A Textron Company

OPERATION SAFETY NOTICE **505-26-10**

2 September 2026

TO: **All owners and operators of Model 505 Helicopters**

SUBJECT: **WEIGHT DISCREPANCY OF AUXILIARY FUEL INSTALLATION KIT (505-370-001)**

The purpose of this Operation Safety Notice (OSN) is to achieve complete distribution of the attached Alert Service Bulletin AA-26013 to the owners/operators currently registered on the Bell technical publications distribution list.

There are changes to the Instructions for Continued Airworthiness document AA-21016 and the Rotorcraft Flight Manual Supplement AA-21017 that are available in the Technical Reports section on the Aeronautical Accessories website noted below.

For any questions regarding this letter, please contact:

Aeronautical Accessories Technical Support
Telephone: (423) 538-5151 / 1-800-251-7094
Email: techsupport@aero-access.com
Website: www.aero-access.com

Approved for public release.

A Textron Company

ALERT SERVICE BULLETIN **AA-26013**

27 August 2026

MODEL AFFECTED: **505**

SUBJECT: **WEIGHT DISCREPANCY OF AUXILIARY FUEL TANK INSTALLATION KIT (505-370-001)**

HELICOPTERS AFFECTED: **Bell Textron Canada Limited Model 505 Helicopters with BTI STC SR11253DS installed.**

COMPLIANCE: Within 30 days following the release date of this bulletin.

DESCRIPTION: Bell (Aeronautical Accessories) was made aware that delivered Auxiliary Fuel Tanks did not match the weight and balance information currently listed in the kit documentation. After investigation, it was found that several components were underestimated in the initial weight and balance calculations due to manufacturing variability and other factors. This resulted in the total weight of the installation to be 8.9 lbs. higher than currently reported in the kit documentation. Due to the change in kit weight, the maximum allowable baggage floor weight limitation with an Auxiliary Fuel Tank installed has been decreased by 8 lbs.

This Alert Service Bulletin provides instructions for the replacement of the Baggage Compartment weight limit decal and updating the weight and balance calculations of the aircraft.

All affected customers, with the Auxiliary Fuel Tank installed prior to this ASB, must contact Aeronautical Accessories Sales to order the updated decal. See the Contact Information section.

As a terminating action to this ASB, Aeronautical Accessories will include the updated decal in all 505 Auxiliary Fuel Tank Installation Kits.

APPROVAL: The engineering design aspects of this bulletin are FAA approved.

CONTACT INFORMATION: For any questions regarding this bulletin, please contact:

Aeronautical Accessories Technical Support or Aeronautical Accessories Sales
Telephone: (423) 538-5151 / 1-800-251-7094
Email: techsupport@aero-access.com or Sales@aero-access.com
Website: aero-access.com

MANPOWER: Approximately 0.5 man-hours are required to complete this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

WARRANTY: Warranty credit is a replacement decal.

MATERIAL:

Required Material:

The following material is required for the accomplishment of this bulletin and may be obtained through Aeronautical Accessories.

Part Number	Nomenclature	Qty (Note)
505-373-149	Decal	1 (1)

NOTE:
1. Required only if STC SR11253DS is installed before the release date of this ASB.

Consumable Material:

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

Part Number	Nomenclature	Qty (Note)	Reference *
2010-06640-00	Edge Sealer	8 OZ (1)	C-349
2100-06673-00	Isopropyl Alcohol	1 GAL (1,2)	C-385
Commercially Available	Cloth, Cleaning, Low-Lint	A/R	C-516

*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.
2. Toluene 2110-06227-00 (C-306) or Ethyl Alcohol (C-339) can be used as an alternate.

SPECIAL TOOLS: None required

WEIGHT AND BALANCE: The replacement of the decal itself does not affect the weight and balance. However; due to the revised weight and balance of the Auxiliary Fuel Tank Installation Kit, it is advisable to verify the aircraft is within the correct C of G limitations. Refer to the Accomplishment Instructions section.

ELECTRICAL LOAD DATA: Not affected.

REFERENCES:

AA-21016 Instructions for Continued Airworthiness
AA-21017 Rotorcraft Flight Manual Supplement
BHT-505-FM-1 or BHT-505-FM-2, Rotorcraft Flight Manual
BHT-505-MM, Maintenance Manual
BHT-505-MD-1 or BHT-505-MD-2, Manufacturer's Data
BHT-ALL-SPM, Standard Practices Manual Chapter 8, Section 8-23

PUBLICATIONS AFFECTED:

AA-21016 Instructions for Continued Airworthiness
AA-21017 Rotorcraft Flight Manual Supplement

NOTE

Copies of AA-21016 and AA-21017 can be accessed on the Aeronautical Accessories website aero-access.com or by contacting Technical Support at techsupport@aero-access.com.

ACCOMPLISHMENT INSTRUCTIONS:

1. Prepare the helicopter for maintenance.
2. Remove existing 505-373-121 Decal from inside surface of Baggage Door.
3. Install 505-373-149 Decal (at same location as removed decal) per BHT-ALL-SPM Chapter 8, Section 8-23.
4. Verify and, if needed, correct the aircraft weight and balance calculations using the updated weight and balance information found in AA-21016, Instructions for Continued Airworthiness for Auxiliary Fuel System Kit, Revision B or later approved version.

NOTE

If unsure of the weight and balance calculations or ballast requirements, it is recommended to re-weigh the helicopter per Maintenance Manual.

5. Using the revised weight and balance calculations, check the flight envelope Center of Gravity (C of G) limitations per BHT-505-FM-1 or BHT-505-FM-2 to ensure weight and balance calculations are within acceptable C of G envelope limits.
6. If required, adjust the helicopter ballast to have the weight and balance to be within the empty weight and flight envelope C of G limitations per BHT-505-MM, Chapter 8.
7. If required, adjust weight and balance planning information in the G1000H or G1000H NXi display units as applicable per BHT-505-FM-1 or BHT-505-FM-2.
8. Remove and discard previous revision of AA-21017, Rotorcraft Flight Manual Supplement for Auxiliary Fuel System Kit, from the Rotorcraft Flight Manual.
9. Insert AA-21017, Rotorcraft Flight Manual Supplement for Auxiliary Fuel System Kit, Revision B or later approved version, into the Rotorcraft Flight Manual and inform flight crews of the change.
10. Make an entry in the helicopter logbook and historical service records indicating compliance with this Alert Service Bulletin.

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INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

for

Auxiliary Fuel System Kit
505–370–001

Bell Textron Canada Limited (BTCL) Model 505 Helicopters

Bell Textron Inc. STC No. SR11253DS

Report Number: AA–21016

Revision B

April 30, 2026

ECCN
9E991

PROPRIETARY RIGHTS NOTICE ON PAGE 2

PROPRIETARY RIGHTS NOTICE

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LOG OF REVISIONS

Revision	Date	Description	Page	Reviewed	Accepted
NR	10/18/2021	Original Release	All	B. Lafon	FAA AEG Accepted
A	4-20-2023	1.4: Added AC, ALT, AMP, ASSY, BHT, BIT, BRT, C°, Cont., DC, ELEC, F°, INC, kg, L/H, LTS, ml, MM, N/A, oz., PBA, PNL LT, PWR, R/H, SPM, SRM,US, VDC	9-10	B. Lafon	AED Concurrence
		2.0: Revised; added last paragraph	11		
		2.2: Revised; added last paragraph	11		
		2.3 – 2.5: Revised	12-14		
		3.1: Revised	16		
		3.3: Revised	16		
		5.0: Added last 2 bullets; Renamed Heading	17		
		6.0: Added last 2 paragraph	18		
		8.0 & 9.0: Added 2nd Warning; moved Note to after Caution	20, 21		
		11.0: Added Auxiliary Fuel System Capacities Summary	22		
		Table 2:			
		Deleted 505-373-123 Decal, Fuel	——		
		Added 505-373-139 Decal, Soft Goods	24		
		Added 505-373-141 Decal, Transfer	24		
		Added 505-373-143 Decal, Fuel	24		
		Added 505-373-145 Decal, Fuel Capacity	25		
		Added 505-373-147 Decal, Fuel Additive	25		
		Added 130-038-10 Tubing, 90" Length	25		
		Added 80-011-P10C0-0 Plug	25		
		Added 80-011-S10F08-0 Sleeve	25		
		Added AFP3087W0808-115 Fitting	25		
		Added CB9151V5 Support	26		
		Added CB9302V3 Support	26		
		Deleted CR3213-4-03 Rivet	——		
		Added MS20470AD3-4 Rivet	26		
		Added MS24694-S60 Screw	26		
		Increased qty of MS3367-1-9 Tie Wrap	26		
		Added MS35338-43 Lock Washer	26		
		Added MS35650-302 Nut	27		
		Added NAS1149D0316H Washer	27		
		Added NAS1801-3-12 Screw	27		
		Increased qty of NAS9926-3L Nut	27		
		Increased qty of PLB3S-C0 Tie Wrap	27		

Revision	Date	Description	Page	Reviewed	Accepted
A cont.		Table 4:			
		Deleted MS24658-21A Switch, Toggle	——		
		Added MS24658-23 Switch, Toggle	28		
		Deleted D38999/20WA35SN Connector	——		
		Added D38999/24WA35SN Connector	28		
		Added alternate to JAN1N5620 Diode	29		
		Added M81714/65-16-1 Splice & alt.	29		
		Deleted KTKSAD2022M150X2 Connector Kit	——		
		Deleted MS24523-23 Switch, Toggle	——		
		Added MS24524-23D Switch, Toggle	29		
		Added D38999/24WD19PN Connector	29		
		Added Figure numbers & titles	34-42		
B	4-30-2026	Added STC Number at placeholders	1,8		FAA AED ACCEPTED
		1.5: Added Reference Documents	10		
		2.2: Revised Figure 1	12		
		4.0: Added Sections 4.1 & 4.2	17-18		
		8.0: Revised Section and Added Sections 8.1 & 8.2	21-22		
		9.0: Revised Section and Added Sections 9.1 & 9.2	23-24		
		11.0: Revised Weight and Balance Information, added Note, and added Section 11.1	25-26		
		12.0: Updated Tables 2 & 4 per latest design updates	28-34		
		Appendix B: Revised Figure 9	44		

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1.0 INTRODUCTION

These instructions contain the information necessary for inspection and maintenance of Aeronautical Accessories Auxiliary Fuel System Kit installed on Bell Textron Canada Limited (BTCL) model 505 helicopters in accordance with Bell Textron Inc. STC No. SR11253DS.

1.1 DISTRIBUTION

These instructions are provided with each Kit. All changes will be made available to any person required to comply with any of these instructions.

The latest approved revision of this document can be accessed on the Aeronautical Accessories website or by contacting Technical Support (refer to Contact Information below).

1.2 LOG OF REVISIONS

A Log of Revisions section is included in these instructions and is used to document all changes. When revisions are required, the entire document is updated and re-released. All pages are at the revision level annotated in the Log of Revisions.

Change recommendations should be submitted to:
Aeronautical Accessories Technical Support at the address below.

1.3 CONTACT INFORMATION

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1.4 ABBREVIATIONS AND ACRONYMS

AA	Aeronautical Accessories
AC	Advisory Circular
ALT	Alternate
AMP	Ampere
ASSY	Assembly
AUX	Auxiliary
AV	Availability [Code]
BHT	Bell Helicopter Textron
BIT	Built-in Test
BRT	Bright
BTCL	Bell Textron Canada Limited
BTI	Bell Textron Inc.
C°	Celsius
Cont.	Continued
DC	Direct Current
ELEC	Electrical
F°	Fahrenheit
FAA	Federal Aviation Administration
FFL	Flammable Fluid Leakage
in	Inches
INC.	Incorporated
kg	Kilograms
L/H	Left Hand
lbs.	Pounds
LT	Light
LTS	Lights
ml	Milliliters
mm	Millimeters
MM	Maintenance Manual
N/A	Not Applicable
No.	Number
NR	No Revision (initial release)
oz.	Ounces
PBA	Pushbutton Actuator
PNL LT	Panel Light

PSE Product Support Engineering
PWR Power
Qty. Quantity
R/H Right Hand
REF Reference
SPM Standard Practices Manual
SRM Structural Repair Manual
STC Supplemental Type Certificate
US United States
USG United States Gallons
VDC Voltage Direct Current
XFER Transfer

1.5 BELL REFERENCE DOCUMENTS

Refer to the latest approved revision of the following documents when applicable:

Document Title	Document Number
505 Maintenance Manual	BHT–505–MM
Structural Repair Manual	BHT–ALL–SRM
Standard Practices Manual	BHT–ALL–SPM
Electrical Standard Practices Manual	BHT–ELEC–SPM
Corrosion Control Guide	CSSD–PSE–87–001
Garmin G1000H Pilot's Guide for the Bell 505 Jet Ranger X -or- Garmin G1000H NXi Pilot's Guide for the Bell 505 Jet Ranger X	190-02064-00 190-02497-01

2.0 DESCRIPTION AND OPERATION

The Aeronautical Accessories Auxiliary Fuel System Kit provides the option for additional flight time with an increased fuel capacity.

The kit consists of an auxiliary fuel tank, auxiliary fuel pump, auxiliary fuel lighting control, and auxiliary fuel system control panel.

Installation of the auxiliary fuel tank assembly in the baggage compartment makes the baggage compartment a flammable fluid leakage (FFL) zone.

2.1 AUXILIARY FUEL TANK ASSEMBLY

The removable auxiliary fuel tank assembly is located in the baggage compartment. Usable fuel capacity of the auxiliary fuel tank assembly is approximately 20 US gallons. The rotorcraft can be operated with the auxiliary fuel tank assembly installed or removed based on operator preference.

2.2 AUXILIARY FUEL CONTROL PANEL

(Refer to Figure 1)

The auxiliary fuel control panel is located in the cockpit. It includes an ON-OFF switch, pushbutton annunciator, fuel quantity indicator, and circuit breaker. The flight crew controls operation of the auxiliary fuel transfer pump using the ON-OFF switch. The ON-OFF switch does not control electrical power to the auxiliary fuel quantity indicating system; the auxiliary fuel quantity indicating system is powered directly from the AUX FUEL POWER circuit breaker.

The pushbutton annunciator contains two illuminated segments: the green segment illuminates to indicate the auxiliary fuel transfer pump is powered ON, at which point the auxiliary fuel transfer pump transfers fuel from the auxiliary fuel tank to the main fuel tank; and the amber segment illuminates to indicate the auxiliary fuel transfer pump is powered ON but low auxiliary transfer fuel pressure is detected by the auxiliary fuel pressure switch. When low auxiliary fuel transfer pressure is detected, the auxiliary fuel system is to be powered OFF by the flight crew. The PUSH TO TEST function tests the illumination of the annunciator segments as well as initiates the built-in test function of the indicator.

The auxiliary fuel quantity indicator displays the quantity of useable fuel in the auxiliary fuel tank. Electrical power is supplied to the auxiliary fuel quantity indicator via the circuit breaker located in the auxiliary fuel control panel, independent of the auxiliary fuel control ON-OFF switch. The auxiliary fuel quantity is indicated to the flight crew by a traditional dial gauge and digital numeric readout on the auxiliary fuel quantity indicator based on the fuel level signal from the auxiliary fuel probe / low-level sensor. A separate low fuel level signal from the auxiliary fuel probe / low-level sensor triggers deactivation of the auxiliary fuel transfer pump. Automatic deactivation of the auxiliary fuel transfer pump reduces pilot workload and ensures the auxiliary fuel transfer pump does not run dry. Turning the auxiliary fuel transfer pump switch OFF, turns off both annunciators and the auxiliary fuel transfer pump.

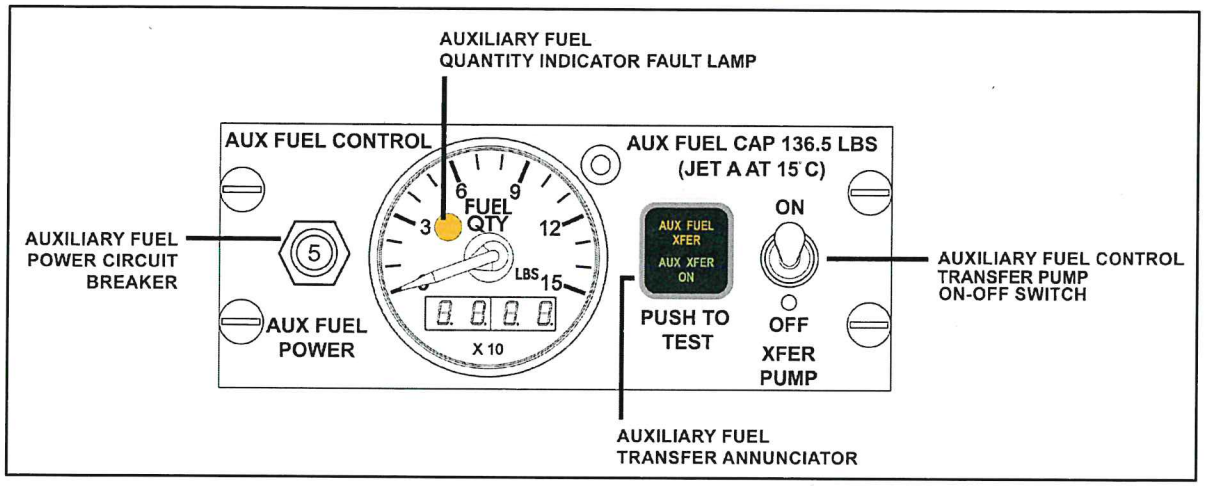


Figure 1. Auxiliary Fuel Control Panel

Auxiliary Fuel Lighting

Auxiliary fuel system component lighting is controlled with the AUX FUEL BRT-DIM toggle switch. With the AUX FUEL BRT-DIM toggle switch in the BRT position, the auxiliary fuel quantity indicator backlight is off, the auxiliary fuel quantity digital display is full bright, and both the AUX FUEL XFER and AUX XFER ON annunciators are full bright. With the AUX FUEL BRT-DIM toggle switch in the DIM position, the auxiliary fuel quantity indicator backlight is on, the auxiliary fuel quantity digital display is dimmed, and both the AUX FUEL XFER and AUX XFER ON annunciators are dimmed. The PNL LT rheostat controls the level of dimming for auxiliary fuel system components when the AUX FUEL BRT-DIM toggle switch is in the DIM position. Full bright lighting level for auxiliary fuel system components cannot be achieved with the AUX FUEL BRT-DIM toggle switch in the DIM position, regardless of PNL LT rheostat position.

2.3 AUXILIARY FUEL TRANSFER

The auxiliary fuel transfer pump is located in the transmission bay next to the existing rotorcraft fuel pump. Electrical power is supplied to the auxiliary fuel transfer pump when the auxiliary fuel transfer pump switch is turned ON by the flight crew, using the auxiliary fuel system control panel located in the cockpit, in accordance with the rotorcraft flight manual supplement procedures. Once the fuel in the auxiliary fuel tank has been transferred to the rotorcraft's main fuel tank, the auxiliary fuel probe/ low-level sensor detects the low auxiliary fuel level and triggers deactivation of the auxiliary fuel transfer pump. Loss of transfer fuel pressure during auxiliary fuel transfer due to a component failure is detected by the auxiliary fuel pressure switch, leading to illumination of the amber caution segment of the auxiliary fuel transfer system annunciator in the auxiliary fuel system control panel.

2.4 NORMAL OPERATION

AUX FUEL POWER Circuit Breaker	XFER PUMP Switch	Auxiliary Fuel Quantity Indicator	Amber AUX FUEL XFER Annunciator	Green AUX XFER ON Annunciator	Description
Open	OFF	Off	Extinguished	Extinguished	Auxiliary fuel quantity indicating system off. Auxiliary fuel transfer pump off.
Closed	OFF	Indicating auxiliary fuel quantity	Extinguished	Extinguished	Auxiliary fuel quantity indicating system on. Auxiliary fuel transfer pump off.
Closed	ON	Indicating auxiliary fuel quantity	Extinguished	AUX XFER ON	Auxiliary fuel quantity indicating system on. Auxiliary fuel transfer pump on. Auxiliary fuel transfer in progress.
Closed	ON	Indicating low auxiliary fuel quantity	Extinguished	Extinguished	Auxiliary fuel quantity indicating system on. Auxiliary fuel transfer pump off. Auxiliary fuel transfer complete.
Closed	OFF	Indicating low auxiliary fuel quantity	Extinguished	Extinguished	Auxiliary fuel quantity indicating system on. Auxiliary fuel transfer pump off.

CAUTION

Do not operate auxiliary fuel transfer pump under run dry conditions. Run dry operation of the auxiliary fuel transfer pump will lead to pump seizure or fuel leakage.

2.5 CAUTION AND ADVISORY LIGHTS

Indication	Condition	Action
Auxiliary Fuel Quantity Indicator – Amber Fault Indication Lamp	Auxiliary fuel quantity indicating system on. Invalid fuel quantity signal from auxiliary fuel probe / low-level sensor. Auxiliary fuel quantity indication unreliable. Auxiliary fuel transfer pump operation unreliable.	When sufficient volume is available in main fuel bladder, fuel from auxiliary fuel bladder may be transferred to main fuel bladder at the discretion of the flight crew, if auxiliary fuel transfer pump is operational (as indicated by green AUX XFER ON annunciatory). Monitor main fuel quantity indicator during fuel transfer. **NOTE** Rotorcraft fuel burn rate will determine whether main fuel quantity increases or decreases during auxiliary fuel transfer. Switch auxiliary fuel transfer pump OFF. Open AUX FUEL POWER circuit breaker. Auxiliar fuel quantity indicating system maintenance required.
Auxiliary Fuel Transfer Annunciator – Amber Segment AUX FUEL XFER	Auxiliary fuel quantity indicating system on. Auxiliary fuel transfer pump on. Low fuel pressure detected by auxiliary fuel pressure switch.	Switch auxiliary fuel transfer system OFF. Auxiliary fuel transfer system maintenance required.
Auxiliary Fuel Transfer Annunciator – Green Segment AUX XFER ON	Auxiliary fuel transfer pump on.	None.

2.6 AUXILIARY FUEL QUANTITY INDICATOR INITIATED BIT TEST

This test will confirm the proper operation of the Auxiliary Fuel Quantity Indicator during initiated BIT Test.

1. Turn rotorcraft electrical power ON.
2. Close AUX FUEL POWER circuit breaker on Auxiliary Fuel Control Panel.
3. Wait 10 seconds.
4. Press and hold Auxiliary Fuel Transfer Annunciator.
5. Confirm that the Auxiliary Fuel Quantity Indicator pointer smoothly returns to the zero position.
6. Confirm that the Auxiliary Fuel Quantity Indicator digital display illuminates the value "1.88.8" such that the fuel quantity invalid BIT indicates and the decimal point as per Figure 2 is illuminated.
7. Confirm that the amber fault lamp remains constantly illuminated.

2.7 AUXILIARY FUEL QUANTITY INDICATOR DISPLAY BIT INDICATORS

The Auxiliary Fuel Quantity Indicator digital display has four available decimal points. The first decimal point is used for Fuel Quantity Invalid. The third decimal point is used specifically as the numeric decimal point. The second and fourth decimal points are not used and are never illuminated.

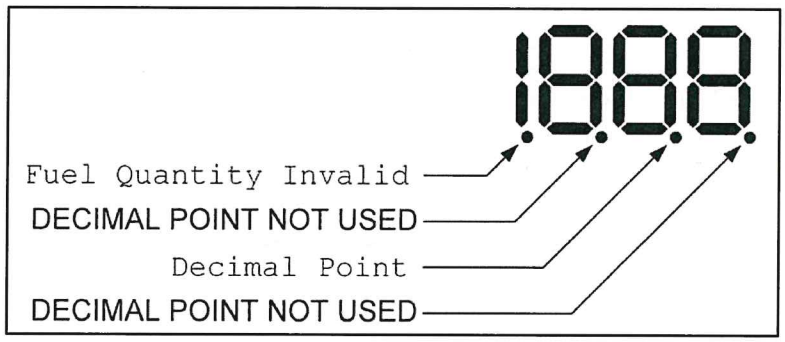


Figure 2. Auxiliary Fuel Quantity BIT Indicators

3.0 INSPECTIONS

3.1 PREFLIGHT CHECK

A Preflight Check of the Auxiliary Fuel System Kit is required. It is permissible to incorporate this check into an existing scheduled maintenance program.

1. Inspect the interior and exterior of the baggage compartment and the exterior of the fuselage beneath the auxiliary fuel tank assembly for indications of fuel leakage.
2. Inspect the auxiliary fuel tank sump drain for evidence of leaks. Drain as required to remove fuel contaminants (13.53 oz [400 ml] minimum).
3. Inspect the auxiliary fuel filler cap for condition; ensure it is closed and secured.
4. Inspect condition and security of auxiliary fuel tank attachment hardware.

3.2 ANNUAL INSPECTION

An Annual Inspection of the Auxiliary Fuel System Kit is required. An Inspection Record is located in Appendix A for convenience to document inspection completion. It is permissible to incorporate this inspection into an existing scheduled maintenance program.

1. Perform the Preflight Check.
2. Inspect the fuel lines, vent lines, and fittings for leakage, damage, and security.
3. Inspect the fuel cell for evidence of fungus. If fungus is present, clean and treat per instructions in Section 6.1.
4. Inspect the fuel pump and pressure switch for condition and security.
5. Inspect fuel pump hose fittings for signs of fuel leakage or internal pump damage.
6. Inspect electrical connections for corrosion, bent pins, and proper mating. Inspect wiring for frayed or broken insulation and circuit breakers for proper operation
7. Inspect the strainer located on Fuel Line in fuel cell for condition and security.
8. Inspect honeycomb panels per BHT-ALL-SRM.
9. Inspect decals for condition, security, and legibility.

3.3 SPECIAL AND CONDITIONAL INSPECTIONS

A special inspection is temporary or of a special time interval that is not consistent with the scheduled inspection.

A conditional inspection does not occur at a specific time. It is caused by known or suspected unusual events, such as suspected rotor strike, lightning strike, flight through hail, or hard landing.

In the event of a special or conditional inspection is required, perform an Annual Inspection.

4.0 GENERAL INSTRUCTIONS

- Disconnect battery before starting work on the aircraft.
- Remove components only to the extent necessary to perform the required task.
- Items removed from the helicopter should be tagged for identification and protected from damage until reinstalled.
- Save all hardware of removed parts for reinstallation, unless otherwise noted.

WARNING

OBEY ALL THE SAFETY PRECAUTIONS WHEN DOING MAINTENANCE ON OR NEAR ELECTRICAL / ELECTRONIC EQUIPMENT.

4.1 FUELING PROCEDURE

WARNING

DO NOT OVERFILL THE AUXILIARY FUEL TANK. FUEL SPILLS MAY CAUSE SKIN IRRITATION AND INCREASES FIRE RISK.

WARNING

DO NOT LEAVE THE FUEL NOZZLE UNATTENDED AT ANY TIME DURING FUELING OPERATIONS.

WARNING

ENSURE THAT THE FUEL SERVICE UNIT IS CORRECTLY CONNECTED TO AN APPROVED GROUND ROD DURING FUELING OPERATIONS. FUEL FUMES ARE VERY SENSITIVE TO IGNITION FROM STATIC ELECTRICITY.

CAUTION

Refer to the Bell 505 Flight Manual for approved fuel types.

1. Ground the fuel service unit to the Auxiliary Fuel Tank by clamping onto one of the bolt heads encircling the fuel filler cap.
2. Open the fuel filler cap of the Auxiliary Fuel Tank.
3. Place the hose nozzle of the fuel service unit in the fuel filler port.
4. Carefully fill the Auxiliary Fuel Tank with the necessary quantity of turbine fuel.
5. Remove hose nozzle from the fuel filler port.
6. Close the fuel filler cap of the Auxiliary Fuel Tank.
7. Disconnect the fuel service cart grounding.

4.2 DEFUELING PROCEDURE

WARNING

ENSURE THAT THE FUEL SERVICE UNIT IS CORRECTLY CONNECTED TO AN APPROVED GROUND ROD DURING FUELING OPERATIONS. FUEL FUMES ARE VERY SENSITIVE TO IGNITION FROM STATIC ELECTRICITY.

CAUTION

Be careful when moving the defueling hose in the Auxiliary Fuel Tank to prevent damage to the fuel tank walls or internal components.

1. Ground the fuel service unit to the Auxiliary Fuel Tank by clamping onto one of the bolt heads encircling the fuel filler cap.
2. Open the fuel filler cap of the Auxiliary Fuel Tank.
3. Place the defueling hose of the fuel service unit in the fuel filler port.
4. Carefully remove fuel from the Auxiliary Fuel Tank.
5. Remove defueling hose from the fuel filler port.
6. Close the fuel filler cap of the Auxiliary Fuel Tank.
7. Disconnect the fuel service cart grounding,
8. Drain the remaining fuel from the Auxiliary Fuel Tank as follows:
    a. Connect the hose of the Extraction Syringe to the Auxiliary Fuel Tank drain port located beside the filler cap.
    b. Pull the handle of the Extraction Syringe to collect the fuel.
    c. Disconnect the hose of the Extraction Syringe from the drain port.
    d. Place the drained fuel in a clean and grounded container.

5.0 FUEL SYSTEM SAFETY WARNINGS

- All fueling and defueling operations should be performed in an area where fire hazards are reduced to a minimum.
- Handle the fuel cell with extreme care during removal and installation to prevent damage.
- The helicopter must be electrically grounded prior to performing defueling or refueling operations.
- Auxiliary Tank must be defueled prior to removal.
- Remove fuel spills from rotorcraft and work area. Ventilate rotorcraft and work area to remove fuel vapor.
- Auxiliary fuel system fuel lines and return lines are electrically isolated between auxiliary fuel cell and main fuel cell. Do not electrically bond auxiliary fuel line coupler, auxiliary return line coupler, or auxiliary fuel pressure switch to airframe.

6.0 MAINTENANCE

Maintenance must be done by authorized personnel.

Replace damaged equipment.

Allow minimum 15 seconds after toggling auxiliary fuel transfer pump ON-OFF switch before toggling ON-OFF switch again.

Ingestion of foreign object debris can damage auxiliary fuel transfer pump rotor and/or disk, leading to decreased pump performance and/or increased electrical loads.

6.1 CLEANING

WARNING

IF HOT WATER IS USED TO CLEAN THE FUEL CELL, IT IS RECOMMENDED THAT THE TEMPERATURE IS LESS THAN 160°F (71°C). IF NOT, INJURY TO PERSONNEL CAN OCCUR.

CAUTION

Do not use soaps or strong detergents when you clean the fuel cell. Some strong detergents can cause damage to the fuel cell. Soaps can react with the fuel and become a compound that can cause a blockage of the fuel filters.

1. Drain Auxiliary Fuel Tank per Section 4.2.
2. Remove all the fungus from the fuel cell with your hands or with a soft brush and warm or hot water.
3. Clean the internal surfaces of the fuel cell with a clean cloth made moist with Ethyl alcohol.
4. Burn the clean cloth used to clean the fuel cell to destroy the fungus.
5. Apply turbine fuel on the internal surfaces of the fuel cell. This will prevent the fuel cell from aging if the fuel cell stays out of service for several weeks without fuel.

7.0 REPAIR

Repair must be done by authorized personnel. General repair practices shall be in accordance with advisory circular AC 43.13-1B, BHT-ALL-SRM, BHT–ELEC–SPM, and BHT–505–MM.

Table 1. Damage Limits

Component	Scratches/Nicks/ Dents/Corrosion	Cracks	Fraying
Aluminum/Steel (mounts, doublers, brackets, stiffeners, flanges, etc.)	Not to exceed 10% of local part thickness in depth after cleanup or affect more than 20% of the surface area.	None allowed	N/A
Wiring	N/A	None allowed	None allowed; repair or replace per BHT-ELEC-SPM and AC 43.13-1B, Ch. 11.
Honeycomb Panels	Refer to BHT-ALL-SRM for damage limits.	None allowed	N/A

Aluminum/Steel Components

(includes mounts, doublers, brackets, stiffeners, flanges, etc.)

NOTE

The indications of corrosion are 1) corrosion deposits (a white or gray powder on aluminum or rust colored deposits on steel), 2) pits in aluminum or steel surfaces, 3) blisters, bulging or flaking of protective coatings.

Remove scratches, nicks, and light corrosion as follows:

1. Lightly hand sand using 400 grit abrasive cloth or paper. Ensure the damage limits are not exceeded. Take care to remove as little of the component protective coatings as possible.
2. Remove sanding residue with a solution of mild detergent and water.
3. Rinse and dry.
4. Evaluate the surface. Ensure damage limits are not exceeded.
5. Hand polish the reworked area to a surface finish equal to or better than the original and blend the area into the surrounding surface.
6. After repair is complete, clean repaired area with isopropyl alcohol. For aluminum parts ONLY, apply chemical film per MIL–DTL–5541.
7. If necessary, touch up parts with primer per MIL-PRF-23377 and paint.

Wiring

Wiring may be repaired per BHT-ELEC-SPM and AC 43.13-1B, Chapter 11.

Honeycomb Panels

Refer to BHT-ALL-SRM for repair instructions.

8.0 REMOVAL

Refer to Appendix B for figures and diagrams.

WARNING

ALL DEFUELING OPERATIONS SHOULD BE PERFORMED IN AN AREA WHERE FIRE HAZARDS ARE REDUCED TO A MINIMUM.

WARNING

REMOVE FUEL SPILLS FROM ROTORCRAFT AND WORK AREA. VENTILATE ROTORCRAFT AND WORK AREA TO REMOVE FUEL VAPOR.

CAUTION

Handle fuel tank with care during removal to avoid damage. Close/cover all openings to prevent entry of foreign material.

NOTE

Items without removal instructions are considered permanent installations. If these items must be removed or replaced, contact Aeronautical Accessories Technical Support for instruction.

8.1 AUXILIARY FUEL TANK

1. Disconnect the battery and external DC power from the helicopter.
2. Defuel the Auxiliary Fuel System per Section 4.2.
3. Remove hardware securing Baggage Protector and Upper Angle Assembly.
4. Disconnect the fuel lines and electrical connector from the roof.
5. Obtain and install D38999/33W9R Dust Cap on electrical connector.
6. Remove attachment hardware securing Outer Fitting from Baggage Floor.
7. Remove the Quick Pin to disconnect tank from Wall Fitting.
8. Remove the tank.
9. Install contrasting color collars on auxiliary fuel system AUX FUEL circuit breaker and 5VDC LTS circuit breaker in aft circuit breaker panel and on AUX FUEL PWR circuit breaker on auxiliary fuel system control panel in cockpit.
10. Placard the auxiliary fuel system control panel in the cockpit INOPERATIVE in full view of the pilot when the rotorcraft is operated without the auxiliary fuel tank installed.

8.2 FUEL PUMP

1. Disconnect the battery and external DC power from the helicopter.
2. Disconnect the power and ground wires at the spliced connection.
3. Disconnect the Hose Assembly from the Pump inlet.
4. Disconnect the Fitting from the Pump Outlet.
5. Remove the hardware connecting the (2) Clamps from the Pump Plate.
6. Remove Pump.

9.0 INSTALLATION

Refer to Appendix B for figures and diagrams.

WARNING

ALL REFUELING OPERATIONS SHOULD BE PERFORMED IN AN AREA WHERE FIRE HAZARDS ARE REDUCED TO A MINIMUM.

WARNING

REMOVE FUEL SPILLS FROM ROTORCRAFT AND WORK AREA. VENTILATE ROTORCRAFT AND WORK AREA TO REMOVE FUEL VAPOR.

CAUTION

Handle fuel tank with care during installation to avoid damage. Close/cover all openings to prevent entry of foreign material.

NOTE

Items without installation instructions are considered permanent installations. If these items must be removed or replaced, contact Aeronautical Accessories Technical Support for instruction.

9.1 AUXILIARY FUEL TANK

1. Install the fuel tank.
2. Attach the Quick Pin.
3. Attach Outer Fitting to Baggage Floor.
4. Attach the fuel lines and electrical connector on the roof.
5. Attach Baggage Protector and Upper Angle Assembly.
6. Connect the battery.
7. Refuel the system per Section 4.1
8. Perform Preflight Check.
9. Perform the following operational check:
    a. Install the ground power unit.
    b. Ensure circuit breakers are closed.
    c. Conduct built-in test on annunciator.
    d. Verify correct reading of fuel indicator.
    e. Switch fuel pump to “ON” position.
    f. Verify fuel is transferring from aux tank to main fuel cell on fuel indicator.
    g. Switch fuel pump to “OFF” position.

h. Open filler cap and inspect fuel level in tank to ensure fuel has been transferred to main fuel cell.

10. Perform Preflight Check again.

9.2 FUEL PUMP

1. Install Pump to Pump Plate using (2) Clamps and associated hardware.
2. Attach Fitting to Pump outlet and Hose Assembly to Pump inlet.

NOTE

Install MS29512-08 Packing on the Pump sides with a thin film of MIL-PRF-23699 Turbine Engine Oil.

3. Cut existing Pump connector from Power and Ground leads and connect to existing wiring using Splice connections per Figure 9.
4. Perform the following operation check:
   a. Install the ground power unit.
   b. Ensure circuit breakers are closed.
   c. Conduct built-in test on annunciator.
   d. Verify correct reading of fuel indicator.
   e. Switch fuel pump to “ON” position.
   f. Verify fuel is transferring from aux tank to main fuel cell on fuel indicator.
   g. Switch fuel pump to “OFF” position.
   h. Open filler cap and inspect fuel level in tank to ensure fuel has been transferred to main fuel cell.

10.0 AIRWORTHINESS LIMITATIONS

"The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved."

No airworthiness limitations are associated with this type design change.

11.0 WEIGHT AND BALANCE

Kit	Weight	Station	Lateral Arm
Auxiliary Fuel Tank Installation Kit 505-370-001	64.0 lbs. (29.0 kg)	155.2 in. (3942 mm)	1.3 in. (33 mm)
Auxiliary Fuel Tank Installation Kit (with tank removed) 505-370-001	10.9 lbs. (4.9 kg)	140.2 in. (3561 mm)	–11.5 in. (–292 mm)

*Note: This is the delta weight effect of this kit. This includes weight and effect of the items removed when this kit is installed.

CAUTION

This is the additional weight of the Auxiliary Fuel Tank Kit components only and does not include any fuel that is added to the Auxiliary Fuel Tank. For reference, the Center of Gravity of a full tank of fuel (20 USG) is located at Station 160.3 in. and Lateral Arm 2.6 in.

NOTE

Due to variances in the manufacturing process, slight weight variations are possible. After the installation has been completed, the aircraft should be weighed in accordance with the applicable Maintenance Manual instructions and ballast adjusted as necessary to return the helicopter center of gravity to within allowable limits. If the aircraft is flown without the Auxiliary Fuel Tank removed, it is recommended to weigh the removed items for the most accurate weight and balance calculation.

Auxiliary Fuel System Capacities Summary

	Fuel Weight (lbs) Jet A Standard Density at 60°F (15.6°C)	Fuel Volume (USG)
Useable Fuel Capacity	136.48	20.07
Unusable Fuel Capacity	2.52	0.37
Total Fuel Capacity	138.99	20.44
Sump Fuel Capacity	1.77	0.26
Trapped Fuel Capacity	0.75	0.11

11.1 GARMIN G1000H WEIGHT AND BALANCE CONFIGURATION

To quickly aid in calculating the weight and balance of the aircraft with the desired Auxiliary Fuel Tank configuration, it is recommended to include the various configurations into the Garmin G1000H system's weight and balance configuration page as shown in Figure 3. The different configurations can be set to "YES" or "NO" to quickly update the payload information and calculate takeoff weight and center of gravity prior to each flight. Reference Garmin G1000H Pilot's Guide for the Bell 505 Jet Ranger X, Weight and Balance Planning section, for instructions on modifying the Weight and Balance Configuration chart.

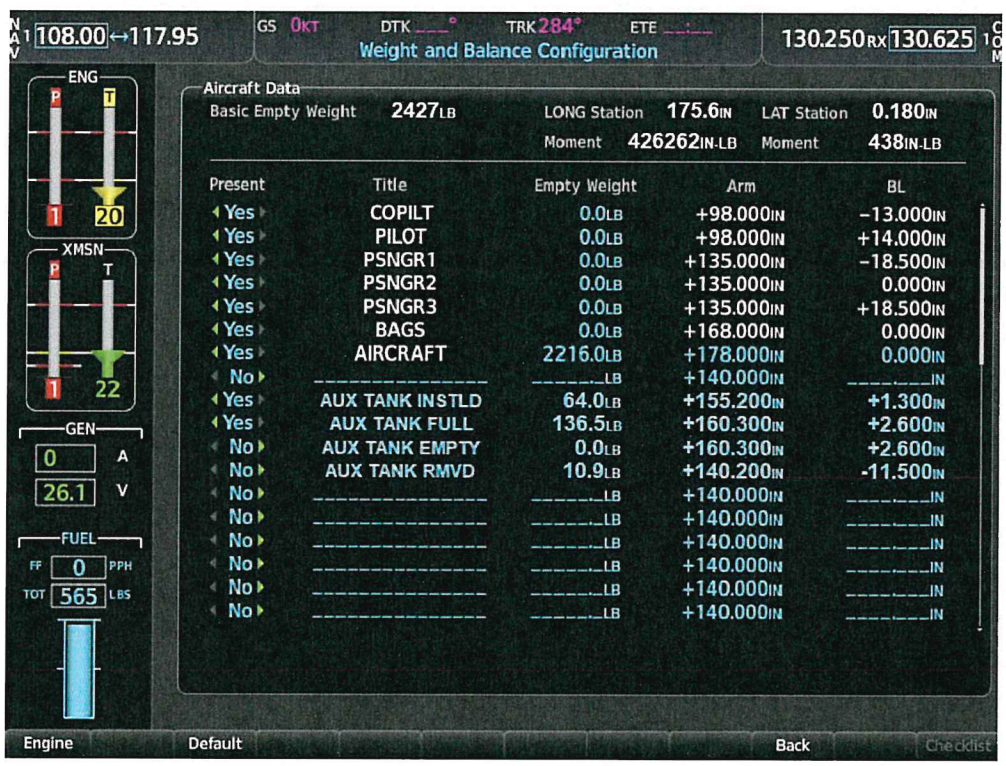


Figure 3. Garmin G1000H Weight and Configuration- Recommended Setup

12.0 PART BREAKDOWN

The following tables contain Part Breakdown data.

The column Availability Code (AV Code) specifies the procurement status for each part. The codes to identify if a part is procurable, procedure details to get an assembly or local manufacture code are as follows:

Av Code	Details
0	Non-procurable part
1	Procurable part
2	Procure as detail parts only
3	Procurable as Next Higher Assembly
4	Local manufacture. Contact AA Product Support Engineering (PSE)
5	Part replacement requires a fixture or special equipment. Contact AA PSE
6	Non-stock procurable part

Table 2. Auxiliary Fuel Tank Installation Kit 505-370-001

Qty.	Part Number	Description	AV Code
1	505-218-001	DZUS RAIL INSTALLATION KIT	1
1	505-371-101	AUX FUEL TANK ASSY	1
1	505-371-153	OUTER FITTING, CENTER	1
1	505-371-155	OUTER FITTING, R/H	1
1	505-371-157	WALL FITTING	1
1	505-371-161	PUMP MOUNT	1
2	505-371-163	PUMP BRACKET	1
1	505-371-165	DOUBLER	1
1	505-371-167	DOUBLER	1
1	505-371-169	ANGLE	1
1	505-371-171	PUMP PLATE	1
2	505-371-184	SHIM	1
1	505-371-219	CONTROL PANEL ASSY	1
1	505-371-221	BAGGAGE GUARD	1
1	505-371-309	UPPER ANGLE ASSY	1
1	505-373-127	DECAL, PBA	1
1	505-373-129	DECAL, DIM	1
1	505-373-131	DECAL, BRT	1
1	505-373-133	DECAL, AUX FUEL	1
1	505-373-135	DECAL, 5VDC LTS	1
1	505-373-139	DECAL, SOFT GOODS	1
1	505-373-141	DECAL, TRANSFER	1
1	505-373-143	DECAL, FUEL	1
1	505-373-145	DECAL, FUEL CAPACITY	1

Table 2. Auxiliary Fuel Tank Installation Kit 505-370-001

Qty.	Part Number	Description	AV Code
1	505-373-147	DECAL, FUEL ADDITIVE	1
1	505-373-149	DECAL, BAGGAGE WEIGHT	1
1	505-374-001	AUX FUEL ELECTRICAL INSTALLATION KIT	1
1	003261 202 59	SUPPORT (ALT: 160-027-478)	1
4	120-273-3-10	STANDOFF	1
1	130-038-10	TUBING, 90" LENGTH	1
6	160-027-554	SUPPORT (ALT: 003261 168 59)	1
1	30-058-1	CLAMP (ALT: MS28042-1A)	1
4	31-032-28A	TAPE (FLOW)	1
3	31-032-29A	TAPE (VENT)	1
1	31-032-30A	TAPE (DRAIN)	1
4	31-033-1A	TAPE (FUEL)	1
1	375001-06	COUPLER	1
1	375001-08	COUPLER	1
8	80-005-2B8	INSERT	1
7	80-011-P10C0-0	PLUG	1
7	80-011-S10F08-0	SLEEVE	1
1	AE1011342H0560	HOSE ASSY	1
1	AE1011343G0520	HOSE ASSY	1
1	AE3956G0130-180	HOSE ASSY	1
1	AE3956H0090-180	HOSE ASSY	1
1	AE5280H0380-090	HOSE ASSY	1
1	AFP3087W0808-115	FITTING	1
5	AN3-4A	BOLT	1

Table 2. Auxiliary Fuel Tank Installation Kit 505-370-001

Qty.	Part Number	Description	AV Code
5	AN3-6A	BOLT	1
1	AS4406W0808	FITTING	1
1	AS4411W080804	FITTING	1
2	AS5178W06	NUT	1
2	AS5178W08	NUT	1
1	AS5406W06	FITTING	1
1	AS5406W08	FITTING	1
1	CB9151V5	SUPPORT	1
2	CB9302V3	SUPPORT	1
4	CR3212-4-03	RIVET	1
12	CR3213-4-02	RIVET	1
4	CR3213-4-04	RIVET	1
1	CR3213-4-05	RIVET	1
20	CR3213-5-02	RIVET	1
1	MS17984C607	QUICK PIN	1
14	MS20426AD3-4	RIVET	1
8	MS20470AD3-4	RIVET	1
4	MS21042L06	NUT	1
2	MS24487-8	FITTING	1
7	MS24694-S60	SCREW	1
7	MS27039-0806	SCREW	1
4	MS27039-0807	SCREW	1
2	MS27039-1-41	SCREW	1
1	MS29512-06	PACKING	1

Table 2. Auxiliary Fuel Tank Installation Kit 505-370-001

Qty.	Part Number	Description	AV Code
3	MS29512-08	PACKING	1
7	MS3367-1-9	TIE WRAP	1
1	MS3367-2-9	TIE WRAP	1
2	MS35190-237	SCREW	1
2	MS35338-43	LOCK WASHER	1
1	MS35650-302	NUT	1
4	MS90354S0505	RIVET	1
4	MS90354S0506	RIVET	1
4	NAS1149DN632J	WASHER	1
11	NAS1149DN816K	WASHER	1
4	NAS1149D0316H	WASHER	1
10	NAS1149D0316K	WASHER	1
6	NAS1149D0332J	WASHER	1
20	NAS1149D0332K	WASHER	1
2	NAS1149D0932K	WASHER	1
2	NAS1149D1232K	WASHER	1
7	NAS1474S08	NUTPLATE	1
2	NAS1716D40N	CLAMP	1
2	NAS1801-06-6	SCREW	1
2	NAS1801-3-7	SCREW	1
4	NAS1801-3-10	SCREW	1
1	NAS1801-3-12	SCREW	1
1	NAS43DD3-24FC	SPACER	1
2	NAS620-6L	WASHER	1

Table 2. Auxiliary Fuel Tank Installation Kit 505-370-001

Qty.	Part Number	Description	AV Code
3	NAS6603-2	BOLT	1
7	NAS6603-4	BOLT	1
1	NAS6603-9	BOLT	1
10	NAS9926-3L	NUT	1
11	PLB3S-C0	TIE WRAP	1

Table 3. Dzus Rail Installation Kit 505-218-001

Qty.	Part Number	Description	AV Code
1	505-219-101	FRONT PEDESTAL PANEL ASSEMBLY	1
1	505-219-105	PLATE ASSY	1
2	505-219-123	DZUS RAIL	1
1	505-219-125	DZUS BRACKET L/H	1
1	505-219-126	DZUS BRACKET R/H	1
6	MS20470AD5-5	RIVET	1
6	NAS1097AD4-4-5	RIVET	1
22	NAS1097AD4-5-5	RIVET	1

Table 4. Aux Fuel Electrical Installation Kit 505-374-001

Qty.	Part Number	Description	AV Code
3	MS26574-5	CIRCUIT BREAKER, 5 AMP	1
2	D38999/26WD19SN	CONNECTOR	1

Table 4. Aux Fuel Electrical Installation Kit 505-374-001

Qty.	Part Number	Description	AV Code
1	319H064XN15	BACKSHELL	1
1	M85049/69-15W	BACKSHELL	1
1	099-721-103	FUEL QUANTITY INDICATOR	1
1	MS24658-23D	SWITCH, TOGGLE	1
1	LED-EM-1M-KB2-SBTES	DEFINED LOGIC PBA	1
1	M81714/63-20F	GROUND BLOCK	1
1	D38999/24WA35SN	CONNECTOR	1
1	D38999/26WA35PN	CONNECTOR	1
1	D38999/26WA35SN	CONNECTOR	1
3	319H064XN09	BACKSHELL	1
1	M81714/16-2	MOUNTING RAIL	1
1	M81714/2-DB1	TERMINAL BLOCK	1
1	M81714/60-22-01	TERMINAL BLOCK	1
1	B07D912BC1-0359	RELAY	1
2	JAN1N5620	DIODE (ALT: JANTX1N5620)	1
1	099-721-105	PRESSURE SWITCH	1
1	18016-B8	TRANSFER PUMP	1
2	M81714/65-16-1	SPLICE (ALT: 130-065-16-1)	1
1	MS24524-23	SWITCH, TOGGLE	1
1	LT53	28VDC TO 5VDC CONVERTER	1
1	PT06A14-5S	CONNECTOR (ALT: MS3476W14-5S)	1
1	D38999/26WB98SN	CONNECTOR	1
1	319H064XN11	BACKSHELL	1
1	D38999/24WD19PN	CONNECTOR	1

Table 4. Aux Fuel Electrical Installation Kit 505-374-001			
Qty.	**Part Number**	**Description**	**AV Code**
1	M85049/52S14W	BACKSHELL	1
1	505-221-001	28 VDC LIGHTING MOD ELECTRICAL INSTALLATION	1

Table 5. 28VDC Lighting Mod Electrical Installation 505-221-001			
Qty.	**Part Number**	**Description**	**AV Code**
1	M81714/67-02	TERMINAL RAIL	1
1	M81714/60-22-01	TERMINAL MODULE	1
20	M39029/22-191	CONTACT	1
2	MS27039-1-07	SCREW	1
2	NAS1149D0332J	WASHER	1
2	NAS9926-3L	NUT	1

APPENDIX A: INSPECTION RECORD

ANNUAL INSPECTION RECORD

Work order number: _____ **Serial number:** _____

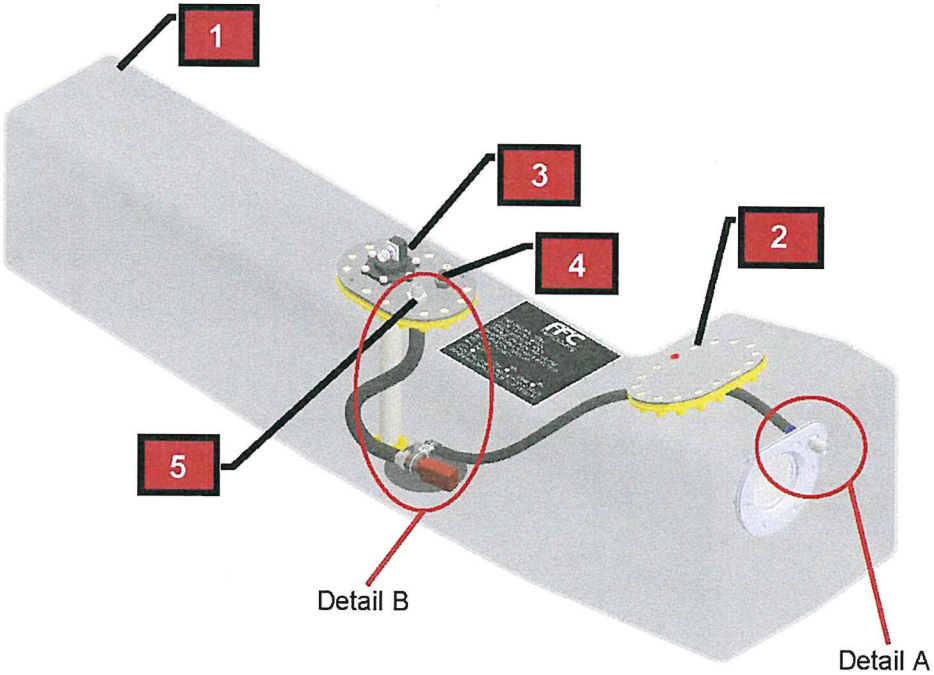
Total time: _____ **Date:** _____

1. Inspect the interior and exterior of the baggage compartment and the exterior of the fuselage beneath the auxiliary fuel tank assembly for indications of fuel leakage. _____
2. Inspect the auxiliary fuel tank sump drain for evidence of leaks. Drain as required to remove fuel contaminants (13.53 oz [400 ml] minimum). _____
3. Inspect the auxiliary fuel filler cap for condition; ensure it is closed and secured. _____
4. Inspect condition and security of auxiliary fuel tank attachment hardware. _____
5. Inspect the fuel lines, vent lines, and fittings for leakage, damage, and security. _____
6. Inspect the fuel cell for evidence of fungus. If fungus is present, clean and treat per instructions in Section 6.1. _____
7. Inspect the fuel pump and pressure switch for condition and security. _____
8. Inspect fuel pump hose fittings for signs of fuel leakage or internal pump damage. _____
9. Inspect electrical connections for corrosion, bent pins, and proper mating. Inspect wiring for frayed or broken insulation and circuit breakers for proper operation _____
10. Inspect the strainer located on Fuel Line in fuel cell for condition and security. _____
11. Inspect honeycomb panels per BHT-ALL-SRM. _____
12. Inspect decals for condition, security, and legibility. _____

Signature: _____ **Signature:** _____

APPENDIX B:
INSTALLATION FIGURES AND WIRING DIAGRAMS

1. 099-720-101 Fuel Cell
2. 505-371-173 Access Plate, Canted
   MS29513-255 O-Ring
   (16) MS24694-S98 Screws
3. 505-371-303 Access Plate, Mid Assy
   MS29513-255 O-Ring
   (12) MS24694-S98 Screws
4. AS5406W06 Fitting (Vent)
   MS29512-06 Packing
   NAS1149D0932K Washer
   AS5178W06 Nut
5. AS5406W08 Fitting (Fuel Feed)
   MS29512-08 Packing
   NAS1149D1232K Washer
   AS5178W08 Nut



Aux Fuel Tank Assembly- Internal Components
(Shell Assembly and external components not shown)

Figure 4-1. Auxiliary Tank Fuel Cell Assembly

1. D3100FMB04ALA01 Quick Disconnect Fitting
   NAS1149D0732K Washer
   MS29512-04 Packing
   AS5178W04 Nut
2. M6000-04 Drain Line
   231-4D Nipple
   290-4D Nut
   NAS1924-22 Hose Clamp
3. AN842-4D Fitting
4. M6000-08 Fuel Line
   231-8D Nipple
   290-8D Nut
   NAS1924-30 Hose Clamp
5. 505-371-225 Strainer Cap
   FT30231 Filter
   AS5183B0806 Fitting
   NAS1924-30 Hose Clamp
6. MS21919WDF15 Clamp
   MS21919WDF09 Clamp
   NAS1802-3-16 Bolt
   NAS1149D0316K Washer
   NAS43DD3-40N Spacer
7. 099-721-101 Fuel Quantity Probe
   AN3-5A Bolt (6)
   NAS1149D0363K Washer (6)

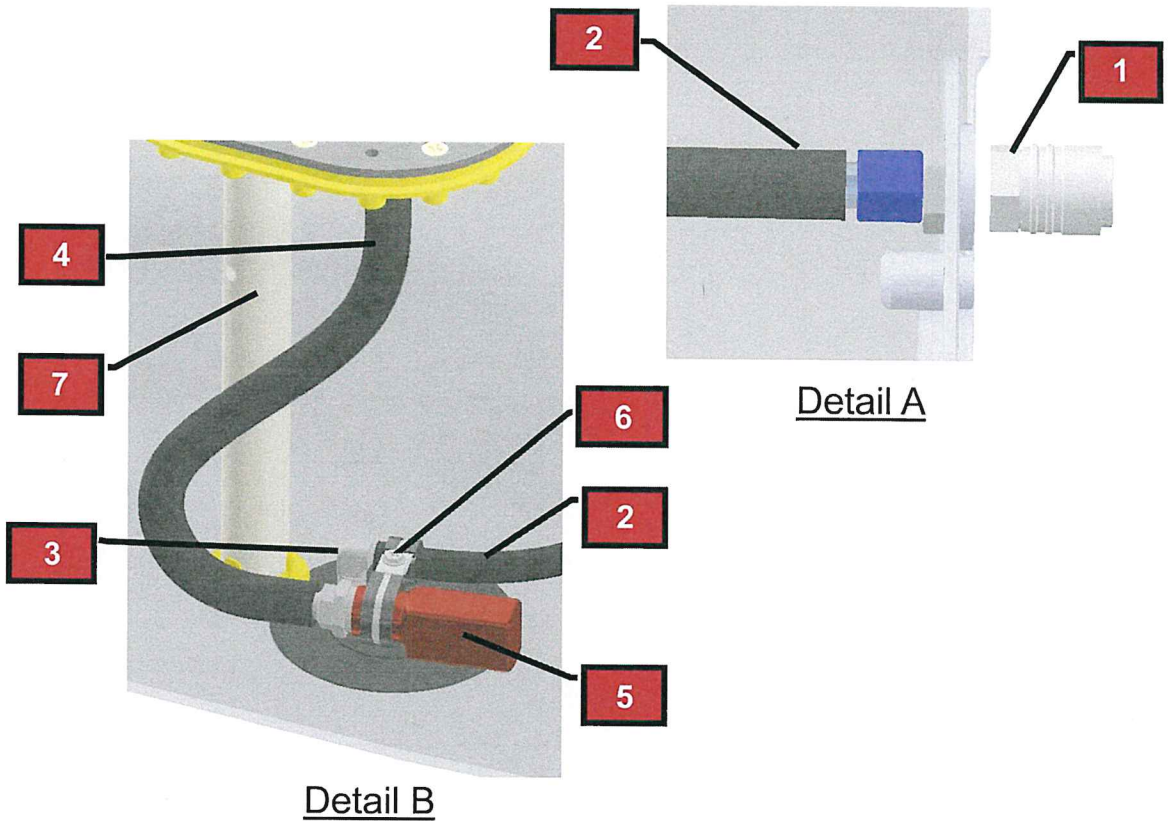


Figure 4-2. Auxiliary Tank Fuel Cell Assembly

1. 505-371-101 Aux Fuel Tank Assy
2. 505-371-153 Outer Fitting, Center
   AN3-6A Bolt
   NAS1149D0332K Washer } Tank Side
   AN3-4A Bolt
   NAS1149D0332K Washer } Floor Side
3. 505-371-155 Outer Fitting, RH
   NAS6603-4 Bolt
   NAS1149D0332K Washer } Tank Side
   NAS6603-2 Bolt
   NAS1149D0332K Washer } Floor Side
4. 505-371-157 Wall Fitting
   505-371-184 Shim
5. MS17984C607 Quick Pin
6. MS24694-S60 Screw
   80-011-P10C0-0 Plug
   80-011-S10F08-0 Sleeve

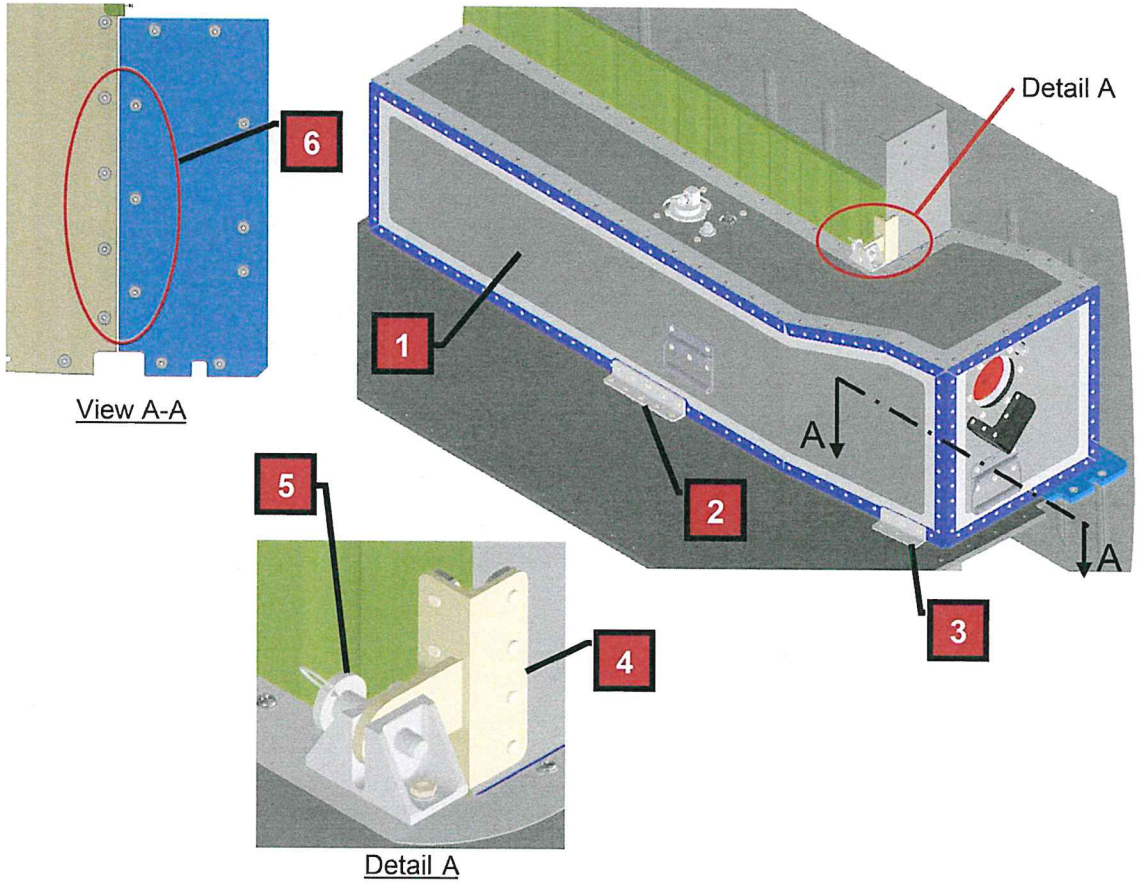


Figure 5. Auxiliary Fuel Tank

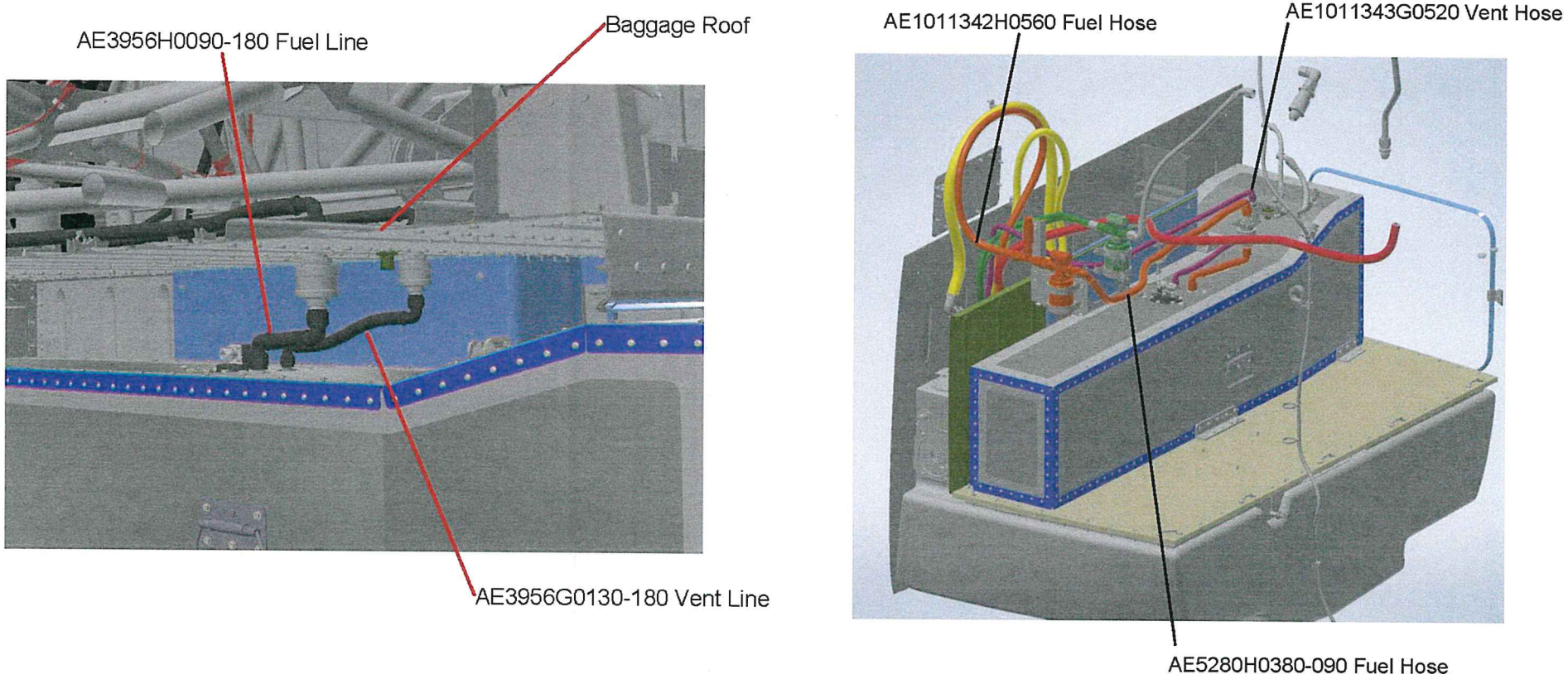


Figure 6. Fuel and Vent Hoses

- **505-371-221 Baggage Guard**
  Baggage Guard slides into place (AFT to FWD) and is retained by (4) screws into slots on sides and (4) screws into the Lower Angle Assy on AFT face

- **505-371-309 Upper Angle Assy**
  Attached using (7) MS27039-08 Screws into NAS1474S08 Nutplates on Baggage Roof

- **505-371-311 Lower Angle Assy**
  (4) MS21075L08 Nutplates for Baggage Guard attachment

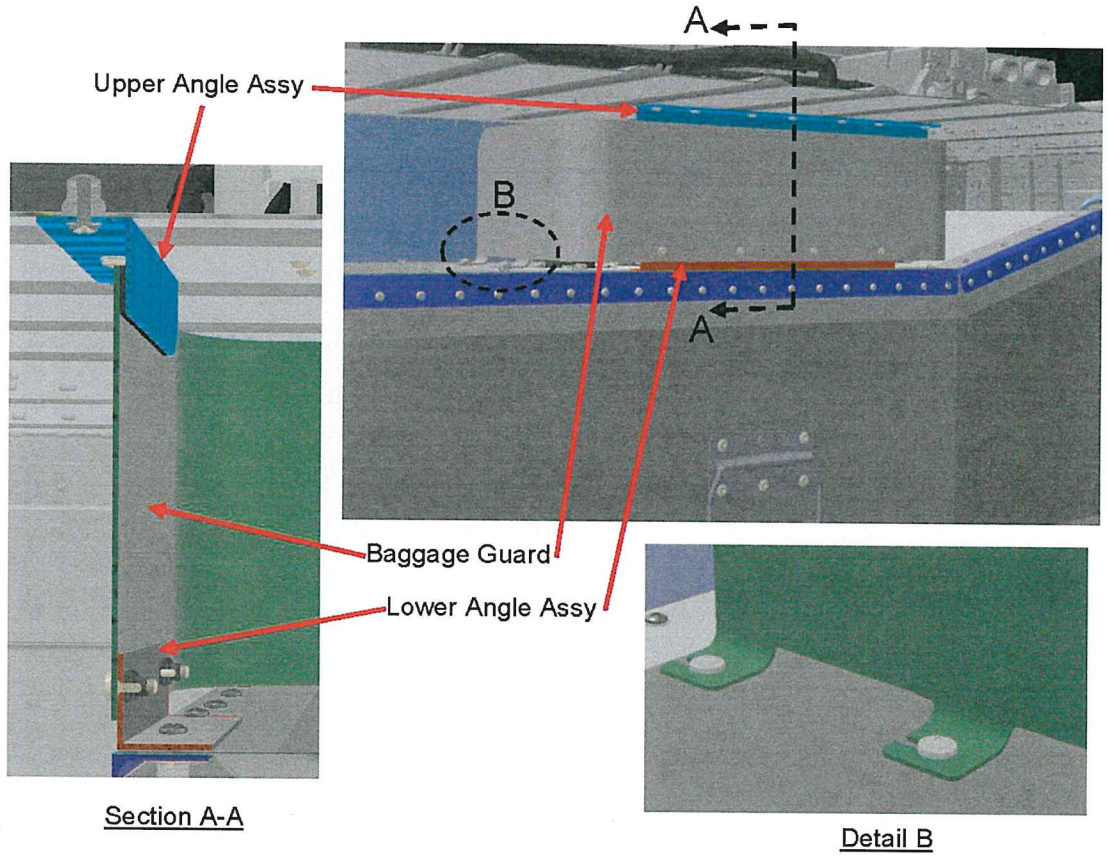


Figure 7. Baggage Area Cover

Basic Ship Fuel System:

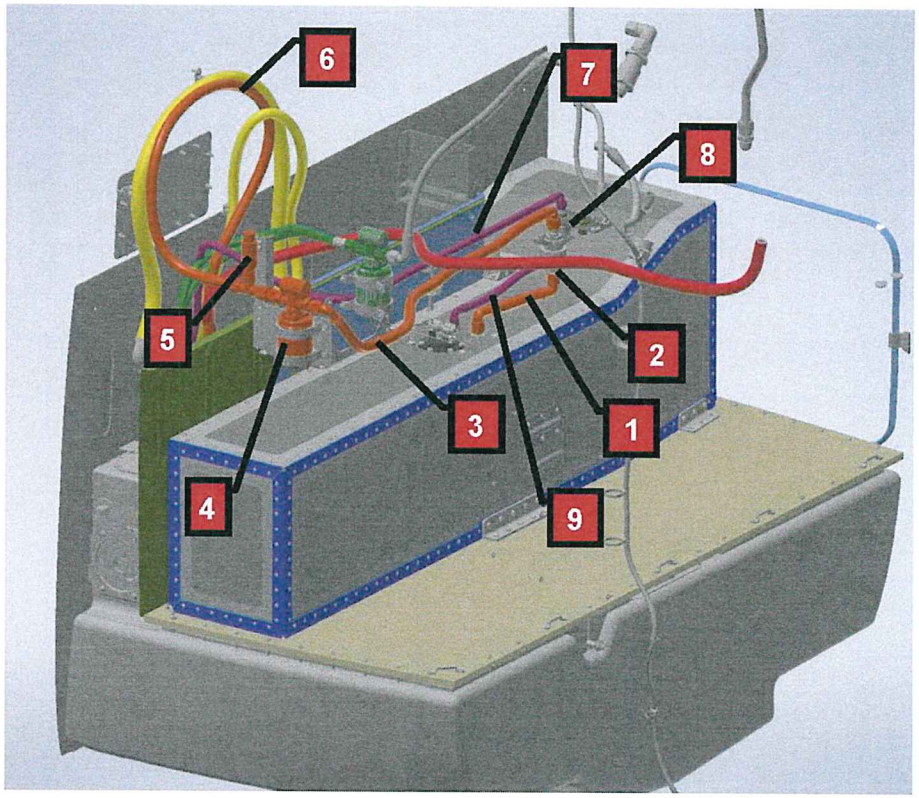
- 2 Vent Tubes (Ø.750 ID & Ø.375 ID): Yellow
- Fuel Line To Prime Pump: Green
- Fuel Return Line: Red

Aux Tank Fuel System:

- Fuel Line (Aux Tank to Main Tank): Orange
- Vent/ Return Line (Main Tank to Aux Tank): Purple

Components:

- (1) AE3956H0090-180 Hose
- (2) 375001-08 Coupler
- (3) AE5280H0380-090 Hose
- (4) 18016-B8 Pump
- (5) 099-721-105 Pressure Switch
- (6) AE1011342H0560 Hose
- (7) AE1011343G0520 Hose
- (8) 375001-06 Coupler
- (9) AE3956G0130-180 Hose



WARNING: AUXILIARY FUEL SYSTEM FUEL LINES AND RETURN LINES ARE ELECTRICALLY ISOLATED BETWEEN THE AUXILIARY FUEL CELL AND THE MAIN FUEL CELL. DO NOT ELECTRICALLY BOND COMPONENTS LISTED ABOVE TO AIRFRAME.

Figure 8. Auxiliary Fuel Tank Hose Routing

NOTES:

1. IDENTIFY KITS IN ACCORDANCE WITH AA PS 88-05005 TO REQUIREMENTS OF 14 CFR 45.15.
2. UNLESS OTHERWISE NOTED, ALL WIRE TO BE PER AS22759/41 OR AS22759 WIRE WITH HIGHER TEMPERATURE RATING, WITH SHIELDED WIRE ADDITIONALLY DEFINED PER WC 27500. WIRE PER DSCC-DWG-04041 & DSCC-DWG-04044, WITH SHIELDED WIRE ADDITIONALLY DEFINED PER DSCC-DWG-04049 ARE ALSO ACCEPTABLE. WIRING TO BE PROVIDED BY INSTALLATION FACILITY.
3. REFERENCE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION REQUIREMENTS AND NOTES.
4. RESERVED.
5. RESERVED.
6. REF BHT-ELEC-SPM CH 8, FIG 8-6 FOR TYPICAL GROUNDING STUD BUILDUP. TYPICAL HARDWARE: MS35207-266 SCREW, MS35338-43 LOCK WASHERS, NAS1149D0332J WASHERS, AN315-3R PLAIN NUT, MS21042L3 LOCKNUT.
7. ENSURE POWER GROUNDS ARE INSTALLED SEPARATE FROM SIGNAL AND SHIELD GROUNDS.
8. UNLESS OTHERWISE SPECIFIED, ALL GROUNDS ARE LOCALLY GROUNDED.
9. THIS INSTALLATION IS TO BE INSTALLED BY BHT APPROVED FACILITY.
10. SPLICE TO BE WITHIN 6 INCHES OF CONNECTOR. WIRES LESS THAN 6 INCHES IN LENGTH MAY BE MARKED AS "JMPR", BUT DO NOT NEED TO BE IDENTIFIED IN THE AIRCRAFT. UNLESS OTHERWISE NOTATED, USE THE SAME WIRE GAUGE FOR JUMPER WIRES AS THE SOURCE WIRE GAUGE.
11. SYMBOL ⊠ DENOTES PERMANENT SPLICE PER M81824.
12. SYMBOL ⊐ DENOTES END CAP USING M23053/5 HEAT SHRINK.
13. EXISTING WIRING AND COMPONENTS SHOWN AS: —·—·—·—
14. INSTALL SHIELD TERMINATION THAT COMPLIES WITH MIL-S-83519/1. IF SHIELD IS FLOATED, COVER WITH M23053/5 HEAT SHRINK TUBING.
15. INSTALL ALL DIODES AND RESISTORS AS DENOTED ON DRAWING. COVER ASSEMBLY WITH M23053/5-205-C CLEAR HEAT SHRINK TUBING.
16. FOLLOW GENERAL SHOP PRACTICES PER AC43.13 DURING INSTALLATION.
17. RESERVED.
18. RESERVED.
19. UNLESS OTHERWISE NOTED, EQUIPMENT BONDING REQUIREMENTS ARE LISTED ON COMPONENT INSTALLATION DRAWINGS OR MANUFACTURERS INSTALLATION INSTRUCTIONS.
20. LABEL NEWLY INSTALLED COMPONENTS AND HARNESSES FOR EASE OF IDENTIFICATION.
21. FOR CLARITY, UNUSED PINS IN CONNECTORS MAY BE OMITTED.
22. PRESSURE SWITCH CONTACT IS NORMALLY CLOSED, AND ACTUATES TO THE OPEN POSITION UPON PRESSURE INCREASE.
23. THIS KIT REQUIRES PRIOR OR CONCURRENT INSTALLATION OF 505-221-001 28VDC LIGHTING MODIFICATION KIT. FOR CONTINUATION OF LIGHTING BLOCKS, REFERENCE AA DRAWING 505-221, 28VDC LIGHTING MOD ELECTRICAL INSTALLATION.
24. INSTALL TERMINAL BLOCK MODULE IN POSITION 1B OF 28VDC LTS TB01, AND RE-LABEL TERMINAL RAIL TO READ "5VDC/28VDC LTS TB01."
25. ALL WIRE AND WIRE ROUTING IN ACCORDANCE WITH AC43.13-1B, CH 11, BHT-ELEC-SPM, AND COMPONENT MANUFACTURER RECOMMENDATIONS.
26. TRUTH TABLE LOGIC FOR DL2 SWITCH IS AS FOLLOWS:

A : 0 0 1 1	C : 0 0 1 1
B : 0 1 0 1	D : 0 1 0 1
Y : 0 1 1 1	Z : 1 1 0 1

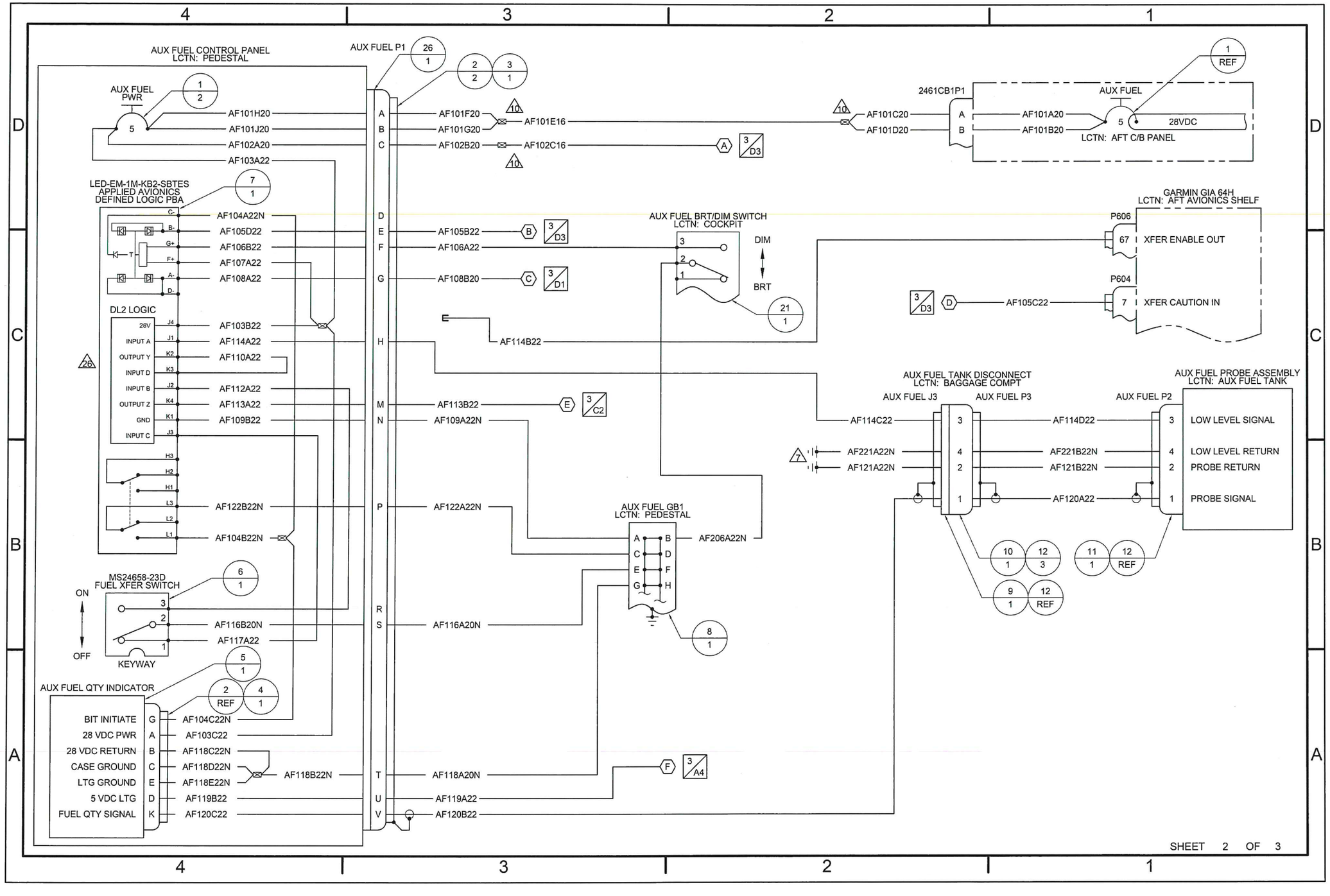
0 = GROUND
1 = OPEN

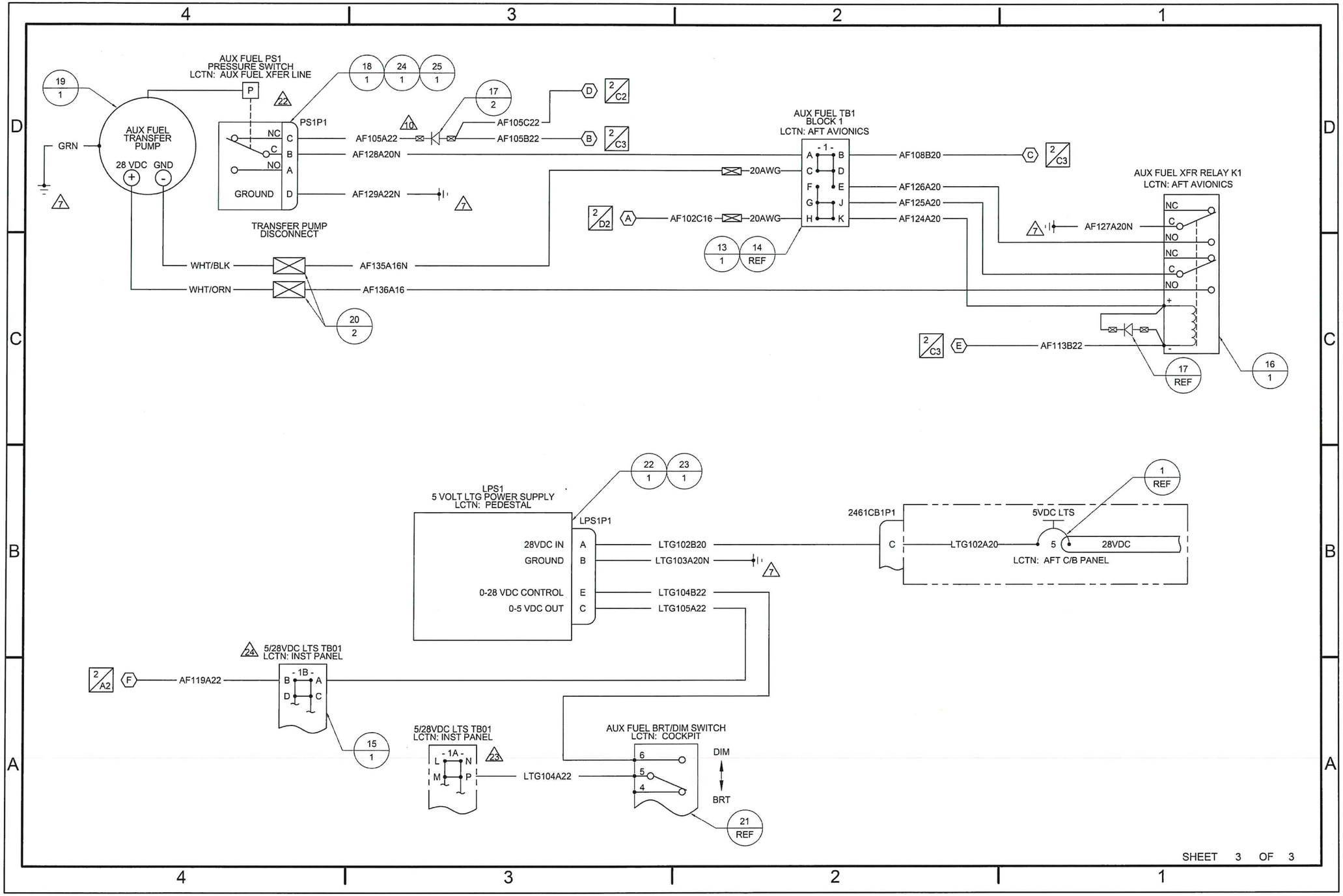
ITEM	PART NUMBER	DESCRIPTION
27	M85049/52S14W	BACKSHELL
26	D38999/24WD19PN	CONNECTOR
25	319H064XN11	BACKSHELL
24	D38999/26WB98SN	CONNECTOR
23	PT06A14-5S	CONNECTOR (ALT: MS3476W14-5S)
22	LT53	28VDC TO 5VDC CONVERTER
21	MS24524-23	SWITCH, TOGGLE
20	M81714/65-16-1	SPLICE (ALT: 130-065-16-1)
19	18016-B8	TRANSFER PUMP
18	099-721-105	PRESSURE SWITCH
17	JAN1N5620	DIODE (ALT: JANTX1N5620)
16	B07D912BC1-0359	RELAY
15	M81714/60-22-01	TERMINAL BLOCK
14	M81714/2-DB1	TERMINAL BLOCK
13	M81714/16-2	MOUNTING RAIL
12	319H064XN09	BACKSHELL
11	D38999/26WA35SN	CONNECTOR
10	D38999/26WA35PN	CONNECTOR
9	D38999/24WA35SN	CONNECTOR
8	M81714/63-20F	GROUND BLOCK
7	LED-EM-1M-KB2-SBTES	DEFINED LOGIC PBA
6	MS24658-23D	SWITCH, TOGGLE
5	099-721-103	FUEL QUANTITY INDICATOR
4	M85049/69-15W	BACKSHELL
3	319H064XN15	BACKSHELL
2	D38999/26WD19SN	CONNECTOR
1	MS26574-5	CIRCUIT BREAKER, 5 AMP

AUX FUEL KIT
ELECTRICAL DIAGRAM

SHEET 1 OF 3

Figure 9. Auxiliary Fuel Kit Electrical Diagram


AUX FUEL CONTROL PANEL
LCTN: PEDESTAL
AUX FUEL P1
AUX FUEL PWR
AF101H20
AF101J20
AF102A20
AF103A22
LED-EM-1M-KB2-SBTES
APPLIED AVIONICS
DEFINED LOGIC PBA
AF104A22N
AF105D22
AF106B22
AF107A22
AF108A22
DL2 LOGIC
AF103B22
AF114A22
AF110A22
AF112A22
AF113A22
AF109B22
AF122B22N
AF104B22N
MS24658-23D
FUEL XFER SWITCH
ON
OFF
KEYWAY
AF116B20N
AF117A22
AUX FUEL QTY INDICATOR
BIT INITIATE
28 VDC PWR
28 VDC RETURN
CASE GROUND
LTG GROUND
5 VDC LTG
FUEL QTY SIGNAL
AF104C22N
AF103C22
AF118C22N
AF118D22N
AF118E22N
AF119B22
AF120C22
AF118B22N
AF101F20
AF101G20
AF102B20
AF101E16
AF102C16
AF105B22
AF106A22
AF108B20
AF114B22
AF113B22
AF109A22N
AF122A22N
AF116A20N
AF118A20N
AF119A22
AF120B22
AUX FUEL BRT/DIM SWITCH
LCTN: COCKPIT
DIM
BRT
AUX FUEL GB1
LCTN: PEDESTAL
AF206A22N
2461CB1P1
AF101C20
AF101D20
AF101A20
AF101B20
AUX FUEL
28VDC
LCTN: AFT C/B PANEL
GARMIN GIA 64H
LCTN: AFT AVIONICS SHELF
P606
XFER ENABLE OUT
P604
XFER CAUTION IN
AF105C22
AUX FUEL TANK DISCONNECT
LCTN: BAGGAGE COMPT
AUX FUEL J3
AUX FUEL P3
AF114C22
AF114D22
AF221A22N
AF121A22N
AF221B22N
AF121B22N
AF120A22
AUX FUEL PROBE ASSEMBLY
LCTN: AUX FUEL TANK
AUX FUEL P2
LOW LEVEL SIGNAL
LOW LEVEL RETURN
PROBE RETURN
PROBE SIGNAL
SHEET 2 OF 3


AUX FUEL PS1
PRESSURE SWITCH
LCTN: AUX FUEL XFER LINE
AUX FUEL TRANSFER PUMP
28 VDC GND
GRN
PS1P1
NC
C
NO
GROUND
TRANSFER PUMP DISCONNECT
AF105A22
AF105C22
AF105B22
AF128A20N
AF129A22N
WHT/BLK
WHT/ORN
AF135A16N
AF136A16
AUX FUEL TB1
BLOCK 1
LCTN: AFT AVIONICS
20AWG
AF102C16
AF108B20
AF126A20
AF125A20
AF124A20
AF127A20N
AUX FUEL XFR RELAY K1
LCTN: AFT AVIONICS
AF113B22
LPS1
5 VOLT LTG POWER SUPPLY
LCTN: PEDESTAL
LPS1P1
28VDC IN
GROUND
0-28 VDC CONTROL
0-5 VDC OUT
LTG102B20
LTG103A20N
LTG104B22
LTG105A22
2461CB1P1
5VDC LTS
LTG102A20
28VDC
LCTN: AFT C/B PANEL
5/28VDC LTS TB01
LCTN: INST PANEL
AF119A22
5/28VDC LTS TB01
LCTN: INST PANEL
LTG104A22
AUX FUEL BRT/DIM SWITCH
LCTN: COCKPIT
DIM
BRT
SHEET 3 OF 3

Aeronautical
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ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

for

Auxiliary Fuel System Kit

Bell Textron Canada Limited Model 505 Helicopters

Report Number AA–21017

Revision B

REGISTRATION No.: _____

SERIAL No.: _____

Digitally signed by Eric W Nottorf
Date: 2026.08.27 06:47:20 -05'00'

ODA Lead administrator, ODA-710621-SW, for

Manager, Flight Test & Human Factors Branch, AIR-710
Federal Aviation Administration

August 27, 2026
Approved Date

THIS MANUAL SHALL BE IN THE HELICOPTER DURING ALL ROTORCRAFT OPERATIONS

This supplement shall be attached to the (applicable) BHT–505–FM when the Aeronautical Accessories Auxiliary Fuel System Kit is installed in accordance with Bell Textron Inc. STC SR11253DS.

The information contained herein supplements the information of the basic Rotorcraft Flight Manual. For Limitations, Procedures, and Performance Data not contained in this supplement, consult the basic Rotorcraft Flight Manual and applicable Rotorcraft Flight Manual Supplements.

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NR	John T. Bouma, ODA Lead administrator, ODA-710621-SW February 15, 2024	Initial Release	All
A	Eric W. Nottorf, ODA Lead administrator, ODA-710621-SW December 1, 2025	Identified pages as FAA Approved or Manufacturer's Data	All
B	Eric W. Nottorf, ODA Lead administrator, ODA-710621-SW August 27, 2026	Updated weight values in Section 1-5-D-2 and Figure 1-4.	7-8
		Revised Placard wording in Figure 1-4	9
		Added Step 5 in Section 2-4-B	11
		Revised Section 5 for latest Weight and Balance information	18
		Revised Placard wording in Figure 6-1	21

NOTE

All pages of the document are revised, but any content change from the previous revision is indicated by a black vertical line.

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GENERAL INFORMATION

ORGANIZATION

The Rotorcraft Flight Manual Supplement (RFMS) is divided into 6 sections as follows:

SECTION 1 — LIMITATIONS

SECTION 2 — NORMAL PROCEDURES

SECTION 3 — EMERGENCY AND MALFUNCTION PROCEDURES

SECTION 4 — PERFORMANCE

SECTION 5 — WEIGHT AND BALANCE

SECTION 6 — SYSTEM DESCRIPTION

Sections 1 through 4 contain data necessary to operate the helicopter in a safe and efficient manner.

Sections 5 and 6 contain Manufacturer's Data, including Weight and Balance and the Auxiliary Fuel System Kit description.

ABBREVIATIONS

AA	Aeronautical Accessories
AUX	Auxiliary
brt	Bright
BTCL	Bell Textron Canada Limited
BTI	Bell Textron Incorporated
˚C	Celsius
cg	Center of Gravity
˚F	Fahrenheit
FAA	Federal Aviation Administration
FMS	Flight Manual Supplement
ft.	Foot/feet
in.	Inch/inches
kg.	Kilograms
lb/lbs.	Pounds
lts	Lights
max	Maximum
ml.	Milliliters
mm.	Millimeters
N/A	Not Applicable
NR	No Revision (initial release)
ODA	Organization Designation Authorization
oz.	Ounces
PBA	Push Button Annunciator
PO	Post Office
Qty	Quantity
Rd	Road
RFMS	Rotorcraft Flight Manual Supplement
STC	Supplemental Type Certificate
TN	Tennessee
TX	Texas
USA	United States of America
US	United States
usg / us gal	United States Gallons
vdc	Volts Direct Current
XFER	Transfer

SECTION 1: LIMITATIONS

1-1. INTRODUCTION

Initiation of auxiliary fuel transfer with main fuel quantity greater than 400 lbs. is prohibited.

Intentional use of auxiliary fuel as low-level fuel reserve is prohibited.

1-5. CONFIGURATION

1-5-B. OPTIONAL EQUIPMENT

Operation of the rotorcraft with the auxiliary fuel tank assembly installed or removed is approved.

1-5-D-2. BAGGAGE COMPARTMENT

The maximum allowable baggage weight with the auxiliary fuel tank assembly installed is:

58 pounds with full fuel in the auxiliary fuel tank.

197 pounds with no fuel in the auxiliary fuel tank.

Baggage compartment cargo is limited to soft goods only with the auxiliary fuel tank assembly installed.

1-20. INSTRUMENT PLACARDS AND MARKINGS

IF AUX FUEL TANK IS INSTALLED,
ONLY SOFT GOODS ARE PERMISSIBLE IN
BAGGAGE COMPARTMENT

505-373-139 DECAL
LOCATION: BAGGAGE DOOR ASSEMBLY

IF AUX FUEL TANK IS INSTALLED:
JET FUEL ONLY
SEE FLIGHT MANUAL FOR
APPROVED FUELS
AUX TANK CAPACITY: 20.1 USG (76.0 L)

505-373-143 DECAL
LOCATION: BAGGAGE DOOR ASSEMBLY

MAX ALLOWABLE BAGGAGE FLOOR CAPACITY
WITH AUX FUEL TANK INSTALLED

NO FUEL IN AUX TANK: 197 LBS (89.4 KG)
FULL FUEL IN AUX TANK: 58 LBS (26.3 KG)

505-373-149 DECAL
LOCATION: BAGGAGE DOOR ASSEMBLY

FOR OPERATING TEMPERATURES BELOW
4 °C (39.2 °F) OAT, FUEL MUST CONTAIN
MIL-DTL-27686 OR MIL-DTL-85470 ADDITIVE.
CONCENTRATION TO BE .07% - .15% BY VOLUME

505-373-147 DECAL
LOCATION: BAGGAGE DOOR

Figure 1-4. Placards and Markings (Sheet 1 of 2)

DO NOT TRANSFER AUX FUEL IF MAIN TANK IS ABOVE 400 LBS

505-373-141 DECAL
LOCATION: PEDESTAL

DIM

505-373-129 DECAL
LOCATION: PEDESTAL

AUX FUEL

505-373-133 DECAL
LOCATION: AFT CIRCUIT BREAKER PANEL

BRT

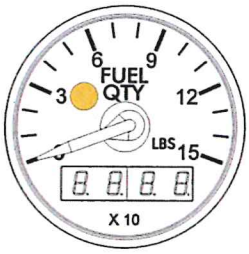
505-373-131 DECAL
LOCATION: PEDESTAL

5VDC LTS

505-373-135 DECAL
LOCATION: AFT CIRCUIT BREAKER PANEL

AUX FUEL

505-373-127 DECAL
LOCATION: PEDESTAL

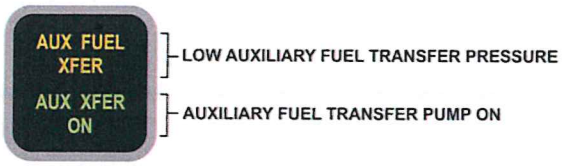


INVALID FUEL QUANTITY SIGNAL

AUX FUEL CAP 136.5 LBS
(JET A AT 15°C)

505-373-145 DECAL
LOCATION: CONTROL PANEL ASSEMBLY

AUXILIARY FUEL QUANTITY INDICATOR
LOCATION: CONTROL PANEL ASSEMBLY, PEDESTAL



PUSH BUTTON ANNUNCIATOR
LOCATION: CONTROL PANEL ASSEMBLY, PEDESTAL

Figure 1-4. Placards and Markings (Sheet 2 of 2)

SECTION 2: NORMAL PROCEDURES

2-2. FLIGHT PLANNING

If auxiliary fuel will be used to complete mission, plan to transfer auxiliary fuel from auxiliary fuel tank to main fuel tank as soon as main fuel tank has sufficient open capacity to hold auxiliary fuel (main tank has less than 400 lbs. of fuel). Loss of auxiliary fuel transfer capability may require return to base or use of enroute alternates. Plan accordingly.

2-3. PREFLIGHT CHECK

2-3-B. EXTERIOR CHECK

2-3-B-4. FUSELAGE — AFT RIGHT SIDE

1. Inspect the interior and exterior of the baggage compartment and the exterior of the fuselage beneath the auxiliary fuel tank assembly for indications of fuel leakage.
2. Inspect the auxiliary fuel tank sump drain for evidence of leaks. Drain as required to remove fuel contaminants (13.53 oz [400 ml] minimum).
3. Inspect the auxiliary fuel filler cap for condition; ensure it is closed and secured.
4. Inspect condition and security of auxiliary fuel tank attachment hardware.

2-4. INTERIOR CHECK

NOTE

The INTERIOR LT should be turned ON and oriented toward the center console to illuminate the control panel and the Auxiliary Fuel Control Panel as required for lighting conditions.

2-4-B. PRESTART CHECK

1. Inspect the Auxiliary Fuel Control Panel and its components for condition, security, and legibility.
2. Ensure AUX FUEL CONTROL XFER PUMP switch is in OFF position.
3. Test Auxiliary Fuel System as follows:
   a. Verify AUX FUEL POWER circuit breaker is closed on Auxiliary Fuel Control Panel.
   b. Wait 10 seconds.
   c. Press and hold the Auxiliary Fuel Transfer PBA.
   d. Confirm AUX FUEL XFER and AUX XFER ON illuminate on PBA.
   e. Confirm the Auxiliary Fuel Quantity Indicator pointer smoothly returns to the zero position.

f. Confirm the Auxiliary Fuel Quantity Indicator digital display illuminates the value "1.8 8.8".

g. Confirm the Auxiliary Fuel Quantity Indicator amber fault lamp illuminates.

h. Release the Auxiliary Fuel Transfer PBA.

i. Confirm AUX FUEL XFER, AUX XFER ON, and amber fault lamp extinguish.

4. Verify the auxiliary fuel quantity indicator pointer and digital display indicate the quantity of fuel in the auxiliary fuel tank.

5. If setup, properly configure the Garmin G1000H Weight and Configuration page by selecting "YES" or "NO" for the Auxiliary Fuel Tank entries to match current aircraft configuration.

2-7. BEFORE TAKEOFF

1. AUX FUEL BRT–DIM switch — As desired

2-9. IN-FLIGHT OPERATIONS

2-9-B. AUXILIARY FUEL SYSTEM

If auxiliary fuel will be used to complete mission, transfer auxiliary fuel from auxiliary fuel tank to main fuel tank as soon as main fuel tank has sufficient open capacity to hold auxiliary fuel (main tank has less than 400 lbs of fuel).

CAUTION

Operation of auxiliary fuel transfer pump without sufficient open capacity in main fuel tank to hold transferred auxiliary fuel can cause overboard fuel spillage through main fuel tank vent.

CAUTION

Do not operate auxiliary fuel transfer pump with low auxiliary fuel pressure. Run dry operation of the auxiliary fuel transfer pump will lead to pump seizure or fuel leakage.

2-9-B-1. Indicating System On

1. AUX FUEL CONTROL XFER PUMP switch — OFF
2. Auxiliary Fuel Quantity Indicator — Indicates auxiliary fuel quantity
3. AUX FUEL XFER annunciator — Extinguished
4. AUX XFER ON annunciator — Extinguished

2-9-B-2. Initiate Fuel Transfer

1. AUX FUEL CONTROL XFER PUMP switch — ON

NOTE

AUX FUEL XFER annunciator can momentarily illuminate under normal operation as pressure builds in the auxiliary fuel transfer lines when auxiliary fuel transfer pump is initially activated.

2. AUX XFER ON annunciator — Illuminated
3. AUX FUEL XFER annunciator — Extinguished
4. Monitor main fuel quantity indicator and auxiliary fuel quantity indicator to verify fuel transfer.

NOTE

Rotorcraft fuel burn rate will determine whether main fuel quantity increases or decreases during auxiliary fuel transfer.

5. For maximum auxiliary fuel quantity transfer, maintain straight and level flight attitude as auxiliary fuel tank reaches empty.

2-9-B-3. Fuel Transfer Complete

NOTE

AUX FUEL XFER annunciator and AUX XFER ON annunciator can momentarily extinguish and illuminate as auxiliary fuel tank reaches empty.

1. AUX FUEL XFER annunciator — Extinguished
2. AUX XFER ON annunciator — Extinguished

NOTE

If AUX XFER ON annunciator switches states (extinguished or illuminated) more rapidly than once every 15 seconds, then proceed to step 4 below.

3. Auxiliary Fuel Quantity Indicator — Indicates zero auxiliary fuel quantity.
4. AUX FUEL CONTROL XFER PUMP switch — OFF

2-11. ENGINE SHUTDOWN

1. AUX FUEL CONTROL XFER PUMP switch — OFF

SECTION 3: EMERGENCY AND MALFUNCTION PROCEDURES

3-8. AUXILIARY FUEL SYSTEM

3-8-A. AUXILIARY FUEL QUANTITY INDICATING SYSTEM MALFUNCTION

INDICATIONS:

Loss of, or erratic changes to, auxiliary fuel quantity indication.

Auxiliary fuel quantity indicator amber fault lamp illuminates.

NOTE

Auxiliary fuel quantity indicator and auxiliary fuel transfer pump are unreliable under this condition.

PROCEDURE:

1. When sufficient volume is available in main fuel tank (main tank has less than 400 lbs of fuel), fuel from auxiliary fuel tank may be transferred to main fuel tank at the discretion of the flight crew, if auxiliary fuel transfer pump is operational.

If option to transfer auxiliary fuel is taken:

a. AUX FUEL CONTROL XFER PUMP switch — ON

NOTE

AUX FUEL XFER annunciator can momentarily illuminate under normal operation as pressure builds in the auxiliary fuel transfer lines when auxiliary fuel transfer pump is initially activated.

b. AUX XFER ON annunciator — Illuminated

NOTE

If AUX XFER ON annunciator does not illuminate, then auxiliary fuel transfer pump is not operational. Proceed to step 2 below.

c. AUX FUEL XFER annunciator — Extinguished

d. Monitor main fuel quantity indicator and auxiliary fuel quantity indicator to verify fuel transfer

NOTE

Rotorcraft fuel burn rate will determine whether main fuel quantity increases or decreases during auxiliary fuel transfer.

e. For maximum auxiliary fuel quantity transfer, maintain straight and level flight attitude as auxiliary fuel tank reaches empty

2. AUX FUEL CONTROL XFER PUMP switch — OFF
3. AUX FUEL POWER circuit breaker — OPEN

3-8-B. LOSS OF AUXILIARY FUEL TRANSFER PRESSURE

INDICATIONS:

Loss of, slow, or incomplete auxiliary fuel transfer.

AUX FUEL XFER caution illuminates.

PROCEDURE:

CAUTION

Do not operate auxiliary fuel transfer pump with low auxiliary fuel pressure. Run dry operation of the auxiliary fuel transfer pump will lead to pump seizure or fuel leakage.

1. AUX FUEL CONTROL XFER PUMP switch — OFF
2. AUX FUEL POWER circuit breaker — OPEN

3-9. WARNING, CAUTION, AND ADVISORY MESSAGES

Table 3-2. Caution Messages

MESSAGE		FAULT CONDITION	CORRECTIVE ACTION
Auxiliary Fuel Quantity Indicator – Amber Fault Indication Lamp		Invalid fuel quantity signal from auxiliary fuel probe / low-level sensor. Auxiliary fuel quantity indication unreliable. Auxiliary fuel transfer pump operation unreliable.	1) When sufficient volume is available in main fuel tank, fuel from auxiliary fuel tank may be transferred to main fuel tank at the discretion of the flight crew, if auxiliary fuel transfer pump is operational (as indicated by green AUX XFER ON annunciator). Monitor main fuel quantity indicator during fuel transfer. **NOTE** Rotorcraft fuel burn rate will determine whether main fuel quantity increases or decreases during auxiliary transfer. 2) Switch auxiliary fuel transfer pump OFF. 3) Open AUX FUEL POWER circuit breaker. 4) Auxiliary fuel quantity indication system maintenance required.
Auxiliary Fuel Transfer Annunciator – Amber Segment	AUX FUEL XFER	Low fuel pressure detected by auxiliary fuel pressure switch.	1) Switch auxiliary fuel transfer pump OFF. 2) Open AUX FUEL POWER circuit breaker. 3) Auxiliary fuel transfer system maintenance required.

Table 3-4. Status Messages

MESSAGE		FAULT CONDITION	CORRECTIVE ACTION
Auxiliary Fuel Transfer Annunciator – Green Segment	AUX XFER ON	Auxiliary fuel transfer pump on.	N/A

SECTION 4: PERFORMANCE

No change from basic flight manual.

SECTION 5: WEIGHT AND BALANCE

Table 5-10. Auxiliary Fuel System Weights and Moments

Kit	Weight	Station	Lateral Arm
Auxiliary Fuel Tank Installation Kit 505-370-001	64 lbs. (29.0 kg)	155.2 in. (3942 mm)	1.3 in. (33 mm)
Auxiliary Fuel Tank Installation Kit (with tank removed) 505-370-001	10.9 lbs. (4.9 kg)	140.2 in. (3561 mm)	–11.5 in. (–292 mm)

*Note: This is the delta weight effect of this kit. This includes weight and effect of the items removed when this kit is installed.

CAUTION

This is the additional weight of the Auxiliary Fuel Tank Kit components only and does not include any fuel that is added to the Auxiliary Fuel Tank. For reference, the Center of Gravity of a full tank of fuel (20.07 USG) is located at Station 160.3 in. and Lateral Arm 2.6 in.

NOTE

Due to variances in the manufacturing process, slight weight variations are possible. After the installation has been completed, the aircraft should be weighed in accordance with the applicable Maintenance Manual instructions and ballast adjusted as necessary to return the helicopter center of gravity to within allowable limits.

5-6. BAGGAGE COMPARTMENT LOADING

The maximum allowable baggage weight with the auxiliary fuel tank assembly installed is:

58 pounds with full fuel in the auxiliary fuel tank.

197 pounds with no fuel in the auxiliary fuel tank.

Baggage compartment cargo is limited to soft goods only with the auxiliary fuel tank assembly installed.

5-7. FUEL LOADING

The Auxiliary Fuel Tank Kit is located at a neutral longitudinal CG position relative to the flight envelope. Therefore, in most cases, the most critical aft and forward CG positions will occur with zero fuel in the auxiliary tank. During transfer, the fuel is transferred from the auxiliary tank to the main tank. Fuel loading table (Table 5-11) lists usable fuel quantities, weight and moments for Jet A and Jet B fuels at 15°C, in U.S. units.

Table 5-11. Auxiliary Fuel Loading (U.S.)

Quantity	Jet A	Longitudinal		Quantity	Jet B	Longitudinal	
(U.S. GAL)	Weight (LB)	CG (IN.)	Moment (IN*LB)	(U.S. GAL)	Weight (LB)	CG (IN.)	Moment (IN*LB)
0	0	161.5	0	0	0	161.5	0
5	34	160.6	5460	5	33	160.6	5297
10	68	160.4	10907	10	65	160.4	10426
15	102	160.3	16351	15	98	160.3	15709
20.07	136	160.3	21801	20.07	131	160.3	21019

SECTION 6: SYSTEM DESCRIPTION

The Aeronautical Accessories Auxiliary Fuel System Kit provides the option for additional flight time with an increased fuel capacity.

The kit consists of an auxiliary fuel tank, auxiliary fuel pump, auxiliary fuel lighting control, and auxiliary fuel system control panel.

Auxiliary Fuel Tank Assembly

The removable auxiliary fuel tank assembly is located in the baggage compartment. Usable fuel capacity of the auxiliary fuel tank assembly is approximately 20.07 US gallons. The rotorcraft can be operated with the auxiliary fuel tank assembly installed or removed based on operator preference.

Auxiliary Fuel Control Panel

The auxiliary fuel control panel is located in the cockpit. It includes an ON-OFF switch, pushbutton annunciator, fuel quantity indicator, and circuit breaker. The flight crew controls operation of the auxiliary fuel pump using the ON-OFF switch. The ON-OFF switch does not control electrical power to the auxiliary fuel quantity indicating system; the auxiliary fuel quantity indicating system is powered directly from the AUX FUEL POWER circuit breaker.

The pushbutton annunciator contains two illuminated segments: the AUX FUEL ON annunciator illuminates to indicate the auxiliary fuel transfer pump is powered ON, at which point the auxiliary fuel transfer pump transfers fuel from the auxiliary fuel tank to the main fuel tank; and the
AUX FUEL XFER annunciator illuminates to indicate the auxiliary fuel transfer pump is powered ON but low auxiliary transfer fuel pressure is detected by the auxiliary fuel pressure switch. When low auxiliary fuel transfer pressure is detected, the auxiliary fuel system is to be powered OFF by the flight crew. The AUX FUEL XFER annunciator can momentarily illuminate under normal operation as pressure builds in the auxiliary fuel transfer lines when auxiliary fuel transfer pump is initially activated. The PUSH TO TEST function tests the illumination of the annunciator segments as well as initiates the built-in test function of the indicator.

The auxiliary fuel quantity indicator displays the quantity of fuel in the auxiliary fuel tank. Electrical power is supplied to the auxiliary fuel quantity indicator via the circuit breaker located in the auxiliary fuel control panel, independent of the auxiliary fuel control transfer pump ON-OFF switch. The auxiliary fuel quantity is indicated to the flight crew by a traditional dial gauge and digital numeric readout on the auxiliary fuel quantity indicator based on the fuel level signal from the auxiliary fuel probe / low-level sensor. A separate low fuel level signal from the auxiliary fuel probe / low-level sensor triggers deactivation of the auxiliary fuel transfer pump. Automatic deactivation of the auxiliary fuel transfer pump reduces pilot workload and ensures the auxiliary fuel transfer pump does not run dry. Turning the auxiliary fuel control transfer pump switch OFF turns off both the AUX FUEL XFER and AUX XFER ON annunciators.

Auxiliary Fuel Lighting

Auxiliary fuel system component lighting is controlled with the AUX FUEL BRT-DIM toggle switch. With the AUX FUEL BRT-DIM toggle switch in the BRT position, the auxiliary fuel quantity indicator backlight is off, the auxiliary fuel quantity digital display is full bright, and both the AUX FUEL XFER and AUX XFER ON annunciators are full bright. With the AUX FUEL BRT-DIM toggle switch in the DIM position, the auxiliary fuel quantity indicator backlight is on, the auxiliary fuel quantity digital display is dimmed, and both the AUX FUEL XFER and AUX XFER ON annunciators are dimmed. The PNL LT rheostat controls the level of dimming for auxiliary fuel system components when the AUX FUEL BRT-DIM toggle switch is in the DIM position. Full bright lighting level for auxiliary fuel system components cannot be achieved with the AUX FUEL BRT-DIM toggle switch in the DIM position, regardless of PNL LT rheostat position.

Auxiliary Fuel Transfer

The auxiliary fuel transfer pump is located in the transmission bay next to the existing rotorcraft fuel pump. The auxiliary fuel transfer pump is sized such that its fuel flow rate is greater than the typical fuel consumption rate of the rotorcraft engine. The time of fuel transfer is approximately 30 minutes. Electrical power is supplied to the auxiliary fuel transfer pump when the auxiliary fuel transfer pump is turned ON by the flight crew, using the auxiliary fuel system control panel located in the cockpit, in accordance with the rotorcraft flight manual supplement procedures. Once the fuel in the auxiliary fuel tank has been transferred to the rotorcraft's main fuel tank, the auxiliary fuel probe/ low-level sensor detects the low auxiliary fuel level and triggers deactivation of the auxiliary fuel transfer pump. Loss of transfer fuel pressure during auxiliary fuel transfer due to a component failure is detected by the auxiliary fuel pressure switch, leading to illumination of the amber caution segment of the auxiliary fuel transfer system annunciator in the auxiliary fuel system control panel.

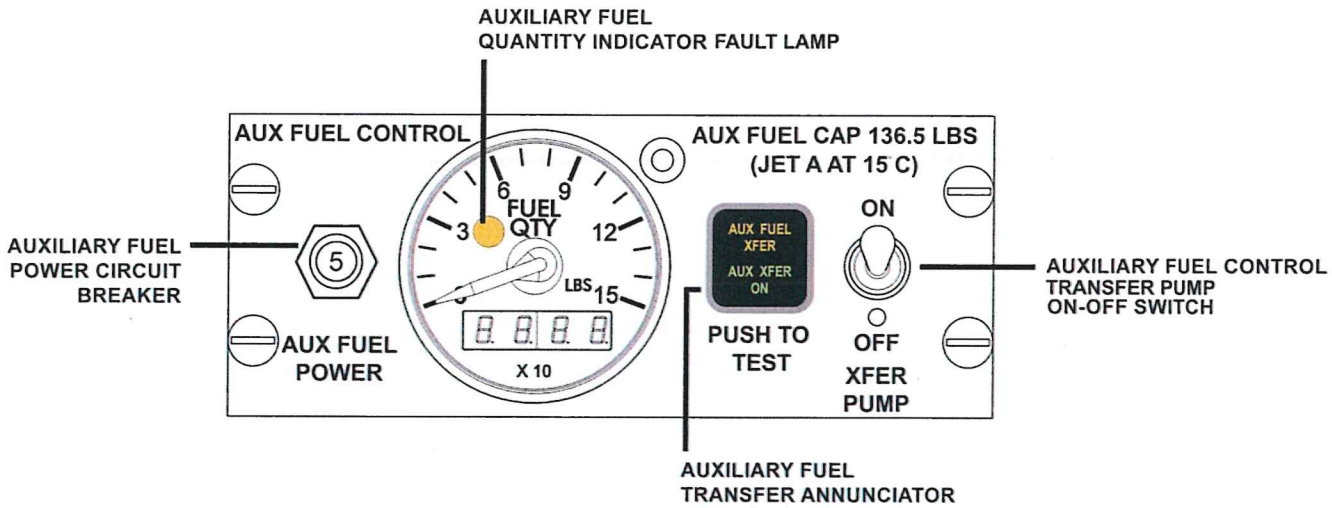


Figure 6-1. Auxiliary Fuel Control Panel

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INSTALLATION INSTRUCTIONS

FOR

AUXILIARY FUEL TANK INSTALLATION KIT
505-370-001

FOR

BELL TEXTRON CANADA LIMITED MODEL 505 HELICOPTERS

Report Number AA-21092

Revision B

April 30, 2026

ECCN
9E991

RESTRICTED DISCLOSURE NOTICE ON SHEET 2

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		Section 3.2 Added Note after Step 24 Added Step 31	11	
		Section 3.4 Revised Step 13	12	
		Section 4.0 Revised Weight and Balance table and added Note Added Section 4.1	14-15	
		Section 5.0 Revised Tables 2 & 3	16-19	

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29 JUL 2026

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1.0 INTRODUCTION

These instructions provide the information necessary to install the **AERONAUTICAL ACCESSORIES AUXILIARY FUEL TANK INSTALLATION KIT** on Bell Textron Canada Limited model 505 helicopters. All engineering aspects of these instructions are FAA approved under BTI STC No. SR11253DS.

Installation must be performed by qualified personnel in accordance with the following instructions, the referenced Aeronautical Accessories drawings and FAA Advisory Circular AC 43.13-1B/2B, or later approved version, as applicable.

2.0 INSTALLATION METHODOLOGY

DO NOT operate this aircraft or return this aircraft to service until ALL operations and instructions contained in this document have been verified to be complete and ALL work performed has been inspected by appropriately rated personnel.

NOTE

Refer to Bell Model 505 Maintenance Manual and all applicable maintenance manuals and / or Instructions for Continued Airworthiness for disassembly / reassembly instructions not specifically addressed in this document. Read ALL instructions and notes thoroughly and have a clear understanding BEFORE beginning. Additional notes are located on individual kit drawings.

2.1 UNPACKING AND INSPECTING EQUIPMENT

Carefully unpack the equipment and note any damage to the shipping containers or equipment. Visually inspect each component for evidence of damage. Report any evidence of damage to Aeronautical Accessories immediately. Refer to Section 5.0 for PARTS LIST.

2.2 GENERAL

- General shop practices shall be in accordance with Bell Structural Repair Manual (BHT-ALL-SRM), Bell Standard Practices Manual (BHT-ALL-SPM) and Bell Electrical Standard Practice Manual (BHT-ELEC-SPM) and per advisory circular AC 43.13, Acceptable Methods, Techniques and Practices, Aircraft Inspection and Repair.
- Ensure aircraft power is OFF.
- Tag all parts, including attaching hardware (unless otherwise noted), removed to gain access to work areas. Protect parts from damage until re-installed.
- All unused components and wiring are to be removed, tagged, and stored in accordance with the applicable chapter of BHT-ALL-SPM.
- Ensure reference materials including the BHT-505-MM, BHT-ELEC-SPM, kit drawings, etc. are accessible before beginning any operation.

2.3 CUTTING, DRILLING AND SANDING OPERATIONS

- Following any drilling or cutting operation, remove burrs and particles.
- To prevent material contamination when drilling, cutting, or sanding composite material, assure tools for composite are maintained separately from tools for metal.

2.4 ADHESIVE AND SEALANTS

ADHESIVE

Unless otherwise noted on drawing, apply adhesives per the following general procedure:

Surface preparation

- Prepare surfaces to be bonded per BHT-ALL-SPM, Chapter 7.

Bonding Procedure

- Mix, bond, and cure in accordance with the adhesive manufacturer's instructions.

SEALANTS

Unless otherwise noted on the drawing, apply sealants per the following general procedure:

Surface Preparation

- All pre-assembly operations such as hole drilling, pre-fitting and deburring shall be completed prior to surface preparation.
- Thoroughly clean surfaces with a clean cloth dampened with aliphatic naphtha (MB 1041 or equivalent) or isopropyl alcohol (MB 1291 or equivalent). These surfaces shall be wiped dry with a clean dry cloth before the solvent evaporates.

Sealant Mixing

- If multi-component sealant is used, mix in accordance with the sealant manufacturer's instructions.

Sealant Application

- Apply sealant in accordance with drawing.

2.5 MATERIALS REQUIRED

The following materials are not supplied in the kit and are to be procured by the installing facility prior to beginning installation.

TABLE 1: MATERIALS REQUIRED

Material	Part Number
Sealant	MIL-PRF-81733,TYPE II, CLASS 1
Sealant	AMS 3374, Type 1

2.6 DRAWINGS REQUIRED

The following drawings are required to complete the installation and should be reviewed prior to beginning installation:

- Aeronautical Accessories Drawing 505-370, Auxiliary Fuel Tank – Installation
- Aeronautical Accessories Drawing 505-374, Auxiliary Fuel Kit Electrical Installation
- Aeronautical Accessories Drawing 505-218, Dzus Rail – Installation
- Aeronautical Accessories Drawing 505-221, 28VDC Lighting Mod Electrical Installation

3.0 AUXILIARY FUEL TANK INSTALLATION KIT COMPONENTS INSTALLATION

NOTE

The following instructions are the recommended installation order of the Auxiliary Fuel Tank Installation Kit.

3.1 AUXILIARY TANK ASSEMBLY INSTALLATION

NOTE

Refer to AA drawing 505-370 for Auxiliary Tank Assembly installation.

NOTE

Ensure all applicable drawing references, notes, and flag notes are accomplished.

1. Remove and retain existing Baggage Fire Blanket per BHT-505-MM.
2. Remove and retain existing Main Baggage Floor Assembly and FWD Baggage Panel Assembly per BHT-505-MM. Remove and replace indicated Plug and Sleeve inserts as shown (Sheet 8, Detail AH). Reinstall Main Baggage Floor Assembly and FWD Baggage Panel Assembly per BHT-505-MM and Drawing Detail AH.
3. Remove and discard (4) existing Rivets, where Wall Fitting is to be installed, as shown (Sheet 2, Section B-B).
4. Temporarily place Aux Fuel Tank inside baggage compartment as shown (Sheet 2, Section A-A).
5. Temporarily attach Wall Fitting to Tank Fitting (part of Aux Tank Assy) using Quick Pin as shown (Sheet 2, Section A-A).

6. Align Wall Fitting and Shims to aircraft while attached to Aux Tank Assy to locate tank. Match drill Wall Fitting and Shim to existing holes in Tunnel Beam, R/H and FWD Fuel Panel- Upper as shown (Sheet 2, Sections B-B and D-D).
7. Temporarily attach Outer Fitting, Center and Outer Fitting, R/H to Aux Tank Assy as shown (Sheets 2 and 6, Sections A-A, U-U, and V-V).
8. Match drill Main Baggage Floor Panel using holes in Outer Fittings in (8) locations as shown (Sheet 2, Section A-A).
9. Remove Aux Tank Assy and attached parts from baggage compartment.
10. Install (8) Inserts into Main Baggage Floor Panel per flag note 12 as shown (Sheet 2, Section A-A).
11. Temporarily attach Wall Fitting and Shims to aircraft at previously drilled locations. Match drill Tunnel Beam, R/H and shim to Wall Fitting in (4) locations as shown (Sheet 2, Sections B-B, D-D and View C-C).
12. Attach Wall Fitting and Shims to the FWD Fuel Panel- Upper and Tunnel Beam, R/H using (8) Rivets as shown (Sheet 2, Section B-B and View C-C).
13. Reinstall Baggage Fire Blanket per BHT-505-MM and by cutting notch for Wall Fitting lug to pass through.
14. Install Aux Tank Assy to Main Baggage Floor Panel using Outer Fitting, Center and Outer Fitting, R/H and hardware as shown (Sheets 2 and 6, Sections A-A, U-U, and V-V).
15. Attach Aux Tank Assy to Wall Fitting using Quick Pin as shown (Sheet 2, Section A-A).
16. Install (4) Decals to the Baggage Door Assy as shown (Sheet 6, Section X-X).

3.2 PUMP AND FUEL/VENT LINE INSTALLATION

NOTE

Refer to AA drawing 505-370 for Pump and Fuel/Vent Line installation.

NOTE

Ensure all applicable drawing references, notes, and flag notes are accomplished.

1. Remove existing Support and rivet as shown (Sheet 3, Detail F).
2. Locate Doubler (505-371-165) using existing rivet hole on Upper Baggage Panel as shown (Sheet 3, Detail F).
3. Match drill Upper Baggage Panel to Doubler at (7) Rivet locations and (1) Connector and (1) Fitting locations as shown (Sheet 3, Detail F).
4. Attach Doubler to Upper Baggage Panel at (7) locations and attach Doubler and Support to Upper Baggage Panel at (1) location as shown (Sheet 3, Detail F).
5. Install Connector and Coupler using hardware as shown (Sheet 3, Section G-G).

NOTE

Do not remove protective paints or coatings from the coupler or airframe during installation. Apply AMS 3374, Type 1 sealing compound to the surfaces of the fitting and hardware contacting the Upper Baggage Panel and Doubler.

6. Locate Doubler (505-371-167) on Upper Baggage Panel as shown (Sheet 3, Detail F).
7. Match drill Upper Baggage Panel to Doubler at (4) Rivet locations and (1) Fitting location as shown (Sheet 3, Detail F).
8. Attach Doubler to Upper Baggage Panel at (4) locations as shown (Sheet 3, Detail F).
9. Install Coupler using hardware as shown (Sheet 3, Section H-H).

NOTE

Do not remove protective paints or coatings from the coupler or airframe during installation. Apply AMS 3374, Type 1 sealing compound to the surfaces of the fitting and hardware contacting the Upper Baggage Panel and Doubler.

10. Locate and Install (4) Supports using hardware as shown (Sheet 4, Detail J and Section K-K).
11. Remove and Discard existing Prime Pump Stiffeners and temporarily attach (2) Pump Brackets as shown (Sheet 5, Views Q-Q, R-R, and Section S-S).
12. Locate Pump Mount as shown and match drill Upper Baggage Panel Stiffener to Pump Mount at (4) locations as shown (Sheet 5, View Q-Q and Section T-T).
13. Match drill Pump Mount to (2) Pump Brackets at (4) locations as shown (Sheet 5, View Q-Q, View R-R and Sections S-S and T-T).
14. Match drill (2) Pump Brackets to existing Upper Baggage Panel Stiffeners at (4) locations and existing Bracket, Prime Pump at (4) locations as shown (Sheet 5, Views Q-Q, R-R, and Section S-S).
15. Attach (2) Pump Brackets and Pump Mount using (16) Rivets as shown (Sheet 5, Views Q-Q, R-R, and Section S-S).
16. Locate Pump Plate and Angle as shown and match drill Pump Mount to Pump Plate (4) places and attach using (4) Rivets as shown (Sheet 5, Section T-T).
17. Match drill Pump Plate and Pump Mount to Angle at (4) locations and attach using (4) Rivets as shown (Sheet 5, Sections P-P, T-T and View R-R).
18. Locate and install Support to Upper Baggage Panel Stiffener as shown (Sheet 3, Section E-E).
19. Remove and retain existing Fuel Tank Expansion Plate per BHT-505-MM.
20. Drill (2) holes into existing Expansion Plate as shown (Sheet 4, Detail N).
21. Attach (2) Fittings using hardware as shown (Sheet 4, Section O-O).
22. Reinstall Expansion Plate to Fuel Tank per BHT-505-MM.
23. Install Pump to Pump Plate using (2) Clamps and hardware as shown (Sheet 5, Section P-P).

24. Install Hose Assembly (Fuel Line) and Fitting from Doubler (505-371-167) to the Pump and restrain to Supports as shown (Sheets 3 and 4, Sections E-E, K-K, P-P, and Detail J).

NOTE

For aircraft S/N 65745-Sub, see alternate Hose Assembly (Fuel Line) routing and retention on Sheet 9, Section E-E.

25. Install (4) Fittings and Pressure Switch to Pump as shown (Sheet 5, Section P-P).
26. Locate and match drill Support to Angle. Install Support to Angle and restrain Pressure Switch to Support using hardware as shown (Sheet 5, View Q-Q and Section S-S).
27. Install Hose Assembly from Pressure Switch to Expansion Plate and restrain as shown (Sheets 3 and 4, Sections E-E, L-L, and P-P).
28. Install Hose Assembly from Doubler to Expansion Plate and restrain as shown (Sheets 3 and 4, Sections E-E, K-K,L-L, and Detail J).
29. Install (2) Hose Assemblies from Aux Tank Assy to Couplers in baggage compartment roof as shown (Sheet 6, Detail W).
30. Route and attach Tubing from Fuel Pump to exterior of aircraft as shown (Sheet 7, Sections AD-AD and AE-AE).
31. Install identification tape onto Hoses and Tubing as shown (Sheets 3,6 and 7, Sections E-E, AD-AD and Detail W).

3.3 BAGGAGE GUARD INSTALLATION

NOTE

Refer to AA drawing 505-370 for Baggage Guard installation.

NOTE

Ensure all applicable drawing references, notes, and flag notes are accomplished.

1. Install Baggage Guard to Aux Tank Assy using hardware as show (Sheet 6, Section V-V).
2. Locate Upper Angle Assy against Baggage Guard and Upper Baggage Panel as shown. Match drill Upper Baggage Panel to Upper Angle Assy at (7) locations as shown. (Sheet 6, Section V-V and Z-Z).
3. Install (7) Nutplates to the Upper Baggage Panel using (14) Rivets as shown (Sheet 6, Section Z-Z and Detail AA).
4. Attach Upper Angle Assy to Upper Baggage Panel using hardware as shown (Sheet 6, Section Z-Z).

3.4 ELECTRICAL INSTALLATION

NOTE

Refer to AA drawings 505-370 and 505-374 for electrical installation.

NOTE

Ensure all applicable drawing references, notes, and flag notes are accomplished.

1. Install 505-218-001 Dzus Rail Installation Kit per AA Drawing 505-218.
2. Install 505-221-001 28VDC Lighting Mod Electrical Installation Kit per AA Drawing 505-221.
3. Locate and match drill Converter to Console Assembly at (2) locations. Install Converter to the Console Assembly as shown (Drawing 505-370, Sheet 8, Section AG-AG).
4. Locate and match drill Grounding Block to Console Assembly at (2) locations. Install Grounding Block to the Console Assembly as shown (Drawing 505-370, Sheet 8, Section AC-AC).
5. Install Toggle Switch into the Plate Assy (part of Dzus Rail Installation Kit) as shown (Drawing 505-370, Sheet 6, Section Y-Y).
6. Install (3) Decals around Toggle Switch as shown (Drawing 505-370, Sheet 6, Section Y-Y).
7. Install Circuit Breaker, Push Button Annunciator, Toggle Switch, and Fuel Quantity Indicator into the Control Panel Assy as shown (Drawing 505-370, Sheet 6, Section Y-Y).
8. Locate and match drill Mounting Rail and Relay to AFT Avionics Shelf at (2) locations each. Install Mounting Rail and Relay to the AFT Avionics Shelf as shown (Drawing 505-370, Sheet 8, Section AF-AF).
9. Install Control Panel Assy to the Dzus Rail Installation Kit in console as shown (Drawing 505-370, Sheet 6, Section Y-Y).
10. Install Decal above Control Panel and Decal on Control Panel as shown (Drawing 505-370, Sheet 6, Section Y-Y).
11. Install (2) Circuit Breakers and (2) Decals into Circuit Breaker Panel as shown (Drawing 505-370, Sheet 7, Section AD-AD).
12. Install (3) Supports for Pump wiring as shown (Drawing 505-370, Sections P-P and S-S).
13. Install and route wiring as shown (Drawing 505-370, Sheets 7, 8, and 9, View AB-AB and Sections AC-AC, AD-AD, AE-AE, AF-AF, AI-AI, and AJ-AJ) and per Electrical Drawing 505-374.

3.5 SYSTEM FUNCTION CHECK

NOTE

Consult Auxiliary Fuel Tank Instructions for Continued Airworthiness (AA-21016) or contact Aeronautical Accessories Product Support for troubleshooting assistance.

1. Fill Auxiliary Fuel Tank with acceptable fuel type per Bell 505 Flight Manual.
2. Perform leak check of Auxiliary Fuel Tank.
3. Attach ground power unit to aircraft.
4. Conduct Auxiliary Fuel Quantity Indicator BIT Test in accordance with AA-21016.
5. Start transfer of fuel from Auxiliary Fuel Tank to main aircraft fuel tank using the Transfer Pump Switch installed on the Aux Fuel Control Panel in Console Assembly.

NOTE

Ensure the main fuel tank has less than 400 lbs of fuel in order to have sufficient capacity to receive fuel from the auxiliary fuel tank.

6. Ensure proper transfer of fuel is occurring and check installation for leaks.
7. Check Fuel Quantity Indicator to ensure fuel level changes with fuel transfer.
8. Stop fuel transfer using the Transfer Pump Switch and ensure system cuts fuel flow from Auxiliary Fuel Tank.
9. Resume fuel transfer using the Transfer Pump Switch.
10. Adjust console lighting brightness. Ensure the Fuel Quantity Indicator brightness changes with the rest of the console.
11. Ensure brightness of PBA and digital readout changes between bright and dim while using AUX FUEL Lighting switch.
12. Pull Circuit Breaker located on Aux Fuel Control Panel installed in Console Assembly in cabin and ensure system shuts off and fuel flow has stopped.
13. Reset Circuit Breaker and ensure fuel transfer continues.
14. Continue fuel transfer until Auxiliary Fuel Tank has emptied and ensure Transfer Pump automatically shuts off.
15. Using drain line fitting, remove remaining fuel using aircraft hand pump.
16. Installation Complete.

4.0 WEIGHT AND BALANCE

Kit	Weight Change*	Station	Lateral Arm
505-370-001** Auxiliary Fuel Tank Installation Kit	64.0 lb (29.0 kg)	155.2 in (3942 mm)	1.3 in (33 mm)
505-370-001** Auxiliary Fuel Tank Installation Kit (With Tank Removed)	10.9 lb (4.9 kg)	140.2 in (3561 mm)	-11.5 in (-292 mm)
505-218-001 Dzus Rail Installation Kit	1.1 lb (0.5 kg)	82.3 in (2090 mm)	0 in (0 mm)
505-221-001 28VDC Lighting Mod Electrical Installation Kit	0.1 lb (0.05 kg)	72.6 in (1844 mm)	1 in (25 mm)

*Note: This is the delta weight effect of this kit. This includes weight and effect of the items removed when this kit is installed.

**Note: This weight does not include the 505-218-001 Dzus Rail Installation kit or 505-221-001 28VDC Lighting Mod Electrical Installation Kit weights.

CAUTION

This is the additional weight of the Auxiliary Fuel Tank Kit components only and does not include any fuel that is added to the Auxiliary Fuel Tank. For reference, the Center of Gravity of a full tank of fuel (approximately 20 USG) is located at Station 160.3 in. and Lateral Arm 2.6 in.

NOTE

Due to variances in the manufacturing process, slight weight variations are possible. After the installation has been completed, the aircraft should be weighed in accordance with the applicable Maintenance Manual instructions and ballast adjusted as necessary to return the helicopter center of gravity to within allowable limits.

4.1 GARMIN G1000H WEIGHT AND BALANCE CONFIGURATION

To quickly aid in calculating the weight and balance of the aircraft with the desired Auxiliary Fuel Tank configuration, it is recommended to include the various configurations into the Garmin G1000H system's weight and balance configuration page as shown in Figure 1. The different configurations can be set to "YES" or "NO" to quickly update the payload information and calculate takeoff weight and center of gravity prior to each flight. Reference Garmin G1000H Pilot's Guide for the Bell 505 Jet Ranger X, Weight and Balance Planning section, for instructions on modifying the Weight and Balance Configuration chart.

Figure 1: Garmin G1000H Weight and Configuration- Recommended Setup

5.0 PARTS LIST

TABLE 2: PARTS LIST
505-370-001 AUXILIARY FUEL TANK INSTALLATION KIT

	QTY -001	Part Number	Description
_____	1	505-218-001	Dzus Rail Installation Kit
_____	1	505-371-101	Aux Fuel Tank Assy
_____	1	505-371-153	Outer Fitting, Center
_____	1	505-371-155	Outer Fitting, R/H
_____	1	505-371-157	Wall Fitting
_____	1	505-371-161	Pump Mount
_____	2	505-371-163	Pump Bracket
_____	1	505-371-165	Doubler
_____	1	505-371-167	Doubler
_____	1	505-371-169	Angle
_____	1	505-371-171	Pump Plate
_____	2	505-371-184	Shim
_____	1	505-371-219	Control Panel Assy
_____	1	505-371-221	Baggage Guard
_____	1	505-371-309	Upper Angle Assy
_____	1	505-373-127	Decal, PBA
_____	1	505-373-129	Decal, DIM
_____	1	505-373-131	Decal, BRT
_____	1	505-373-133	Decal, Aux Fuel
_____	1	505-373-135	Decal, 5VDC LTS
_____	1	505-373-139	Decal, Soft Goods
_____	1	505-373-141	Decal, Transfer
_____	1	505-373-143	Decal, Fuel
_____	1	505-373-145	Decal, Fuel Capacity
_____	1	505-373-147	Decal, Fuel Additive
_____	1	505-373-149	Decal, Baggage Weight
_____	1	505-374-001	Aux Fuel Electrical Installation Kit
_____	1	003261 202 59	Support (Alt: 160-027-478)
_____	4	120-273-3-10	Standoff
_____	1	130-038-10	Tubing (90" Length)
_____	6	160-027-554	Support (Alt: 003261 168 59)
_____	1	30-058-1	Clamp
_____	4	31-032-28A	Tape (Flow)
_____	3	31-032-29A	Tape (Vent)
_____	1	31-032-30A	Tape (Drain)
_____	4	31-033-1A	Tape (Fuel)
_____	1	375001-06	Coupler
_____	1	375001-08	Coupler
_____	8	80-005-2B8	Insert

	QTY -001	Part Number	Description
_____	7	80-011-P10C0-0	Plug
_____	7	80-011-S10F08-0	Sleeve
_____	1	AE1011342H0560	Hose Assembly
_____	1	AE1011343G0520	Hose Assembly
_____	1	AE3956G0130-180	Hose Assembly
_____	1	AE3956H0090-180	Hose Assembly
_____	1	AE5280H0380-090	Hose Assembly
_____	1	AFP3087W0808-115	Fitting
_____	5	AN3-4A	Bolt
_____	5	AN3-6A	Bolt
_____	1	AS4406W0808	Fitting
_____	1	AS4411W080804	Fitting
_____	2	AS5178W06	Nut
_____	2	AS5178W08	Nut
_____	1	AS5406W06	Fitting
_____	1	AS5406W08	Fitting
_____	1	CB9151V5	Support
_____	2	CB9302V3	Support
_____	4	CR3212-4-03	Rivet
_____	12	CR3213-4-02	Rivet
_____	4	CR3213-4-04	Rivet
_____	1	CR3213-4-05	Rivet
_____	20	CR3213-5-02	Rivet
_____	1	MS17984C607	Quick Pin
_____	14	MS20426AD3-4	Rivet
_____	8	MS20470AD3-4	Rivet
_____	4	MS21042L06	Nut
_____	2	MS24487-8	Fitting
_____	7	MS24694-S60	Screw
_____	7	MS27039-0806	Screw
_____	4	MS27039-0807	Screw
_____	2	MS27039-1-41	Screw
_____	1	MS29512-06	Packing
_____	3	MS29512-08	Packing
_____	7	MS3367-1-9	Tie Wrap
_____	1	MS3367-2-9	Tie Wrap
_____	2	MS35190-237	Screw
_____	2	MS35338-43	Lock Washer
_____	1	MS35650-302	Nut
_____	4	MS90354S0505	Rivet
_____	4	MS90354S0506	Rivet
_____	4	NAS1149DN632J	Washer

	QTY -001	Part Number	Description
_____	11	NAS1149DN816K	Washer
_____	4	NAS1149D0316H	Washer
_____	10	NAS1149D0316K	Washer
_____	6	NAS1149D0332J	Washer
_____	20	NAS1149D0332K	Washer
_____	2	NAS1149D0932K	Washer
_____	2	NAS1149D1232K	Washer
_____	7	NAS1474S08	Nutplate
_____	2	NAS1716D40N	Clamp
_____	2	NAS1801-06-6	Screw
_____	2	NAS1801-3-7	Screw
_____	4	NAS1801-3-10	Screw
_____	1	NAS1801-3-12	Screw
_____	1	NAS43DD3-24FC	Spacer
_____	2	NAS620-6L	Washer
_____	3	NAS6603-2	Bolt
_____	7	NAS6603-4	Bolt
_____	1	NAS6603-9	Bolt
_____	10	NAS9926-3L	Nut
_____	11	PLB3S-C0	Tie Wrap
_____	1	AA-21016	Instructions for Continued Airworthiness
_____	1	AA-21017	Rotorcraft Flight Manual Supplement
_____	1	AA-21092	Installation Instructions
_____	1	DWG 505-370	Installation Drawing

TABLE 3: PARTS LIST
505-374-001 AUX FUEL ELECTRICAL INSTALLATION KIT

	QTY -001	Part Number	Description
_____	3	MS26574-5	Circuit Breaker, 5 Amp
_____	1	D38999/26WD19SN	Connector
_____	1	319H064XN15	Backshell
_____	1	M85049/69-15W	Backshell
_____	1	099-721-103	Fuel Quantity Indicator
_____	1	MS24658-23D	Switch, Toggle
_____	1	LED-EM-1M-KB2-SBTES	Defined Logic PBA
_____	1	M81714/63-20F	Ground Block
_____	1	D38999/24WA35SN	Connector
_____	1	D38999/26WA35PN	Connector
_____	1	D38999/26WA35SN	Connector
_____	3	319H064XN09	Backshell
_____	1	M81714/16-2	Mounting Rail
_____	1	M81714/2-DB1	Terminal Block
_____	1	M81714/60-22-01	Terminal Block
_____	1	B07D912BC1-0359	Relay
_____	1	JAN1N5620	Diode (Alt: JANTX1N5620)
_____	1	099-721-105	Pressure Switch
_____	1	18016-B8	Transfer Pump
_____	2	M81714/65-16-1	Splice (Alt: 130-065-16-1)
_____	1	MS24524-23	Switch, Toggle
_____	1	LT53	28VDC to 5VDC Convertor
_____	1	PT06A14-5S	Connector (Alt: MS3476W14-5S)
_____	1	D38999/26WB98SN	Connector
_____	1	319H064XN11	Backshell
_____	1	D38999/24WD19PN	Connector
_____	1	M85049/52S14W	Backshell
_____	1	505-221-001	28VDC Lighting Mod Electrical Installation Kit
_____	1	DWG 505-374	Electrical Installation Drawing

TABLE 4: PARTS LIST
505-221-001 28VDC LIGHTING MOD ELECTRICAL INSTALLATION KIT

	QTY -001	Part Number	Description
_____	1	M81714/67-02	Terminal Rail
_____	1	M81714/60-22-01	Terminal Module
_____	20	M39029/22-191	Contact
_____	2	MS27039-1-07	Screw
_____	2	NAS1149D0332J	Washer
_____	2	NAS9926-3L	Nut
_____	1	DWG 505-221	Installation Drawing

TABLE 5: PARTS LIST
505-218-001 DZUS RAIL INSTALLATION KIT

	QTY -001	Part Number	Description
_____	1	505-219-101	Front Pedestal Panel Assembly
_____	1	505-219-105	Plate Assy
_____	2	505-219-123	Dzus Rail
_____	1	505-219-125	Dzus Bracket L/H
_____	1	505-219-126	Dzus Bracket R/H
_____	6	MS20470AD5-5	Rivet
_____	6	NAS1097AD4-4-5	Rivet
_____	22	NAS1097AD4-5-5	Rivet
_____	1	DWG 505-218	Installation Drawing

Confirm inventory prior to installation.

Packed by: _____ / / _____

United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number: SR11253DS

This certificate issued to: Bell Textron Inc.
441 Industrial Park Road
Piney Flats TN 37686

Certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 27 *of* Title 14, Code of Federal Reguations.

Original Product Type Certificate Number: R00008RD

Make: Bell Textron Canada Limited

Model: 505

Description of Type Design Change:

Installation of Auxiliary Fuel System in accordance with Master Drawing List, Report No. AA-21001, Revision D, dated October 25, 2023, or later FAA approved revision.
Aeronautical Accessories Rotorcraft Flight Manual Supplement, Report No. AA-21017, No Revision, dated February 15, 2024, or later FAA approved revision, is required.
Aeronautical Accessories Instructions for Continued Airworthiness, Report No. AA-21016, Revision A, dated April 20, 2023, or later FAA concurred revision, is required.

Limitations and Conditions:

See Continuation Sheet 1.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of Application: April 6, 2021 *Date Reissued:*

Date of Issuance: February 23, 2024 *Date Amended:*

By Direction of the Administrator

Signature:

John T. Bouma
ODA Lead administrator
Title: BTI ODA-710621-SW

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.120).

United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number: SR11253DS

***INSTRUCTIONS**: The transfer endorsement below may be used to notify the appropriate FAA Aircraft Certification Office of the transfer of this Supplemental Type Certificate. The FAA will reissue the certificate in the name of the transferee and forward it to him.*

Transfer Endorsement

Transfer the ownership of Supplemental Type Certificate Number: _____

***To** (Name and address of transferee):*

***From** (Name and address of grantor):*

Extent of Authority (if licensing agreement):

Date of transfer:

Signature of grantor: _____

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.120).

Supplemental Type Certificate

(Continuation Sheet)

Number: SR11253DS

Continuation Sheet 1 of 2
February 23, 2024

Limitations and Conditions (continued):

This STC is applicable to all serial numbers for Bell Textron Canada Limited Model 505.

The installer must determine whether this design change is compatible with previously approved modifications.

If the holder agrees to permit another person to use this certificate to alter a product, the holder must give the other person written evidence of that permission.

Any alteration of this certificate and/or the Type Certificate Data Sheet is punishable by a fine not exceeding $1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with Title 14 of the Code of Federal Regulations, part 21, section 21.47 (14 CFR 21.47). A transfer must be endorsed as provided on the reverse hereof. A Type Certificate holder who allows a person to use the Type Certificate to manufacture a new aircraft, aircraft engine, or propeller must provide that person with a written licensing agreement acceptable to the FAA. (Ref. 14 CFR 21.55).

Supplemental Type Certificate

(Continuation Sheet)

Number: SR11253DS

Continuation Sheet 2 of 2
February 23, 2024

Certification Basis:

Subpart B 27.171 [27-0];

Subpart C 27.301 [27-0], 27.303 [27-0], 27.305(a) [27-0], 27.307(a) [27-26], 27.337(a) [27-26], 27.561(b)(3)(c) [27-32];

Subpart D 27.601(a) [27-0], 27.603 [27-16], 27.605(a) [27-16], 27.609 [27-0], 27.610 [27-46], 27.613(a)(d) [27-26], 27.619(b) [27-0], 27.625(a) [27-35], 27.771(a)(b) [27-0], 27.773(a)(1)(b) [27-0], 27.777 [27-0], 27.855(b)(1) [27-0], 27.863(a)(b)(d) [27-16];

Subpart E 27.951(a)(b)(1) [27-9], 27.952(a)(b)(2)(e)(f) [27-30], 27.954 [27-23], 27.955(b) [27-23], 27.959 [27-0], 27.963(a)(b)(c)(d)(e)(g) [27-30] 27.965(a)(c)(d) [27-12], 27.967(a)(b)(c) [27-30], 27.969 [27-23], 27.971 [27-23], 27.973(a)(1)(3)(b) [27-30], 27.975 [27-35], 27.993 [27-2], 27.999 [27-23], 27.1045(c)(2) [27-23], 27.1141(a)(c)(e) [27-33], 27.1183(c) [27-20], 27.1185(a)(c)(d) [27-37];

Subpart F 27.1301 [27-0], 27.1305(d)(m) [27-37], 27.1309(a)(c) [27-46], 27.1321(a)(c)(d) [27-13], 27.1322(b)(c) [27-11], 27.1337(b)(1) [27-37], 27.1351(a)(b)(1)(i) [27-13], 27.1357(a)(c) [27-13], 27.1365 [27-35], 27.1367 [27-0], 27.1381 [27-0];

Subpart G 27.1501(b) [27-14], 27.1529 [27-18], 27.1541(a)(1)(b) [27-0], 27.1543(b) [27-0], 27.1555(a)(c)(1) [27-21], 27.1557(a)(c)(1)(i)(iii) [27-11], 27.1581 [27-14], 27.1583(c) [27-16], 27.1585(a)(f) [27-21];

Appendix A A27.1 [27-18], A27.2 [27-18], A27.3 [27-18], A27.4 [27-47].

- END -

Any alteration of this certificate and/or the Type Certificate Data Sheet is punishable by a fine not exceeding $1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with Title 14 of the Code of Federal Regulations, part 21, section 21.47 (14 CFR 21.47). A transfer must be endorsed as provided on the reverse hereof. A Type Certificate holder who allows a person to use the Type Certificate to manufacture a new aircraft, aircraft engine, or propeller must provide that person with a written licensing agreement acceptable to the FAA. (Ref. 14 CFR 21.55).

SUPPLEMENTARY TYPE CERTIFICATE

(*Supplemental Type Certificate*)

NUMBER: 2024S09-18

(Number)

This Certificate, issued based on Law No. 7565 "Brazilian Aeronautical Code", of December 19, 1986,
This Certificate, issued in the basis of the Law No 7565 "Código Brasileiro de Aeronáutica", dated 19 December 1986,

It is conferred on the (to): *is granted to:*
Bell Textron Inc.
441 Industrial Park Road
Piney Flats TN 37686
USA

for having the modification to the type design of the product mentioned below, observing the limitations and conditions
for having the change to the type design of the product mentioned below, with the limitations and conditions

specified requirements, satisfied with the applicable airworthiness requirements.
conditions there for as specified hereon, met the applicable airworthiness requirements.

Original Product - Type Certificate Number: 2018Q03 (ANAC)
Original Product - Type Certificate No:

Manufacturer: Bell Textron Canada Ltd.
Manufacturer:

Model(s): 505
Model(s):

DESCRIPTION OF THE MODIFICATION TO THE TYPE PROJECT:

Description of Type Design Change:

Installation of Auxiliary Fuel System in accordance with Bell Textron Canada Ltd Master Drawing List, document No. AA-21001, Rev. D, dated 25 oct. 2023, or later approved revision.

This CST validates in Brazil the STC No. SR11253DS, issued by FAA (USA).

LIMITATIONS AND CONDITIONS:

Limitations and Conditions:

See continuation sheet for applicable data.

DATES:
Dates of:

From the request: 27 Aug. 2024
Aplication:

From the issue: 12 Sep. 2024
Issuance:

From reissue:
Reissuance:

From the amendment:
Through:

Aeronautical Product Project Certification Management

Superintendence of Airworthiness

Digitally signed Certificate

Note:
(Note:)

(a) This Certificate and the technical data on the basis of which it was issued are valid until cancelled, suspended, revoked or a deadline is established by the National Civil Aviation Agency.
(This Certificate and the supporting technical data used for approval shall remain in effect until surrended, suspended, revoked or a termination date is otherwise established by the National Civil Aviation Agency.)

b) In the event of transfer of ownership of this Certificate, the transferor must fill in the box "Endorsement of Transfer", and the purchaser must send this Certificate to the General Management of Certification of Product Aeronautical to be reissued in his name.
(In case of transfer of the property of this Certificate, the grantor should fill the blanks of "Transfer Endorsement", and the transferee must remit this Certificate to the General Management of Certification of Aeronautical Product to permit reissuance of the Certificate in his name.)

TRANSFER ENDORSEMENT
(Transfer Endorsement)

I transfer ownership of this Supplemental Type Certificate to:
(I transfer the property of this Supplemental Type Certificate to:)

ACQUIRER
(Transferee)

Name:.....
(Name:)

Street:.....
(Street:)

ZIP CODE:..... **City:**..... **State:**..... **Country:**.....
(Zip:) *(City:)* *(State:)* *(Country:)*

TRANSFEROR
(Grantor)

Name:.....
(Name:)

Street:.....
(Street:)

ZIP CODE:..... **City:**..... **State:**..... **Country:**.....
(Zip:) *(City:)* *(State:)* *(Country:)*

Transfer Date: .....
(Date of Transfer:)

Signature of the Transferor: .....
(Signature of the Grantor:)

Name:.....
(*Name:*)

Position:.....
(*Function:*)

ANAC
AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL

Continuation Sheet
(*Continuation Sheet to*)

SUPPLEMENTARY TYPE CERTIFICATE

(*Supplemental Type Certificate*)

NUMBER: 2024S09-18

(Number)

LIMITATIONS AND CONDITIONS:
Limitations and Conditions:

I. The approval of this type design change should not be extended to other rotorcraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in Type Design, will introduce no adverse effect upon the airworthiness of that rotorcraft.

II. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

III. Operation must be performed in accordance with the FAA Approved Aeronautical Accessories Rotorcraft Flight Manual Supplement, document No. AA-21017, No Revision, dated 15 feb. 2024, or later approved revision.

IV. The maintenance of the aircraft shall be performed in accordance with the FAA accepted Aeronautical Accessories Instructions for Continued Airworthiness (ICA), document No. AA-21016, Rev. A, dated 20 apr. 2023 or later accepted revision.

V. Serial numbers eligible: 65011 and subsequent.

VI. The Certification Basis for parts changed or affected by this change, as specified on the FAA STC No. SR11253DS, is applicable.

VII. A copy of this Certificate and the Supplement referred on item III above shall be maintained as part of the permanent records of the modified.

----------END----------

Document electronically signed by **Mário Igawa**, **Aeronautical Product Project Certification Manager**, on 09/13/2024, at 11:53 am, according to Brasília official time, based on article 4 of Decree No. 10,543, of November 13, 2020.

Document electronically signed by **Marco Aurélio Bonilauri Santin**, **Superintendent of Airworthiness, Substitute**, on 09/13/2024, at 16:16, according to official time in Brasilia, based on article 4, of Decree No. 10,543, of November 13, 2020.

The authenticity of this document can be checked on the https://sei.anac.gov.br/sei/autenticidade website, informing the verification code **10539282** and the CRC code **8E4155BB.**

Transport Canada Transports Canada

Department of Transport

Supplemental Type Certificate

This approval is issued to:

Bell Helicopter Textron Inc.
441 Industrial Park Rd.
Piney Flats, Tennessee
United States of America 37686

Number: SH24-29
Issue No.: 1
Approval Date: September 06, 2024
Issue Date: September 06, 2024

Responsible Office:	Québec
Aircraft/Engine Type or Model:	Bell 505
Canadian Type Certificate or Equivalent:	H-112
Description of Type Design Change:	Installation of Auxiliary Fuel System in accordance with FAA STC SR11253DS

Installation/Operating Data,
Required Equipment and Limitations:

Installation of Auxiliary Fuel System in accordance with Aeronautical Accessories Master Drawing List, Report No. AA-21001, Revision D, dated October 25, 2023, or later FAA approved revision.

Maintenance of Auxiliary Fuel System in accordance with Aeronautical Accessories Instructions for Continued Airworthiness, Report No. AA-21016, Revision A, dated April 20, 2023, or later FAA accepted revision.

Operation of Auxiliary Fuel System in accordance with Aeronautical Accessories Rotorcraft Flight Manual Supplement, Report No. AA-21017, No Revision, dated February 15, 2024, or later FAA approved revision.

Basis of certification: As per TCDS H-112.

— End —

Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the modified product.

DocuSigned by:
Kenneth Clayton
D6AF6AE0732A49A...

Kenneth Clayton
For Minister of Transport

Canada

SUPPLEMENTAL TYPE CERTIFICATE

10085188

This Certificate/Approval is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation and in accordance with Commission Regulation (EU) No. 748/2012 to

BELL TEXTRON, Inc.

441 INDUSTRIAL PARK ROAD
PINEY FLATS TN 37686
UNITED STATES OF AMERICA

and certifies that the change in the type design for the product listed below with the limitations and conditions specified meets the applicable Type Certification Basis and, if applicable, environmental protection requirements when operated within the conditions and limitations specified below:

Type Certificate Number: EASA.IM.R.520
Type Certificate Holder: BELL TEXTRON CANADA LIMITED
Type: 505
Model: 505
Original STC Number: FAA STC SR11253DS

Description of Design Change:
Installation of Auxiliary Fuel System

EASA Certification Basis:
The Type and OSD Certification Bases (CB) for the original product remains applicable to this certificate/ approval.
The requirements for environmental protection and the associated certified noise and/ or emissions levels of the product are unchanged and remain applicable to this certificate/approval without any impact on the noise database.

Associated Technical Documentation:
Master Drawing List, Report No. AA-21001, Revision D, dated October 25, 2023;
Aeronautical Accessories Installation Instructions, Report No. AA-21092, Revision A, dated February 28, 2023;
Aeronautical Accessories Rotorcraft Flight Manual Supplement, Report No. AA-21017, No Revision, dated

See Continuation Sheet(s)

For the European Union Aviation Safety Agency

Cologne, Germany, 27 May 2025

Fabrice LEGAY
Section Manager
Medium & Light Rotorcraft

Task Number: 60092125
BELL TEXTRON, Inc. - 300952

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February 15, 2024;
Aeronautical Accessories Instructions for Continued Airworthiness, Report No. AA-21016, Revision A, dated April 20, 2023
or later revisions of the above listed document(s) approved/accepted on behalf of EASA in accordance with the Technical Implementation Procedures of EU/ USA Bilateral Agreement.

Limitations/Conditions:
Prior to installation of this change/repair it must be determined that the interrelationship between this change/repair and any other previously installed change and/ or repair will introduce no adverse effect upon the airworthiness of the product.

- End -

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Civil Aviation Authority
United Kingdom

SUPPLEMENTAL TYPE CERTIFICATE

UK.STC.00369
Revision 0

This approval is issued by the Civil Aviation Authority, acting in accordance with Assimilated Regulations (EU) 2018/1139 and (EU) No. 748/2012.

BELL TEXTRON INC.
441 Industrial Park Road
Piney Flats
Tennessee
United States

Type Certificate Holder:	BELL TEXTRON CANADA LTD.
Type Certificate Number:	EASA.IM.R.520 (FAA R00008RD)
Type:	Bell Textron Canada Limited Model 505
Model:	505
Original Design Approval Reference:	FAA STC SR11253DS
Title/Description of Change:	INSTALLATION OF AUXILIARY FUEL SYSTEM ON BELL TEXTRON CANADA LIMITED 505 MODEL HELICOPTER
Applicant's Change Definition:	Bell 505 Project Specific Certification Plan AA21000 Rev A
Date of application:	29 August 2024
Change Certification Basis:	The Certification Basis for the original product remains applicable to this certificate/ approval. The requirements for environmental protection and the associated certified noise and/ or emissions levels of the original product are unchanged and remain applicable to this certificate/approval.
Associated Technical Documentation:	• Master Drawing List, Report No. AA-21001, Revision D, dated October 25, 2023 • Aeronautical Accessories Rotorcraft Flight Manual Supplement, Report No. AA-21017, No Revision, dated February 15, 2024. • Aeronautical Accessories Instructions for Continued Airworthiness, Report No. AA-21016, Revision A, dated April 20, 2023. or later revisions of the above listed document(s) approved/ accepted on behalf of CAA in accordance with the Implementation Procedures for Airworthiness of the UK/USA Bilateral Agreement.

Limitations and Conditions:

1. The installer must determine whether this change to the type certificate is compatible with previously approved configurations.
2. This certificate and associated data shall remain valid until surrendered, withdrawn, or otherwise terminated.
3. Other:
   - This STC is applicable to all serial numbers for Bell Textron Canada Limited Model 505.
   - If the holder agrees to permit another person to use this certificate to alter a product, the holder must give the other person written evidence of that permission.

Revision Record

Revision:	Date:	Reason for Revision:
0	31 January 2025	Initial Issue

Statement of Approval

The Civil Aviation Authority certifies that the change to the type certificate listed above complies with the applicable airworthiness and environmental protection requirements specified subject to the limitations and conditions specified above.

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Signed, for and on behalf of the Civil Aviation Authority

Name: Nigel Brant

Date of issue: 31 January 2025

Position: Initial Airworthiness Surveyor – General Aviation Unit