

 US Department of Transportation Federal Aviation Administration		MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)		OMB No. 2120-0020 Exp. 5/31/2018	Electronic Tracking Number
		For FAA Use Only			

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))

1. Aircraft	Nationality and Registration Mark XXXXXXXXXXXXXXXXXXXX	Serial No. MC-392	
	Make Beech Aircraft Corp.	Model B24R	Series 24
2. Owner	Name (As shown on registration certificate) XXXXXXXXXXXXXXXXXXXX X	Address (As shown on registration certificate) Address XXXXXXXXXXXX City <u>Cincinnati</u> State <u>OH</u> Zip <u>45251</u> Country <u>USA</u>	

3. For FAA Use Only

The data identified herein complies with applicable airworthiness requirements and is approved only for the above described aircraft subject to conformity inspection by a person authorized in FAR 43.7

Approving Inspector: [Signature]
Date April 14, 2021 **GL05**

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME	<u>Beech Aircraft Corp.</u>	<i>(As described in Item 1 above)</i>	<u>MC-392</u>
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type		
			Manufacturer		

6. Conformity Statement

A. Agency's Name and Address Name <u>Jeffrey J Whyte</u> Address <u>8098 Pepper Pike</u> City <u>West Chester</u> State <u>OH</u> Zip <u>45069</u> Country <u>USA</u>	B. Kind of Agency <input checked="" type="checkbox"/> U. S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Certificated Maintenance Organization
C. Certificate No. <div style="text-align: right; font-size: 1.2em;">2857210</div>	

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 <input type="checkbox"/>	Signature/Date of Authorized Individual
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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

BY	FAA Flt. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee	Repair Station	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)

Certificate or Designation No. A&P2857210IA	Signature/Date of Authorized Individual
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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.)

N9270S

Nationality and Registration Mark

Date

1. Introduction: This document provides the necessary information on the alteration of N9270S, Beech B24R S/N MC-392 for installation of LED lamps on the left hand wingtip position light, right hand wingtip position light, landing light and two taxi lights.

2. Description: Removed existing incandescent landing, taxi and wingtip position light lamps. Installed one landing light and two taxi lamps with Aero-Lites assemblies P/N PAR36L204 (landing lamp) and PAR36TR4 (taxi lamp) in accordance with Aero-Lights installation instructions ALSSIV-001 Rev. 1-1 Dated 08/19. Installed Aero-Lites AL-7512NM-R left hand and AL-7512NM-G right hand wingtip position light lamps IAW Aero-Lites installation instructions ALNM-001 Rev. 1-0 Dated 03/2019. The new lamps were installed in the existing fixtures with no modifications required. The installation used the existing wiring, circuit breakers and switches, which were found to be satisfactory IAW AC43.13-1B Chapter 11 Sections 4, 5, 6 and 7. This modification was found not to interfere with any other installed systems and/or alterations and does not exceed 80% of alternator output. No adverse interference to radios or navigational equipment from radio frequency interference (RFI) or electromagnetic interference (EMI) was found while testing the installation in all ON/OFF conditions. No change to the weight and balance. Similar alterations have been approved on N79546 FAA Field Approval 337 dated 10/10/2017 and N108WY FAA Field Approval 337 dated 07/11/2018.

3. Control: No change from original.

4. Servicing Information: Beechcraft 169-590015F6 Shop Manual.

5. Maintenance Instructions: For the circuit breakers, switches, wires and lamp holders refer to Beechcraft 169-590015F6 Shop Manual. For the PAR36 lamps • Periodically inspect LED to verify proper operation. * This lamp is a sealed assembly and has no serviceable parts. Lamp assembly must be replaced if inoperative. * Periodically inspect lens for abnormalities: Lens should be kept clean from insects and other debris. * Clean lenses with commercial acrylic cleaner/polish and microfiber towel. DO NOT clean with solvents. For AL-7512NM-R and G • Before every flight *Perform function check of lamp(s): If lamp is found defective, discontinue aircraft operation between sunset and sunrise until serviceable replacement lamp has been installed. • 100hr *Perform function check of lamp(s) *Inspect each light assembly for evidence of moisture/condensation beneath outer lens. *Replace defective lamp before return to service. *Replace lens gasket on condition when evidence of moisture is noted. • Annually *Perform function check of lamp(s) *Inspect each light assembly for evidence of moisture/condensation beneath outer lens. *Replace defective lamp before return to service. *Replace lens gasket on condition when evidence of moisture is noted. WARNING: If applicable: Post installation and before return to service - Test the full frequency spectrum of all radio equipment to verify no adverse interference.

☒ Additional Sheets Are Attached

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.)

N9270S

Nationality and Registration Mark

Date

6. Troubleshooting Information: For the circuit breakers, switches, wires and lamp holders refer to Beechcraft 169-590015F6 Shop Manual. For PAR36 lamps refer to Aero-Lites ALSSIV-001 Rev. 1-1 dated 08/19. For AL-7512NM-R and G refer to Aero-Lites ALNM-001 Rev. 1-0 dated 03/19.

7. Removal and Replacement Information: For PAR36 lamps refer to Aero-Lites ALSSIV-001 Rev. 1-1 dated 08/19. For AL-7512NM-R and G refer to Aero-Lites ALNM-001 Rev. 1-0 dated 03/19.

8. Diagrams: No change from the original.

9. Special Inspection Requirements: No special inspections required.

10. Application of Protective Treatments: No special treatments required.

11. Data: No change from original types and styles of fasteners.

12. Special Tools: No special tools required.

13. Commuter Category Aircraft: Not applicable.

14. Recommended Overhaul Periods: No additional overhaul time limitations.

15. Airworthiness Limitations Section: Not applicable.

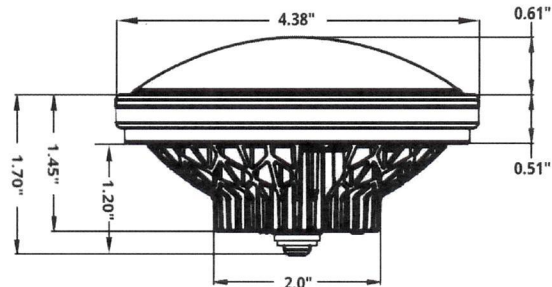
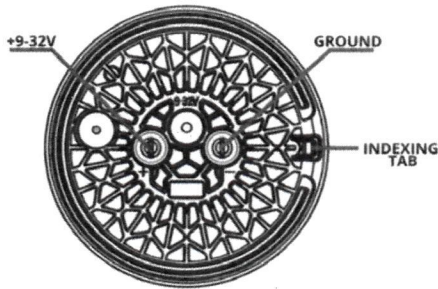
16. Revisions: Maintenance information must be acceptable to the FAA. As such, changes should be documented by submitting the revised maintenance information along with the original FAA Form 337 to the Aircraft Registration Branch (AFS-750) in Oklahoma City. An entry in the aircraft records should indicate the current revision.

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☒ Additional Sheets Are Attached

****THOROUGHLY READ THIS GUIDE, INCLUDING WARNINGS, BEFORE ATTEMPTING LIGHT INSTALLATION****

PART #	STYLE	Application	Beam	Weight	Voltage	Input Current
PAR36L204	PAR 36	LANDING/SPOT	10° x 10°	0.70 lbs.	+9-32VDC	2.80a @ 14VDC / 1.45a @ 28VDC (max)
PAR36TR4	PAR 36	TAXI/LINEAR FLOOD	45°X 15°	0.70 lbs.	+9-32VDC	2.80a @ 14VDC / 1.45a @ 28VDC (max)



INSTALLATION PROCEDURES:

1. Verify your currently installed lamp is a PAR 36 / 4.5" diameter sealed beam lamp.
2. Verify power is removed from the circuit before attempting installation.
3. Remove existing lamp from fixture (retain all hardware for reassembly) and disconnect both wire leads from lamp.
4. Verify that the wire size is sufficient for the current load of the replacement LED lamp.
5. Install the leads onto the LED bulb with provided 8-32 machine screws such that the power wire is attached to the terminal marked "+", and the ground wire to the terminal marked "-".

NOTE: The lamp will not sustain damage if wired in reverse; however it will not illuminate.

6. Install new LED lamp into OEM light fixture with original hardware. If applicable, align the indexing tab on the rear of the lamp with the notch of the mounting fixture.

NOTE: If installing Linear Flood version, PN: PAR36TR4, It is imperative that the Indexing Tab be positioned at either 3 o'clock or 9 o'clock position.

This will ensure that the projected light beam is oriented parallel to the horizon.

7. Perform functional check by placing the light switch in the ON position and verify proper operation AND orientation (PAR36TR4 only) of lamp.
8. Test the full frequency spectrum of all radio equipment to verify no adverse interference due to EMI or RFI while the light is in the ON position.

TROUBLESHOOTING

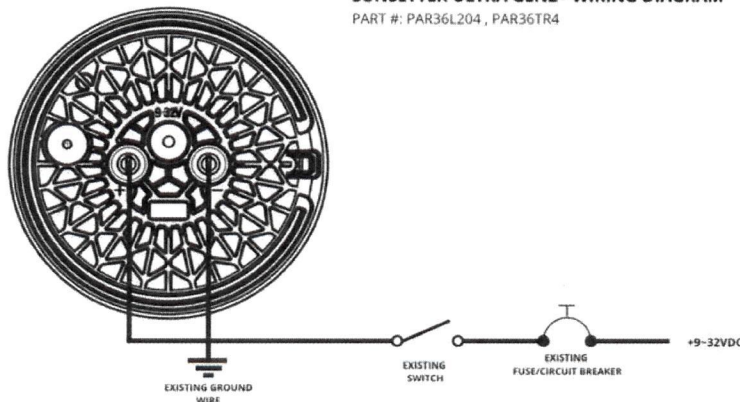
- LED does not illuminate when power applied:
Verify polarity of power and ground leads. *LED will not illuminate in wired reverse polarity.
- Polarity verified but LED does not illuminate:
Use a volt meter to verify voltage measured at "+" terminal is >12VDC and < 30VDC. Verify "-" terminal has continuity to circuit ground.
- Input voltage and polarity verified but LED does not illuminate.
Remove LED and test on bench with 12/28VDC power source. If LED fails to illuminate, replace with new.

MAINTENANCE AND INSPECTION

- Periodically inspect LED to verify proper operation. If LED is found inoperative, follow troubleshooting procedure above.
*This lamp is a sealed assembly and has no serviceable parts. Lamp assembly must be replaced if inoperative.
- Periodically inspect lens for abnormalities: Lens should be kept clean from insects and other debris.
*Clean lenses with commercial acrylic cleaner/polish and microfiber towel. DO NOT clean with solvents.

SUNSETTER ULTRA GEN2 - WIRING DIAGRAM

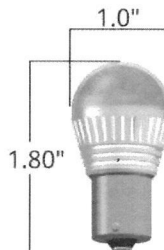
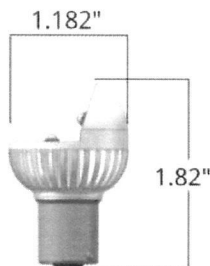
PART #: PAR36L204, PAR36TR4



WARNING: If applicable: Post installation and before return to service - Test the full frequency spectrum of all radio equipment to verify no adverse interference noted due to EMI or RFI while the light is in the ON position.

WARNING: This product is not FAA/PMA approved; It is the sole responsibility of installer to determine installation eligibility for use, and to verify compatibility with other equipment and/or modifications.

****THOROUGHLY READ THIS GUIDE, INCLUDING WARNINGS, BEFORE ATTEMPTING LIGHT INSTALLATION****



PART #	Description	Bulb Base	Weight	VDC	Input Current
AL-7512NM-G	Wingtip Nav - GREEN	BAY15S	0.85 oz.	14VDC	260mA @14VDC
AL-7512NM-R	Wingtip Nav - RED	BAY15S	0.85 oz.	14VDC	260mA @ 14VDC
AL-1777NM-W	Rear Position - WHITE	BA15S	0.60 oz.	14VDC	260mA @ 14VDC
AL-7524NM-R	Wingtip Nav - RED	BAY15S	0.85oz	28VDC	140mA @28VDC
AL-7524NM-G	Wingtip Nav - GREEN	BAY15S	0.85oz	28VDC	140mA @28VDC
AL-307NM-W	Rear Position - WHITE	BA15S	0.60oz	28VDC	140mA @ 28VDC

INSTALLATION PROCEDURES:

- Remove existing bulb from fixture with reference to the instructions in your maintenance manual. Retain all OEM hardware.
- Before proceeding, verify your currently installed wingtip lamp has a standard **BAY15S** base, or other approved alternate for this lamp. The BAY15S has two (2) offset indexing tabs that are mandatory for proper installation in the wingtip light fixture.

IMPORTANT: It is imperative to inspect and replace each lens cover gasket if evidence of deterioration/cracking/dry-rot is noted. This gasket is the environmental seal for the bulbs and it is critical to inhibit water ingress to the LED which can cause premature failure of the LED bulb assemblies.

- With the LEDs oriented forward, align the indexing tabs on bulb with slots in the wingtip socket. Gently press the LED bulb into the socket and rotate the bulb in a clockwise direction. If properly aligned, bulb should twist approximately 20 degrees and seat in the socket.
- Repeat step 1. for removal of the rear-facing position light bulb.
- Verify the lamp base on the removed bulb is a BA15S (single contact bayonet base).
- To install, align the indexing tabs on bulb with slots in the rear position light bulb socket. Gently press the LED bulb into the socket while rotating the bulb in a clockwise direction.
- Re-install all lenses, gaskets and hardware in the reverse order from which it was removed.
- Test the aircraft Position Light circuit via the appropriate procedure in the aircraft operating handbook to verify the new lamps function.
 - Test the full frequency spectrum of your aircraft's Communication and Navigation equipment to verify no adverse interference due to EMI or RFI while the light is in the ON position.
- Make entry in appropriate aircraft logbook and update equipment list to reflect installed equipment.
Note: Retrofit installations have negligible affect to Aircraft Weight & Balance.

MAINTENANCE & INSPECTION

Interval:	Action:	Remarks:
Every Flight	<ul style="list-style-type: none"> Perform function check of lamp(s) 	If lamp is found defective, discontinue aircraft operation between sunset and sunrise until serviceable replacement lamp has been installed.
100hr	<ul style="list-style-type: none"> Perform function check of lamp(s) Inspect each light assembly for evidence of moisture/condensation beneath outer lens. 	<ul style="list-style-type: none"> Replace defective lamp before return to service. Replace lens gasket on condition when evidence of moisture in noted
Annually	<ul style="list-style-type: none"> Perform function check of lamp(s) Inspect each light assembly for evidence of moisture/condensation beneath outer lens. 	<ul style="list-style-type: none"> Replace defective lamp before return to service. Replace lens gasket on condition when evidence of moisture in noted

WARNING: If applicable: Post installation and before return to service - Test the full frequency spectrum of all radio equipment to verify no adverse interference noted due to EMI or RFI while the light is in the ON position.

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