Forced
Aeromotive
Technologies

Instructions for Continued Airworthiness

FAA-STC SA10925SC

Supercharged IO-550-N Engines Installed On
Cirrus Model SR-22 Aircraft

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.

Model No. _____

Aircraft Serial No. _____

Aircraft Registration No. _____

LOG OF REVISIONS

Revision Number	Revision Date	Approval	Affected Pages	Description of Revision
IR	03/05/2004		All	New
A	04/03/2008		12, 13	Item 75, added P/N and manufacturer Item 79, corrected part dash number to -3R Item 80, corrected part dash number to -7R Item 85, changed quantity from 26 to 30 Item 90, added AS1072 specification to P/N Added items 105, 106, 107
B	07/13/2008		11	Added item 44
C	8/12/2008		6, 7, 11	Updated diagrams, Added item 45
D	10/27/2008		4, 10-13	Updated placard added, kit list updated
E	6/9/2009		4, 6, 12	Updated placard, updated wiring diagram added ,kit list updated
F	9/7/2009		5, 8, 10-13	Belt replacement, tensioner overhaul times, kit list removed
G	10/1/2015		7	Section 9.2 expanded

Table of Contents

1. INTRODUCTION

This document outlines the compliance with 14 CFR 23.1529 “Instructions for Continued Airworthiness” for Forced Aeromotive Technologies, Inc. Supplemental Type Certificate (STC) No. SA10925SC.

NOTICE:
Section 15, titled “Airworthiness Limitations” 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. To remain in compliance with the STC, the aircraft shall be maintained in accordance with these limitations.

This document supplements or supersedes the Cirrus Maintenance Manual”, part number 13773-001, dated 5 December 2003, or later approved revision only in those areas listed herein.

2. GENERAL DESCRIPTION

STC SA10925SC installs supercharged Teledyne Continental Motors Model No. IO-550-N engines in the Cirrus model SR-22 aircraft. Induction air is drawn from the right side of the engine through the airbox to the supercharger which is belt driven from the accessory pad on the left side of the engine. The air exits the supercharger through a boost control valve, an overboost valve, and into the throttle body, and uses the existing oil system for lubrication The boost control valve limits maximum manifold pressure to 29.6 in HG. This STC also installs a revised required fuel flow placard.

REQUIRED FUEL FLOWS AT FULL THROTTLE MAXIMUM CLIMB

ALTITUDE	GPH
16000	22
11000	25
6000	29
SL	29

3. CONTROL, OPERATION INFORMATION, SPECIAL PROCEDURES

Refer to basic Cirrus Maintenance or Service Manual, basic Pilot’s Operating Handbook and Airplane Flight Manual Supplement 22006.

4. SERVICING INFORMATION

Refer to basic Cirrus Maintenance or Service Manual.

5. MAINTENANCE INSTRUCTIONS

Refer to basic Cirrus Maintenance Manual for information other than what is provided below.

5.1 REPLACEMENT OF SUPERCHARGER BELT

1. Inset a ¾ inch open end wrench or 3/8 drive in the end of the idler and pull down to relieve the tension on the belt.
2. Replace the belt and let the tension back on the idler so the belt is tight.
3. Rotate the drive assembly to ensure the belt is properly in the pulley grooves.

6. TROUBLESHOOTING INSTRUCTIONS

For troubleshooting guidance contact Forced Aeromotive Technologies, Inc. for assistance.

Forced Aeromotive Technologies, Inc.
7161 S. Peoria Street 18E
Englewood, CO 80112
www.forcedaeromotive.com

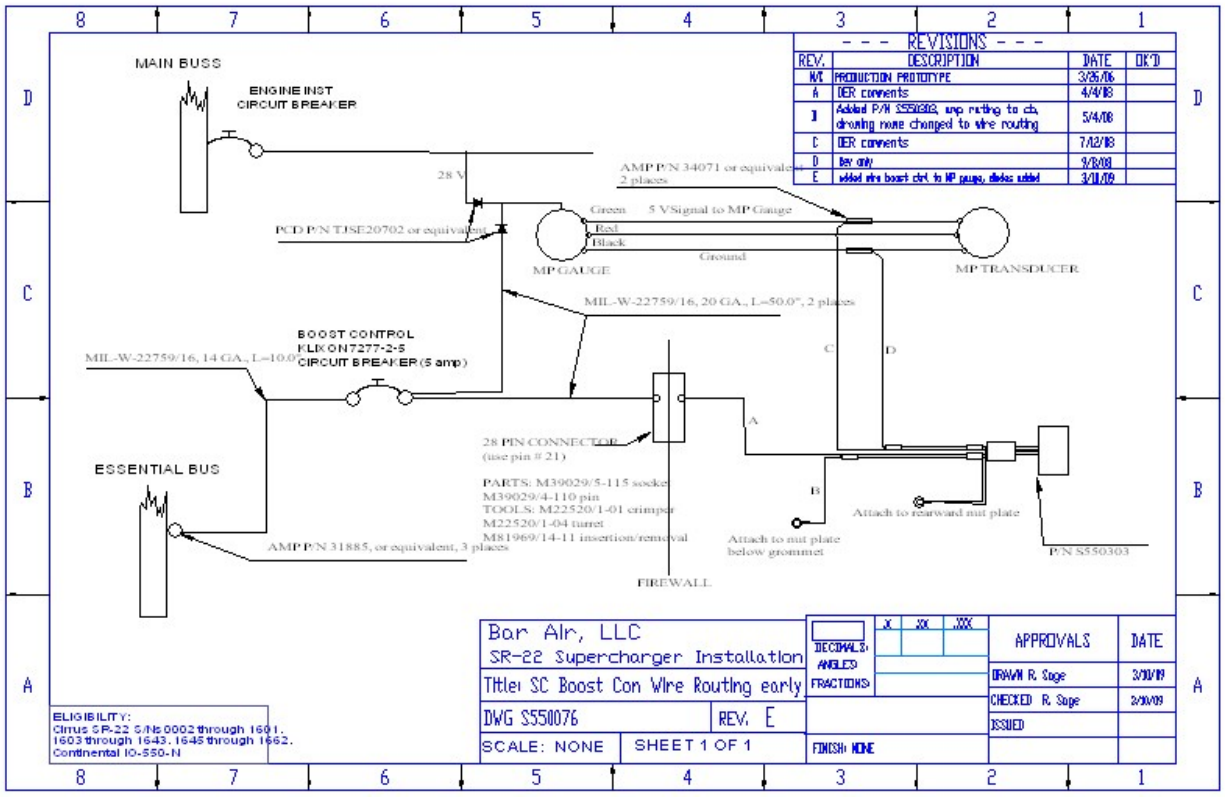
7. REMOVAL AND REPLACEMENT INFORMATION

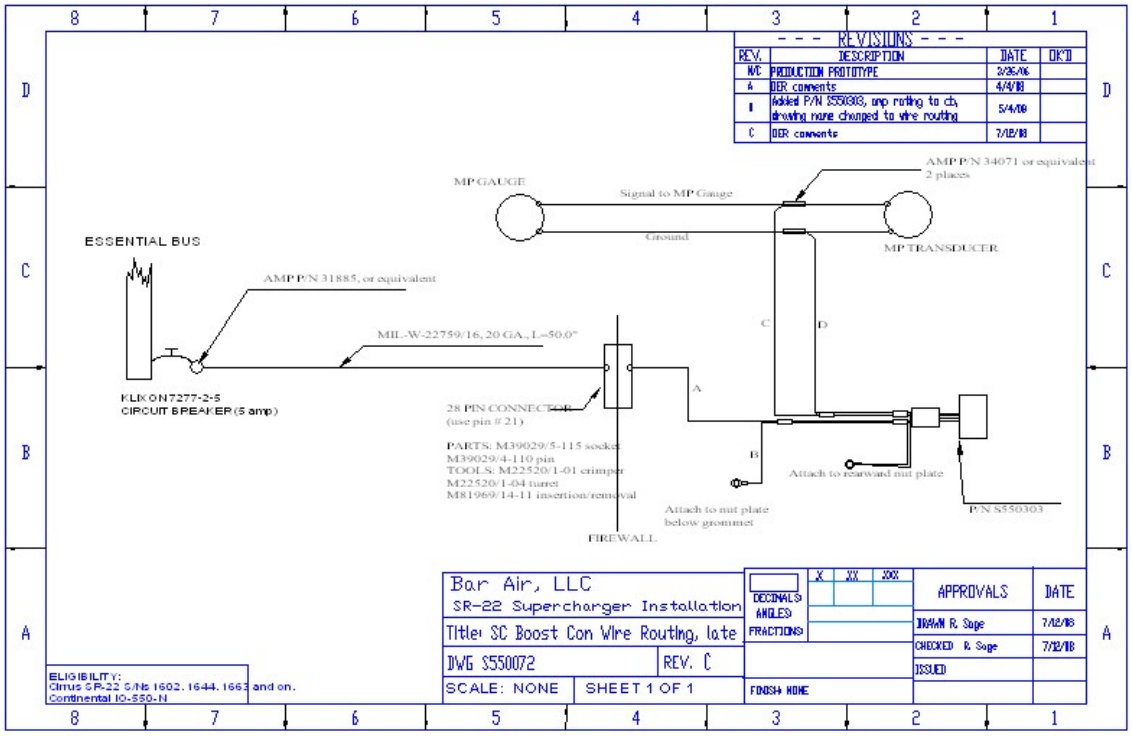
Remove and replace as specified in Forced Aeromotive Installation Drawing II-SR-22, Rev. N/C, dated 03/26/2006 or later FAA approved revision. For replacement parts contact Forced Aeromotive at the following address.

Forced Aeromotive Technologies, Inc.
7161 S. Peoria Street 18E
Englewood, Co 80112
www.forcedaeromotive.com

8. DIAGRAMS

Refer to basic Cirrus Maintenance or Service Manual and Forced Aeromotive Installation Drawing II-SR-22, Rev. N/C, dated 03/26/2006 or later FAA approved revision and the following wiring diagrams.





9. INSPECTION REQUIREMENTS

Conduct routine inspections on the engines, airframe, and propeller in accordance with appropriate basic Teledyne Continental Motors Engine Maintenance Manual, basic Cirrus Maintenance Manual, and basic Hartzell or McCauley Propeller Maintenance Manual except as noted below.

9.1 INSPECTION OF SUPERCHARGER BELT

For every flight 100 hours, conduct routine inspections on the supercharger belt for wear. Replace worn belt as necessary and also at supercharger overhaul.

9.2 INSPECTION OF SUPERCHARGER OIL NOZZLE

At each annual inspection, remove the supercharger oil inlet line and remove the oil nozzle. Clean the nozzle with compressed air and replace it and reconnect the oil line. It is not necessary to remove the fitting from the oil nozzle to clean it with compressed air. If the fitting is removed, use thread sealant during reassembly.

Always use two wrenches when tightening fittings to avoid putting a side load on the assembly. Torque for these fittings is 60-80 inch pounds. See example in figure 2.

Use only the parts and materials or equivalent materials in figure 1.

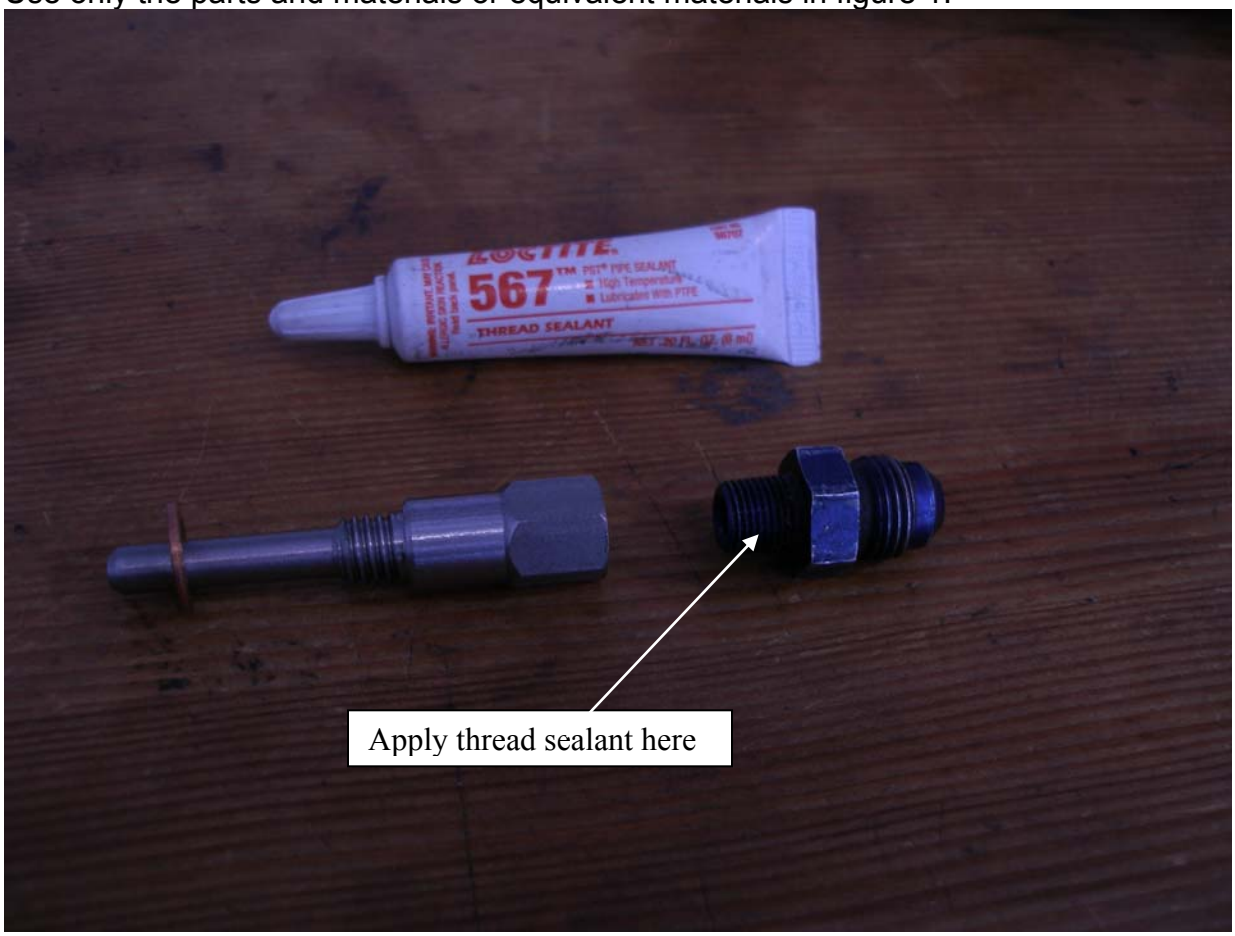


Figure 1

Figure 2

There are no mandatory replacement times on any new components.

10. APPLICATION OF SPECIAL TREATMENTS

None

11. DATA

None

12. SPECIAL TOOLS

None Required

13. ADDITIONAL INFORMATION FOR COMMUTER CATEGORY AIRCRAFT

Not Applicable

14. RECOMMENDED OVERHAUL PERIOD

Supercharger: 2000 Hours after STC installation
Tensioning Idler: replace at 2000 hours or 6 years whichever comes first.

15. AIRWORTHINESS LIMITATIONS

NOTICE:

This 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. To remain in compliance with the STC, the aircraft shall be maintained in accordance with these limitations.

There are no changes to the airworthiness limitations of the IO-550-N engine or Cirrus SR-22 aircraft from those, which are listed in basic Teledyne Continental Engine Maintenance Manual, or Basic Cirrus Maintenance Manual:

There are no changes to the airworthiness limitations of the propeller from those which are listed in the basic Cirrus Maintenance Manual or basic Hartzell or McCauley Propeller Maintenance Manual.

16. REVISION

Each time this ICA is revised or reissued, the revised ICA will be distributed to operators using a Service Letter/Bulletin by Forced Aeromotive Technologies. This revision will include a new Log of Revisions page along with the revised pages. The lower right hand corner of each revised page will reflect the revision letter. That portion of text or an illustration, which has been revised by the addition of, or change in, information is denoted by a solid revision bar located adjacent to the area of change, and placed along the outside margin of a page. Revision bars show only information changed within latest revision.

17. ASSISTANCE

For assistance with ICA issues not addressed herein, contact Forced Aeromotive Technologies at the following address or phone number.

Forced Aeromotive Technologies, Inc.
7161 S. Peoria Street 18E
Englewood, Co 80112
www.forcedaeromotive.com

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