



A Textron Company

TECHNICAL BULLETIN

407-20-136

8 October 2020

Revision A, 13 October 2020

MODEL AFFECTED: 407

SUBJECT: AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS)
WIRING INSTALLATION, MODIFICATION OF.

HELICOPTERS AFFECTED: Serial numbers 54857 through 54890, 54892 through 54903, 54905, 54906, 54908 through 54910, 54912, 54913, 54915 through 54921, 54923 through 54938, 54939, 54941, 54943, 54944, 54946, and 54948 through 54950.

[Serial number 54891, 54904, 54907, 54911, 54914, 54922, 54939, 54940, 54942, 54945, 54947, and 54951 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: At customer's option.

DESCRIPTION:

Bell has been made aware that the Automatic Flight Control System (AFCS) mode selector panel does not have a light dimming capability on certain delivered helicopters. This Technical Bulletin (TB) introduces the procedures to change the wiring configuration for the electrical provisions to incorporate the light dimming capability to the AFCS panel of the affected helicopters. The AFCS kit provisions became part of the basic 407 helicopter configuration at serial number 54857 and subsequent. Unless an owner/operator has the AFCS kit (2-axis or 3-axis configurations) it is not required to incorporate these changes to helicopter serial numbers 54857 through 54950 but recommended when accessibility to the area is available. A revision to the 407-MM Maintenance Manual and BHT-407-IPB Illustrated Parts Breakdown will be made showing this change.

Revision A of this Technical Bulletin corrects the erroneous bulletin sequential number from 407-20-135 to 407-20-136, and the subject.

APPROVAL:

The engineering design aspects of this bulletin are Transport Canada Civil Aviation (TCCA) approved.

CONTACT INFO:

For any questions regarding this bulletin, please contact:

Bell Product Support Engineering
Tel: 1-450-437-2862 / 1-800-363-8023 / productsupport@bellflight.com

MANPOWER:

Approximately 1.5 man-hours are required to complete this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available, as well as installed optional kits or customizing.

WARRANTY:

There is no warranty credit applicable for parts or labor associated with this bulletin.

MATERIAL:

Required Material:

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>
1250-00301-00	Copper Alloy Wire (04041-22-9)	2 (1, 2)
M39029/22-191	Contact	4

NOTES:

1. The copper alloy wire is sold by the foot, but wire length required for each of the two required wires L70B22 and L70C22 is approximately seven inches.
2. An acceptable alternate to the copper alloy wire is M22759/41-22-9, which may be purchased from your Bell Supply Center using the material code 1250-55130-00.

Consumable Material:

None required.

SPECIAL TOOLS:

Contact crimp tool M22520/7-01 and turret/positioner M22520/7-11, or equivalent.
Contact installation/removal tool M81969/16-04, or equivalent.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-ELEC-SPM, Electrical Standard Practice Manual, Chapter 5 and 6.

PUBLICATIONS AFFECTED:

BHT-407-IPB, Illustrated Parts Breakdown, Chapters 22 and 96.
407-MM, Maintenance Manual, Chapters 22, 96, and 98.

ACCOMPLISHMENT INSTRUCTIONS:

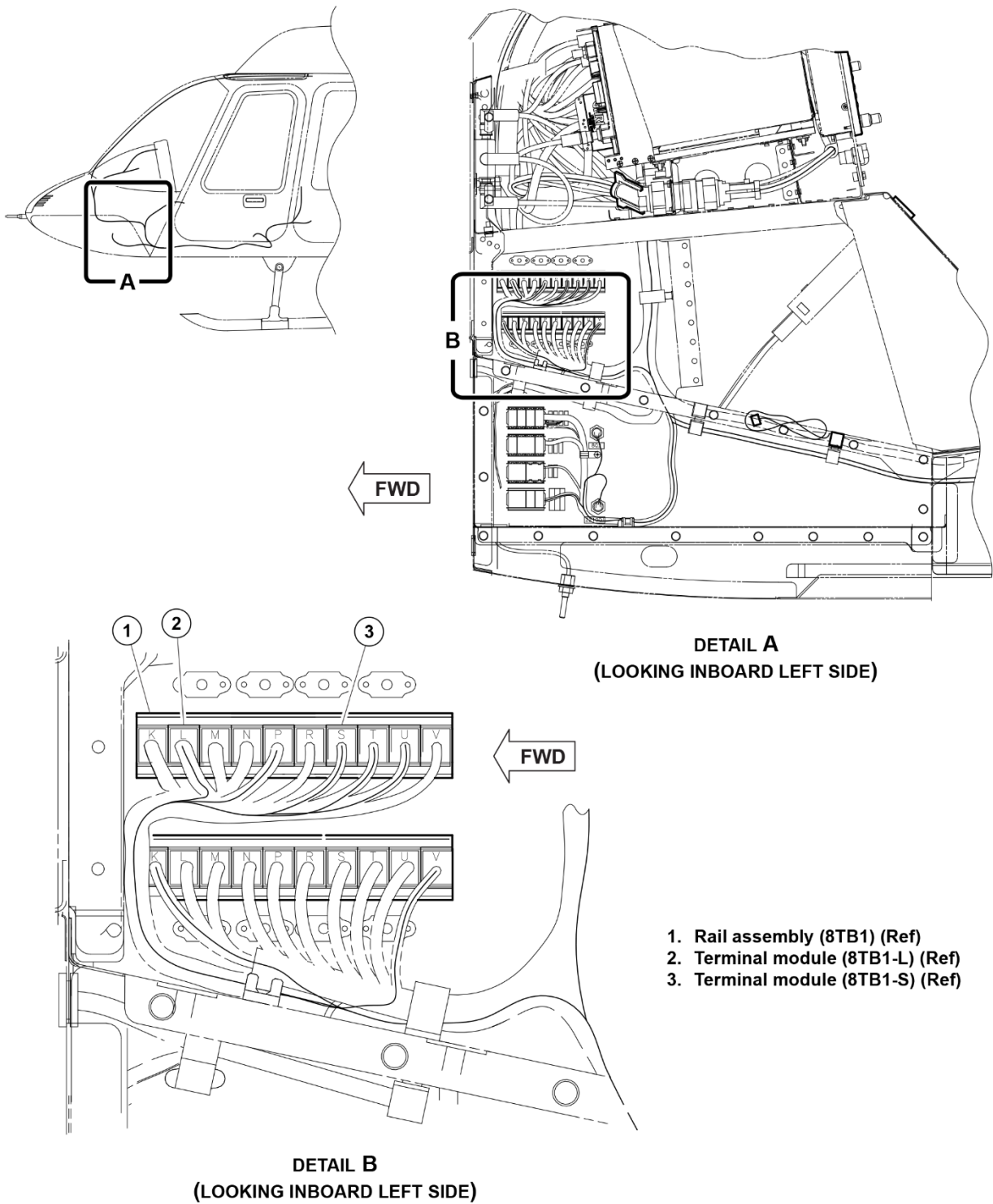
1. Prepare the helicopter for maintenance.
2. Gain access to rail assembly 8TB1 (1, Figure 1).

-NOTE-

The required length of copper alloy wire may vary depending on installed kits or customizing to the helicopter. It is recommended to measure the length required prior to preparing the wires for installation.

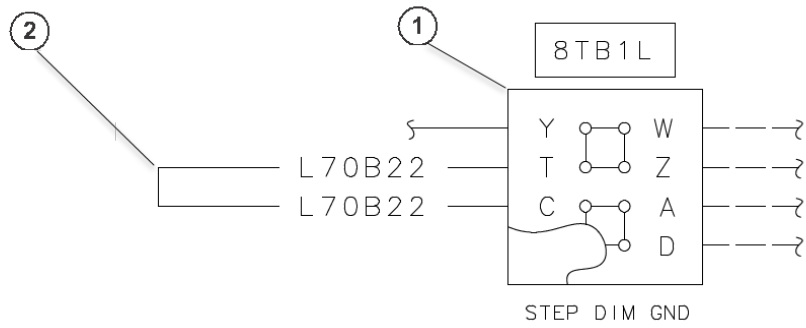
3. Cut two (2) pieces of copper alloy wire seven inches long. Add a contact M39029/22-191 to each end of the wires using crimping tool (BHT-ELEC-SPM, Chapter 5).
 - a. Identify one wire as L70B22 and one wire as L70C22.
4. Locate wire L70B22 (2, Figure 2) on terminal module 8TB1-L (2, Figure 1 and 1, Figure 2).
5. Using the installation/removal tool, remove and discard wire L70B22 (2, Figure 2) from the terminal module (8TB1-L) (2, Figure 1 and 1, Figure 2) between pin C and pin T.
6. Using the installation/removal tool, insert one end of wire L70C22 (4, Figure 2) in pin C of the terminal module 8TB1-L (2, Figure 1 and 1, Figure 2) and the other end of wire L70C22 (4, Figure 2) in pin Y of the terminal module 8TB1-S (3, Figure 1 and 3, Figure 2).

7. Using the installation/removal tool, insert one end of new wire L70B22 (2, Figure 2), created in step 3, in pin T of the terminal module 8TB1-L (2, Figure 1 and 1, Figure 2) and the other end of wire L70B22 (2, Figure 2) in pin T of terminal module 8TB1-S (3, Figure 1 and 3, Figure 2).
8. Secure installed wires L70B22 (2, Figure 2) and L70C22 (3, Figure 2) with cable ties or lacing (BHT-ELEC-SPM, Chapter 6).
9. Install all removed parts or components that were required to gain access to the rail assembly 8TB1 (1, Figure 1).
10. Make an entry in the helicopter logbook and historical service records indicating compliance with this Technical Bulletin.

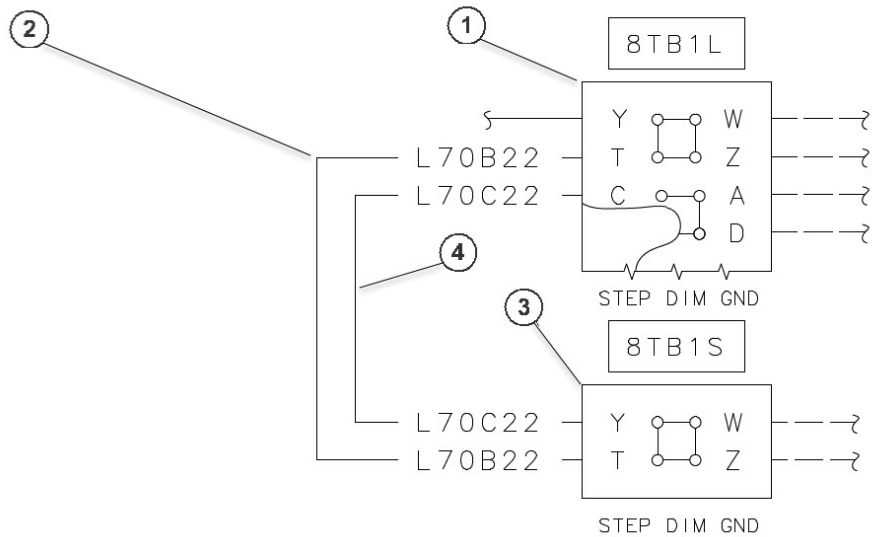


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Figure 1 – Locating Rail Assembly 8TB1



Removal of wire L70B22 from pin C and T of terminal module 8TB1-L



Installation of new wire L70B22 and wire L70C22 between terminal modules 8TB1-L and 8TB1-S

1. Terminal module (8TB1-L) (Ref)
2. Wire L70B22 (Ref)
3. Terminal module (8TB1-S) (Ref)
4. Wire L70C22 (Ref)

Figure 2 – Wiring Changes to Rail Assembly 8TB1