

TITLE

INDICATING/RECORDING SYSTEMS - COCKPIT OVERHEAD DIMMING POTENTIOMETER REPLACEMENT

EFFECTIVITY

MODEL	SERIAL NUMBERS
C90GTi	LJ-1847, LJ-1853 thru LJ-2179
B200CGT	BZ-1 thru BZ-8
B200GT	BY-1 thru BY-419
B300C	FM-1 thru FM-116
B300	FL-1 thru FL-1349

REASON

The 22M185 Dimming Potentiometer in the cockpit overhead is obsolete.

DESCRIPTION

This service document provides parts and instructions to remove and replace the dimming potentiometer and modify the existing wire to the dimming potentiometer.

COMPLIANCE

OPTIONAL. This service document can be accomplished at the discretion of the owner.

A service document published by Textron Aviation may be recorded as *completed* in an aircraft log only when the following requirements are satisfied:

- 1) The mechanic must complete all of the instructions in the service document, including the intent therein.
- 2) The mechanic must correctly use and install all applicable parts supplied with the service document kit. Only with written authorization from Textron Aviation can substitute parts or rebuilt parts be used to replace new parts.
- 3) The mechanic or airplane owner must use the technical data in the service document only as approved and published.
- 4) The mechanic or airplane owner must apply the information in the service document only to aircraft serial numbers identified in the *Effectivity* section of the document.
- 5) The mechanic or airplane owner must use maintenance practices that are identified as acceptable standard practices in the aviation industry and governmental regulations.

No individual or corporate organization other than Textron Aviation is authorized to make or apply any changes to a Textron Aviation-issued service document or flight manual supplement without prior written consent from Textron Aviation.

Textron Aviation is not responsible for the quality of maintenance performed to comply with this document, unless the maintenance is accomplished at a Textron Aviation-owned Service Center.

APPROVAL

Textron Aviation received FAA approval for the technical data in this publication that changes the airplane type design.

March 08, 2023

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Textron Aviation Customer Service, P.O. Box 7706, Wichita, KS 67277, U.S.A. 1-316-517-5800

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FLIGHT CREW OPERATIONS

No Changes

CONSUMABLE MATERIAL

No specialized consumable materials are required to complete this service document.

TOOLING

No specialized tooling is required to complete this service document.

WEIGHT AND BALANCE INFORMATION

Negligible

REFERENCES

Beechcraft King Air Chapter 20 Standard Practice - Airframe

PUBLICATIONS AFFECTED

Beechcraft C90A/C90GT/C90GTi Electrical Wiring Diagram Manual

Beechcraft C90GTi Fusion Wiring Diagram Manual

Beechcraft Super King Air Model B200GT/B200CGT Fusion Wiring Diagram Manual

Beechcraft Super King Air Model B300/B300C Fusion Wiring Diagram Manual

Beechcraft B300 Electrical Wiring Diagram Manual

Beechcraft B200/T/C/CT/GT/CGT WDM (Pro Line 21 Avionics)

ACCOMPLISHMENT INSTRUCTIONS

1. Prepare the airplane for maintenance.
 - A. Make sure that the airplane is electrically grounded.
 - B. Make sure that all switches are in the OFF/NORM position.
 - C. Disconnect electrical power from the airplane.
 - (1) Disconnect external electrical power.
 - (2) Disconnect the airplane battery.
 - D. Attach maintenance warning tags to the battery and external power receptacle that have **"DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS"** written on them.
2. (Refer to Figure 1, Sheet 1.) Remove and retain the setscrew from the dimming control knob.
 - A. Keep the dimming control knob.
3. Remove the nut and the locking ring that attach the 22M185 Dimming Potentiometer to the overhead panel assembly.
4. Remove and keep all screws and knobs from the overhead electroluminescent panel assembly.
5. Remove and keep the electroluminescent panel assembly.
6. Remove the screws that attach the overhead instrument panel assembly to the overhead panel assembly.
 - A. Keep the screws and overhead electroluminescent panel assembly.
7. Disconnect the 22M185 Dimming Potentiometer from the wire bundle assembly as follows:
 - A. Identify the wires and the terminals on the 22M185 Dimming Potentiometer.

NOTE: The potentiometer terminals can be hooks or lugs. The wire removal procedures are the same.

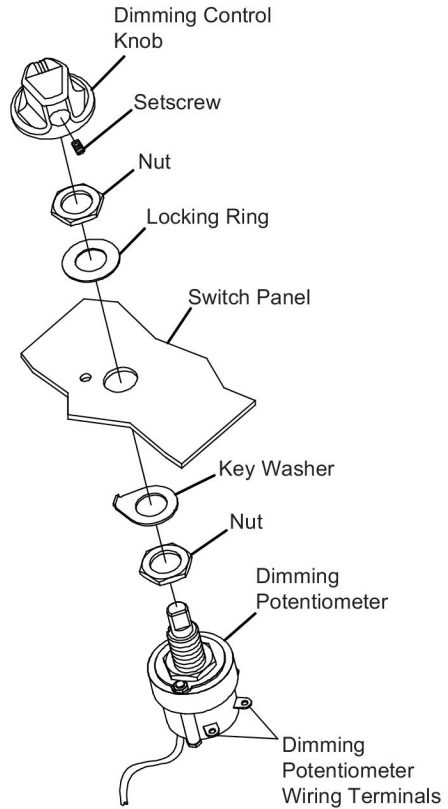
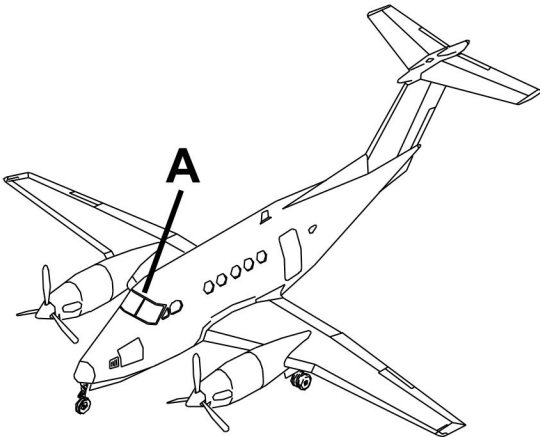
- B. Use a soldering iron to disconnect the wires from the dimming potentiometer terminals.
8. Remove the nut and the key washer from the 22M185 Dimming Potentiometer.
9. Remove and discard the 22M185 Dimming Potentiometer from the airplane.
10. (Refer to Figure 1, Sheet 2.) Do the wiring changes as follows:
 - A. Install one M81824/1-2 Splice on the J13-21-R35SP1-20 Electrical Wire and the J13-22-R35SP1-20 Electrical Wire. (Refer to the King Air Standard Practice Chapter 20 – Airframe, Electrical Wiring – Maintenance Practices).
 - B. Using a heat gun, install the 106242G44 Heat Shrink Tubing over the electrical wires.
11. Connect the new L11756 Dimming Potentiometer to the wire bundle assembly as follows:
 - A. Identify the wires and the terminals on the dimming potentiometer.

NOTE: The dimming potentiometer terminals can be hooks or lugs. The wire installation procedures are the same.
 - B. Use a soldering iron to connect the wire to the dimming potentiometer terminals.
12. Put the new L11756 Dimming Potentiometer in its position in the overhead panel.
13. Install the nut and the key washer on the L11756 Dimming Potentiometer.
14. Install the nut and the locking ring that attach the L11756 Dimming Potentiometer to the switch panel.
15. Install the electroluminescent panel to the overhead panel assembly with the retained screws.
16. Install the setscrews and knobs on the dimming control potentiometers.
17. Remove the maintenance warning tags and connect the airplane battery.
18. Do an operational test of the L11756 Dimming Potentiometer by rotating the rotary knob and making sure that the annunciator lights are dimming and the push to brighten function works.
19. Make an entry in the airplane logbook that states compliance and method of compliance with this service document.

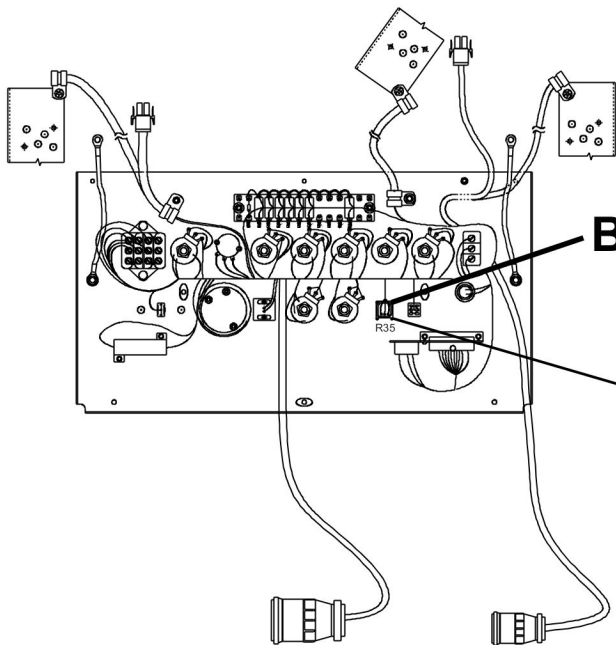
NOTE: Textron Aviation recommends that compliance with all service documents is reported to a maintenance tracking system provider.

 - Complete a record of compliance. (Maintenance Transaction Report, Log Book Entry, or other record of compliance.)
 - Put a copy of the completed record of compliance in the airplane logbook.
 - Send a copy of the completed record of compliance to the maintenance tracking system provider used.

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DETAIL B
 (Reference)



- 22M185 Dimming Potentiometer (R35) (Discard)
- L11756 Dimming Potentiometer (R35) (1 Required)

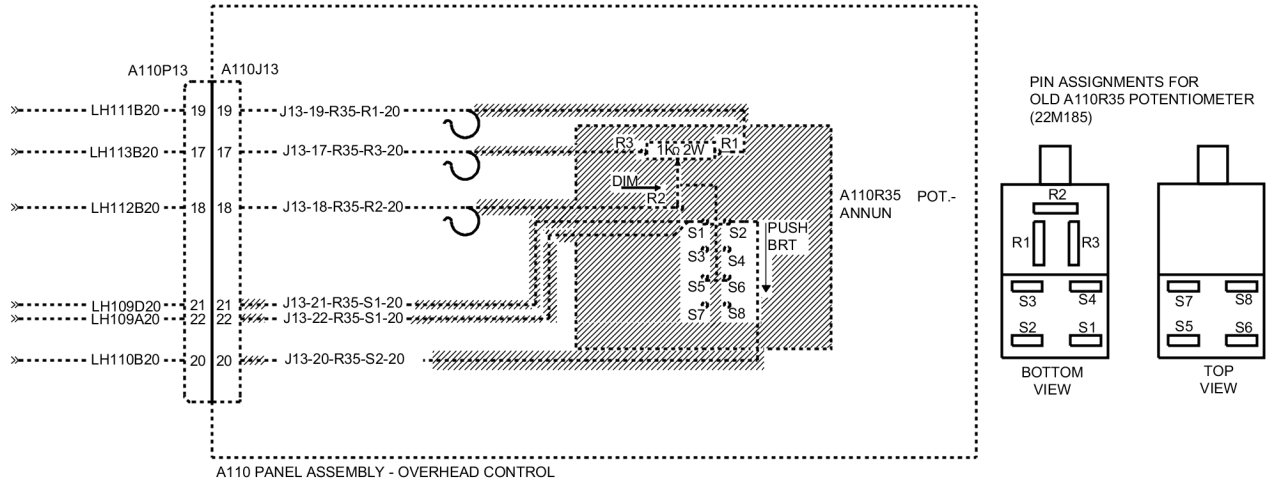
DETAIL A

NOTE: The model shown is a B200, yet the location of the dim potentiometer is the same for all models.

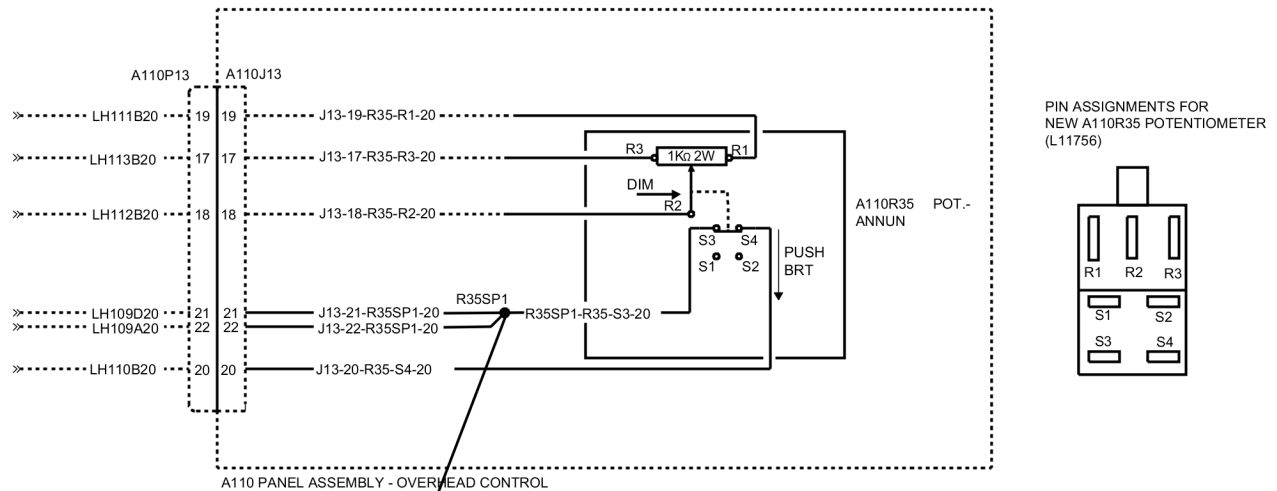
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Figure 1. Dim Potentiometer Installation (Sheet 1)

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Before Modification



After Modification

M81824/1-2
 Splice
 (1 Required)

LEGEND	
-----	Existing Wire and Equipment
////	Removed Wire and Equipment
.....	Existing Wire Disconnected to be moved
————	New Wire and Equipment

130M364280-2

Figure 1. Dim Potentiometer Installation (Sheet 2)

MATERIAL INFORMATION

Order the kit below to install this modification.

NEW P/N	QUAN- TITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
MTB-31-04	1	Kit , consisting of the following parts:		
L11756	1	Dimming Potentiometer	22M185	Discard
M81824/1-2	1	Splice		
106242G44	2 Inches	Heat Shrink		
MTB-31-04	1	Instructions		

* Please contact your Regional Textron Aviation Parts Distribution Customer Support Team for current cost and availability of parts listed in this service document. Phone at 1-800-835-4000 (Domestic) or 1-316-517-5603 (International).

For more information, please visit the TAPD Support & Aftermarket Account Management website at <https://ww2.txtav.com/Parts/Promos/TAPD>.

Based on availability and lead times, parts may require advanced scheduling.

TITLE

INDICATING/RECORDING SYSTEMS - COCKPIT OVERHEAD DIMMING POTENTIOMETER REPLACEMENT

TO:

Beechcraft Model C90GTi, B200GT, B200CGT, B300, and B300C Aircraft Owner

REASON

The 22M185 Dimming Potentiometer in the cockpit overhead is obsolete.

COMPLIANCE

OPTIONAL. This service document can be accomplished at the discretion of the owner.

LABOR HOURS**WORK PHASE**

Modification

LABOR-HOURS

As Necessary

MATERIAL AVAILABILITY**PART NUMBER**

MTB-31-04

AVAILABILITY

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COST

*

* Please contact your Regional Textron Aviation Parts Distribution Customer Support Team for current cost and availability of parts listed in this service document. Phone at 1-800-835-4000 (Domestic) or 1-316-517-5603 (International).

For more information, please visit the TAPD Support & Aftermarket Account Management website at <https://ww2.txtav.com/Parts/Promos/TAPD>.

Based on availability and lead times, parts may require advanced scheduling.

WARRANTY

None

NOTE: As a convenience, service documents are now available online to all our customers through a simple, free-of-charge registration process. If you would like to sign up, please visit the Customer Access link at www.txtavsupport.com to register.

