

1. SCOPE

1.1 Purpose.- The purpose of this specification is to provide instructions for reconditioning and modifying AN3095-3, AN3095-6, AN3095-6A and AN3095-9 electrically retractable landing lights for use on C-45G, C-45H, SNB-5, and SNB-5P aircraft.

1.2 Application.- All reconditioning operations and repairs covered by this specification may be accomplished where required without further authorization. Repairs not authorized by this specification cannot be performed without further authorization.

1.3 List of Pages and Revisions.- This specification consists of the pages listed below. An asterisk (*) denotes the pages revised by the current revision.

<u>Page</u>	<u>Date</u>	<u>Description</u>	<u>Serial Effectivity</u>
1	4-22-53		
2	4-22-53		
3	4-22-53		
4	4-22-53		
5	4-22-53		
6	4-22-53		
7	4-22-53		
8	4-22-53		
9	4-22-53		
10	4-22-53		

APPROVED:

Kenneth O'Gee
USAF Quality Control

A 56

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED 4-22-53	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT MODEL C-45G, C-45H, SNB-5, AND SNB-5P		
PROJECT ENGINEER <i>[Signature]</i>				
APPROVAL <i>[Signature]</i>	DATE REVISED	Joseph Girard CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION NO 3610	PAGE 1
APPROVAL <i>[Signature]</i>				

2. APPLICABLE PUBLICATIONS

2.1 Specifications:

2.1.1 Beech.-
OS 7008 General Acceptable Quality Standards

2.2 Technical Orders.- Compliance with this specification constitutes compliance with the technical orders listed below.

03-5-4 Electrical Equipment - Cleaning and Polishing Landing Lamp Reflectors, dated September 11, 1943

03-5-140 Overhaul Instructions - Electrically Retractable Landing Light, dated July 26, 1950

3. REQUIREMENTS

3.1 Parts Involved:

3.1.1 Parts Not Used.- None

3.1.2 Parts to be Reconditioned.- The following parts are to be reconditioned in accordance with the instructions contained herein. "Reconditioned" means the disassembly, cleaning, inspection and correction of discrepancies, repair and/or replacement of components, and modifications to incorporate changes in accordance with applicable engineering drawings to assure an operationally safe and serviceable aircraft.

AN3095-3 Electrically Retractable Landing Lights
AN3095-6 Electrically Retractable Landing Lights
AN3095-6A Electrically Retractable Landing Lights
AN3095-9 Electrically Retractable Landing Lights

3.1.3 Parts to be Supplied New.- None

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED <i>4-22-53</i>	OVERHAUL SPECIFICATION	
PROJECT ENGINEER <i>[Signature]</i>		ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-45G, C-45H, SNB-5, AND SNB-5P	
APPROVAL <i>[Signature]</i>	DATE REVISED	Beech Aircraft CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION NO. 3610
APPROVAL <i>[Signature]</i>			PAGE 2

3.2 Cause for Rejection.- The following specific conditions as well as damage or wear which cannot be corrected by one or more of the authorized repairs listed in Paragraph 3.4 of this specification are cause for rejection.

3.2.1 Power Unit.-

- (a) If the motor is defective and will not operate, replace it with a complete new unit.
- (b) If the lamp does not extend and retract in the number of seconds specified in Paragraph 3.5.1 of this specification, replace the power unit.

3.2.1.1 Motor Assembly.-

- (a) Replace the brushes when they are worn to a length of 3/16-inch.
- (b) If the commutator of the armature is excessively burned, replace the entire motor.
- (c) Replace unserviceable brake assemblies.
- (d) Replace damaged and unserviceable gears.

3.2.2 Outer Canopy and Drive Housing Assembly.-

- (a) If the slide is worn or burned, unsolder the lead wire running to the terminal receptacle and replace with a new cover.
- (b) If the gear and pinion assembly which drives the quadrant gear is damaged or excessively worn, replace the entire outer canopy and drive housing.

3.3 Reconditioning Operations:

3.3.1 Power Unit.-

- (a) Remove radiation screen and detach from light.
- (b) Disassemble power unit as follows:
 - (1) Remove the three motor contact assemblies from the outside of the gear plate.
 - (2) Separate the gear reduction assembly and the motor assembly.

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED <i>4-22-53</i>	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-45G, C-45H, SMB-5, AND SMB-5P		
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISED			
APPROVAL <i>[Signature]</i>		Beck Aircraft CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION no. 3610	PAGE 3
APPROVAL <i>[Signature]</i>				

3.3.1 Power Unit.- (Continued)

- (3) Remove gear brace assembly. Remove the four reduction gears from gear plate.
- (4) Remove the motor case cover.
- (5) Remove the brush holder assembly. Remove brushes from the brush holders and separate brush holders by removing the spring yokes and spring.
- (6) Remove the locking spring and bearing washer from the end of the armature shaft and remove armature. Remove the armature adjusting washers and snubber washer from the armature shaft.
- (7) Remove the field and block assembly. Grip the block on either side and lift it straight out from the motor housing.
- (8) Remove the brake assembly from motor housing.
- (c) Inspect parts and assemblies for nonrepairable conditions.
- (d) Wipe off any dirt or grease on the motor case.
- (e) Test the motor operation by applying 24-volt DC to lamp. The spring contacts, which deliver power to the motor, are marked on the bottom of the gear case assembly as to ground and direction of motor rotation.
- (f) Lubricate the reduction gears with MIL-O-6086 oil. Use only the amount that will adhere to the gears when they are dipped into the oil.
- (g) Reassemble the power unit by reversing the disassembly procedure.
- (h) Spray the entire motor and gear housing with two coats of MIL-P-3038 cold spray plastic protective stripping compound.
- (i) Test and adjust as outlined in Paragraph 3.5.1 of this specification.

3.3.2 Outer Canopy and Drive Housing Assembly.-

- (a) Disassemble as follows:
 - (1) Remove the sliding contact cover. Unsolder connections to the internal receptacle.
 - (2) Remove receptacle adapter and receptacle.

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED 4-22-53	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-450, C-45H, 5NB-5, AND 5NB-5P		
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISED			
APPROVAL <i>[Signature]</i>		Overhaul Specification CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION NO. 3610	PAGE 4

3.3.2 Outer Canopy and Drive Housing Assembly.- (Continued)

- (3) Drive out the hinge pin.
 - (4) Remove external wire connection. Unsolder leads and take out the insulator.
 - (5) Remove movable and stationary retract contact assemblies.
 - (6) Remove bottom cover.
 - (7) Remove extend circuit contact assembly. Remove insulator from the drive housing.
 - (8) Remove rubber bumper from the outer canopy.
 - (9) Remove filter.
 - (10) Separate the left-half drive housing from the right-half drive housing. Remove the gear and pinion assembly and gear and pinion shaft.
- (b) Inspect the parts and assemblies for nonrepairable conditions.
 - (c) Check the motor limit switches and be certain that they make good contact.
 - (d) Fill oil hole of the gear and pinion shaft with two or three drops of refrigerator machine oil, Specification WV-C-581, Grade 20.
 - (e) Saturate the wool wick of the hinge pin hollow shaft with machine oil mentioned above.
 - (f) Clean all points and make certain that there is good contact.
 - (g) Reassemble by reversing the disassembly procedure. Make the wiring connections in accordance with Figure (1) of this specification.
 - (h) Test and adjust as outlined in Paragraph 3.5 of this specification.
 - (i) Repair as necessary as authorized in Paragraph 3.4.1 of this specification.

3.3.3 Inner Canopy Assembly and Lamp.-

- (a) Disassemble as follows:
- (1) Remove the lamp from the canopy and disconnect wires.
 - (2) Remove the sliding contact arm assembly with terminal and insulator.

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED <i>4-22-53</i>	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT MODEL C-45G, C-45H, SNB-5, AND SNB-5P		
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISED			
APPROVAL <i>[Signature]</i>		Boeing Aircraft CORPORATION Wichita 1, Kansas.	OVERHAUL SPECIFICATION NO. 3610	PAGE 5
APPROVAL <i>[Signature]</i>				

3.3.3 Inner Canopy Assembly and Lamp.- (Continued)

- (3) Remove the inner canopy quadrant. Separate quadrant from inner canopy.
- (b) Inspect parts and assemblies for nonrepairable conditions.
- (c) Check operation of lamp bulbs by applying 24-volt DC to lamp. Apply power directly across lamp terminals.
- (d) Check the condition of the contact at the end of the gear quadrant. Clean. Check the wire connections inside inner canopy and also the contact on the gear quadrant.
- (e) Apply a small amount of MIL-G-3278 grease to the quadrant.
- (f) Repair as necessary as authorized in Paragraph 3.4.2 of this specification.
- (g) Reassemble by reversing the disassembly procedure. Make the wiring connections in accordance with Figure (1) of this specification.

NOTE: The filament shield of the lamp should be located toward the pilot, or inboard side, of the aircraft. Make certain that the lamp is correctly inserted as required for right or left installation in the aircraft.

- (h) Test and adjust as outlined in Paragraph 3.5 of this specification.

3.4 Authorized Repairs:

3.4.1 Outer Canopy and Drive Housing Assembly.-

- (a) Use AN507-632E-10 screws and Timmerman washer A-3236-012-24A for installation of landing lights when screw holes in the light mounting rim are enlarged.

3.4.2 Inner Canopy Assembly and Lamp.-

- (a) Reflectors with discolored lacquer coating will be refinished as follows:
 - (1) Remove the lacquer coating on the reflector surface with Grade B acetone, Specification C-A-51B.

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED <i>4-22-53</i>	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-45G, C-45H, SSB-5, AND SSB-5P		
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISED			
APPROVAL <i>[Signature]</i>		Cessna Aircraft CORPORATION Wichita, L. Kansas	OVERHAUL SPECIFICATION no. 3610	PAGE 6
APPROVAL <i>[Signature]</i>				

3.4.2 Inner Canopy Assembly and Lamp.- (Continued)

- (2) Polish the silver-plated surface by using a soft chamois, and a paste made from Specification TT-L-70 lamp black, and alcohol.
 - (3) Relacquar the reflector surface with Specification 3-163 lacquer.
- (b) Reflectors having surfaces that require replating will be replated as follows:
- (1) Strip reflector surfaces of the old plating.
 - (2) Plate reflector with silver or nickel, buff to a mirror finish and relacquar as described in Paragraph 3.4.2 above.

3.5 Test Procedure:

3.5.1 Power Unit.-

- (a) Operate the unit at rated voltage and check the length of time required for the lamp to reach the fully extended position. The lamp must light when it extends 10 degrees and remain lighted for the complete time of the extension. The lamp must extend fully in not more than 17 seconds. When the lamp is retracted, the light must go off at the 10 degree extended position and retract fully within 17 seconds. If the light does not go on and off at the specified positions, bend the lamp contacts to obtain correct adjustment.

3.5.2 Retract Points.-

- (a) Care must be taken in the adjustment of the retract points to allow the inner canopy to bottom against the rubber bumper as the retract points are opened by the sliding contact arm. If the inner canopy should close too hard against the rubber bumper, the operating mechanism may be strained.
- (b) When the inner canopy is fully retracted, the retract points should be parted or broken about one-sixteenth of an inch.
- (c) The retract points should be set to break just before the inner canopy reaches the flush position, since the high RPM of the driving motor causes a slight override or coasting of the brake.

WRITTEN BY	<i>M. D. Davis</i>	DATE ISSUED	4-22-53	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-45G, C-45H, SNB-5, AND SNB-5P		
PROJECT ENGINEER	<i>[Signature]</i>	DATE REVISED				
APPROVAL	<i>[Signature]</i>			Cessna Aircraft CORPORATION Wichita, Kansas	OVERHAUL SPECIFICATION	PAGE
APPROVAL	<i>[Signature]</i>				no. 3610	7

3.5.2 Retract Points.- (Continued)

- (d) The retract points can be adjusted by bending the strap spring or by slightly bending the point arm itself. If the arm is straightened, the inner canopy will run deeper into the outer canopy. If the arm is bent inwardly toward the sliding contact, the retract circuit will be broken earlier, thus restricting the recess of the inner canopy.
- (e) Before the light is operated after this adjustment has been accomplished, check the spring tension of the arm to be certain that the points make good contact.
- (f) After adjustment, care should be taken in retracting the light the first few times. The adjustment is correct when the light stops at the flush position.

3.5.3 Extend Points.-

- (a) The extend points govern the number of degrees the light travels from its flush position.
- (b) Be sure the light is disconnected from the power supply when adjusting the points.
- (c) Loosen the locking screw until the contact assembly will slide in the rack. If a greater opening is desired, move the contact assembly toward the canopy and away from the retract points. If less opening is desired, move the contact assembly toward the retract points.
- (d) Tighten the locking screw, thus holding the contact assembly in position.
- (e) Check the operation of the extend points in a similar manner to that given for the retract points. A second contact point assembly provides a parallel path for the lamp current carried by the sliding contact at the open position of the light.
- (f) After adjustment blow all foreign matter from the housing and replace the cover. The light is then ready for installation.

WRITTEN BY <i>M. D. Davis</i>	DATE ISSUED 4-22-53	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-45G, C-45H, SNB-5, AND SNB-5P	
PROJECT ENGINEER <i>[Signature]</i>	DATE REVISED		
APPROVAL <i>[Signature]</i>		Deech Aircraft CORPORATION Wichita, Kansas	

4. INSPECTION

4.1 General.- The parts will be inspected to the general acceptable quality standards of QS 7006 and installation shall be in accordance with Drawing 694-180668, outboard wing electrical equipment installation.

WRITTEN BY	<i>M. D. Davis</i>	DATE ISSUED	<i>7-2-53</i>	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-45G, C-45H, SNE-5, AND SNE-5P	
PROJECT ENGINEER	<i>[Signature]</i>	DATE REVISED			
APPROVAL	<i>[Signature]</i>			Boesh Aircraft CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION NO. 3610
APPROVAL	<i>[Signature]</i>				

WIRING DIAGRAM

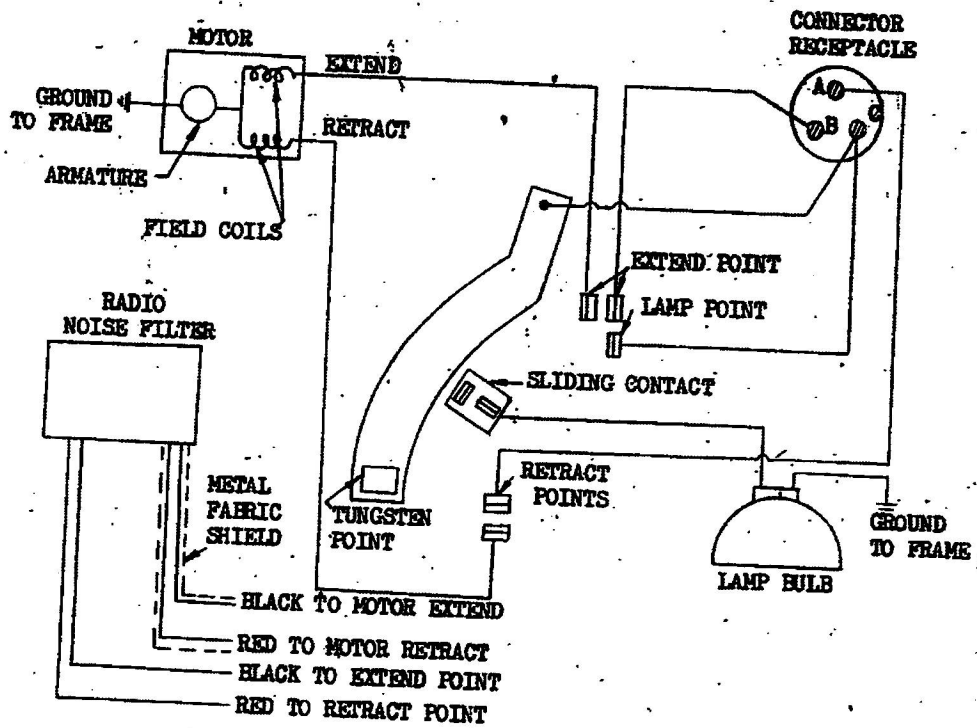


FIGURE 1

WRITTEN BY	<i>M. D. Davis</i>	DATE ISSUED	4-22-53	OVERHAUL SPECIFICATION ELECTRICALLY RETRACTABLE LANDING LIGHT - MODEL C-45G, C-45H, SNB-5, AND SNB-5P	
PROJECT ENGINEER	<i>[Signature]</i>	DATE REVISED			
APPROVAL	<i>[Signature]</i>			Beech Aircraft CORPORATION Wichita 1, Kansas	OVERHAUL SPECIFICATION NO. 3610
APPROVAL	<i>[Signature]</i>				