



US Department of Transportation
Federal Aviation Administration

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

Form Approved

OMB No. 2120-0020

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. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each violation (Section 901 of Federal Aviation Act of 1958).

1. Aircraft	Make <p style="text-align: center;">Piper</p>	Model <p style="text-align: center;">PA-22-150</p>
	Serial No. <p style="text-align: center;">22-5185</p>	Nationality and Registration Mark <p style="text-align: center;">N7424D</p>
2. Owner	Name (As shown on registration certificate) <p style="text-align: center;">Ralph R. Gutowski</p>	Address (As shown on registration certificate) <p style="text-align: center;">8 Ives Woods Drive Oxford, OH 45056</p>

3. For FAA Use Only

This data identified herein complies with applicable airworthiness requirements and is approved only for the above-described aircraft subject to conformity inspection by a person authorized in FAR 43.7.

APPROVING INSPECTOR

DATE 5/14/04

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address <p style="text-align: center;">Thomas E. Anderson 5401 Crooked Tree Rd Mason, OH 45040-9663</p>	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. <p style="text-align: center;">IA # 33781172 3412459</p>
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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 <p style="text-align: center;">7-21-2009</p>	Signature of Authorized Individual
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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 Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection <p style="text-align: center;">7-21-2009</p>	Certificate or Designation No. <p style="text-align: center;">3412459</p>	Signature of Authorized Individual
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NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

1. Removed existing 3/8" diameter fuel line from gascolator, right side, bottom floor, to AN "T" located in front of right upper side doorpost under instrument panel (see figure 1, sheet A).
2. Installed AN929 cap at "T" fitting (see figure 2, sheet A).
3. Installed a new 3/8" - 3003-0 (0.375" x 0.035") Aluminum tubing fuel line from right floor gascolator, parallel to tubular fuselage crossmember and parallel to left cabin floor bulkhead, to existing fuel valve using AN826 (MS20826) Tee-fitting with AN818/AN819 nut-sleeve combination (see figure 2, sheet A).
4. Test fuel system for leaks and found none.
5. Engineering test data collected on previous installation on N3383A (Ser. No. 22-1646) demonstrated a fuel flow difference of 8% between right and left tank as compared to 18% before modification, for a net improvement in fuel flow from the right tank of 10% or 4.1 GPH. System demonstrated a gravity fuel flow of 38 gallons/hour after modification.
6. This alteration does not eliminate requirement to comply with AD 67-24-02.
7. No significant change in weight and balance noted.
8. Instruction for Continued Airworthiness are attached.

-----end-----

Additional Sheets are Attached

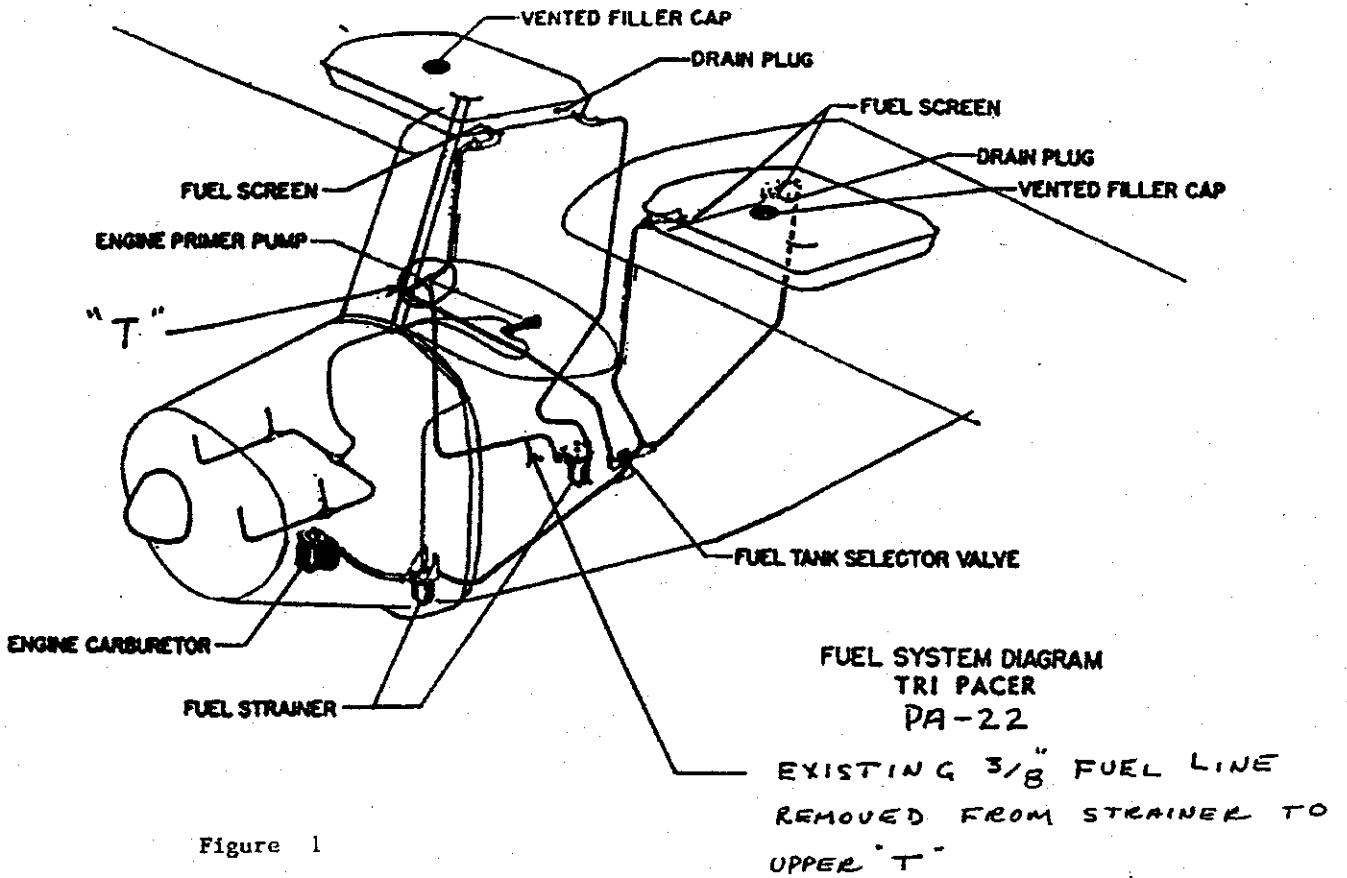


Figure 1

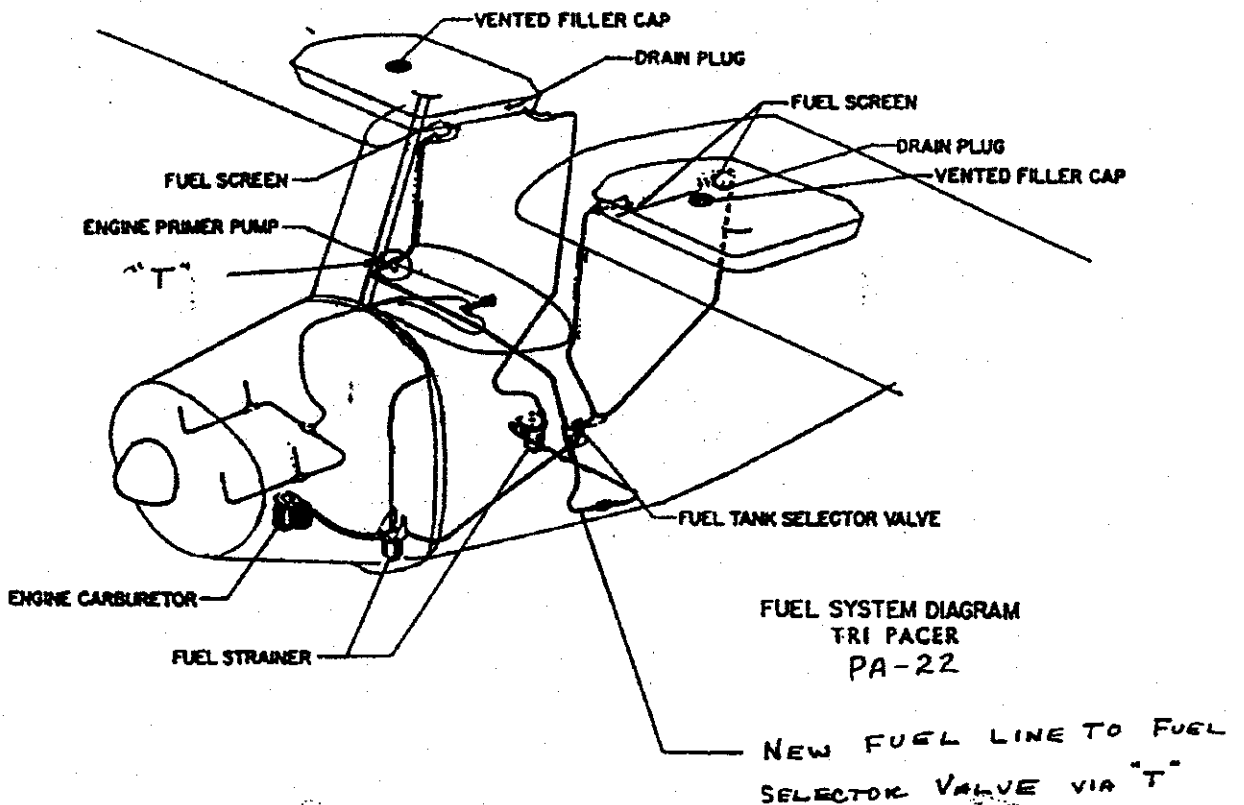


Figure 2



INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

A/C Make: PIPER Model: PA-22-150 S/N: 22-5185 Reg.#: N7424D
 Revision: Original IAC Date: _____

This sixteen-item checklist is Instructions for Continued Airworthiness (ICA), to comply with FAA Handbook Bulletin for Airworthiness (HBAW 98-18 Dated October 7, 1998), are applicable to the aircraft listed above when the following equipment is installed:

SYSTEM: _____

ITEM	CHECKLIST INFORMATION
1.	<p>Introduction: This section briefly describes the aircraft, engine, propeller, or component that has been altered. Include any other information on the content, scope, purpose, arrangement, applicability, definitions, abbreviations, precautions, units of measurement, referenced publications, and distribution of the ICA as applicable.</p> <p style="text-align: center;"><u>This alteration applies to a Piper Tri-Pacer PA22-150, S/N 22-5185, N7424D. The purpose of the alteration is to remove restrictions and improve the flow of fuel from the right side fuel tank.</u></p>
2.	<p>Description: Of the major alteration, its functions, including an explanation of its interface with other systems, if any.</p> <p style="text-align: center;"><u>This alteration re-routes the fuel line between the rear fuel port of the right fuel tank and the tank selector valve. The original fuel line runs from the rear fuel port to a gascolator located in the right belly of the aircraft and up to a Tee below the right window post where it is combined with the fuel flow from the forward port of the right fuel tank. The modified routing removes the fuel line between the belly gascolator and the tee below the right window post and installs a new fuel line between the gascolator and a new tee at the right tank inlet to the fuel selector valve (see attached drawings).</u></p>
3.	<p>Control: Operation information: Or special procedures, if any.</p> <p style="text-align: center;">Comment: <u>None required</u></p>
4.	<p>Servicing information: Such as types of fluids used, servicing points, and location of access panels, as appropriate.</p> <p style="text-align: center;">Comment: <u>None required</u></p>
5.	<p>Maintenance Instructions: Such as recommended inspection/maintenance periods in which each of the major alteration components are inspected, cleaned, lubricated, adjusted, tested, including applicable wear tolerances and work recommended at each scheduled maintenance period. This section can refer to the manufacturers' instructions for the equipment installed where appropriate (e.g., functional checks, repairs, inspections.) It should also include any special notes, cautions, or warnings, as applicable.</p> <p style="text-align: center;">Comment: <u>For annual inspection the fuel system shall be inspected in accordance with FAR 43 Appendix D.</u></p>
6.	<p>Trouble shooting information: Information describing probable malfunctions, how to recognize those malfunctions, and the remedial actions to be taken.</p> <p style="text-align: center;">Comment: <u>Not Applicable</u></p>

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

7.	<p>Removal and replacement information: This section describes the order and method of removing and replacing products, parts and any necessary precautions. This section should also describe or refer to manufacturer's instructions to make required tests, trim checks, alignment, calibrations, center of gravity changes, lifting or shoring, etc., if any.</p> <p>Comment: <u>Not Applicable</u></p>
8.	<p>Diagrams: Of access plates and information, if needed, to gain access for inspection.</p> <p>Comment: <u>Not Applicable</u></p>
9.	<p>Special inspection requirements: Such as X-ray, ultrasonic testing, or magnetic particle inspection, if required.</p> <p>Comment: <u>Not Applicable</u></p>
10.	<p>Application of protective treatments: To the affected area after inspection and/or maintenance, if any.</p> <p>Comment: <u>Not Applicable</u></p>
11.	<p>Data: Relative to structural fasteners such as type, torque, and installation requirements, if any.</p> <p>Comment: <u>Not Applicable</u></p>
12.	<p>List of special tools: Special tools that are required, if any.</p> <p>Comment: <u>Not Applicable</u></p>
13.	<p>For commuter category aircraft: The following additional information must be furnished, as applicable:</p> <ul style="list-style-type: none">A. Electrical loadsB. Methods of balancing flight controlsC. Identification of primary and secondary structuresD. Special repair methods applicable to the airplane. <p>Comment: <u>Not Applicable</u></p>

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

14.	<p>Recommended overhaul periods: Are required to be noted on the ICA when an overhaul period has been set by the manufacturer of a component, or equipment. If there is no overhaul period, the ICA should state for item 14: "No additional overhaul time limitations."</p> <p>Comment: <u>Not Applicable</u></p>
15.	<p>Airworthiness Limitation Section: Include any "approved" airworthiness limitations identified by the manufacturer or FAA Type Certificate Holding Office (e.g., An STC incorporated in a larger field approved major alteration may have an airworthiness limitation.) The FAA inspector should not establish, alter, or cancel airworthiness limitations without coordinating with the appropriate FAA Type Certificate Holding Office. If there are no changes to the airworthiness limitations, the ICA should state for item 15: "No additional airworthiness limitations" or "Not Applicable."</p> <p>Comment: <u>Not Applicable</u></p>
16.	<p>Revision: This section should include information on how to revise the ICA. For example, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement: "The attached revised/new Instructions for Continued Airworthiness (date _____) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (date _____)." Once the revision has been accepted, a maintenance record entry will be made, identifying the revision, its location, date of the Form 337.</p> <p align="center"><u>A letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement:</u></p> <p align="center"><u>"The attached revised/new Instructions for Continued Airworthiness (date _____) for the above aircraft or component major alteration have been accepted by the FAA, superceding the Instructions for Continued Airworthiness (date _____)."</u></p> <p align="center"><u>Once the revision has been accepted, a maintenance record will be made, identifying the revision, its location, date of the Form 337.</u></p>

Note:

Implementation and Record Keeping: For major alterations performed in accordance with FAA Field Approval policy, the owner/operator operating under part 91 is responsible for ensuring that the ICA is made part of the applicable section 91.409 inspection program for their aircraft. This is accomplished when a maintenance entry is made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g., Block 8 of FAA Form 337, dated 5/28/98) along with a statement that the ICA is now part of the aircraft's Inspection/maintenance requirements.

For major alterations performed in accordance with a field approval on air carrier aircraft, the air carrier operator is responsible for ensuring that the ICA is made part of the applicable inspection/maintenance program for their aircraft. If a procedure is not currently included in the operator's manual to incorporate ICA, this process will need to be appropriately addressed (i.e. the operator submits a revision to its maintenance program to the applicable certificate-holding district office (CHDO).

For aircraft inspected under an Approved Aircraft Inspection Program (AAIP), the operator will submit a change to the CHDO in accordance with section 135.419 b).

For air carrier aircraft inspected using an annual/100 hour inspection program, a reference to the new ICA will be made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g., ICA is located/attached to Block 8 of FAA Form 337, dated 5/28/98). In addition, the operator will request a revision to the operator's Operations Specifications, additional maintenance requirements, which incorporates the ICA into the inspection program.

67-24-02 PIPER:

Amdt. 39-464, as amended by amendment 39-885. Applies to Type PA-22 Aircraft Serial Nos. 22-1 to 22-7642 Inclusive.

Compliance required within the next 15 hours in service after December 6, 1969, the effective date of this AD as amended.

To forestall the possibility of engine fuel starvation during takeoff operations, install a placard on the right fuel quantity gauge, as shown in Piper Service Bulletin No. 250 dated June 2, 1967. The placard shall read: "Right Tank Level Flight Only With Less Than 1/3 Tank." A 1/3 tank capacity equals 6 gallons. Aircraft equipped with a single fuel quantity gauge must also have the placard installed.

The manufacturer's specifications and procedures identified and described in this directive are incorporated herein and made a part hereof pursuant to 5 U.S.C. 522(a)(1). All persons affected by this directive who have not already received these documents from the manufacturer may obtain copies upon request to Piper Aircraft Corporation, Lock Haven, Pa. 17745. These documents may also be examined at the Office of Regional Counsel, Eastern Region, J.F.K. International Airport and at FAA Headquarters, 800 Independence Avenue, S.W., Washington, D.C. A historical file on this AD which includes the incorporated material in full is maintained by the FAA at its headquarters in Washington, D.C., and at the Eastern Region in Jamaica, New York.

Effective August 17, 1967.

Revised December 6, 1969.



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

Form Approved
OMB No. 2120-0020

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. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Piper	Model PA-22-135
	Serial No. 22-1646	Nationality and Registration Mark N3383A
2. Owner	Name (As shown on registration certificate) Frank P. Sperandeo III	Address (As shown on registration certificate) 15841 Pear Cir. Fayetteville, AR 72704

3. For FAA Use Only

THE ALTERATION IDENTIFIED HEREIN COMPLIES WITH APPLICABLE AIRWORTHINESS REQUIREMENTS AND IS APPROVED ONLY FOR THE ABOVE DESCRIBED AIRCRAFT SUBJECT TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED IN FAR 43.7.
5-7-97 David J. Hall
DATE FAA INSPECTOR

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				x
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address K. V. Turney 17654 Marshall St. Garfield, AR 72732	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. 1464298
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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 3/27/97	Signature of Authorized Individual <i>K. V. Turney</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 Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 5/5/97	Certificate or Designation No. 1464298	Signature of Authorized Individual <i>K. V. Turney</i>		

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

1. Removed existing 3/8" Dia. fuel line from gas collator, right side, bottom of floor, to AN "T" located in front of right upper side doorpost under instrument panel.
2. Installed A.N. cap at lower "T" fitting. (See Figure 2, sheet A).
3. Installed a new 3/8" - 5051 Alum tubing. fuel line from right floor gas collator to new UNIVAR FUEL VALVE # U-491-947A, VIA. behind tubular Fuselage crossmember, and parallel to left cabin floor bulkhead using AN Fittings. (See Figure 2, sheet B).
4. Test fuel system for leaks and found none.
5. Test fuel system for flow of fuel and found a difference of 8% between right and left tank as compared to 18% before modification, for a net gain of 225% improvement. System now has a gravity fuel flow of 38 GAL/HR.
6. No significant change in weight and balance noted.

*****END*****

RECEIVED

APR 11 1997

FAA
SW-FSDO-11
(LIT)

		SPV	A2
		AS	A4
		CS	A5
		ASA1	A6
		ASA2	A7
		ASF	A9

RECEIVED

APR 2 - 1997

FAA
SW-FSDO-11
(LIT)

			A1
		SPV	A2
		SPV	A3
		AS	A4
		CS	A5
		ASA1	A6
		ASA2	A7
		ASF	A8
			A9

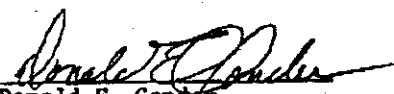
Additional Sheets Are Attached

Parts Manufacturer Approval Listing - Supplement No. 65
Federal Aviation Administration - Parts Manufacture Approval

Univair Aircraft Corporation

Univair Aircraft FAA-Approved Design Data	Approved Replacement for	FAA Design Approval Means	Installation Eligibility
Cowl Latch Part No. U-0452108, U-0452109, U-0452110, U-0452111, U-0452112, U-0452113, U-0452114, U-0452115, U-0452119, U-0452120, U-0452122, U-0452123	Cessna Aircraft Co. Part No. 0452108 0452109 0452110 0452111 0452112 0452113 0452114 0452115 0452119 0452120 0452122 0452123	Identical Design Approval per FAR 21.303(c)	120, 140, 140A, 170, 170A, 170B
Fuel Valve Part No. U-491-947	Piper Aircraft Corp. Part No. 491-947	Identical Design Approval per FAR 21.303(c)	PA-18
Elevator Link Part No. U-10449-00	Piper Aircraft Corp. Part No. 10449-00	Identical Design Approval per FAR 21.303(c)	J-5C, PA-11, PA-12, PA-14, PA-15, PA-16, PA-17, PA-18, PA-20, PA-22, PA-25
Grommet Part No. U-10293-00 and U-10293-02	Piper Aircraft Corp. Part No. 10293-00 and 10293-02	Identical Design Approval per FAR 21.303(c)	PA-11, PA-14, PA-15, PA-17, PA-18, PA-20, PA-22, PA-25, J-3, J5C
Fairing Part No. U-4-10000	Bellanca/Champion Part No. 4-10000	Identical Design Approval per FAR 21.303(c)	7EC, 7FC, 7ECA, 7GCAA, 7GCBC

END OF LIST


Donald E. Gonder
Acting Manager, Seattle Manufacturing
Inspection District Office

Issued: February 9, 1977
Reissued: September 18, 1989

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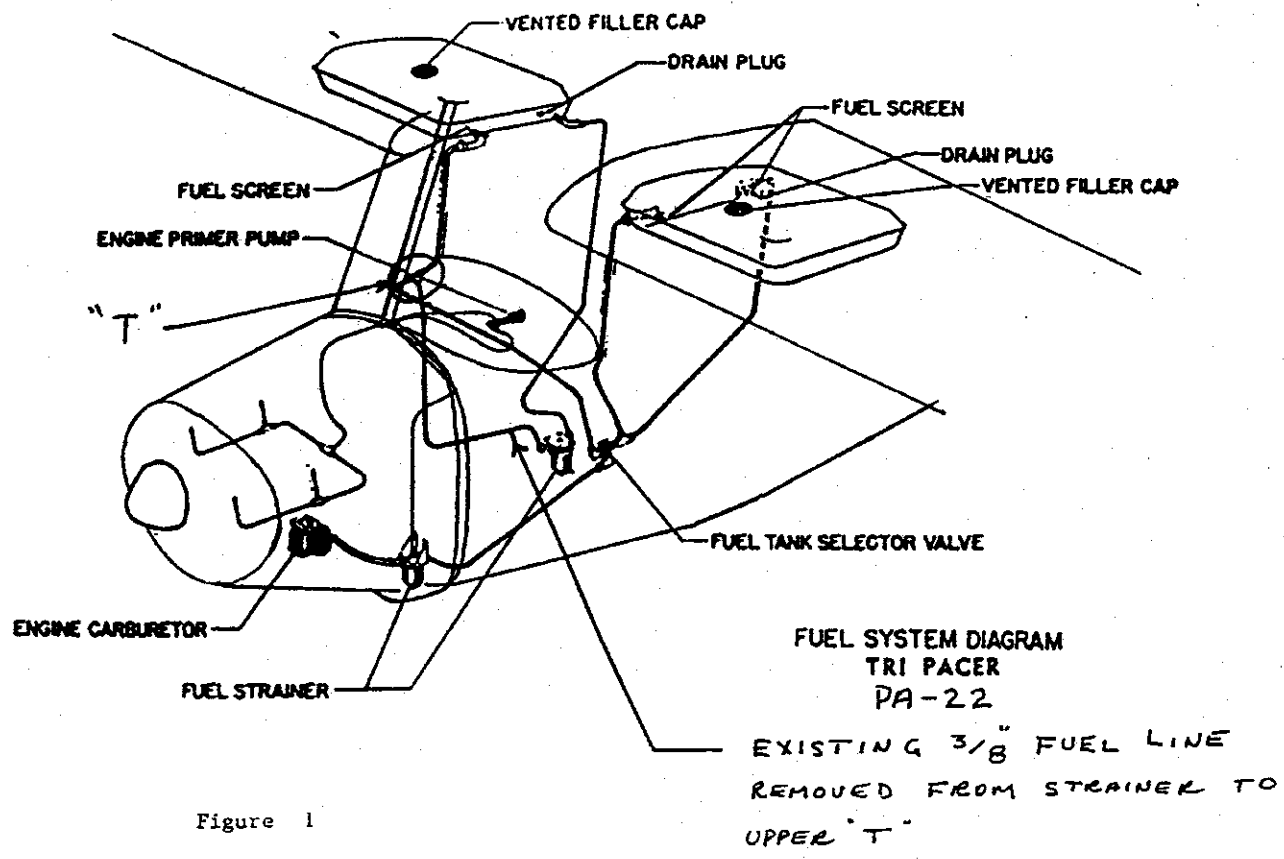


Figure 1

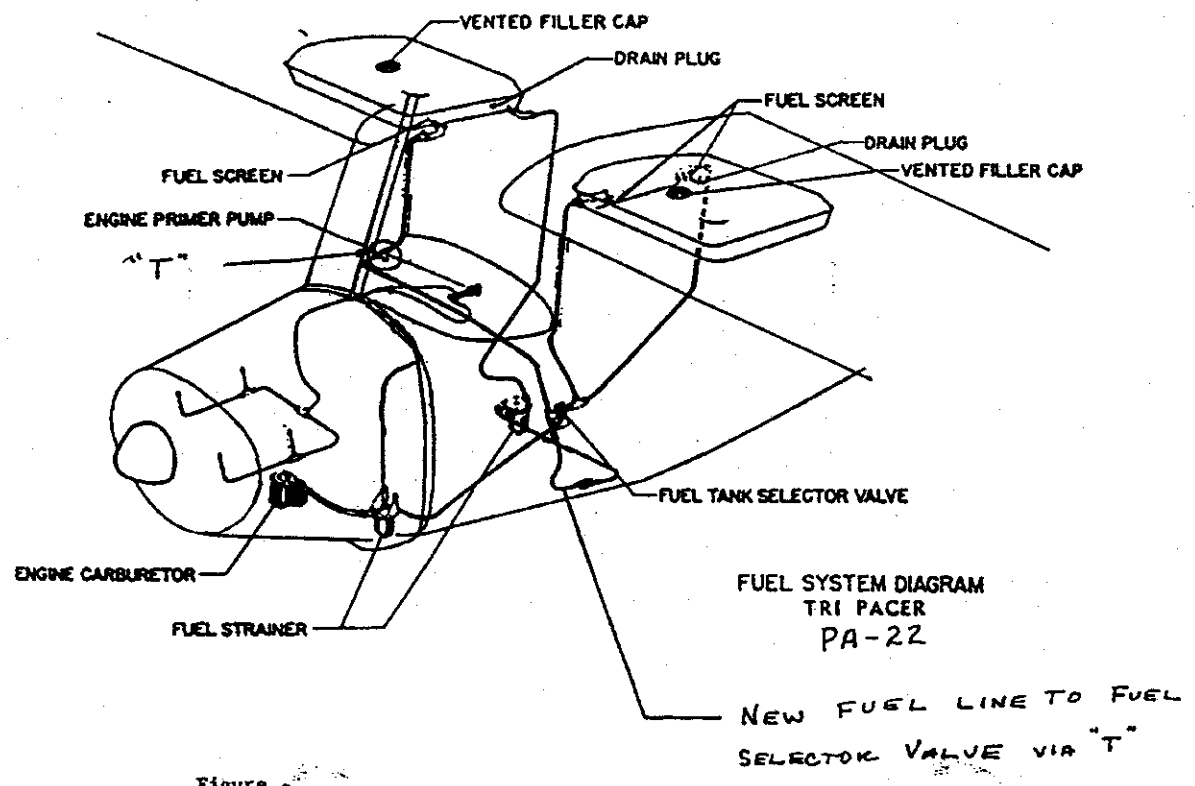
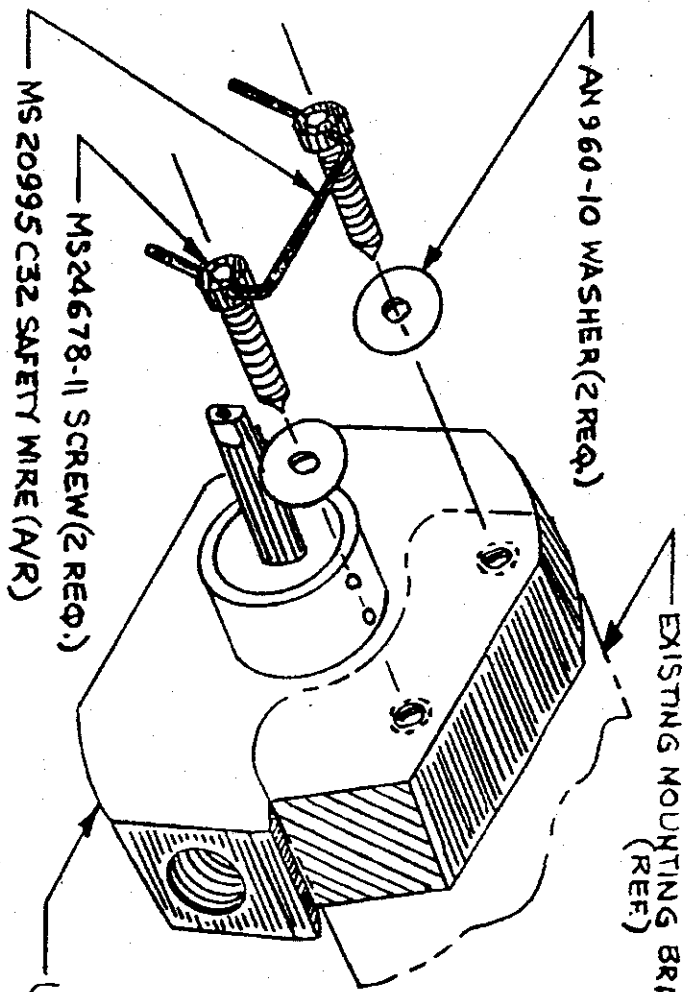


Figure 2



(A) WARNING: DO NOT DISASSEMBLE VALVE. NO FIELD SERVICEABLE PARTS INSIDE.

AN 960-10	WASHER	2			
MS20995 C32	SAFETY WIRE	A/R			
MS24678-11	SCREW	2			
U-491-947A	FUEL VALVE	1			
PART NO.	NAME	STOCK SIZE	QTY	MATERIAL	SPEC
DRAWN BY: BALDWIN		DATE: 5-1-90	SCALE: FULL	A/C TYPE: PIPER	
LIMITS: $\pm .03$ $\pm .010$ $\pm 2^\circ$					
FINISH: NONE					
PAINT: NONE					
MODELS: FAA/PMA PA-20,-22					
TITLE: VALVE ASSY.- INSTALLATION					
UNIVAIR AIRCRAFT CORPORATION 2500 Himalaya Road Aurora, Colorado 80011					
E.O. NO.	CHG	REVISION	DATE	SHEET NO.	DRAWING NO.
91249	A	ADD WASHERS	12-3-93	1 of 1	U-491-947K2

MATERIALS LIST
Fuel Line Alteration

Piper PA-22-150
S/N: 22-5185
Reg. Nbr: N7424D

1. 3003-0 (0.375" x 0.035") 3/8" Aluminum tubing
2. AN929 cap at "T" fitting.
3. AN826 (MS20826) Tee-fitting at fuel valve.
4. AN818/AN819 nut-sleeve combination.
5. Line/tubing clamps p/n 05-00005 and MS21919.

FIELD APPROVAL CHECKLIST

FIELD APPROVAL CHECKLIST

Instructions: Print or type all entries. This information should be as complete as possible prior to your initial discussion with the FAA.

1. Aircraft	Make PIPER	Model PA22 TRIPACER
	Registration Number N 7424D	Serial Number 22-5185
2. Applicant	Name RALPH R. GUTOWSKI	Address/Telephone Number 513-243 2647 8 FIVE WOODS DR OXFORD, OH 45056

3. Type of Product and Certification Basis

- AIRFRAME
 ENGINE
 APPLIANCE
 OTHER _____
 Part 23
 Part 25
 Part 27
 Part 29
 Part 31
 Part 33
 CAR 3
 CAR 4(a)
 CAR 4(b)
 CAR 6
 CAR 7
 CAR 8
 CAR 13

4. Brief Description of Project **REROUTE FUEL LINE FROM RIGHT TANK REAR OUTLET TO IMPROVE FUEL FLOW & SAFETY MARGIN.**

5. Schedule for Completion of Project

Date when field approval is needed: 6-1-04
 Date when work is to begin: _____
 Date for ASI visit (projected): _____
 Projected completion date for project: 9-1-04

6. Who Will Perform the Alteration or Repair?

Mechanic's name: THOMAS E. ANDERSON or Repair station: _____
 Certificate no: 376447222 Contact person at the facility: _____
 Telephone number: 513 398 2636
 Location where alteration/repair will be accomplished: OXD MIAMI UNIV AIRPORT

7. Designees (DARs and DERs) None

Names and telephone numbers of the Designated Engineering Representatives, (DER) and/or Designated Airworthiness Representatives (DAR) who are helping with the project:

Name: _____ Telephone number: _____
 Name: _____ Telephone number: _____

**COMPLIANCE CHECKLIST
FUEL LINE MODIFICATION**

CAR 3	Subject	Method of Compliance	Documentation Reference
Para 03.422	Fuel system operation		
Para 03.4220	Fuel flow rate	test and placard	Aircraft Specivication 1A6, AD 67-24-02
Para 03.42200	Gravity feed systems	Test	Test data
Para 03.425	Fuel system lines vibration and loads	Material specifications	Material list
14 CFR Part 23			
Para 23.955			
Sub para (b)	Gravity systems	Test	Test data
Para 23.993	Fuel system lines and fittings		
Sub para (a)	Support for vibration and loads	Material specifications	Material list
Para 23.994	Fuel system components	Protection from wheels up landing	Aircraft Specification 1A6 Fixed landing gear
14 CFR Part 27			
Para 27.952	Crash resistance	N/A	Car 3 Aircraft specification
Para 27.955	Fuel Flow	Test data	Aircraft Specification 1A6
Para 27.993	Support for vibration and loads	Material specifications	Material list