



## **INSTALLATION MANUAL**

MAIN LANDING GEAR AUXILIARY LANDING LIGHTS

FOR THE

BEECHCRAFT BONANZA, BARON, AND TRAVEL AIR AIRCRAFT

MODEL NUMBERS:

33 SERIES, 35 SERIES, 36 SERIES, 55 SERIES, 56 SERIES, 58 SERIES, 95  
SERIES

**STC NOs: SA00469NY & SA00802NY**

INSTALLATION INSTRUCTION: NO. 001

REVISION: 02

NOVEMBER 15, 2021

**FAA APPROVED**

**CHICAGO ACO BRANCH  
NOTICE  
C & A DIVISION**

THESE DOCUMENTS MUST BE KEPT WITH THE AIRCRAFT RECORDS

**REVISIONS**

<b><u>Revision No</u></b>	<b><u>Date</u></b>	<b><u>Pages Affected</u></b>	<b><u>Description</u></b>
<b>02</b>	<b>11/15/21</b>	<b>All</b>	<b>STCs Re-issued to Gallagher Aviation LLC</b>

# INSTALLATION INSTRUCTIONS

## A. Getting Started

Before attempting to install your auxiliary landing lights, you should take some time to read this installation manual and begin to work out a logical sequence of operation. It will be your option to either begin with the wiring layout and hookup or to begin with installing the lights to the main landing gear brace assembly. The parts list should be checked to make sure that all necessary parts have been included. Every effort was made to insure that a complete kit was shipped, but in the event of short or missing items contact Gallagher Aviation LLC immediately.

## B. Electrical Installation

Remove the pilot and copilot seats. Remove the lower left and right interior panels from the instrument panel back to gain access to the wire ways that house the wires that run from the instrument panel to each wing tip. All electrical wiring shall be routed through these areas using existing wire ways when possible, ensure compliance with the latest version of Advisory Circular (AC) 41.13 *Acceptable Methods, Techniques & Practices Aircraft Inspection, Repair & Alteration*. Proceed with wiring as per Drawing No. 004EI. The positive wire runs from the landing light to the circuit breaker switch via the main landing gear brace assembly and the existing wire way that is located near the forward section of the wheel well area (View C, No. 005EI). The ground wire is routed from the landing light to the wing rib closest to the main landing gear brace assembly, via the main landing gear brace assembly also (View C, No. 005EI). Use nylon self-clinching cable ties to fasten these wires to the main landing gear brace assembly as shown in View C, Drawing No. 005EI. Reinstall the pilot and copilot seats and all interior panels that were removed for this installation.

The circuit breaker switch (P/N 004) must be mounted so that the “ON” position is reached by an upward movement of the toggle. Ensure there is adequate clearance behind the panel for circuit breaker switch body. Mount switch in a location that is in clear view and reach of the pilot, see Drawing No. 005EI for possible location.

## C. Landing Light Installation

Park the aircraft in a work area that is level. Identify and separate the parts for the left and right landing light assemblies and place them near the appropriate main landing gear. **IMPORTANT: MOUNTING BRACKETS (RIGHT = P/N 001, LEFT = P/N 002) ARE NOT INTERCHANGEABLE.** Gently spread the open end of the right mounting bracket (approximately 1 inch) and slide it over the right landing gear assembly as shown in View A, Drawing No 001MC. Install mounting gasket (P/N 003) so that the gasket and bracket openings are aligned. Mounting Gasket is not required on some Model 58 Barons. Insert bolt (P/N 011) and lock nut (P/N 012) but do not tighten. Before tightening the bracket, rotate the clamp until the bottom arm on the bracket is level. Fasten the level, that is provided in the kit, as shown in View B, Drawing No. 002MC, to verify level. Check gasket alignment and torque bolt/nut (P/Ns 011 and 012) to 50 inch lbs. Recheck alignment and remove plastic level. Attach Whelen Aerospace Technologies (WAT) lamp housing (P/B 006) to mounting bracket as shown in View C, Drawing No. 003MC, and tighten self-locking nut to 100 inch lbs. Connect electrical wiring to light. Install the left side mounting bracket and light assembly as described above.

## D. Required Testing

**IMPORTANT: Upon completion of the installation of the auxiliary landing lights, perform an electrical load analysis as set forth in the Electrical Load Analysis section of this installation document.**

D.1. Disconnect the two lower connectors on both outer gear doors and conduct a landing gear retraction test. With the gear retracted, inspect the assembly and verify that at least one inch of clearance is present between the light housing and the nearest obstruction. Extend gear and reattach outer gear doors. Apply red slip markers as shown in View C, Drawing No. 003MC. **IMPORTANT: Slip markers should be easily visible during the preflight inspection.**

D.2. Conduct an initial flight test WITH LANDING GEAR EXTENDED to an airspeed equal to maximum gear extended speed as stated in the pilots operating handbook for that aircraft: **DO NOT RETRACT THE LANDING GEAR ON THE INITIAL FLIGHT TEST.** Land and inspect light assembly; pay particular attention to alignment of the red slip markers. Check that the landing light housing and surrounding gear assembly are free of marks indicating any contact during this test.

D.3 Perform a second flight test and cycle the landing gear one time. Land and inspect for proper alignment and again check that the landing light housing and surrounding gear assembly are free of marks indicating any contact during this test.

## **E. Documentation and Placards**

Complete the calculations for weight and balance and revise the equipment list showing the installation of the main gear auxiliary landing lights of 3 lbs. at the applicable station for the aircraft. Keep all Gallagher Aviation LLC paperwork with aircraft flight records.

Install placard (P/N 005) at landing light circuit breaker switch.

## ELECTRICAL LOAD ANALYSIS

Model:

Serial Number:

N Number or Tail Number:

Date:

ALTERNATOR/GENERATOR OUTPUT RATING: \_\_\_\_\_ AMPS

**BEFORE** INSTALLATION OF MAIN GEAR AUXILIARY LANDING LIGHTS: HIGHEST

CONTINUOUS FLIGHT LOAD: \_\_\_\_\_ AMPS

**AFTER** INSTALLATION OF MAIN GEAR AUXILIARY LANDING LIGHTS: HIGHEST

CONTINUOUS FLIGHT LOAD: \_\_\_\_\_ AMPS

## PARTS LIST

<b>PART NUMBER</b>	<b>QUANTITY</b>	<b>DESCRIPTION</b>
001	1	Landing Light Bracket – Right
002	1	Landing Light Bracket – Left
003	2	Gasket (not required on Model 58)
004	1	W 31-X2M1G-20 or W 31-X2M1G-25 Circuit Breaker Switch
005	1	Placard for Circuit Breaker Switch
006	2	WAT Lamp Housing A715-1
007	2	14V Lamp GE4509 or 28V Lamp GE4596; or WAT 01-0772102-10; or WAT 01-0772102-15
008	2	Red Slip Markings (each set)
009	1	MIL-W-22759/16 12 GA wire – 40 feet
010	10	Insulated Ring Terminals
011	2	AN4-7A Bolt
012	2	AN364 Self-Locking Nut

013

1

Empire Level

## **APPENDIX A**

### **INSTALLATION ILLUSTRATIONS**





View A  
(Right Main Landing Gear – Looking Outboard)

*Note*

*Reference dimension in View A shows distance from Point A (center point of Retract Brace Assembly, Main Landing Gear) to forward edge of Right or Left Landing Light Bracket (P/N 001 and P/N 002)*

Revisions

System	Description	Dr/Date	App Date

Gallagher Aviation LLC  
 2264 Endovalley Dr.  
 Cincinnati, OH 45244  
 1-833-425-5288 or [www.gallagheraviationllc.com](http://www.gallagheraviationllc.com)

Title:

Landing Light Bracket Installation

Drawn: CK	A/C Make: Beechcraft	Drawing Number: 001MC
Checked: ED	A/C Models: 33, 35, 36, 55, 56, 58, 95	STC Numbers: SA00469NY & SA00802NY
Approved: AE	Scale: None	Date: 11-18-95



View B  
(Right Main Landing Gear – Looking Aft)

*Note*

1. *View B shows Plastic Level (P/N 014) fastened to right landing light bracket (P/N 001).*
2. *Install level parallel to Main Wing Spar*
3. *Rotate bracket until bubble is centered. Secure bracket in accordance with installation instructions.*
4. *Remove plastic level and install Whelen Aerospace Technologies Lamp Housing (P/N 006)*

Revisions

System	Description	Dr/Date	App Date

Gallagher Aviation LLC  
2264 Endovalley Dr.  
Cincinnati, OH 45244

1-833-425-5288 or [www.gallagheraviationllc.com](http://www.gallagheraviationllc.com)

Title:

Landing Light Bracket Installation

Drawn: CK	A/C Make: Beechcraft	Drawing Number: 002MC
Checked: ED	A/C Models: 33, 35, 36, 55, 56, 58, 95	STC Numbers: SA00469NY & SA00802NY
Approved: AE	Scale: None	Date: 11-18-95





View C

(Right Main Landing Gear – Looking Outboard and aft)

*Note*

1. *IMPORTANT: Slip Markers must be placed so they are clearly visible during the Preflight Inspection. Suitable alternates to slip markers are painting the markings on for a more permanent solution.*
2. *Lamps must point forward and be parallel with Main Wing Spar*

Revisions

System	Description	Dr/Date	App Date

Gallagher Aviation LLC  
 2264 Endovalley Dr.  
 Cincinnati, OH 45244

1-833-425-5288 or [www.gallagheraviationllc.com](http://www.gallagheraviationllc.com)

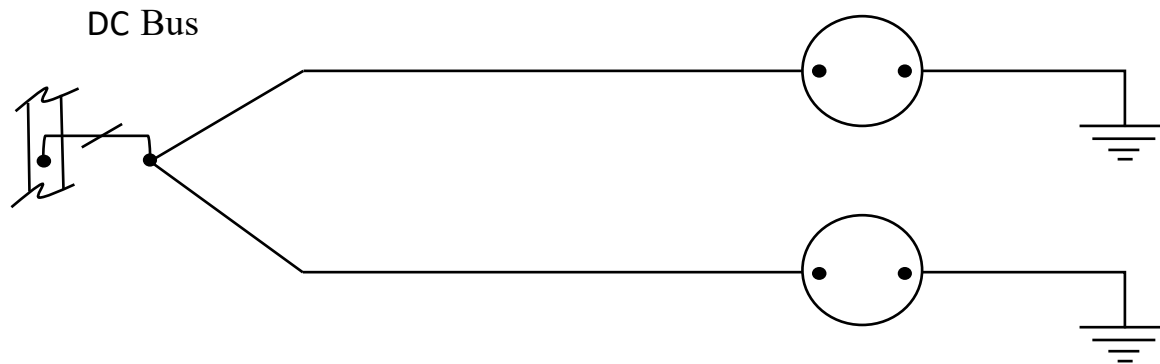
Title:

Landing Light Bracket Installation

Drawn: CK	A/C Make: Beechcraft	Drawing Number: 003MC
Checked: ED	A/C Models: 33, 35, 36, 55, 56, 58, 95	STC Numbers: SA00469NY & SA00802NY
Approved: AE	Scale: None	Date: 11-18-95

## Revisions

System	Description	Dr/Date	App Date



- A. Circuit Breaker Switch (P/N 004): 20 Amp for 14 VDC, 25 Amp for 24 VDC Systems.
- B. Landing Light, Left (P/N 002): GE Q4509 Lamp (or LED substitute) for 14 VDC, GE 4596 for 24 VDC systems.
- C. Land Light, Right (P/N 001): GE Q4509 Lamp (or LED substitute) for 14 VDC, GE 4596 for 24 VDC systems.

*Note*

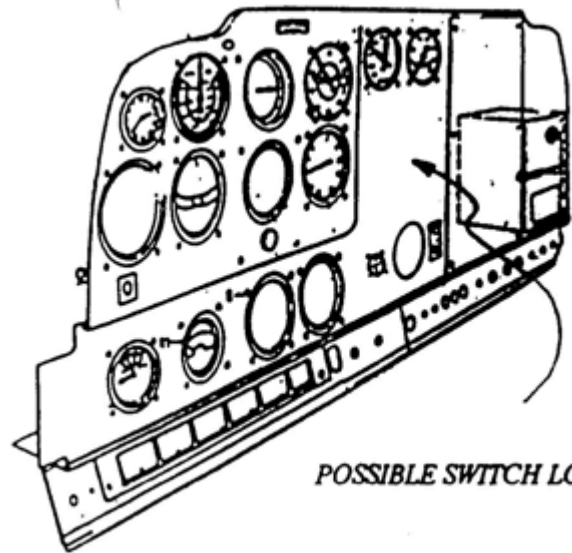
1. Wire as per AC 43.13 – 1A, CH 11
2. Length of wire from circuit breaker switch to left landing light is approximately 22 feet.
3. Length of wire from circuit breaker switch to right landing light is 20 feet.

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Title:

Electrical Installation – Wiring Diagram

Drawn: CK	A/C Make: Beechcraft	Drawing Number: 004EI
Checked: ED	A/C Models: 33, 35, 36, 55, 56, 58, 95	STC Numbers: SA00469NY & SA00802NY
Approved: AE	Scale: None	Date: 11-18-95

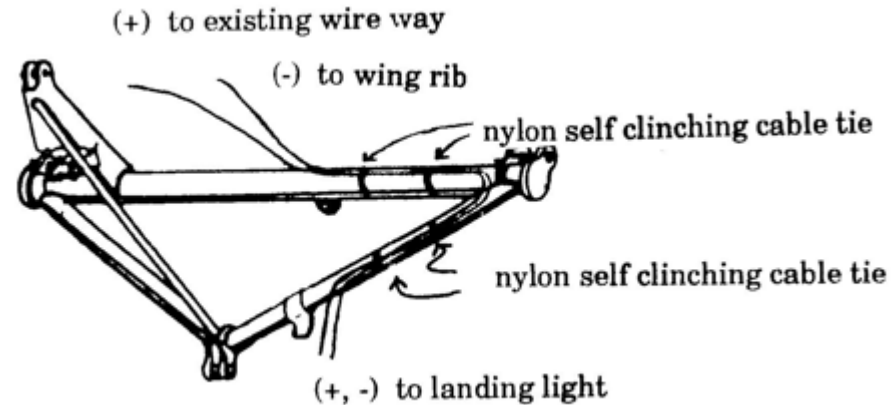


POSSIBLE SWITCH LOCATION

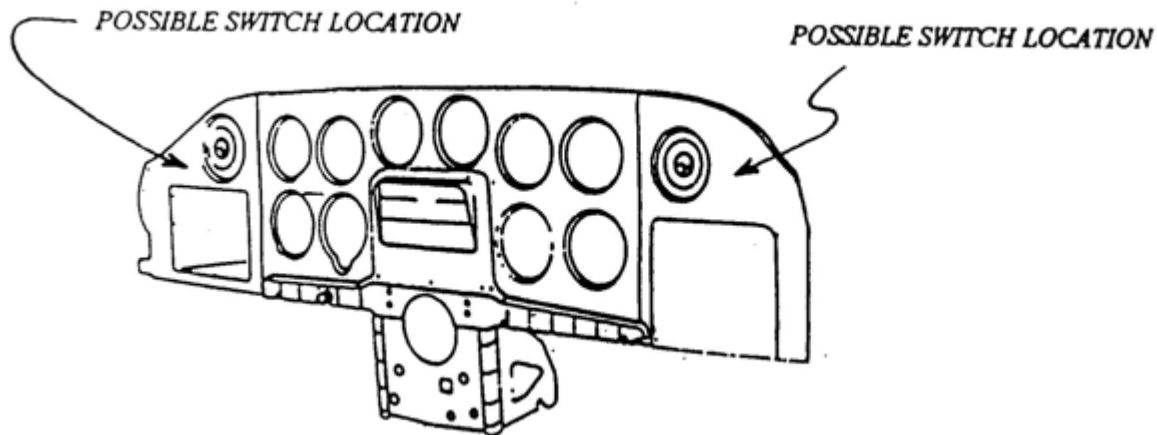
VIEW A: TYPICAL LATE MODEL BONANZA OR BARON PANEL

## Revisions

System	Description	Dr/Date	App Date



VIEW C: MAIN LANDING GEAR RETRACT ASSEMBLY



VIEW B: TYPICAL EARLY MODEL BONANZA PANEL

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 Cincinnati, OH 45244  
 1-833-425-5288 or [www.gallagheraviationllc.com](http://www.gallagheraviationllc.com)

Title:

Electrical Installation

Drawn: CK	A/C Make: Beechcraft	Drawing Number: 005EI
Checked: ED	A/C Models: 33, 35, 36, 55, 56, 58, 95	STC Numbers: SA00469NY & SA00802NY
Approved: AE	Scale: None	Date: 11-18-95



## **INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

Applicable to:

Beechcraft Models 33, 35, 36, 55, 56, 58, and 95  
Modified by STCs SA00469NY & SA00802NY

This ICA applied only to Beechcraft model 33, 35, 36, 55, 56, 58, and 95 aircraft modified in accordance with STC SA00469NY (Beech models 33, 35, and 36) and SA00802NY (Beech models 55, 56, 58, and 95), which provides for the installation of an auxiliary main landing gear light system listed above.

The information contained in this ICA supplements or supersedes the basic airplane service manuals only in those areas outline herein. For limitations, procedures and information not contained in this manual, consult the basic aircraft, engine or propeller service manuals.

**Written:** \_\_\_\_\_

### Log of Revisions

<b>REV NO.</b>	<b>EFFECTED PAGE(S)</b>	<b>DESCRIPTION</b>	<b>DATE</b>
Orig. Issue	All	Initial Release	August 4, 2022

## 1. Introduction

This document is intended to provide for the continued airworthiness of modifications defined in STC SA00469NY and SA00802NY for Beechcraft Model series 33, 35, 36, 55, 56, 58, and 95. It is specifically concerned with the maintenance of explain what the modification is here configuration for Beechcraft models 33, 35, 36, 55, 56, 58, and 95. For all items not related to the altered Beechcraft models 33, 35, 36, 55, 56, 58, and 95 installations, refer to the basic airplane model service and parts manuals.

## 2. Revisions and Amendments

All Instructions for Continued Airworthiness (ICA) changes will be submitted to the FAA for review and acceptance by the Aircraft Certification Office and the Airplane Evaluation Group prior to issuance to the field. Revisions to this ICA may not be distributed without prior FAA acceptance. Once an ICA revision is accepted by FAA it shall be distributed to all registered owners by either U.S. mail or via internet email at the election of the STC holder. The STC holder shall retain a list of all registered owners. This list shall be made available to FAA for any Continued Operational Safety issues (Airworthiness Directive, etc.) that arise concerning this STC. For questions or assistance regarding these ICA, contact Gallagher Aviation LLC at 1-833-425-5288 or [gallagheraviationllc@gmail.com](mailto:gallagheraviationllc@gmail.com)

## 3. System Description

The airplane systems as modified per STC SA00469NY and SA00802NY calls for the installation of Main Landing Gear Auxiliary Landing Lights as required. The STC allows for the installation of two PAR-36 size incandescent or Light Emitting Diode (LED) lamps that fold up into the main landing gear well of the applicable Beechcraft series aircraft.

## 4. SPECIAL OPERATING INFORMATION

See the Airplane Flight Manual Supplement for any special operating instructions and all operating limitations.

## 5. SERVICE INFORMATION

Installation: Refer to Installation Instruction 001, Revision 02

Parts: Refer to Installation Instruction 001, Revision 02 for parts required

## 6. TROUBLESHOOTING

Refer to Installation Instruction 001, Revision 02

1. **Incandescent Lights:** Check for condition, attachment, cracked or broken lens. Replace lamp if lens is cracked, has broken lens, or filament has burned out.

**Whelen Aerospace Technologies (WAT) LED Lamp P/N 01-0772102-10 or 01-0772102-15:** Refer to G3 STC Manual Installation Guide/ICA at [www.flywat.com](http://www.flywat.com) or see

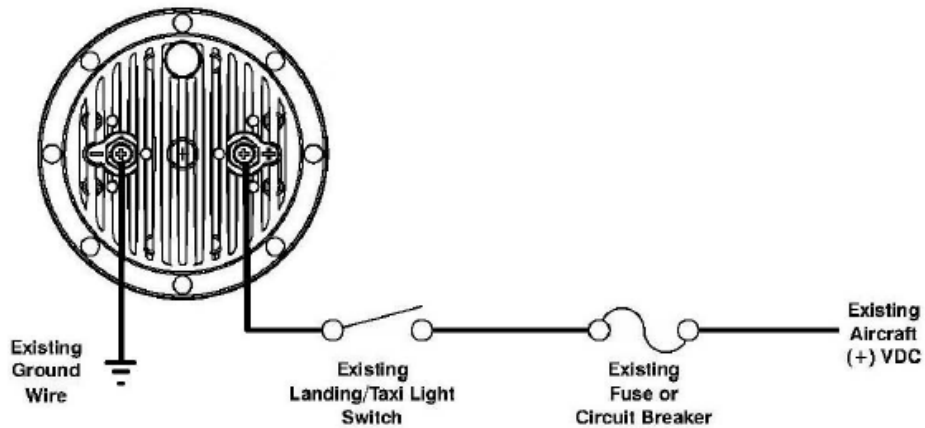


below for specific information as to how to troubleshoot the WAT G3 LED or Taxi light only.

#### Troubleshooting Procedure:

The following information is to provide guidelines for troubleshooting the LED Light Models listed on page 1.

#### Wire Diagram



In the case of no light output:

1. For a new installation, check the polarity of the wire connections. Check that the appropriate part has been selected for the aircraft.
2. Check the connections at the positive (+) and ground (-) terminals. Check that both wires are firmly attached to the light and that the contacts are clean.
3. Check for the correct voltage at the light (+9 to 32VDC) terminal. Check for ground at the (GND) terminal.
4. Perform a bench check and replace if a failure is confirmed.
5. Refer to the aircraft manual for additional information.

**WAT LED Lamp P/N 01-0772102-10 or 01-0772102-15 Periodic Inspection:** Refer to G3 STC Manual Installation Guide/ICA found at [www.flywat.com](http://www.flywat.com) or see below.

**Periodic Inspection:**

INTERVAL	DESCRIPTION	ACTIONS	NOTES
Annually (unless the OEM specifies a shorter interval)	<ul style="list-style-type: none"> <li>•Perform function check. Observe that all LEDs are illuminated. Note: To reduce eye strain during LED inspection, use an optical filter such as dark glasses or a blue covering dome.</li> </ul>	<ul style="list-style-type: none"> <li>•Replace if all LEDs are not illuminated.</li> </ul>	The unit is not repairable.
	<ul style="list-style-type: none"> <li>•Inspect lens for abrasion, crazing or cracking. For additional lens maintenance detail see SAE ARP5637.</li> </ul>	<ul style="list-style-type: none"> <li>•Replace if there is excessive scratching, pitting, discoloration or cracking.</li> </ul>	
	<ul style="list-style-type: none"> <li>•Check Mounting, connections and wire integrity.</li> </ul>	<ul style="list-style-type: none"> <li>•Adjust or replace as required.</li> </ul>	

2. **Circuit Breaker Switch:** Check for looseness and operation. Inspect placard to assure that it is easily readable and securely attached.
3. **Electrical Wiring:** Inspect for chafing, damage, and security.
4. **Landing Light Bracket:** Check for security and alignment of red slip markers. Check structural integrity of bracket. If found to be faulty, replace. If found to be out of alignment, align bracket in accordance with the Gallagher Aviation LLC Installation Instructions.

**7. PARTS REMOVAL AND REPLACEMENT**

Installation: Refer to Installation Instruction 001, Revision 02

Parts: Refer to Installation Instruction 001, Revision 02

Refer to Installation Instruction 001, Revision 02 dated November 15, 2021 for specific part removal and replacement information.

**8. PLACARDS**

Refer to Installation Instruction 001, Revision 02

During installation, a new switch with an “ON-OFF” placard shall be installed on the instrument panel. No other placards are required.

## 9. DATA

## 10. INSPECTIONS

A 100 hour inspection **MUST** be accomplished within each 12-month period for compliance with the Federal Aviation Regulations. To the extent that the airplane is operated in excess of 100 hours per year, the below listed inspection must be conducted at 100 hour intervals rather than annually.

This inspection procedure meets the intent of FAR 91.409(b).

### 100 HOUR INSPECTION

1. **Lights:** Check for condition, attachment, cracked or broken lens. Replacement lamp as necessary.
2. **Circuit Breaker Switch:** Check for looseness and operation. Inspect placard to assure that it is easily readable and securely attached.
3. **Electrical Wiring:** Inspect for chafing, damage, and security.
4. **Landing Light Bracket:** Check for security and alignment of red slip markers. Check structural integrity of bracket. If found to be faulty, replace. If found to be out of alignment, align bracket in accordance with the Gallagher Aviation LLC Installation Instructions.

## 11. RECOMMENDED OVERHAUL PERIODS

There are no recommended overhaul periods prescribed for the components listed in these STC kits. Components should be replaced on an as-needed basis during inspections.

## 12. AIRWORTHINESS LIMITATIONS

There are no additional airworthiness limitations, and the Pilot in Command (PIC) should operate the aircraft in accordance with existing aircraft limitations.

The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.