| US Department     |
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| of Transportation |
| Federal Aviation  |
| Administration    |

## MAJOR REPAIR AND ALTERATION

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|   | Form Approved  | Electronic Tracking Number |
|   | OMB No. 2120-0020  |                            |
|   | 2/28/2011  |                            |
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| of Fe  | Department<br>Fransportatia<br>derat Aviatio<br>Iministration  | en<br>Sen                               | (Airfra   | me, P                                  | owerplant, Pro   | p   | eller, or App               | liance)                                |                                | The second discussion of the second discussion | <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del> | For FAA Use Only |  |
|--|--|---|---|--|--|---|-----------------------------|--|--------------------------------|--|--|------------------|--|
| in   | INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 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. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a)) |   |   |  |  |   |                             |  |                                |  |  |                  |  |
|  |  | Nationalit                              |   | istratio                               | n Mark   |   | Serial No.                  |  |                                |  |  |                  |  |
| 1. A   | Aircraft   | N6123F<br>Make                          | 1   |  | 19284<br>Model   |   |                             | ······································ | Series                         |  |  |                  |  |
|  |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
|  |  |   | Piper Name (As shown on registration certificate) |  |  |   |                             | J3C-65 (As shown on registration of    |                                |  | Cub<br>conflicate                                |                  |  |
|  |  |   | , 0010 M11 C1                                     | ,                                      | , and , , , , , , , , , , , , , , , , , , ,  |   |                             | Address 13818 SW 216th ST  City Vashon |                                |  | oeranoare)                                       |                  |  |
| 2. 0   | wner   |   |   |  |  |   |                             |  |                                |  | State WA   |                  |  |
|  |  | Peria, G                                | Suido F   |  |  | Zp <u>98070</u>   |                             |  |                                | Country USA  |  |                  |  |
|  |  |   |   |  |  | 3   | 3. For FAA Use              | Only                                   |                                |  | ***************************************          |                  |  |
| The technical data identified herein has been found to comply with applicable airworthiness requirements and is hereby approved for use only on the above decribed sincraft, subject to conformity inspection by a person in FAR 43.7  245 TAN 2013  DATE  FAA Inspector, NM-FSDO-01   |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
|  | 4. Tyj   | )&                                      |   |  |  | 4   | 5. Unit Identific           | tion                                   |                                |  |  |                  |  |
| R  | Repair   | Alteration                              | Un  | it .                                   | Ma   | ak  | e                           | -                                      |                                | Model  |  | Serial No.       |  |
|  |  | Ø                                       | AIRFRAN   | ΛE                                     |  |   |                             | (As                                    | (As described in Item 1 above) |  |  |                  |  |
|  |  |   | POWER   | PLANT                                  |  |   |                             |  |                                |  |  |                  |  |
|  |  |   | PROPEL  | LER                                    |  |   |                             |  |                                |  |  |                  |  |
|  |  |   | APPLIANCE   |  | Type  Manufacturer   |   |                             |  |                                |  |  |                  |  |
|  |  | *                                       |   |  | 8  | -   | Conformity Sta              |  |                                |  |  |                  |  |
|  |  | lame and Ad                             |   |  |  | ┿   | B. Kind of Agend            | ·                                      |                                |  |  |                  |  |
| Name   | Port I<br>ss P.O. E  | <u>lownsend A</u><br>Nov 101            | Aero Mus  | eum_                                   |  | H   | U. S. Certific              |  |                                |  |  | nufacturer       |  |
| City   | Chima  | *************************************** |   | ······································ | State WA   | ٢   | Foreign Cert Certificated I |  | C. Centi                       | icate No.  |  |                  |  |
| Zip 98325 Country USA  |  |   |   | _                                      | Certificated !   | Certificated Maintenance Organization A.&P. 3041660 IA                        |                             |  |                                |  |  |                  |  |
| D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 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. |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
| Extended range fuel per 14 CFR Part 43 App. B  Signature/Date of Authorized Individual  Michael Payne  01/24/13  |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
|  |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
| 7. Approval for Return to Service  Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is  Approved Rejected   |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
|  | FAA Fit. Standards Inspector Manufacturer  |   |   |  | The state of the s | Maintenance Organization Persons Approved by Canadian Department of Transport |                             |  |                                |  |  |                  |  |
| BY   | FA   | A Designee                              |   | Repa                                   | air Station  |   | Inspection Auth             | orization                              |                                | Other (Spec  | ify)   |                  |  |
| Certificate or Signature/Date of Authorized Individual   |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
| Designation No.  A&P 3041660 IA Michael Payne Muhal Payne 01/24/13   |  |   |   |  |  |   |                             |  |                                |  |  |                  |  |
|  | FAA Form 337 (sp.es)   |   |   |  |  |   |                             |  |                                |  |  |                  |  |

## 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.

| Description of Work Accomplished                    |                         |                                  |                                  |
|---|-------------------------|----------------------------------|----------------------------------|
| (If more space is required, attach additional sheet | ets, Identify with airc | raft nationality and registratio | hatelemen kinew atch inne mem ne |

N6123H 1/24/13

Nationality and Registration Mark

Date

Description of alteration: This alteration replaced the original Scott brake master cylinder parts with new Grove brake master cylinders P/N 680-1 produced by Grove Aircraft Landing Gear Systems, Inc. on Piper J-3 Cub, SN 19284, registration number N6123H.

Description of work: Removed left and right side Scott brake compression covers P/N 2728, diaphragms P/N 2844, pistons P/N 1383, diaphragm pads P/N 2003-1, and springs P/N 1256, and replaced with Grove master cylinders P/N 608-1. Grove master cylinders are produced for use on amateur built aircraft and have no TSO or PMA (see attached Grove Aircraft Landing Gear Systems, Inc. drawing no. 680-1). Grove master cylinders P/N 608-1 have previously been field approved on Piper J-3C-65, S/N 18263, registration number NC98115, on FAA Form 337 dated October 30, 2011 (see attached FAA Form 337 for supporting documentation). The Grove master cylinders were installed directly to the Scott brake pedal housing with no modification to the housing using nine AN526-832R screws from the original configuration. The Grove Master Cylinder includes a fluid reservoir. Mineral-oil based hydraulic fluid conforming to MIL-H-5606 is used as the hydraulic fluid. Flexible brake hoses were replaced with new Aeroquip 303-4 hoses fabricated i/a/w AC 43.13-1B, Par 9-30. Brake system pressures will be less than 650 psi (it takes 300 psi to lock a wheel). This installation meets certification standards of CAR 3.363 and 14 CFR 23.735. All work was accomplished i/a/w the standard practices of AC 43.13-1B and AC 43.13-2B. An operational check was preformed that provided adequate braking action to conform to certification standards without excessive force that could cause a nose-over of the aircraft. The weight change from the old Scott brake master cylinder parts to the new Grove master cylinders was negligible. No revision to the aircraft Weight and Balance was calculated.

## INSTRUCTIONS FOR CONTINUED AIRWOWTHINESS:

- 1) Introduction: See Above Section 8, "Description of Work Accomplished".
- 2) Description: See Above Section 8, "Description of Work Accomplished".
- 3) Control, operation and information: No Change.
- 4) Maintenance instructions: Brake system should be checked i/a/w 14 CFR 43 Appendix D at each Annual Inspection and the brake fluid level should be checked each 50 hours of operation. See attached Grove document "Master Cylinder Inspection and Maintenance".
- 5) Trouble shooting information: No Change
- 6) Removal and replacement information: No Change
- 7) Diagrams: See attached Grove Aircraft Landing Gear Systems, Inc. drawing no. 680-1.
- 8) Special inspection requirements: none
- 9) Application of protective treatments: N/A
- 10) Data: See attached Grove Aircraft Landing Gear Systems, Inc. drawing no. 680-1.
- 11) List of special tools: N/A
- 12) For Commuter category aircraft: N/A
- 13) Recommended overhaul periods: No additional overhaul time limitations.
- 14) Airworthiness limitations section: No additional airworthiness limitations.
- 15) Revision: Revision will be made by letter to the local FSDO with a revised Form 337, and revised ICA. Record will be entered in the aircraft log upon approval by the FAA.

Installation of Grove Master Cylinder on Piper Cub

Remove parts 58, 56, 57, 59, and end bell. Remove hose from end bell cylinder to Scott housing as shown, using eight original screws and attach hose to Grove master cylinder. Install Grove Master symmetrically placed.

This drawing is part of form 337 dated