



U.S. 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 such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make <b>Piper</b> Serial No. <b>20-138</b>	Model <b>PA-20</b> Nationality and Registration Mark <b>N7029K</b>
2. Owner	Name (As shown on registration certificate) <b>James T. Carr</b>	Address (As shown on registration certificate) <b>11042 42<sup>nd</sup> Street S.          Scotts, MI 49088</b>

### 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 in FAR Part 43, Section 43.7

GL-089  
District Office
09-01-2006  
Date
John A. Muller  
Signature of FAA Inspector

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	----- (As described in Item 1 above) -----				<b>X</b>
POWERPLANT					
PROPELLER					
APPLIANCE	Type Manufacturer				

### 6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
<b>Peter L. Mills</b> <b>7266 34<sup>th</sup> Street S.</b> <b>Scotts, MI 49088</b>	<input checked="" type="checkbox"/> U.S. Certificated Mechanic	<b>2667149</b>
	<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 <b>SEPT. 1, 2006</b>	Signature of Authorized Individual <i>Peter L. Mills</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 <b>SEPT. 1, 2006</b>		Certificate No. <b>2667149</b>		Signature of Authorized Individual <i>Peter L. Mills</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.)*

**N 7029K**

**S/n: 20-138**

Removed Lycoming O-290-D (125 HP) engine and installed Lycoming O-290-D2 (135 HP) engine.

This installation uses all original accessories except the oil cooler. Oil cooler was changed to a Harrison part number AP12CU03-01 in accordance with requirements of Aircraft Specification 1A4, item 107. The engine mount, baffling, cowling, exhaust and controls are same as original.

- This installation utilizes the same list of eligible propellers as listed in the applicable section of Aircraft Specification 1A4 for the O-290-D2 engine.
- The basic structures of the primary elements of the aircraft (fuselage, wings, flight controls, landing gear and empennage) are the same for the installation of either engine as shown by the applicable Piper drawings and require no modification for the O-290-D2 engine.

This alteration increases horsepower by eight per cent. This is less than the ten percent recommended limitation of FAA Order 8300.10, Volume 2, Change 21, Figure 1-3 for eligibility for field approval and is not a substantial increase.

- The operating limitations for the aircraft and engine are the same as listed in Aircraft Specification 1A4 for the Model PA-20 "135" aircraft.
- The operating limitations for the propeller are the same as listed in Aircraft Specification 1A4 for the propellers eligible for use on the O-290-D2 engine.

Updated aircraft weight and balance records to reflect installation of this engine.

**Instructions for Continued Airworthiness**

1. Introduction: Removed Lycoming O-290-D engine and installed Lycoming O-290-D2 engine.
2. Description: Installed Lycoming O-290-D2 engine for improved performance.
3. Control: N/A
4. Servicing information: Engine may be serviced using the applicable Lycoming service manual.
5. Maintenance inspections: Engine may be inspected using the applicable Lycoming service manual or 14CFR, Part 43, Appendix D.
6. Troubleshooting information: Troubleshooting to be performed using applicable Lycoming service documents.
7. Removal and replacement information: Described in applicable Lycoming service manuals.
8. Diagrams: No special diagrams needed.
9. Special inspection requirements: No special inspections required.
10. Application of protective treatments: No special protective treatments needed.
11. Data: As listed in applicable Lycoming service manual.
12. List of special tools: No special tools needed to remove or install this engine.
13. For commuter category aircraft: N/A
14. Recommended overhaul period: As listed in applicable Lycoming service documents.
15. Airworthiness limitation section: As listed in Aircraft Specification 1A4.
16. Revision: For any revision to these instructions, a letter will be submitted to the local Flight Standards District Office (FSDO) with a copy of the revised FAA Form 337 and revised Instructions for Continued Airworthiness.

\*\*\*\*\* **END** \*\*\*\*\*