

Fuel Caps

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

FOR FAA USE ONLY
OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE Piper	MODEL PA 22-150
	SERIAL NO. 22-5250	NATIONALITY AND REGISTRATION MARK N7522D
2. OWNER	NAME (As shown on registration certificate) Thomas D. Stewart	ADDRESS (As shown on registration certificate) 405 Norman Ave. Cashmere, Wn. 98815

3. FOR FAA USE ONLY

THE SIGNATURE OF THE PERSON WHOSE NAME IS APPEARING IN THIS SPACE IS NECESSARY TO VERIFY THAT THE REPAIR OR ALTERATION WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF PART 43 OF THE FEDERAL AVIATION REGULATIONS AND IS NECESSARY FOR THE AIRCRAFT TO BE SUBJECT TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED BY PART 43.7.

3-11-86
Date

Michael J. Brown
FAA Inspector (TW-FSDO-61)

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
				REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				XX
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS William C. Markey 1506 Walla Walla St. Wenatchee, Wn. 98801	B. KIND OF AGENCY		C. CERTIFICATE NO. A&P 1740086
	<input checked="" type="checkbox"/>	U.S. CERTIFICATED MECHANIC	
	<input type="checkbox"/>	FOREIGN CERTIFICATED MECHANIC	
	<input type="checkbox"/>	CERTIFICATED REPAIR STATION	
<input type="checkbox"/> MANUFACTURER			

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

DATE 3-11-86	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>William C. Markey</i>
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7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is APPROVED REJECTED

BY	FAA RT. STANDARDS INSPECTOR	MANUFACTURER	<input checked="" type="checkbox"/>	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION	<input type="checkbox"/>	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	
DATE OF APPROVAL OR REJECTION 3-11-86	CERTIFICATE OR DESIGNATION NO. 1740086	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>William C. Markey</i>			

The gas cap covers are early Cessna 180 covers and have the hump in the cover lid. The later flat style covers will not work as they don't allow clearance for the Piper gas caps. The Cessna covers are designed to attach to the bladder type fuel cell and will have to be modified as follows:

1. Remove Piper gas cap and measure distance from top of metal tank bay cover to top of gas tank. (probably about 5/8")
2. Remove tank bay cover from wing.
3. Take a piece of .032 or such flat sheet of aluminum and cut to about 10" sq. (should be about 2" larger than the dia. of Cessna cover.)
4. Mark center of alum. sheet described in #3 and cut a hole slightly larger than gas tank filler neck in flat sheet.
5. Now slide this piece down over filler neck and let it rest on top of gas tank. Put gas cap back on fuel tank.
6. Take Cessna cover and measure down from bottom side of top mounting ring on Cessna cover the distance measured in step #1. Mark this distance around neck of cover and cut the lower portion of cover off. This will leave about 5/8" sides on cover. The lower mounting ring which used to bolt to bladder tank is discarded.
7. With lid to Cessna cover latched closed, place cover over Piper gas tank filler neck. The Piper gas cap should center into the hump on Cessna cover. Push down until sides of cover contact the flat alum. plate laying on top of Piper gas tank. Should take very little pressure to do this unless sides of Cessna cover were cut to long. If so trim as necessary. The hump in Cessna cover is not exactly in center of cover so it is necessary to do this step to line things up.
8. Now draw a line around base of Cessna cover onto alum. sheet and make 2 or 3 index marks so when pieces are removed they can be accurately lined up for welding.
9. Remove parts from Piper tank. Cut alum. sheet as marked in previous step. Sides of Cessna tank cover should probably be trimmed about 1/16" so finished unit does not jam down tight against gas tank when installed. Carefully align parts and weld prepared alum sheet to bottom of Cessna cover. This forms the new bottom of Cessna cover and if done properly the filler neck hole will line up exactly with the hump in Cessna cover. Also install a 1/8" piece of alum. tube on latch side of cover for fuel overflow drainage. This should be parallel to bottom and stick out about 2".

10. Install Piper tank bay cover on wing.
11. Slide modified Cessna cover down over filler neck and rotate cover so hinge line on cover is toward leading edge of wing. Mark Piper tank bay cover using outside bottom of Cessna cover for a pattern.
12. Remove Piper tank bay cover and cut out area previously marked.
13. Install Piper cover on wing and slip Cessna cover in place. Mounting ring on Cessna cover should contact top of Piper tank bay cover. Mark Piper tank bay cover for location of Cessna cover mounting holes.
14. Remove Cessna cover and Piper tank bay cover. Drill mounting holes in Piper cover and install correct size tinnerman nuts. Cessna cover can now be mounted to Piper tank bay cover.
15. Take approx. 18" of 1/8" alum. tubing and pass one end of it between rear spar and rear edge of gas tank straight down until it contacts lower fabric surface of wing. Mark this spot and cut out for 1/8" tubing to exit bottom of wing. Let it stick down 1/4" or so below bottom of wing. Bend remaining tubing forward to follow contour of fuel tank. The alum. tubing should be attached to rear spar with a small adel clamp etc. to secure it in place. Some duct tape works OK for on top of tank.
16. The tubing in #15 should be adjusted in length so there is about 8" or so between the end of it and the end of the tube from Cessna cover when cover is in place. A piece of rubber gas line hose connects these together and is a necessary coupling for installing cover. There is no need to clamp this hose.
17. Glue a piece of 12" sq. felt to top of gas tank to prevent rubbing (1/16" felt) of parts and install Piper tank bay cover with Cessna cover mounted in place.
18. Replace gas cap and close lid on Cessna cover. Cover will probably touch top of gas cap, but this is not a problem.

NOTE: I seal the area between filler neck and bottom of cover with a foam ring of rubber glued only to bottom of cover. If you do this it is very important to drill a couple of 1/16" vent holes in the top of Piper gas cap. If this is not done and rubber moves up filler neck it will block vents on bottom of Piper caps. Don't neglect to do this as I speak from experiance. Also install good tight gas cap gaskets to prevent fuel slopping out around cap when tanks are full. THIS COMPLETES MODIFICATION