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 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
	Serial No.: 22-5685	Nationality and Registration Mark: N8430D
2. Owner	Name *(As shown on registration certificate)*: David A and Deborah L Geiger	Address *(As shown on registration certificate)*: 154 Timber Trail Drive, Murphysboro, IL 62966

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized by FAR PART 43, Section 43.7.

SPI FSDO — DISTRICT OFFICE
JUN 1 5 2007 — DATE
Curt C. Lindauer — SIGNATURE OF 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	B. Kind of Agency	C. Certificate No.
	X U.S. Certificated Mechanic	
	Foreign Certificated Mechanic	
	Certificated Repair Station	
	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 herin is true and correct to the best of my knowledge.

Date	Signature of Authorized Individual

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 Flt. Standards Inspector		Manufacturer		Inspection Authorization	Other *(Specify)*
		FAA Designee		Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual

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.)

Remove Pesco Model 3P-194-F wet vacuum pump, air-oil separator, and associated air-oil lines and hardware. Remove oil return inlet plate from fuel pump mounting boss on accessory case. Replace oil return line inlet plate with fuel pump blocking cover [Lycoming 65098].

Install Rapco dry air vacuum pump, RA215CC [direct FAA PMA replacement for Airborne 215CC used for Lycoming O-320 engines].

Install vacuum hose from vacuum pump to vacuum regulator. Install hose to exit port of vacuum pump and route to exit in lower cowl.

Run engine and adjust vacuum regulator as necessary to obtain 4-5 inches vacuum pressure.

Continued Airworthiness for the equipment installed is "ON CONDITION", refer to the manufacturers current documentation and appropriate FAR's for the required inspections regarding the described installation.

Instructions for Continued Airworthiness attached and included with the aircraft maintenance records.

Aircraft maintenance records and weight and balance data have been updated to reflect the above installation.

----------END----------

☐ Additional Sheets Are Attached

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

A/C Make: Piper Tri-Pacer_ Model: PA-22-150 S/N: 22-5685 Reg. #: N8430D

Revision: Initial IAC Date: June 10, 2007

SYSTEM: Dry Air Vacuum Pump [Rapco Inc. FAA-PMA Approved RA215CC]

1.	Introduction: The Piper PA-22 series aircraft that had a vacuum pump installed used a Pesco 'wet' style pump with associated air-oil separator. The last PA-22 model, the PA-108 used an Airborne Mechanism 'dry' vacuum pump which required no air-oil separator. The PA-22 with the Lycoming O-320 engine was not produced from the Piper factory with the 'dry' pump installation. Aircraft produced after the PA-22 series had the 'dry' vacuum pump installation as a standard item. The dry vacuum pump eliminates the air-oil line, air-oil separator, and oil return line to the engine.
2.	Description: Rapco Inc. manufactures PMA new replacement vacuum pumps that are the equivalent of the previously manufactured Airborne pump for the Lycoming 0-320 [See PMA Supplement No. 63, Enclosure A]. The vacuum pump is a vane style pump that creates a vacuum to the line for 'gyro' instruments and discharges air to the engine compartment atmosphere. In general, the installation, operation, and maintenance is the same as previous 'dry' vacuum pumps.
3.	Control: Not Applicable. There are no controls or adjustments to the vacuum pump. An external vacuum pressure regulator controls vacuum pressure to the instruments using vacuum.
4.	Servicing information: No servicing required.
5.	Maintenance Instructions: An inoperable vacuum pump must be removed to be overhauled or replaced.
6.	Trouble shooting information: Probable Malfunction: Loss of vacuum while engine is operating. Low vacuum pressure can result if there is a leak in the vacuum hose plumbing or if the vacuum pressure regulator has changed settings. High vacuum pressure levels could result If the vacuum pressure regulator has changed settings. Check all vacuum hoses and connections for integrity. If vacuum pressure is zero, the failure is most likely the vacuum pump. Typical failure of the vacuum pump will cause the connecting shaft to break, thereby disconnecting the failed pump from the engine accessory drive.
7.	Removal and replacement information: Removal and replacement of the vacuum pump requires no special tools or techniques. See manufacturer's [Rapco] 'Dry Air Pump Removal & Installation Instructions', Enclosure B]
8.	Diagrams: Not applicable.
9.	Special inspection requirements: The vacuum pump should be inspected during annual inspections and 100 hour inspections for: 1] oil leakage between the pump and adapter and accessory case and 2] excessive or abnormal carbon material in the area of the exhaust outlet for the pump. An increase in the amount of carbon material could indicate excessive wear and possible imminent failure of the vacuum pump.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

10.	Application of protective treatments: Not Applicable
11.	Data: See manufacturer's [Rapco] 'Dry Air Pump Removal & Installation Instructions' for relevant torque and installation requirements [Enclosure B].
12.	List of special tools: No special tools are required for this installation.
13.	For commuter category aircraft: Not Applicable.
14.	Recommended overhaul periods: No additional overhaul time limitations.
15.	Airworthiness Limitation Section: Not Applicable.
16.	Revision: A letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.