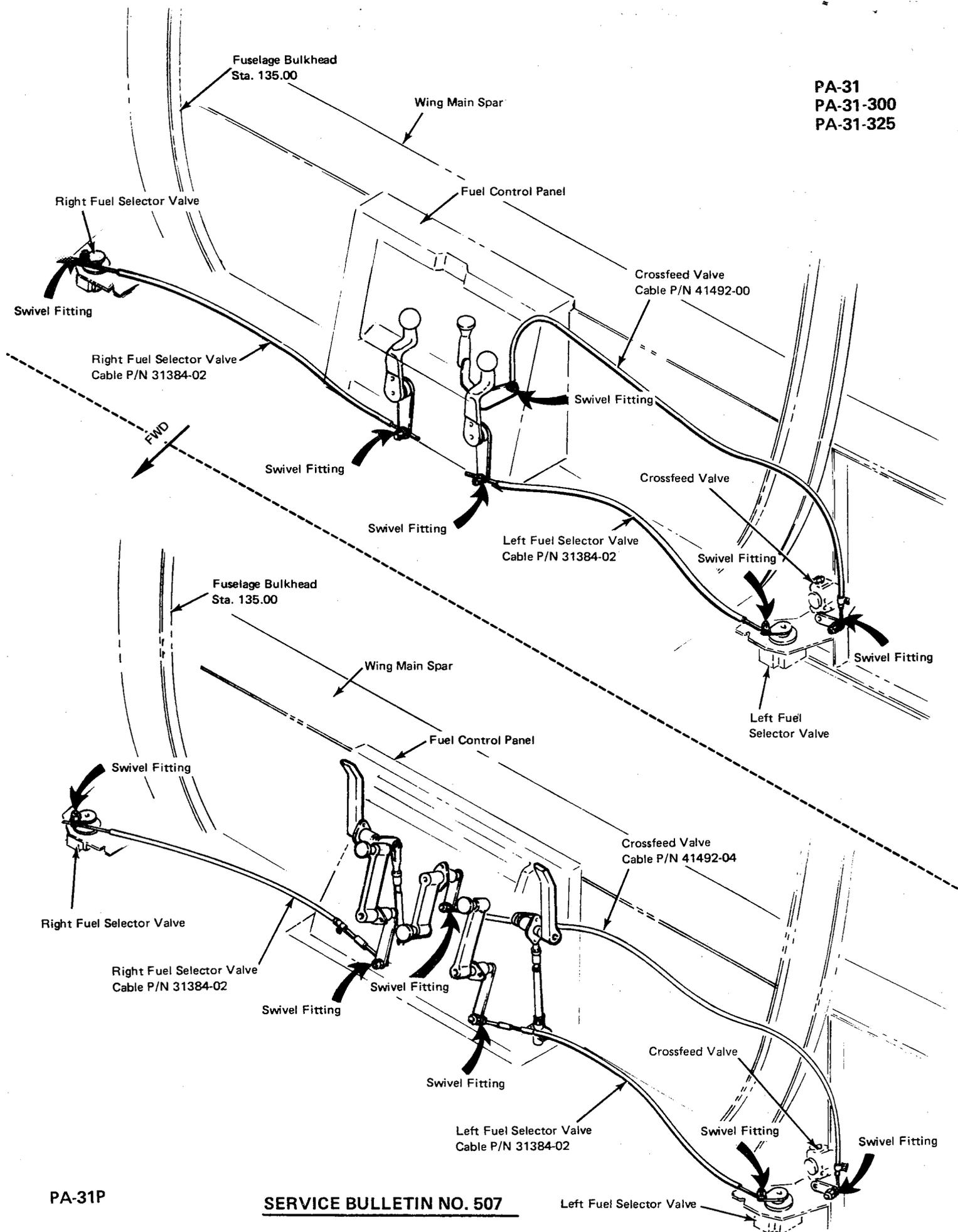


Left and Right Fuel Selector  
Cable Assembly (From Arm  
to Valve).  
P/N 18816-00 PA-23-150 & 160  
(With Aux. Fuel System)  
P/N 18816-00 PA-23-250 (Six Place)  
27-2000 to 27-2222 incl. and PA-23-250  
P/N 30856-00 PA-23-250 (Six Place)  
27-2223 to 27-2504 incl. and PA-23-235

Left Fuel Selector Valve.  
(Swivel Fitting on PA-23-250  
(Six Place) S/N 27-2223 to  
27-2504 inclusive and  
PA-23-235 only).

**PA-23-150  
PA-23-160  
PA-23-235  
PA-23-250  
PA-23-250 (Six Place) Serial  
Nos. 27-2000 to 27-2504**

PA-31  
PA-31-300  
PA-31-325



PA-31P

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Left Fuel Selector Valve