



# **INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

## **FAA-STC SA2706SW and SA2969SW**

### **Piper PA-28-140 and PA-28-151 Aircraft with 160 hp Lycoming Engines**

#### **Drawing 2662**

**December 12, 2005**

#### Notice

This document must be referenced on Block 8 of FAA form 337 and added to the aircraft permanent record as required by 14 CFR Part 91, §91.417(a)(2)(vi) when the reference FAA-STC modification is accomplished on eligible aircraft. This document complies with the requirements of 14 CFR Part 23, §23.1529, in accordance with 14 CFR Part 23, Appendix G.

Aircraft Serial No. \_\_\_\_\_

Aircraft Registration No. \_\_\_\_\_

| Log of revisions |                 |          |            |         |
|------------------|-----------------|----------|------------|---------|
| Rev.             | Description     | Date     | Engineer   |         |
| I.R.             | Initial Release | ECN 4163 | 12-12-2005 | A. Jain |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |
|                  |                 |          |            |         |

## I. INTRODUCTION

This document provides instructions for continued airworthiness (ICA) for Piper PA-28-140 and PA-28-151 Aircraft models with modified Lycoming O-320-E2A engine in accordance with RAM Aircraft, L.P. Supplemental Type Certificate (STC) SA2706SW or SA2969SW.

Updates to this document are available from RAM's Customer Service Department or online as follows.

RAM Aircraft, Limited Partnership  
P O Box 5219  
7505 Karl May Drive  
Waco, TX 76708

Phone: 254 752-8381  
Fax: 254 752-3307

Website: [www.ramaircraft.com](http://www.ramaircraft.com)

## II. DESCRIPTION

The STC is to install the following Textron Lycoming engine models on Piper PA-28-140 and PA-28-151 aircraft models as a replacement engine.

- O-320-D2A
- O-320-D2B
- O-320-D2C
- O-320-D3G
- O-320-E3D and O-320-E2A engines modified in accordance with RAM Aircraft STC SE8987SW.

## III. SPECIAL PROCEDURES

None

## IV. SERVICING INFORMATION

The following document shall be followed for installation and operation of the Lycoming engines:

- FAA approved Piper PA-28-140 or PA-28-151 service manual.
- FAA approved Piper PA-28-140 or PA-28-151 parts manual.

V. MAINTENANCE INSTRUCTIONS

The following document shall be followed for Parts, Overhaul, and Maintenance of the Piper PA-28-140 or PA-28-151 aircraft models.

- FAA approved Piper PA-28-140 or PA-28-151 service manual.
- FAA approved Piper PA-28-140 or PA-28-151 parts manual.

VI. TROUBLESHOOTING

The following document shall be followed for Troubleshooting of the installation of the above mentioned engines.

- FAA approved Piper PA-28-140 or PA-28-151 service manual.

VII. REMOVAL AND REPLACEMENT

The following document shall be followed for removal and replacement of the above mentioned Lycoming engines on Piper PA-28-140 or PA-28-151 aircraft models.

- FAA approved Piper PA-28-140 or PA-28-151 service manual.

VIII. SPECIAL INSPECTION REQUIREMENTS

The following document shall be followed for inspection of the above mentioned Lycoming engines on Piper PA-28-140 or PA-28-151 aircraft models.

- FAA approved Piper PA-28-140 or PA-28-151 service manual.

IX. APPLICATION OF SPECIAL TREATMENTS

None

X. DATA

For installation on Piper PA-28-140 Aircraft per RAM Drawing R14001D, Revision H, dated September 26, 2005 or later FAA approved revision.

For installation on Piper PA-28-151 Aircraft per RAM Drawing R16101D, Revision E, dated October 11, 2005 or later FAA approved revision.

XI. SPECIAL TOOLS

None

**XII. ADDITIONAL INFORMATION FOR COMMUTER CATEGORY AIRCRAFT**  
None

**XIII. AIRWORTHINESS LIMITATIONS SECTION**

*Note: The airworthiness limitations section is FAA approved and specifies maintenance required under §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.*

**ENGINE LIMITATIONS**

Propellers:

- a. Number of Propellers: 1
- b. Manufacturer: Sensenich
- c. Propeller Model Number: 74DM6-0-58 or -60
- e. Diameter: Maximum = 74 inches, Minimum = 72 inches
- g. Operating Limits:
  - (1) Maximum Continuous: 160 H.P. – 2700 rpm.  
150 H.P. – 2650 rpm. (O-320-E3D only)
  - (2) Take-off : 160 H.P. – 2700 rpm.  
160 H.P. – 2700 rpm. (5 minute, O-320-E3D only)

**INSTRUMENT MARKINGS**

Tachometer:

|            |                 |
|------------|-----------------|
| GREEN ARC  | 2200 – 2700 RPM |
| RED RADIAL | 2700 RPM        |

Tachometer (O-320-E3D only):

|            |                 |
|------------|-----------------|
| GREEN ARC  | 2200 – 2650 RPM |
| YELLOW ARC | 2650 – 2700 RPM |
| RED RADIAL | 2700 RPM        |

**PLACARDS**

Install Fuel Placard on top of wing next to each fuel filler cap in plain view:

|                                                      |
|------------------------------------------------------|
| <b>AVGAS ONLY<br/>100LL OR 100<br/>BLUE OR GREEN</b> |
|------------------------------------------------------|