



A Textron Company

TECHNICAL BULLETIN

407-20-135

16 February 2026

MODEL AFFECTED: 407

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

HELICOPTERS AFFECTED: Serial numbers 54304, 54567, 54805 through 54903, 54905 through 54906, 54908 through 54910 and 54912 with 407-706-061-103 or 407-706-061-107 AFCS kit installed.

[Serial numbers 54904, 54907, 54911, 54913 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: At customer's option.

DESCRIPTION:

This bulletin provides instructions to modify the automatic flight control system (AFCS) to allow the monitoring of the force trim electrical power via the Integrated Avionics System (IAS), in preparation for the upcoming Garmin IAS software 24 release.

Applicability of this bulletin to any spare part shall be determined prior to its installation on an affected helicopter.

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 24 man-hours are required to complete this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

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	Wire	9 feet (2.7m)(1)
130-061-06W3	Identification, Tubing	1
DCR-1A-04	Rail	1
M39029/22-191	Contact	1
M39029/58-360	Contact	1
M81714/60-22-06	Terminal Block	1

NOTE 1: Part number is for quantities sold by the foot. Actual quantity required must be specified in the order.

Consumable Material:

The following material is required to accomplish this bulletin, but may not require ordering, depending on the operator's consumable material stock levels. This material may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>	<u>Reference *</u>
2000-00731-00	Insulation tape.	1Roll (1)	C-548
PLT2S-C702Y	Cable Tie	AR	C-292

* C-XXX numbers refer to the consumables list in the BHT-ALL-SPM, Standard Practices Manual

NOTE 1: Quantity indicated is the format that the product is delivered in. Actual quantity required to accomplish the instructions in this bulletin may be less than what has been delivered.

SPECIAL TOOLS:

M81969/14-01 Insertion/Extraction tool

M81969/16-04 Insertion/Extraction tool

M22520/7-01 Crimp tool (or equivalent)
M22520/7-07 Turret/Positioner
M22520/7-11 Turret/Positioner
M81714/69-02 Module extractor
HT-900 Raychem heat gun (or equivalent)
45-1987 Wire stripper (or equivalent)

WEIGHT AND BALANCE:

Negligible.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

407-IPB, Illustrated Parts Breakdown, Chapter 95
407-MM, Maintenance Manual, Chapters 25, 95, 98
BHT-ELEC-SPM, Electrical Standard Practices Manual
BHT-ALL-SPM, Standard Practices Manual

PUBLICATIONS AFFECTED:

407-IPB, Illustrated Parts Breakdown, chapter 95
407-MM, Maintenance Manual, chapter 98

ACCOMPLISHMENT INSTRUCTIONS:

1. Prepare the helicopter for maintenance.
2. Make sure all electrical power is removed from helicopter.

WARNING

OBHEY ALL THE SAFETY PRECAUTIONS WHEN YOU DO
MAINTENANCE ON OR NEAR ELECTRICAL/ELECTRONIC
EQUIPMENT (407-MM, Chapter 96).

3. Gain access to the connector 3140A2P4, the terminal block 2210TB2 and the wire harness between them by removing the Primary Flight Display (PFD), the Integrated Avionics Unit (GIA) No 2, the shroud assembly, the left upper and lower console panel, the pedestal cover, the crew seats, the pilot seat panel and the center panel (407-MM, Chapter 25 and Chapter 95, BHT-ALL-SPM).

4. Remove terminal blocks 2210TB2K, 2210TB2L and 2210TB2M from the terminal block rail (BHT-ELEC-SPM).
5. Remove and discard the existing rail (1, Figure 1) (BHT-ALL-SPM). Retain the hardware for the installation in step 6.
6. Install the new rail (1) with the hardware that was retained in step 5.
7. Install the new terminal block 2210TB2N (2) on the rail (1). Reinstall terminal blocks 2210TB2K, 2210TB2L and 2210TB2M that were removed in step 4 (BHT-ELEC-SPM).

-NOTE-

Refer to BHT-ELEC-SPM to complete the following step.
Refer to Figure 1 for wire routing, and Figure 2 for the wiring diagram.

-NOTE-

Actions specified in the "ACTION" column shown in the Wiring Modifications Instruction Table (Table 1) are as follows:

Retermine – Reposition one end of the specified wire FROM its previous location TO a new location.

Add – A new wire or resistor is required between the two locations listed in TO and FROM

8. Wire harness modifications instruction (BHT-ELEC-SPM, Chapter 6).
 - a. Retermine existing wire C50B22 from 2210TB2K position N to 2210TB2N position A.
 - b. Cut two pieces of wire to the length specified in table 1. Mark the wire number C50H22 and C50J22 every 6 to 12 inches (152.4 to 304.8 mm) using M23053/5-105-9 heat shrink and a permanent ink marker.
 - c. Crimp contact M39029/22-191 to both end of wire C50H22. Terminate wire C50H22 to 2210TB2K position N and 2210TB2N position B. Secure installed wire C50H22 with cable ties.
 - d. Crimp contact M39029/22-191 to wire C50J22. Terminate wire C50J22 to 2210TB2N position E. Route wire from terminal block 2210TB2N to GIA No.2connector 3140A2P4.

- e. Crimp contact M39029/58-360 to opposite end of wire C50J22. Terminate wire C50J22 to 3140A2P4 position 15.
9. Reinstall the PFD, the GIA No 2, the shroud assembly, the left upper and lower console panel, the pedestal cover, the crew seats, the pilot seat panel and the center panel removed in step 3 (407-MM, Chapter 25 and Chapter 95, BHT-ALL-SPM).

-NOTE-

Only force trim release functional check is required for the moment, the AFCS force trim electrical power monitoring test will be enabled and tested upon next Garmin Integrated Avionic System (IAS) software release.

10. For helicopters equipped with the 2-axis AFCS kit, do a force trim release functional check (DMC-407-A-22-00-00-07A-340A-A).
11. For helicopters equipped with the 3-axis AFCS kit, do a force trim release functional check (DMC-407-A-22-73-00-03A-340A-A).
12. Make an entry in the helicopter logbook and historical service records indicating compliance with this Technical Bulletin.

Table 1 – Wiring Modifications Instruction Table

Action	Wire#	Length (feet)	From (Pin location)	Hardware	To (Pin location)	Hardware	Notes
Reterminate	C50B22		2210TB2K (N)	M39029/22-191	2210TB2N (A)	M39029/22-191	2,4
Add	C50H22	0.5	2210TB2K (N)	M39029/22-191	2210TB2N (B)	M39029/22-191	1,2,3,7
Add	C50J22	8	2210TB2N (E)	M39029/22-191	3140A2P4 (15)	M39029/58-360	1,2,3,5,6,7

NOTES:

1. Cut to length.
2. Identify the terminal block wire harness 2210TB2N by using the insulation tube 130-061-06W3 and a permanent ink marker.
3. Mark wire number every 6 to 12 inches (152.4 to 304.8 mm) using M23053/5-105-9 heat shrink and a permanent ink marker.
4. Reposition one end of the specified wire from its previous location to a new location.
5. Remove and reinstall the back shell of connector 3140A2P4 to add the wire. Use insulation tape (C-548) to build the wire bundles diameter (BHT-ELEC-SPM, Chapter 6).
6. For the contact PN: M39029/58-360 use crimping tool M22520/7-01 and positioner M22520/7-07. The insert/extract tool is M81969/14-01.
7. For the contact PN: M39029/22-191 use crimping tool M22520/7-01 and positioner M22520/7-11. The insert/extract tool is M81969/16-04.

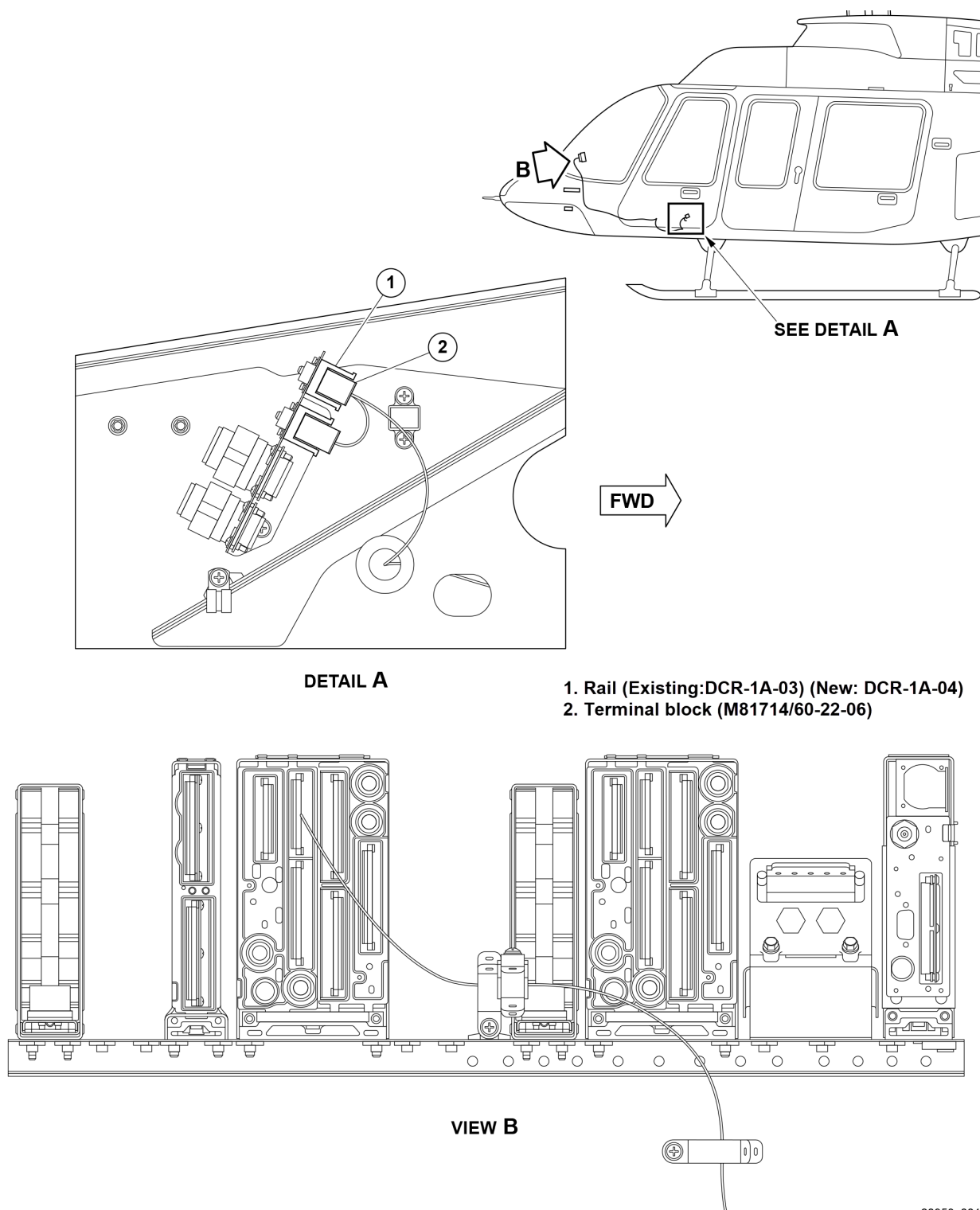
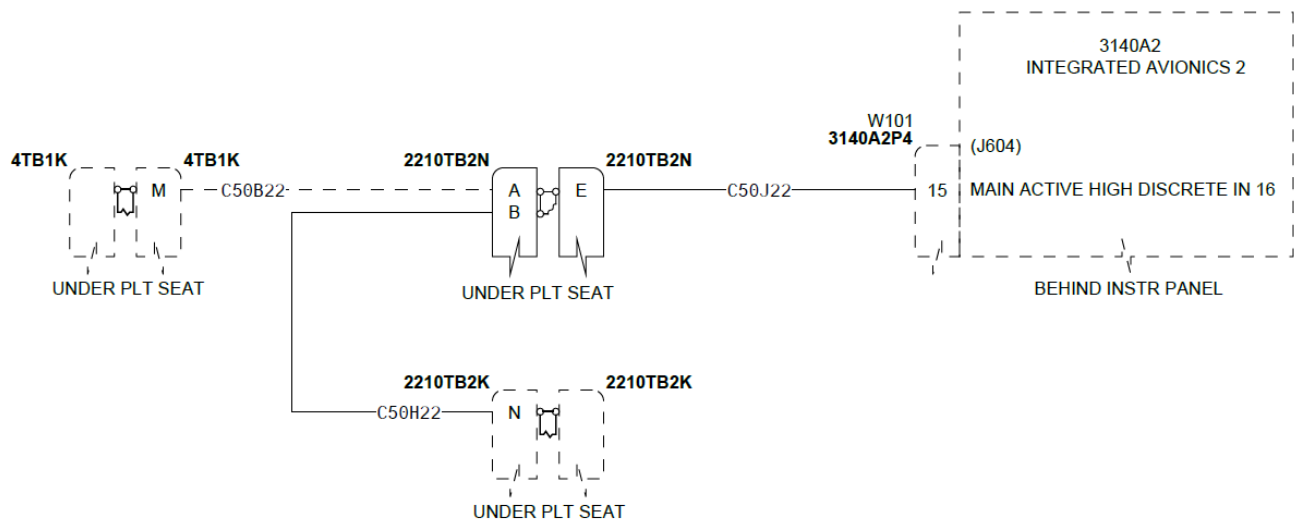


FIGURE 1 – Terminal block, rail and wire harness installation



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FIGURE 2 – AFCS force trim modification wiring diagram