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Beechcraft King Air 90 Series

AUXILIARY FUEL TANKS

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

ICA Manual No. 26005-30
Revision 1
September 1, 2014

RECORD OF REVISIONS

Rev. No.	Date Inserted	By	Rev. No.	Date Inserted	By	Rev. No.	Date Inserted	By

When a revision to this manual is issued, insert the revised or added pages into the manual. Record the revision number, date inserted, and the initials of the person responsible for the update on this page.

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REVISION LOG

Rev. No.	Rev. Date	Change Description	Page(s) Affected
1	9/1/14	ADDED KING AIR 90 SERIES ELIGIBILITY	ALL

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LIST OF EFFECTIVE PAGES

Section	Pages	Rev. No.	Date
Title	Title	1	9/1/14
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INTRODUCTION

GENERAL

This ICA Manual provides the Instructions for Continued Airworthiness (ICA) for the equipment and modifications to Beechcraft King Air 90 series airplanes approved under FAA Supplemental Type Certificate (STC) number SA11142SC.

ASSOCIATED DRAWINGS

The following CenTex Aerospace drawings show the installation of equipment for this STC:

Number	Title
26005-2000	INSTALLATION, AUXILIARY FUEL TANK
26005-3000	INSTALLATION, NACELLE FAIRING, AUXILIARY FUEL TANK ASSEMBLY
26005-4000	INSTALLATION, FUEL SYSTEM MOD., AUXILIARY FUEL TANK ASSEMBLY
26005-5001	WIRING DIAGRAM, FUEL LEVEL INDICATION, AUXILIARY FUEL TANK
26005-6000	INSTALLATION, FUEL LEVEL INDICATION, AUXILIARY FUEL TANK ASSEMBLY
26005-7000	INSTALLATION, PLACARDS, AUXILIARY FUEL TANK ASSEMBLY
26005-8000	TANK REMOVAL & NACELLE SKIN REINSTALLATION

DESCRIPTION OF EQUIPMENT

The equipment installed on King Air 90 series aircraft for this STC is described below. Illustrations are found in Appendix A of this manual.

A. Placards:

New placards mark the fuel tank fillers, nacelle filler access & fuel drains are added as part of this conversion. See Chapter 11 for maintenance information.

B. Auxiliary Fuel Tanks:

The auxiliary fuel tanks are 90-gallon all aluminum tanks mounted on the upper wing behind the engine nacelles. The tanks are secured to the upper wing structure with five (5) AN4 (1/4 inch dia.) bolts & to the existing aft nacelle structure with sixteen (16) AN525-832 (#8) screws. See Chapter 28 for maintenance information.

C. Fuel System Modification:

The existing fuel system is modified so that fuel from the auxiliary tanks can flow into the ship's center section fuel tanks by gravity feed. Fuel supply lines from the bottom aft of the auxiliary tanks are routed into the landing gear wheel well and connected to existing fuel lines between the existing wing tank check valves & center section fuel tanks (see Figures 1 & 1a). Check valves are installed between the auxiliary tanks, center section tanks, and outboard tanks to prevent fuel from migrating into the outer wing tanks or back into the auxiliary tanks. Drain valves in the aft wheel well nacelles allow draining of the fuel lines. See Chapter 28 for maintenance information.

The auxiliary fuel tanks have two (2) vent lines (inlet & outlet) mounted at the bottom of the tanks. The vent lines are open at the top just forward the tank's fuel filler adapter. These vent lines are installed in-line with the ship's existing vent system so that ship's vent system enters one of the tanks' vent lines & exits through the other line and into the ship's vent system. The tank vent lines are

spliced into the existing vent system behind the main spar in the main landing gear wheel wells. See Chapter 28 for maintenance information.

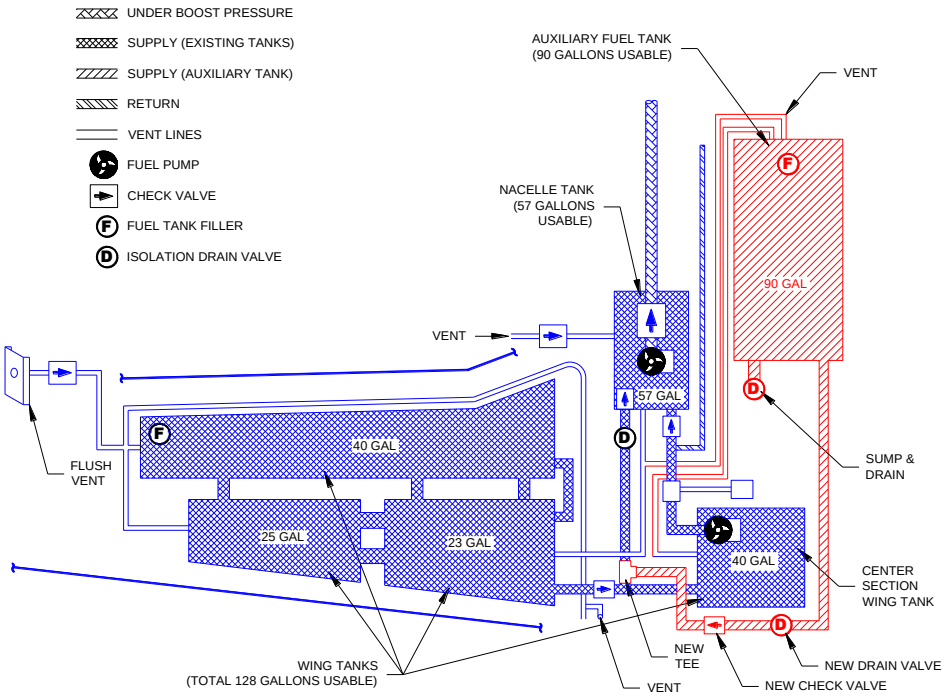

Figure 1. Fuel System Schematic

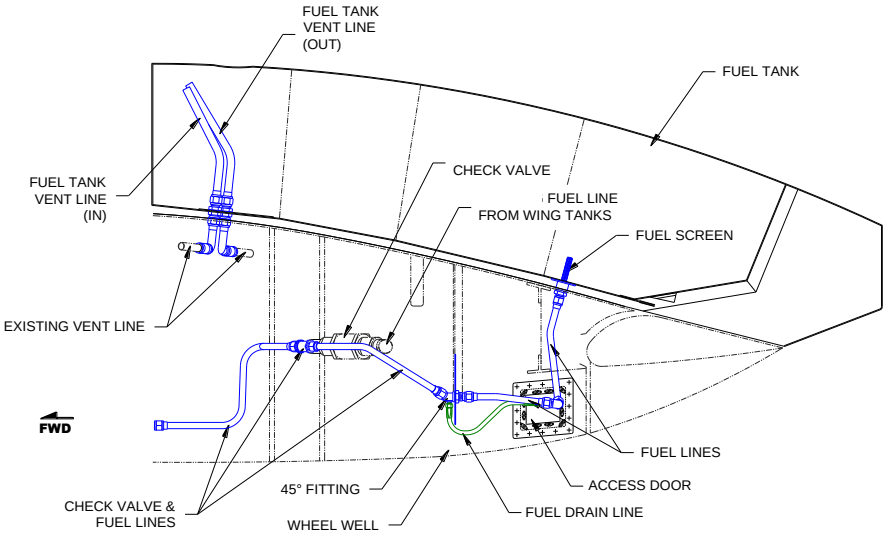

Figure 1a. Fuel System (LH side looking inboard)

D. Fuel Level Indication System:

The fuel level indication system consists of 5 optical level switches installed in each fuel tank & a fuel level indicator panel mounted on the fuel management panel on the pilot's side wall. The switches

use infra-red light to determine whether the sensor is submerged in fuel or is exposed in air. Each tank has a switch mounted at the 90 gallon, 75 gallon, 50 gallon, 20 gallon, & 0 gallon levels.

The fuel level indicator has a left and right column of green LEDs that are labeled 90, 75, 50, 20 & 0 to correspond to the switches mounted in the tank. The top four LEDs will illuminate when their corresponding switches are submerged in fuel and turn off when the switches are above the fuel line. The bottom LED is a bi-color LED that stays green when the switch is submerged in fuel and changes to amber when the switch is above the fuel line (fuel tank empty). See Chapter 28 for maintenance information.

F. Fuel Tank Fairing:

The fuel tank fairings are installed to create a smooth transition between the auxiliary fuel tanks and the nacelle firewalls. Mounting brackets are installed on top of the wing to secure the sides of the fairings. The fairings are mounted to the mounting brackets, auxiliary fuel tank & nacelle firewall with AN525-832 (#8) screws, nuts and/or clip nuts.

An access door is mounted on top of each fairing for access to the nacelle tank filler caps. See Chapter 54 for maintenance information.

MAINTENANCE

Airworthiness limitations, inspection procedures, servicing information, and maintenance procedures provided in this manual apply to the equipment and modifications associated with this STC and supplement the Beechcraft King Air 90 Series Maintenance Manual. This manual uses the following chapter numbering in order to group STC equipment according to aircraft system. This manual provides maintenance information in the following chapters:

CHAPTER	TITLE
4	Airworthiness Limitations
5	Time Limits/Maintenance Checks
11	Placards and Markings
12	Servicing
24	Electrical Power
28	Fuel
54	Nacelles

For standard aviation maintenance practices, such as cutting, splicing, and replacing wire, routing and securing lines, inspecting electrical wiring and equipment, etc. use the techniques and practices found in FAA Advisory Circular AC 43.13-1B/2B or later FAA approved revision.

REPLACEMENT PARTS

Appendix A of this manual includes illustrated parts lists for the equipment specified herein.

WIRING DIAGRAMS

Appendix B of this manual includes wiring diagrams for the systems specified herein.

WEIGHT & BALANCE

See Aircraft Flight Manual Supplement for weight & balance information.

MANUAL UPDATES

A copy of this ICA Manual is provided with the STC upon installation. When changes to this ICA Manual are made, CenTex Aerospace will provide updates to the registered airplane owner by email or direct mail. Contact CenTex Aerospace to make other arrangements. If there is a change in airplane ownership or operator, please notify CenTex Aerospace in order to keep all contact information current.

The changes to the ICA manual will be identified by revision number and date in the Revision Log. CenTex will provide the owner with the revised pages, a Revision Log, and an updated List of Effective Pages. The owner, or responsible party, will add or replace the pages affected by the revision and make an entry in the Record of Revisions in order to document the update to the ICA Manual is accomplished.

ASSISTANCE

For assistance with continuing airworthiness issues or any other issues related to this STC, contact Centex Aerospace at the following address or telephone number.

Centex Aerospace Inc.
7925 Karl May Drive
Waco, Texas 76708
(254) 752-4290
http://www.centex.aero/

CHAPTER 4

AIRWORTHINESS LIMITATIONS

GENERAL

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

AIRWORTHINESS LIMITATIONS

For King Air 90 airplanes with CenTex Aerospace auxiliary fuel tanks installed under STC SA11142SC, there are no changes or additions to the original Airworthiness Limitations established by Beechcraft.

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CHAPTER 5

TIME LIMITS/MAINTENANCE CHECKS

GENERAL

In addition to the inspection times and intervals specified in the Beechcraft King Air 90 Series Maintenance Manual, follow the maintenance schedule below for equipment installed as part of this STC. The maintenance schedule below follows the inspection program specified in the Beechcraft King Air 90 Series Maintenance Manual.

INSPECTION AND MAINTENANCE TIME TABLE

ITEM	PHASE INSP				BIENNIAL INSP	
	1	2	3	4	INT	COMP
Cockpit placard	X	X	X	X	X	X
Exterior placards	X	X	X	X	X	X
Fuel drains	X	X	X	X		X
Fuel level indication wiring	X	X	X	X		X
Fuel plumbing	X					X
Fuel tanks	X	X	X	X		X
Fuel tank fairings		X		X		X
Fuel tank screens		X		X		X
Fuel vents	X	X	X	X		X

OVERHAUL AND REPLACEMENT SCHEDULE

ITEM	OVERHAUL OR REPLACE
Fuel drain hoses	Replace every 10 years

SCHEDULED INSPECTION PROGRAM

In conjunction with the normal airplane phase or biennial inspection programs, use the inspection sheet on the following page to document inspections and maintenance of equipment installed as part of this STC according to the time table above.

AUXILIARY FUEL TANK EQUIPMENT INSPECTION

Owner _____ Total Time _____ Total Cycles _____

W.O. No. _____ Date In _____ Date Out _____

Serial No. _____ Reg. No. _____ TS Aux Tanks Installed _____ Cycles _____

Inspection (1,2,3,4,INT,COMP): _____

A. PILOT COMPARTMENT	REFERENCE	MECH	INSP
1. COCKPIT PLACARDS - Check fuel level placard for proper adhesion, visibility, signs of damage.	26005-30 Ch. 11		
2. FUEL LEVEL INDICATOR - Check for proper operation, failed or malfunctioning LEDs, and security of attachment. Check connectors & wiring for damage, chafing and security.	26005-30 Ch. 28		
B. WING SECTION			
1. AUXILIARY FUEL TANKS – Check for signs of damage & leaks. Check mounting hardware for security & proper installation.	26005-30 Ch. 28		
2. FUEL TANK FAIRINGS - Check for security, missing fasteners, & signs of damage.	26005-30 Ch. 54		
3. FUEL SYSTEM - Check for leaks, security of attachment, & signs of damage. Check fuel screen for blockage. Check fuel drain valves for proper operation.	26005-30 Ch. 28		
4. EXTERNAL PLACARDS - Check placards for proper adhesion, visibility, signs of damage.	26005-30 Ch. 11		
5. FUEL LEVEL INDICATION - Check optical level switches for damage & leaks at mounting holes. Check connectors & wiring for damage, chafing and security.	26005-30 Ch. 28		
C. OPERATIONAL INSPECTION			
1. FUEL LEVEL INDICATION SYSTEM - Conduct the "System Functional Test."	26005-30 Ch. 28		

INSPECTION COMPLETED

I certify that this inspection was performed in accordance with the CenTex Auxiliary Fuel Tank Equipment Inspection Program and that the airplane is approved for return to service:

MECHANIC: _____ CREW CHIEF: _____

INSPECTOR: _____ DATE: _____

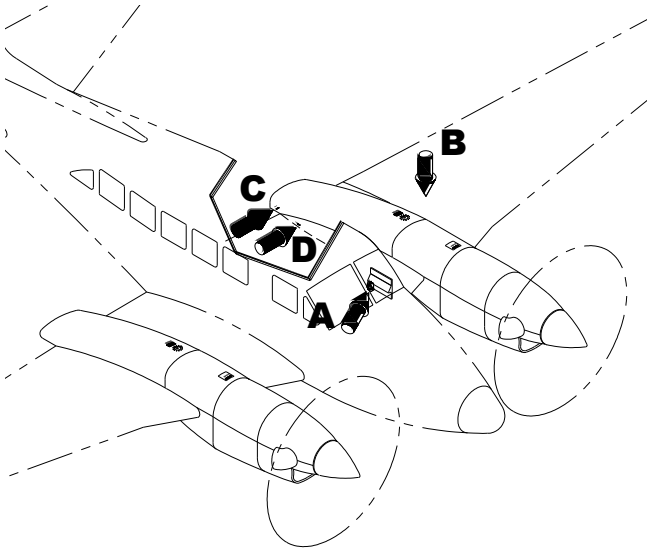
CHAPTER 11

PLACARDS AND MARKINGS

PLACARDS AND MARKINGS - MAINTENANCE PRACTICES

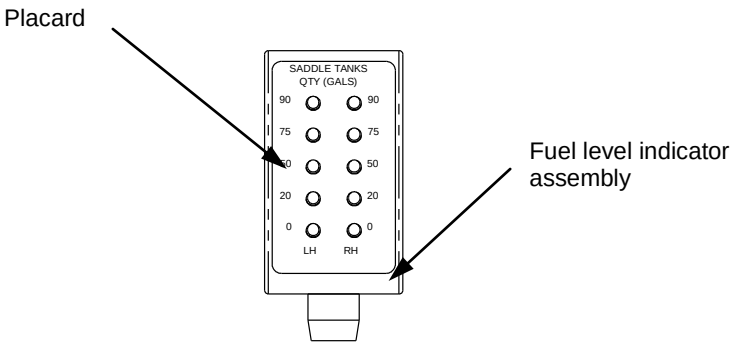
The placards and markings added to the airplane for this STC are located in the areas indicated below. Interior placards are in location A. Exterior placards are in locations B, C, D.

Inspect placards and markings for damage and wear. Replace when placards or markings become illegible or start peeling or delaminating.



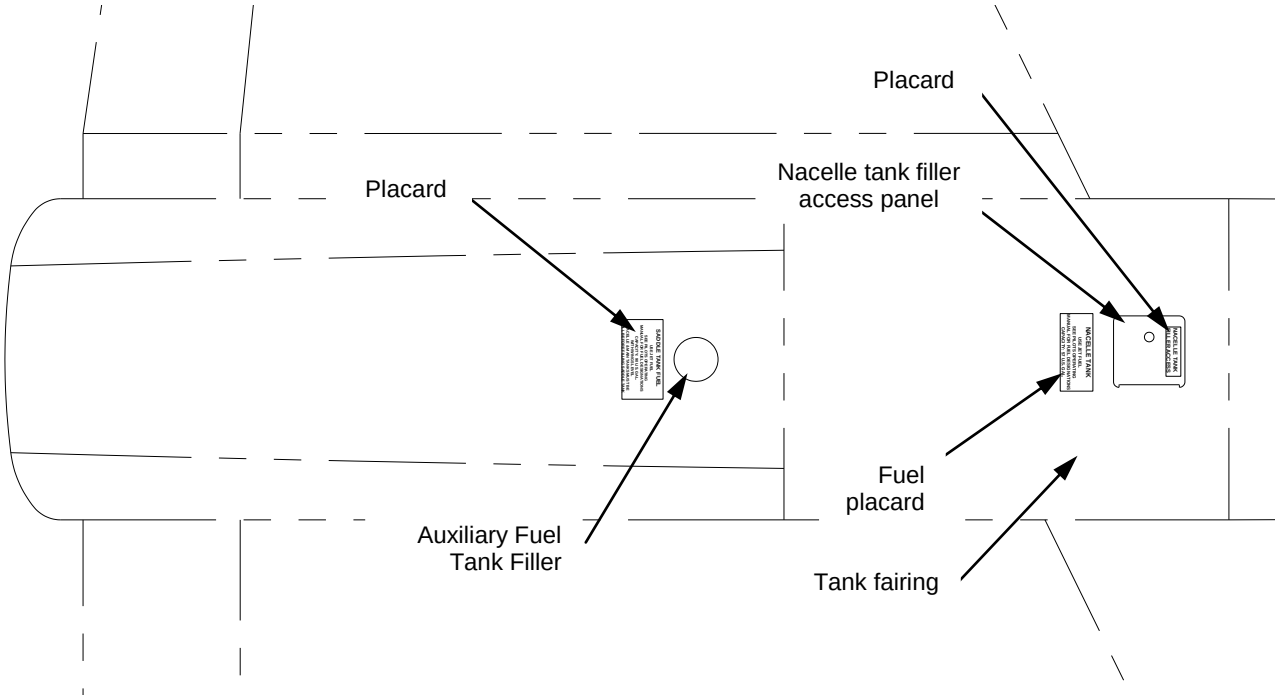
INTERIOR PLACARDS AND MARKINGS

Location A – Fuel Panel:

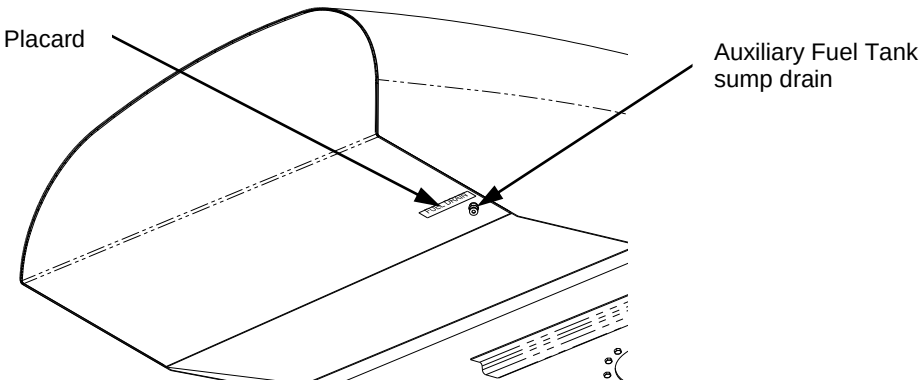


EXTERIOR PLACARDS AND MARKINGS

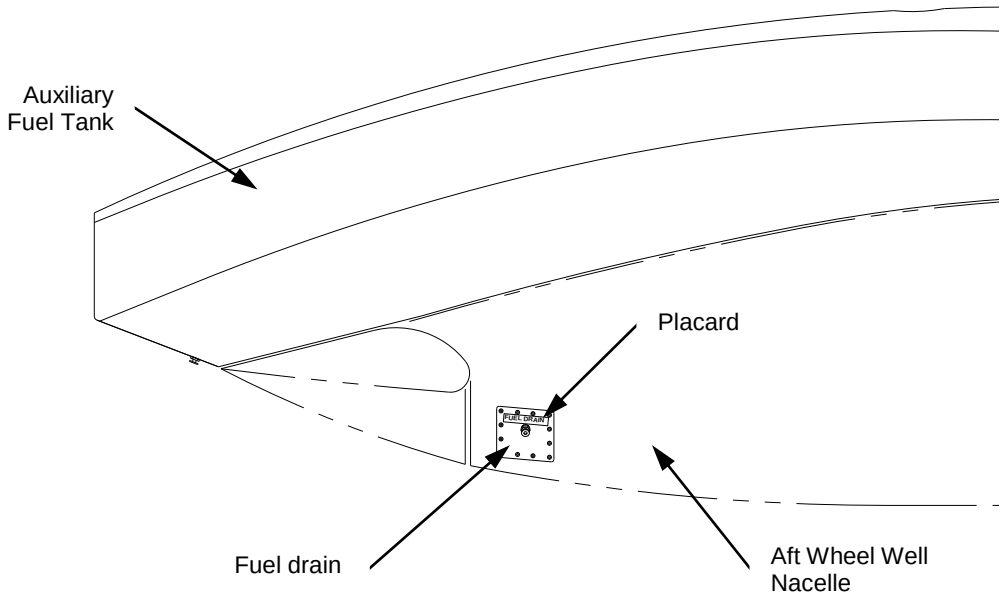
Location B – Auxiliary Fuel Tank Filler & Nacelle Tank Filler Access Door:



Location C – Bottom Aft of Auxiliary Fuel Tank Sump Drain:



Location D – Inboard Wheel Well Nacelle Drain:



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CHAPTER 12

SERVICING

GENERAL

In addition to the servicing information and procedures specified in the Beechcraft King Air 90 Series Maintenance Manual, follow the procedures below for equipment installed as part of this STC.

SERVICING - MAINTENANCE PRACTICES

FUEL

Always fill auxiliary fuel tank last. Verify nacelle & wing tanks are full before filling auxiliary fuel tank.

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CHAPTER 24

ELECTRICAL POWER

ELECTRICAL LOAD DISTRIBUTION - MAINTENANCE PRACTICES

In addition to the information specified in the Beechcraft King Air 90 Series Maintenance Manual, the following electrical load data applies for the equipment installed as part of this STC.

ELECTRICAL LOAD UTILIZATION CHARTS

The equipment installed as part of this STC adds the following continuous loads.

ELECTRICAL EQUIPMENT

Equipment	No. Units Used	Load Ea. Unit Amps DC	Total Load Amps DC	Total Load per System Amps DC	Notes
FUEL LEVEL INDICATION SYSTEM				0.30	1
Optical level switches	10	0.008	0.08		
LED indicators	10	0.020	0.20		
Relay	2	0.010	0.02		

Notes:
1) The fuel level indication system is added to the existing fuel gauge circuit.

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CHAPTER 28

FUEL

FUEL SYSTEM – TROUBLESHOOTING

If the auxiliary tank fuel system is not working properly, consult Chart 1 below for possible problem indicators, causes and solutions. Use this chart in conjunction with the fuel maintenance practices.

Chart 1. Troubleshooting Fuel System

Indication	Possible Cause	Remarks
1) Fuel from auxiliary tank not transferring to center wing tanks.	a) Finger screen is blocked	a) Clean or replace finger screen
	b) Check valve not opening	b) Repair or replace check valve
2) Fuel from auxiliary tank slow in transferring to center wing tanks.	a) Finger screen partially blocked	a) Clean or replace finger screen
	b) Check valve not opening fully	b) Clean, repair or replace check valve

FUEL - MAINTENANCE PRACTICES

FUEL SYSTEM

The auxiliary tanks may need to be checked for dirt or debris to prevent restrictions to the fuel flow. If noticeable amount of debris is found at the fuel screen, it is advisable to inspect the check valve inside wheel well as well. To check the fuel screen, follow the steps below:

FUEL SCREEN CHECK & REPLACEMENT

a. Lower wing flaps (full down).
b. Make sure all electrical power is disconnected from the airplane.
c. Make sure existing wing tank is empty or below 1/8 capacity
d. Drain all fuel from the auxiliary fuel tank.
e. Remove the bottom panel on fuel tank.
f. Disconnect wire bundles at 3-pin connectors.
g. Remove the bottom access panel & seal.
h. Check the fuel screen for any damage and remove any debris.
i. Inspect access panel seal for damage. Replace as necessary.
j. Reinstall access panel & seal with twenty (20) bolts & secure with safety wire.
k. Reinstall bottom panel on fuel tank.

a. Should the fuel screen need replacing, follow instructions under FUEL TANK REMOVAL to remove the fuel tank. The fuel screen is replaced from the bottom of the tank.
b. Remove & replace the fuel screen assembly.

c. Perform a leakage test. See section under FUEL TANK LEAKAGE TEST. Tighten or reseal screen assembly as necessary.

d. Reinstall fuel tank following instructions under FUEL TANK INSTALLATION.

CHECK VALVE INSPECTION & REPLACEMENT

a. Make sure all electrical power is disconnected from the airplane.

b. Make sure existing wing tank is empty

c. Drain all fuel from the auxiliary fuel tank.

d. Drain fuel from drain valve located in the aft inboard side of the wheel well.

e. Remove check valve & check for dirt or debris. Clean as necessary.

f. Verify the swing valve operates freely when check valve is tilted down.
Note: Swing valve used in check valve do not have spring.

g. Reinstall or replace check valve as necessary. Make sure the word “HINGE” is on top & horizontal. Make sure check valve arrow points inboard.

STORAGE - MAINTENANCE PRACTICES

FUEL TANK REMOVAL

a. Lower flaps (full down)

b. Make sure all electrical power is disconnected from airplane.

c. Make sure existing wing tank is empty or below 1/8 capacity.

d. Drain all fuel from auxiliary tank through sump drain.

e. Drain fuel from drain valve located in the aft inboard side of the wheel well.

f. Remove fuel tank fairing (see Chapter 54).

g. Disconnect bonding straps from fairing brackets.

h. Disconnect wire bundle at the six pin connector.

i. Disconnect vent lines to the auxiliary tank (accessed through the wheel well)

j. Disconnect fuel supply line from the auxiliary fuel tank (accessed behind the aft spar).

k. Remove #8 screws securing the front of the auxiliary tank to the aft nacelle structure.

l. Remove five (5) AN4 bolts attaching the auxiliary fuel tank to the upper wing. Three (3) bolts are located mid wing & two (2) are located behind the aft spar.

m. Lift tank up & remove tank from wing.

n. Protect vent & fuel fittings with caps & plugs.

FUEL TANK INSTALLATION

a. Install alignment pins in two aft mounting holes. Fabricate pins from AN4 bolts (see Figure 2).

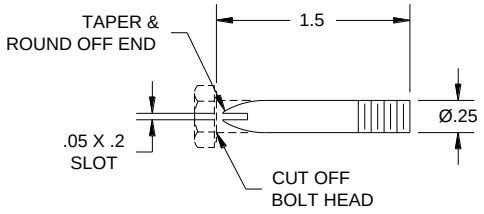

Figure 2. Alignment pin

b. Remove protective caps & plug from vent & fuel fittings.

c. Carefully lower auxiliary tank onto wing, making sure the two alignment pins are inserted into the bolt holes on the wing without excessive force. When aligned properly, the weight of the tank should be sufficient to insert the pins into the bolt holes.

d. Use an awl if necessary to align the mounting holes in the forward mounting bracket with the holes in the aft nacelle structure. Install with #8 screws & nuts (16 each minimum)

e. Install auxiliary tank to wing with three (3) AN4H bolts at the mid wing location. Remove the alignment pins at the aft spar location with a flat head screw driver. Install two (2) AN4 bolts & lock tab at this location. Torque all bolts 50 – 70 inch pounds. Secure with safety wire. Aft two (2) bolts are secured with the lock tab.

f. Connect fuel supply line to fuel fitting on tank.

g. Connect two (2) vent lines to vent fittings on tank.

h. Reconnect wire bundle at the six pin connector. Secure connectors with wire tie(s).

i. Reconnect bonding straps to fairing brackets (2 places per tank).

j. Reinstall fuel tank fairing (see Chapter 54).

FUEL TANK LEAKAGE TEST

a. Make sure all openings are sealed or capped off.

b. Fill tank with fuel and check for leaks.

c. Fuel tank may also be leak tested with shop air.

   1. Verify tank openings are sealed or capped off except one open fitting.
   2. Insert a rubber hose into fitting and seal around hose.
   3. Pressurize tank with 1 - 2 psi shop air.
   4. Spray mild soapy water solution along seams, rivet heads, and around any recently replaced components and check for bubbles.

d. Repair and or reseal any leaks found.

INDICATION – TROUBLESHOOTING

If the fuel level indication is not working properly, consult Chart 2 below for possible problem indicators, causes and solutions.

Chart 2. Troubleshooting Fuel Level Indicating System

Indication	Possible Cause	Remarks
1) Fuel level LEDs not illuminated.	a) Aircraft power is OFF	a) Turn on main battery power
	b) Existing fuel indicator circuit breaker is OFF	b) Depress circuit breaker
	c) Blown fuse in fuel level indicator assembly	c) Replace fuse or repair indicator assembly
2) Some of the LED(s) not illuminated	a) Fuel level in tank is below fuel level switch	a) Condition is normal
	b) Faulty LED	b) Replace
	c) Faulty fuel level switch	c) Replace

INDICATION - MAINTENANCE PRACTICES

FUEL LEVEL INDICATING & FUNCTIONAL TEST

Since the fuel level indicator and optical switches are activated every time the ship's power is turned on, a functional test is made every time the fuel tank is filled. To determine if the switches are functioning properly, observe the fuel level indicator when the tank is empty or is being filled. Figure 3 below shows the LEDs illuminated at different fuel levels.

Fuel level ind. LEDs	Fuel Tank Qty (gallons)				
	90	75	50	20	0
90	ON				
75	ON	ON			
50	ON	ON	ON		
20	ON	ON	ON	ON	
0	ON	ON	ON	ON	ON

Figure 3. Fuel level indication system functional test

When a fuel tank is empty, only the bottom or "0" gallon LED is illuminated. The LED is amber in color. As fuel tank is filled, the "0" gallon LED changes from amber to green. The rest of the LEDs will illuminate as the fuel level increases. If any LED remains off when the fuel level is above its corresponding switch sensor, there is a malfunctioning switch or LED. For the "0" gallon LED, if the color does not change from green to amber when the fuel tank is empty, the switch is faulty.

OPTICAL SWITCH REMOVAL (UPPER LEVEL SWITCHES – 3 EA)

The following are steps in the removal & replacement of any of the three upper level optical level switches. These switches are mounted in the forward bulkhead of the auxiliary fuel tank.

a. Make sure all electrical power is disconnected from the airplane.

b. Make sure existing wing tank is empty or below 1/8 capacity

c. Drain all fuel from the auxiliary fuel tank.

d. Remove the fuel tank fairing (see Chapter 54).

e. Disconnect suspected switch wire bundle at 3-pin connector.

f. Remove the fuel filler cap & remove the screws attaching the filler neck adapter assembly to the tank. Care must be taken when separating the filler neck adapter from the tank as some prying may be necessary.

g. Reach in through the filler hole and loosen the 12mm hex nut from the switch.

h. Remove the switch from the outside of the tank.

OPTICAL SWITCH INSTALLATION (UPPER LEVEL SWITCHES – 3 EA)

The following are steps in the removal & replacement of any of the three upper level optical level switches.

a. Apply a thin coat of PRC PR-1428-B-2 Class A sealant to the mounting face of the optical switch. Be careful not to get sealant on the glass cone of the switch. Should sealant contact the glass cone, wipe of sealant with cloth dipped in acetone.

b. Insert switch into hole & secure with washer and the included seal & nut. Tighten nut ½ turn beyond hand tight. **Do not over tighten**. **Do not scratch glass cone**.

c. Clean mating surfaces on filler neck adapter & fuel tank with acetone & clean cloth. Inspect tank and remove any sealant loosened from the cleaning process.

d. Apply a thin coat of PRC PR-1428-B-2 Class A sealant to the mounting faces of the filler neck adapter & fuel tank shell.

e. Align filler neck adapter holes with fuel tank holes and secure with twelve (12) #10 countersunk screws. Wipe off excess sealant.

f. Perform a leakage test. See section under FUEL TANK LEAKAGE TEST. Tighten fasteners or reseal components as necessary.

g. Reinstall fuel tank fairing (see Chapter 54).

OPTICAL SWITCH REMOVAL (LOWER LEVEL SWITCHES – 2 EA)

The following are steps in the removal & replacement of any of the two lower level optical level switches. These switches are mounted in the aft bulkhead of the auxiliary fuel tank.

a. Lower wing flaps (full down).

b. Make sure all electrical power is disconnected from the airplane.

c. Make sure existing wing tank is empty or below 1/8 capacity

d. Drain all fuel from the auxiliary fuel tank.

e. Remove the bottom panel on fuel tank.

f. Disconnect wire bundles at 3-pin connectors.

g. Remove the bottom access panel & seal. Lowest level switch is attached to access panel.

h. Loosen the 12mm hex nut from the switch and remove switch. Remove upper switch from outside of fuel tank.

OPTICAL SWITCH INSTALLATION (LOWER LEVEL SWITCHES – 2 EA)

The following are steps in the removal & replacement of any of the three upper level optical level switches.

a. Apply a thin coat of PRC PR-1428-B-2 Class A sealant to the mounting face of the optical switch. Be careful not to get sealant on the glass cone of the switch. Should sealant contact the glass cone, wipe of sealant with cloth dipped in acetone.

b. Insert switch into hole & secure with washer and the included seal & nut. Tighten nut ½ turn beyond hand tight. **Do not over tighten**. **Do not scratch glass cone**.

c. Inspect access panel seal for damage. Replace as necessary.

d. Reinstall access panel & seal with twenty (20) bolts.

e. Perform a leakage test. See section under FUEL TANK LEAKAGE TEST. Tighten fasteners or reseal components as necessary.

f. Secure access panel bolts with safety wire.

g. Reinstall bottom panel on fuel tank.

CHAPTER 54
NACELLES

NACELLES - MAINTENANCE PRACTICES

FUEL TANK FAIRING REMOVAL

The following are steps in the removal & replacement of the fuel tank fairings.

a. Remove existing access panels on the inboard & outboard sides of the nacelle.
b. Remove #8 screws & nuts through access panels.
c. Remove remaining screws securing fairing to nacelle firewall, side brackets and auxiliary fuel tank.

FUEL TANK FAIRING INSTALLATION

The fairing installation process is the opposite of the removal process.

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APPENDIX A

BEECHCRAFT KING AIR 90 SERIES AUXILIARY FUEL TANKS

ILLUSTRATED PARTS CATALOG

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ILLUSTRATED PARTS CATALOG

SCOPE

This section provides an illustrated list of the equipment installed under STC SA11142SC for 65-A90-1 & 65-A90-4 series aircraft. The information contained herein should be used as reference only to help with ordering replacement parts when necessary. The STC drawings contain the FAA approved data and may supersede the information in the parts lists until this section is updated to reflect the latest drawings.

FORMAT

This Illustrated Parts Catalog (IPC) is broken down into systems, installations, assemblies & detail parts. The example below shows the basic format. The following terms used in the parts lists are defined below.

ITEM – the item number in the parts list corresponds to the item number in the illustration.

PART NUMBER – lists the part number of the item. The number can be a CTA part number, a vendor number, or a mil-spec number.

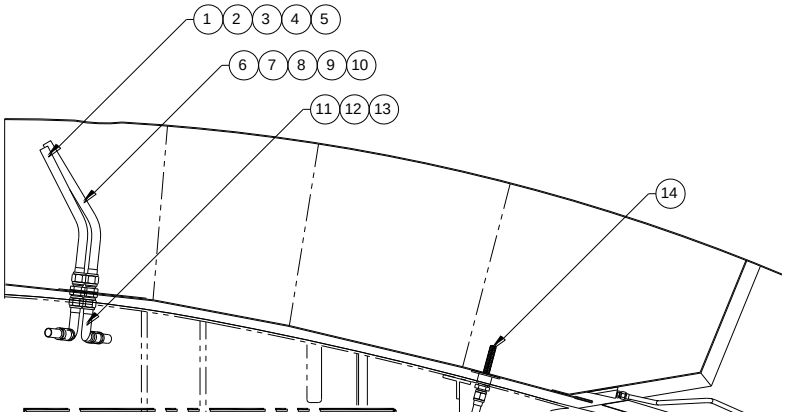
NOMENCLATURE – name of the part and if it is a detail part, an assembly or installation.

EFFECTIVITY – if listed, the serial numbers of the aircraft eligible for the specific part installation. If the parts are eligible for installation on all serial number King Air 90s, the column is left blank.

UNITS/ASSY – quantity of the parts used in each system installation per aircraft.

EXAMPLE

The example shows how parts are illustrated and listed by installation, assembly, etc.



ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
	26005-4000-1	INSTALLATION, FUEL SYSTEM, LH		1
	26005-4000-2	INSTALLATION, FUEL SYSTEM, RH		1
1	26005-4002-3	. TUBE ASSEMBLY		1
		ATTACHING PARTS		
2	AN832-12D	. . BULKHEAD UNION		1
3	AN960-1716	. . WASHER		1
4	AN924-12D	. . NUT		1

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ILLUSTRATED PARTS CATALOG

26005-2000
FUEL TANKS

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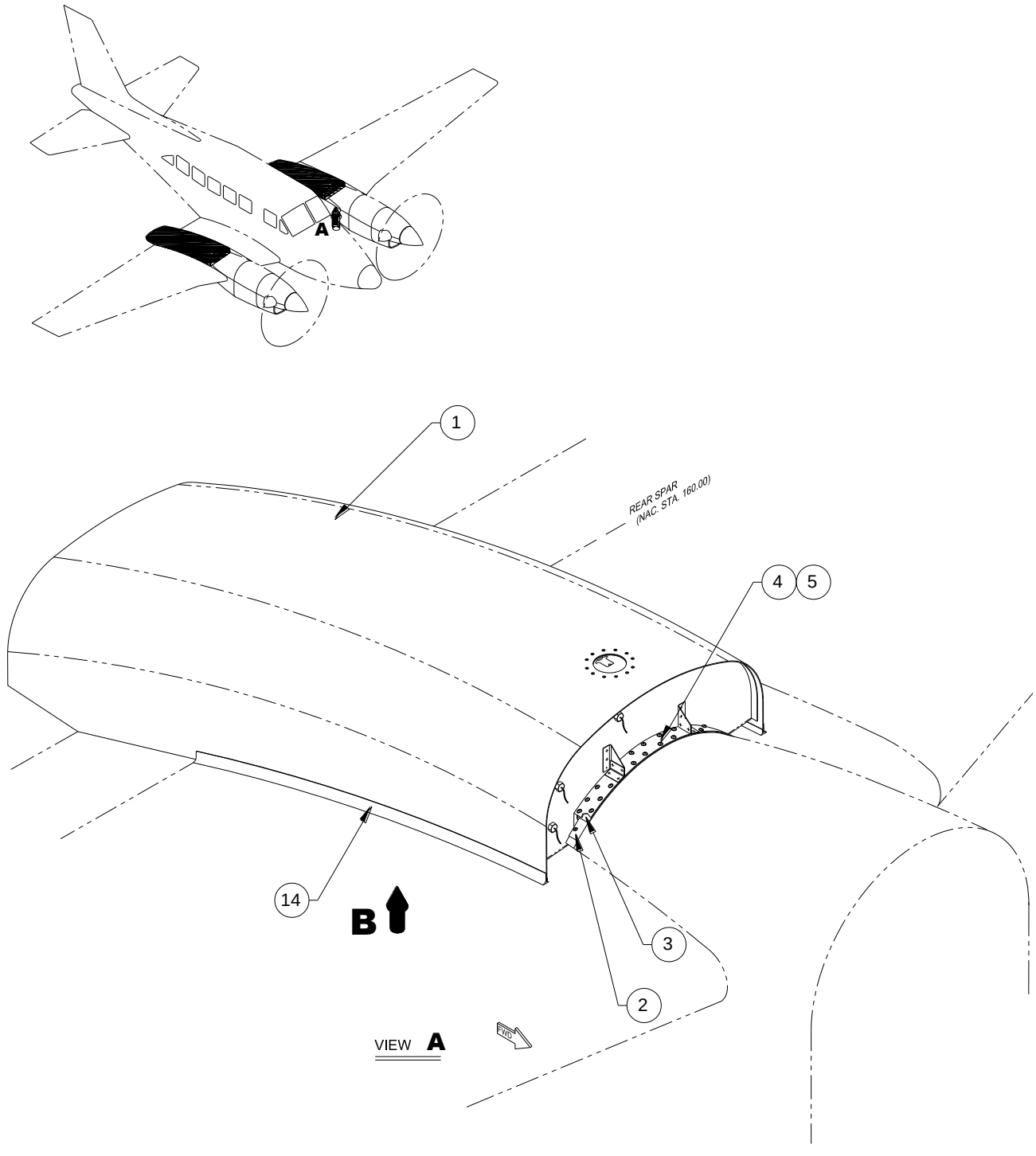
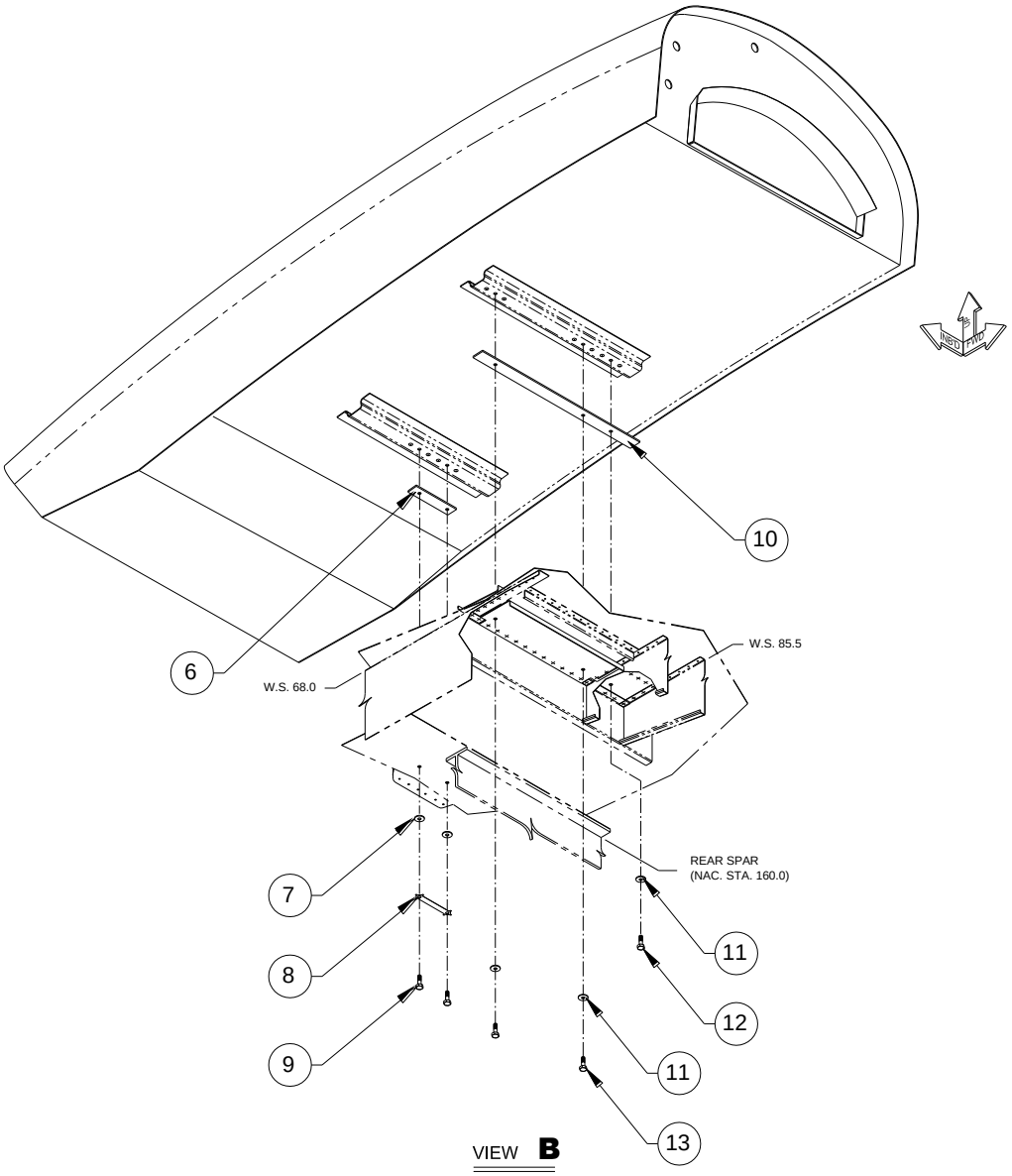
ILLUSTRATED PARTS CATALOG



26005-2000-1/-2 FUEL TANKS, SHEET 1 OF 2

ILLUSTRATED PARTS CATALOG



26005-2000-1/-2 FUEL TANKS, SHEET 2 OF 2

ILLUSTRATED PARTS CATALOG

ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
	26005-2000-1	INSTALLATION, FUEL TANK,LH		1
	26005-2000-2	INSTALLATION, FUEL TANK, RH		1
1	26005-2001-1	. FUEL TANK ASSEMBLY, LH		1
	26005-2001-2	. FUEL TANK ASSEMBLY, RH		1
		ATTACHING PARTS		
2	26005-2008-8	. . SHIM		1
	AN526-632R6	. . .SCREW		2
	AN960-6	. . .WASHER		2
	AN365-632	. . .NUT		2
3	26005-2011-13	. . CHAFING STRIP		1
4	AN525-832R8	. . SCREW		16
	AN960-8	. . WASHER (OPTIONAL)		16
5	AN365-832	. . NUT		16
	130007	. . CLIP NUT (ALTERNATE)		A/R
		-------*-------		
6	26005-2011-11	. CHAFING STRIP		1
7	AN970-4	. WASHER		2
8	26005-	. LOCK TAB		1
9	AN4H-10A	. BOLT		2
10	26005-2011-12	. CHAFING STRIP		4
11	AN970-4	. WASHER		3
12	AN4H-10A	. BOLT		1
13	AN4H-12A	. BOLT		2
14	WR-8988	. SEAL		A/R

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ILLUSTRATED PARTS CATALOG

26005-3000
FUEL TANK FAIRING

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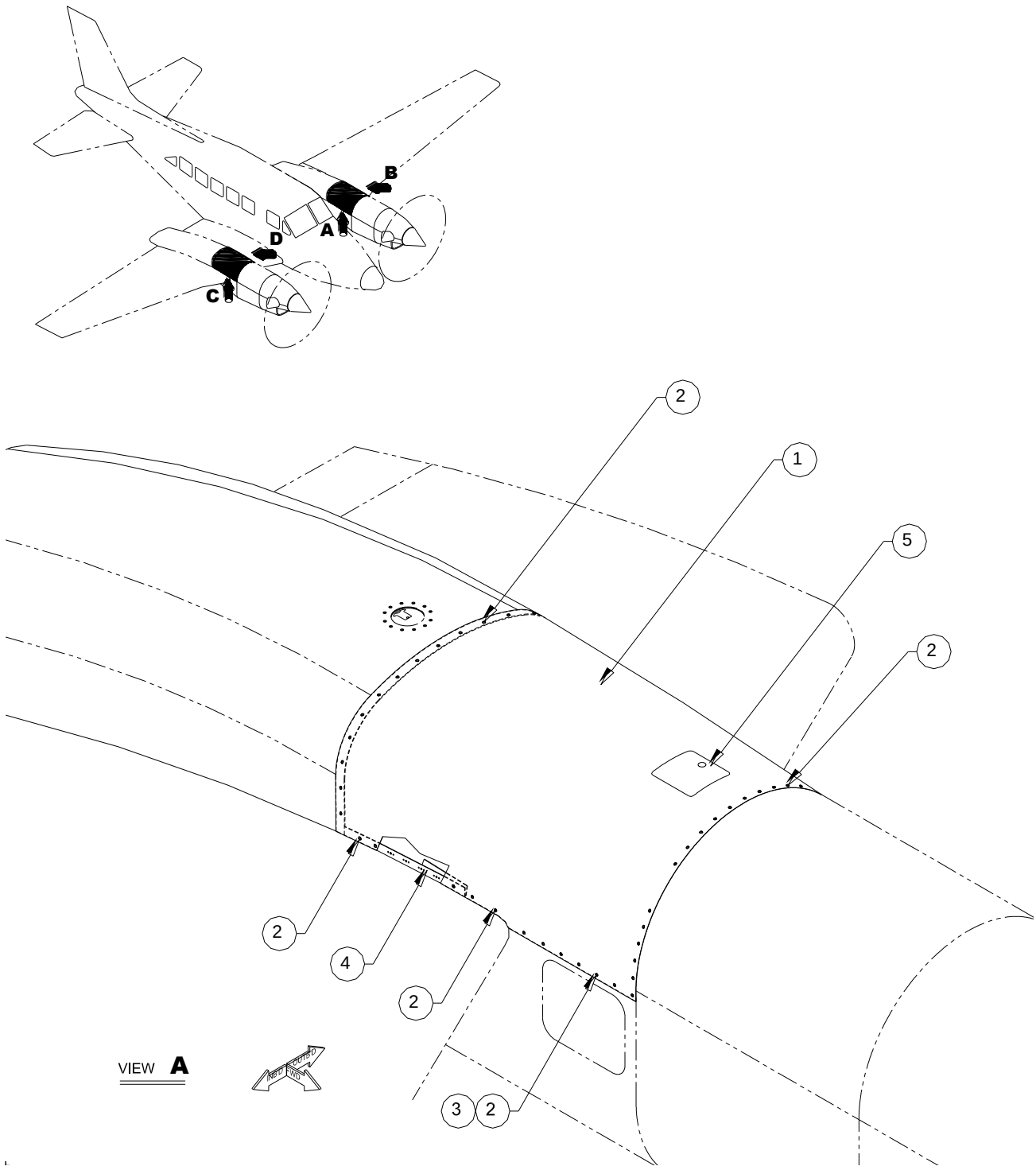
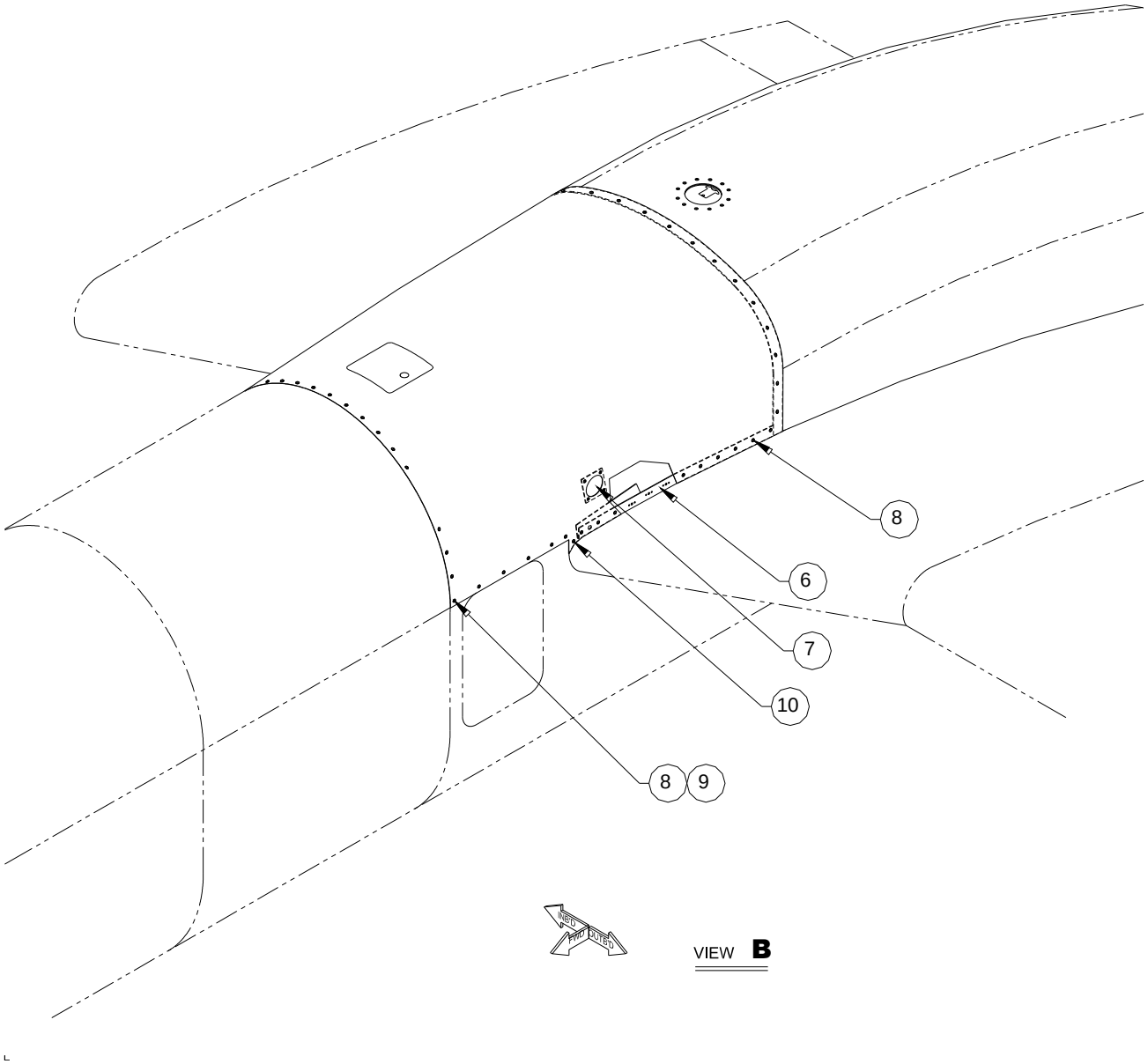
ILLUSTRATED PARTS CATALOG



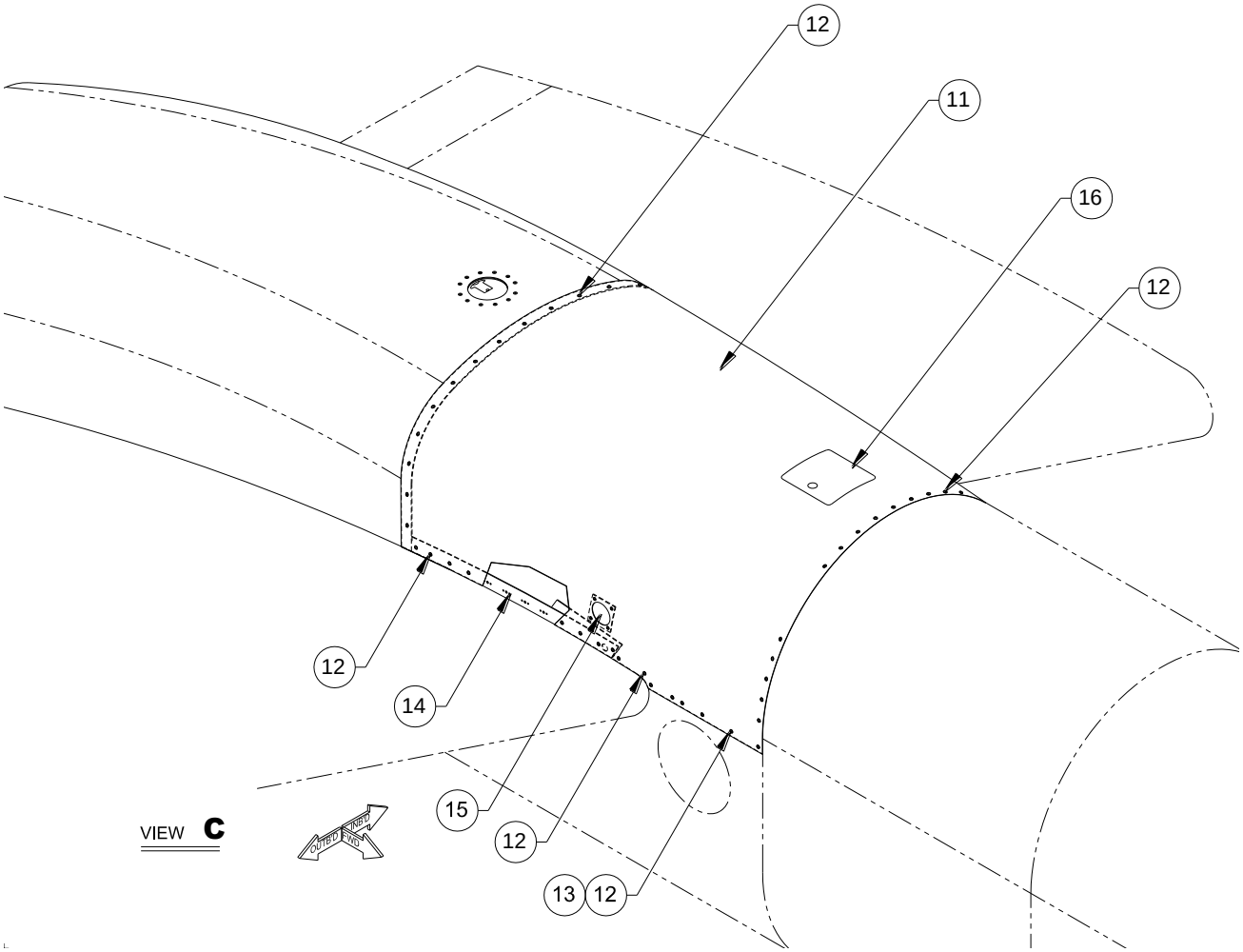
26005-3000-1/-2 FUEL TANK FAIRING, SHEET 1 OF 4

ILLUSTRATED PARTS CATALOG



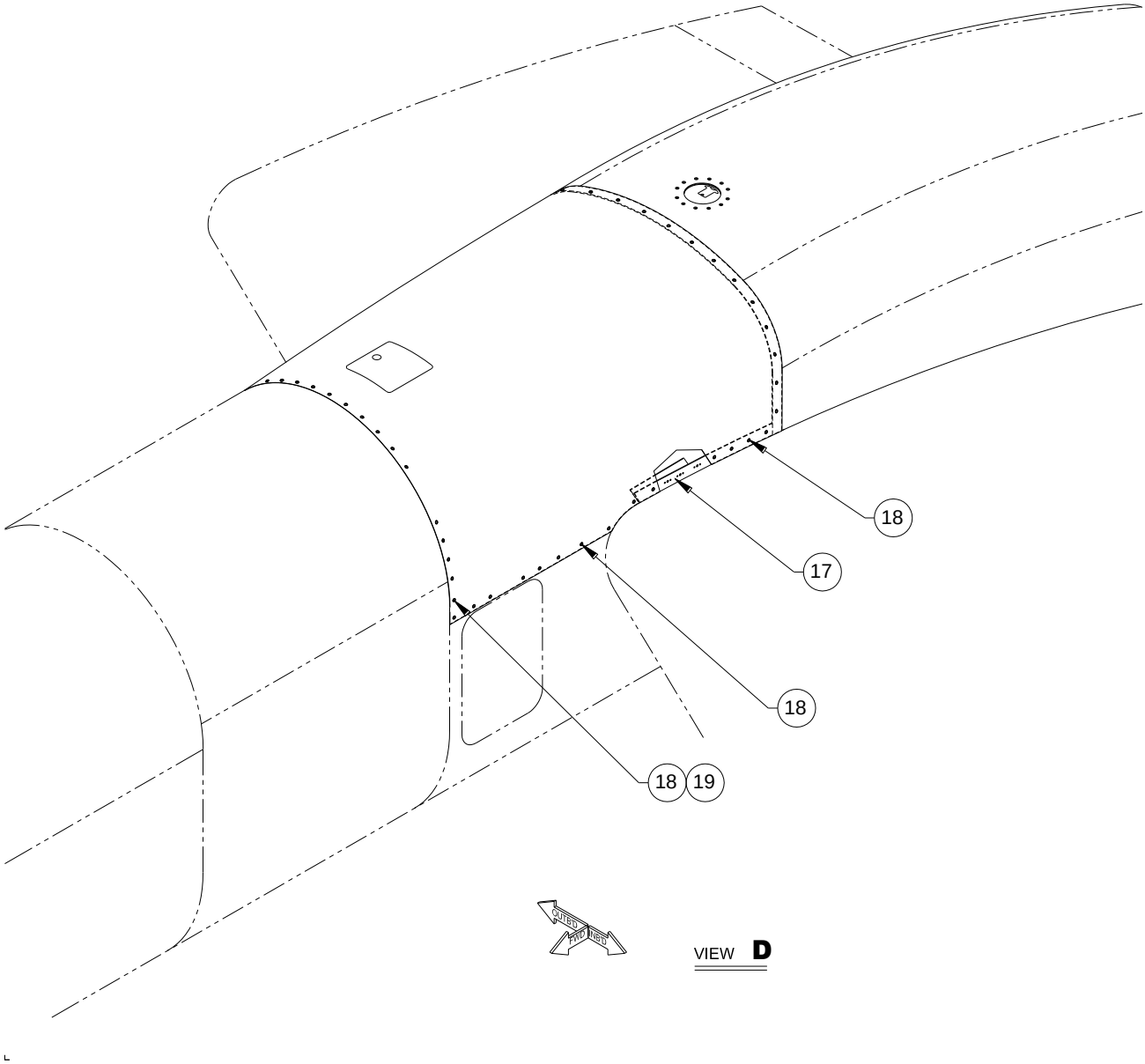
26005-3000-1/-2 FUEL TANK FAIRING, SHEET 2 OF 4

ILLUSTRATED PARTS CATALOG



26005-3000-1/-2 FUEL TANK FAIRING, SHEET 3 OF 4

ILLUSTRATED PARTS CATALOG



26005-3000-1/-2 FUEL TANK FAIRING, SHEET 4 OF 4

ILLUSTRATED PARTS CATALOG

ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
	26005-3000-1	INSTALLATION, FUEL TANK FAIRING, LH		1
	26005-3000-2	INSTALLATION, FUEL TANK FAIRING, RH		1
1	26005-3005-1	. FAIRING, LH		1
		ATTACHING PARTS		
2	AN525-832R8	. . SCREW		53
	AN960-8	. . WASHER		11
3	MS21044N08	. . NUT		11
		-------*-------		
4	26005-3002-1	. BRACKET ASSEMBLY, LH INB'D		1
		ATTACHING PARTS		
	MS27039-1-08	. . SCREW		3
	MS27039-08-08	. . SCREW		1
		-------*-------		
5	26005-3004-2	. ACCESS DOOR		1
6	26005-3002-2	. BRACKET ASSEMBLY, LH OUTB'D		1
		ATTACHING PARTS		
	MS27039-1-08	. . SCREW		5
	MS27039-08-08	. . SCREW		1
		-------*-------		
7	26005-3003-1	. LENS		1
		ATTACHING PARTS		
	AN526-632R6	. . SCREW		4
	MS21044N06	. . NUT		4
		-------*-------		
8	AN525-832R8	. SCREW		21
9	MS21044N08	. NUT		9
	AN960-8	. WASHER		9
10	AN525-10R8	. SCREW		1
11	26005-3005-2	. FAIRING, RH		1
		ATTACHING PARTS		
12	AN525-832R8	. . SCREW		51
	AN960-8	. . WASHER		10
13	MS21044N08	. . NUT		10
		-------*-------		
14	26005-3002-4	. BRACKET ASSEMBLY, RH OUTB'D		1
		ATTACHING PARTS		
	MS27039-1-08	. . SCREW		5
	MS27039-08-08	. . SCREW		1
		-------*-------		

ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
15	26005-3003-1	. LENS		1
		ATTACHING PARTS		
	AN526-632R6	. . SCREW		4
	MS21044N06	. . NUT		4
		-------*-------		
16	26005-3004-2	. ACCESS DOOR		1
17	26005-3002-3	. BRACKET ASSEMBLY, RH INB'D		1
		ATTACHING PARTS		
	MS27039-1-08	. . SCREW		3
	MS27039-08-08	. . SCREW		1
		-------*-------		
18	AN525-832R8	. SCREW		23
	AN960-8	. WASHER		12
19	MS21044N08	. NUT		12

ILLUSTRATED PARTS CATALOG

26005-4000
FUEL SYSTEM

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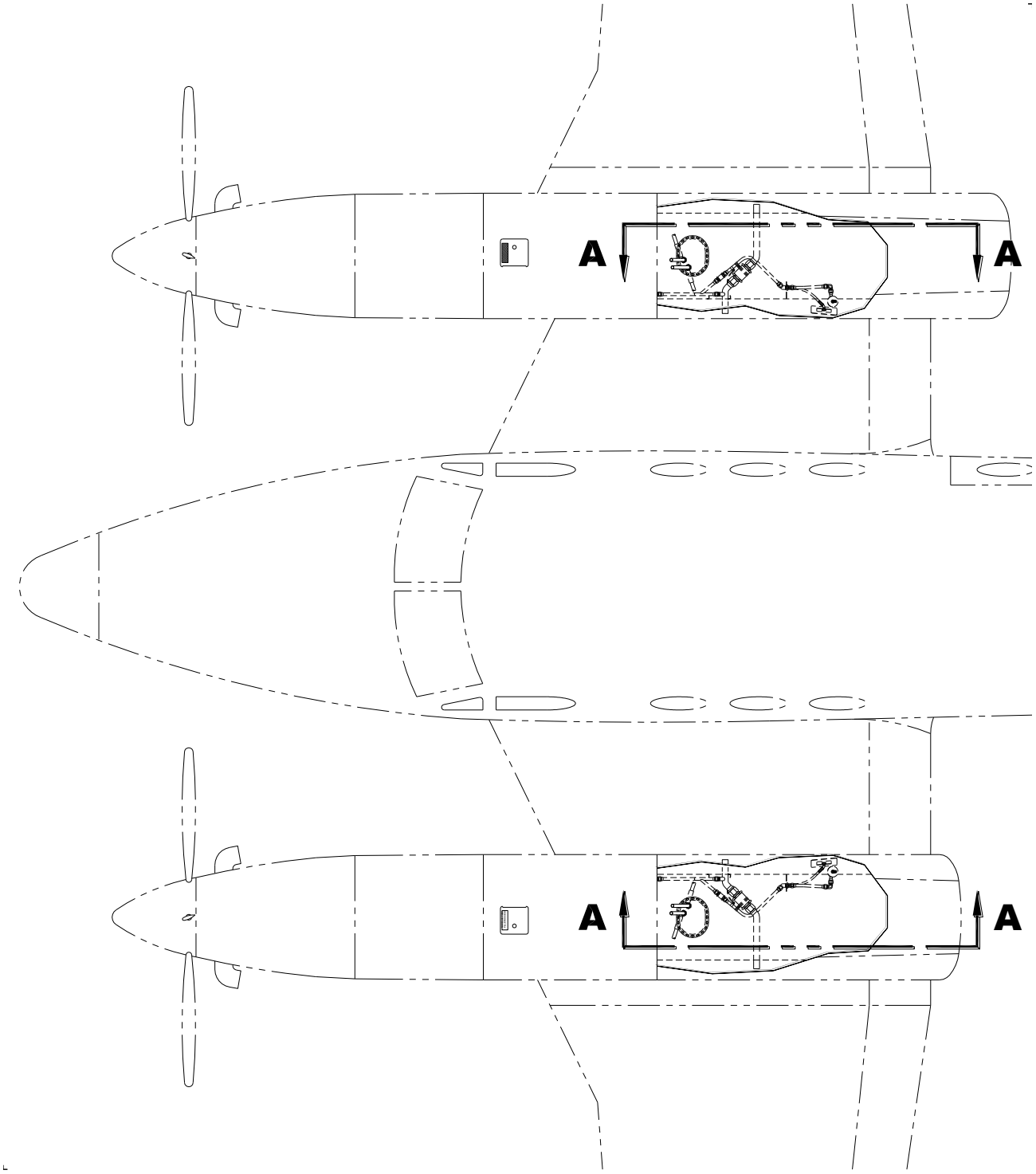
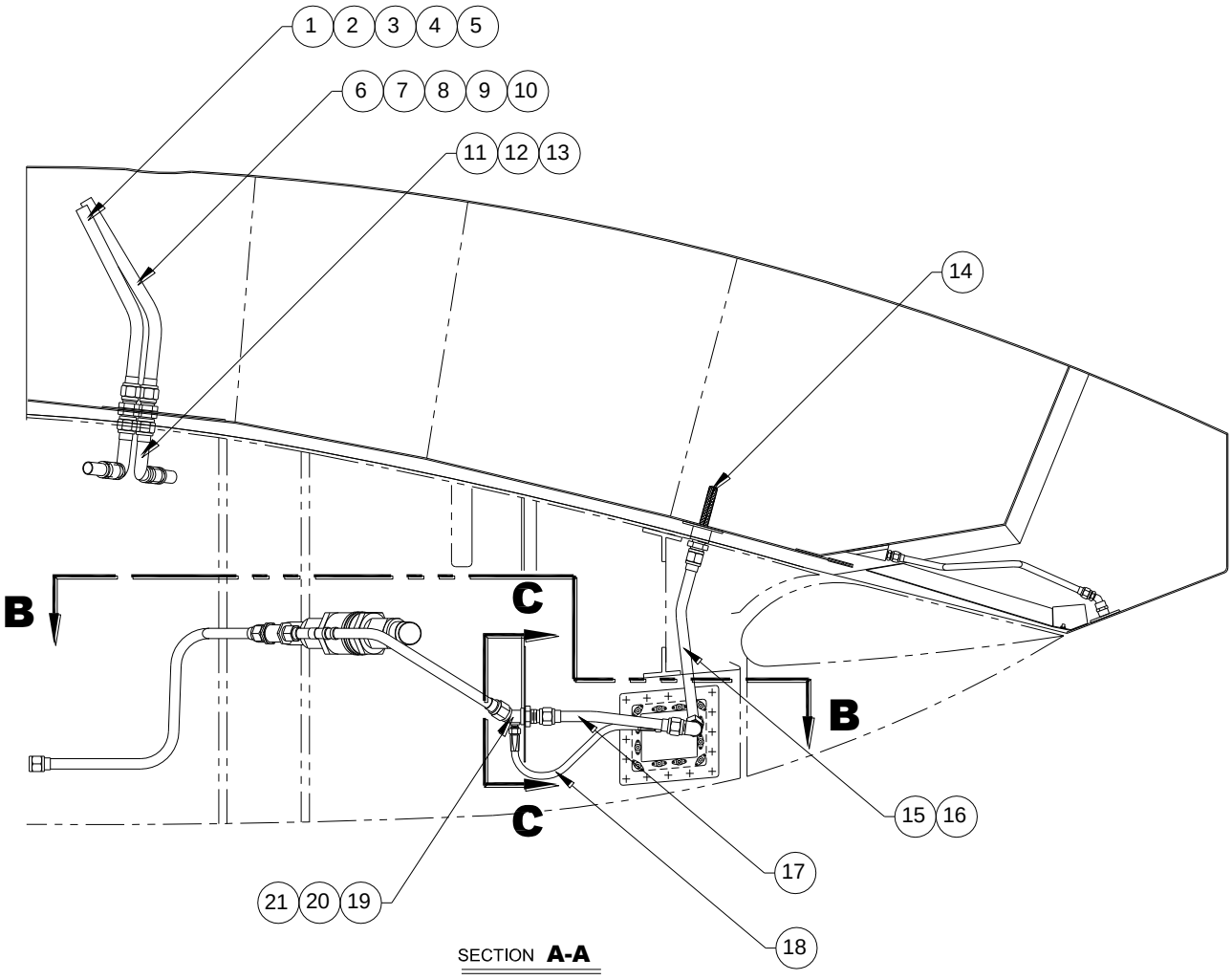
ILLUSTRATED PARTS CATALOG



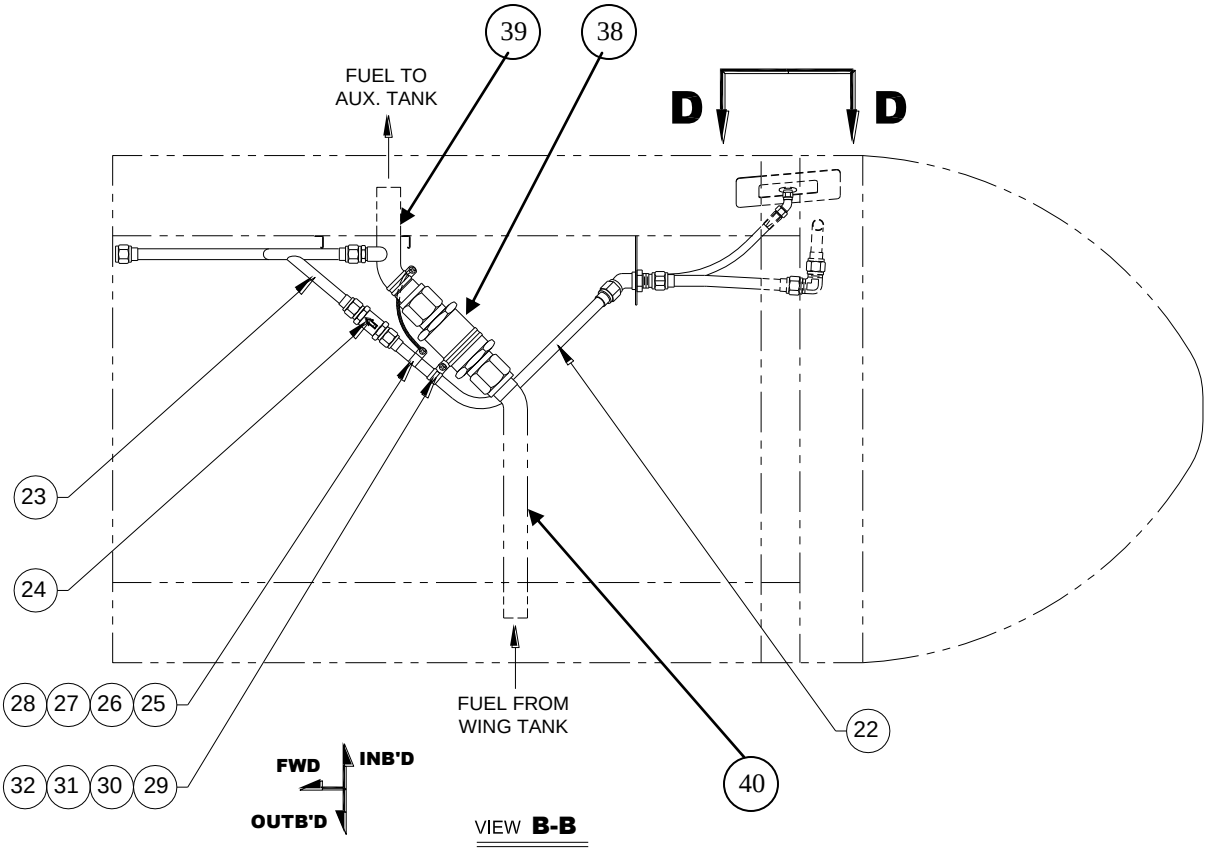
26005-4000-1/-2 FUEL SYSTEM, SHEET 1 OF 3

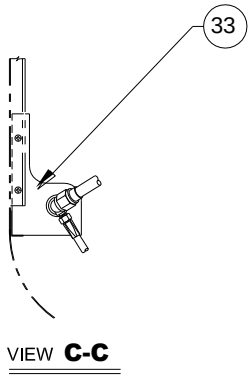
ILLUSTRATED PARTS CATALOG

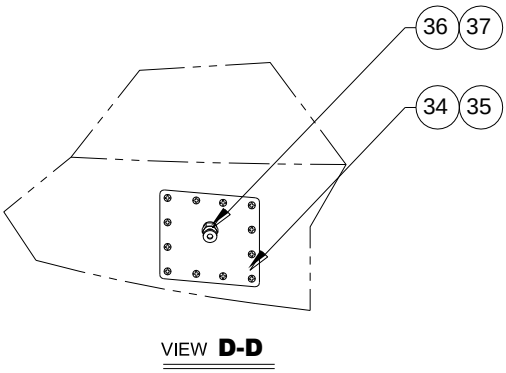


26005-4000-1/-2 FUEL SYSTEM, SHEET 2 OF 3

ILLUSTRATED PARTS CATALOG







26005-4000-1/-2 FUEL SYSTEM, SHEET 3 OF 3

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ILLUSTRATED PARTS CATALOG

ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
	26005-4000-1	INSTALLATION, FUEL SYSTEM, LH		1
	26005-4000-2	INSTALLATION, FUEL SYSTEM, RH		1
1	26005-4002-3	. TUBE ASSEMBLY		1
		ATTACHING PARTS		
2	AN832-12D	. . BULKHEAD UNION		1
3	AN960-1716	. . WASHER		1
4	MS92513-119	. . O-RING		1
5	AN924-12D	. . NUT		1
		-------*-------		
6	26005-4002-4	. TUBE ASSEMBLY		1
		ATTACHING PARTS		
7	AN832-12D	. . BULKHEAD UNION		1
8	AN960-1716	. . WASHER		1
9	MS92513-119	. . O-RING		1
10	AN924-12D	. . NUT		1
		-------*-------		
11	26005-4003-1	. TUBE ASSEMBLY		2
		ATTACHING PARTS		
12	2231-12	. . HOSE		2
13	200-16H	. . CLAMP		4
		-------*-------		
14	26005-4005-1	. SCREEN ASSEMBLY		1
15	26005-4008-1	. TUBE ASSEMBLY		1
16	AN821-10D	. ELBOW		1
17	26005-4007-1	. TUBE ASSEMBLY		1
18	130001-4S-0152	. HOSE ASSEMBLY		1
19	26005-4001-1	. FITTING ASSEMBLY, LH		1
	26005-4001-2	. FITTING ASSEMBLY, RH		1
		ATTACHING PARTS		
20	AN960-816L	. . WASHER		1
21	AN924-10D	. . NUT		1
		-------*-------		
22	26005-4010-1	. TUBE ASSEMBLY		1
23	26005-4006-1	. TUBE ASSEMBLY, LH		1
	26005-4006-2	. TUBE ASSEMBLY, RH		1
24	26005-4012-1	. CHECK VALVE		1
25	AN724D10	. CLAMP		1
26	MS25083-1BB6	. JUMPER ASSEMBLY		1
27	MS27039-1-09	. SCREW		2

ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
28	AN363-1032	. NUT		2
29	MS21919DG10	. CLAMP		1
30	MS21919DG44	. CLAMP		1
31	MS27039-1-09	. SCREW		1
32	AN363-1032	. NUT		1
33	26005-4004-4	. BRACKET		1
		ATTACHING PARTS		
	MS27039-1-09	. . SCREW (EXISTING)		2
	AN363-1032	. . NUT (EXISTING)		2
		-------*-------		
34	26005-4004-1	. ACCESS PANEL ASSEMBLY		1
		ATTACHING PARTS		
35	MS24693S50	. . SCREW		12
		-------*-------		
36	CAV-110	. FUEL DRAIN VALVE		1
37	MS20823-4D	. ELBOW		1
		-------*-------		
38	26005-4015-1	. CHECK VALVE	A	1
39	26005-4016-1	. TUBE ASSEMBLY, INB'D.	A	1
40	26005-4016-2	. TUBE ASSEMBLY, OUTB'D.	A	1

EFFECTIVITY CODE:

A: 65-A90, B90, C90, C90A, C90GT, C90GTi

ILLUSTRATED PARTS CATALOG

26005-6000
FUEL LEVEL INDICATION

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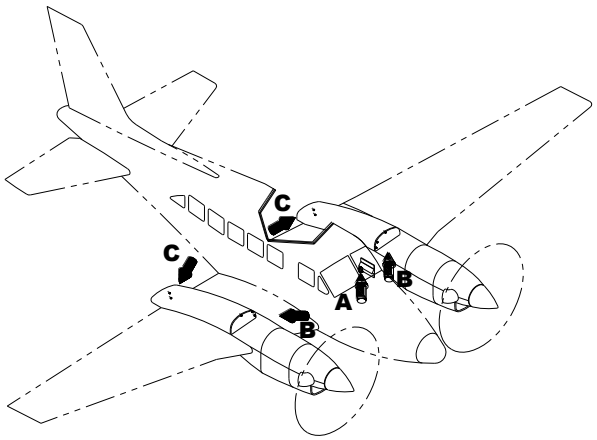
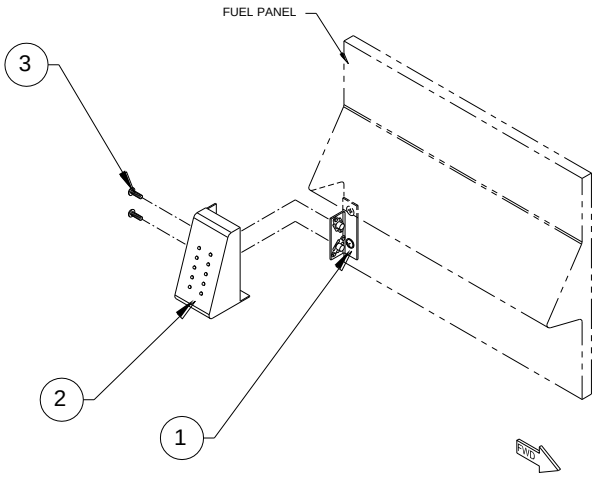
ILLUSTRATED PARTS CATALOG

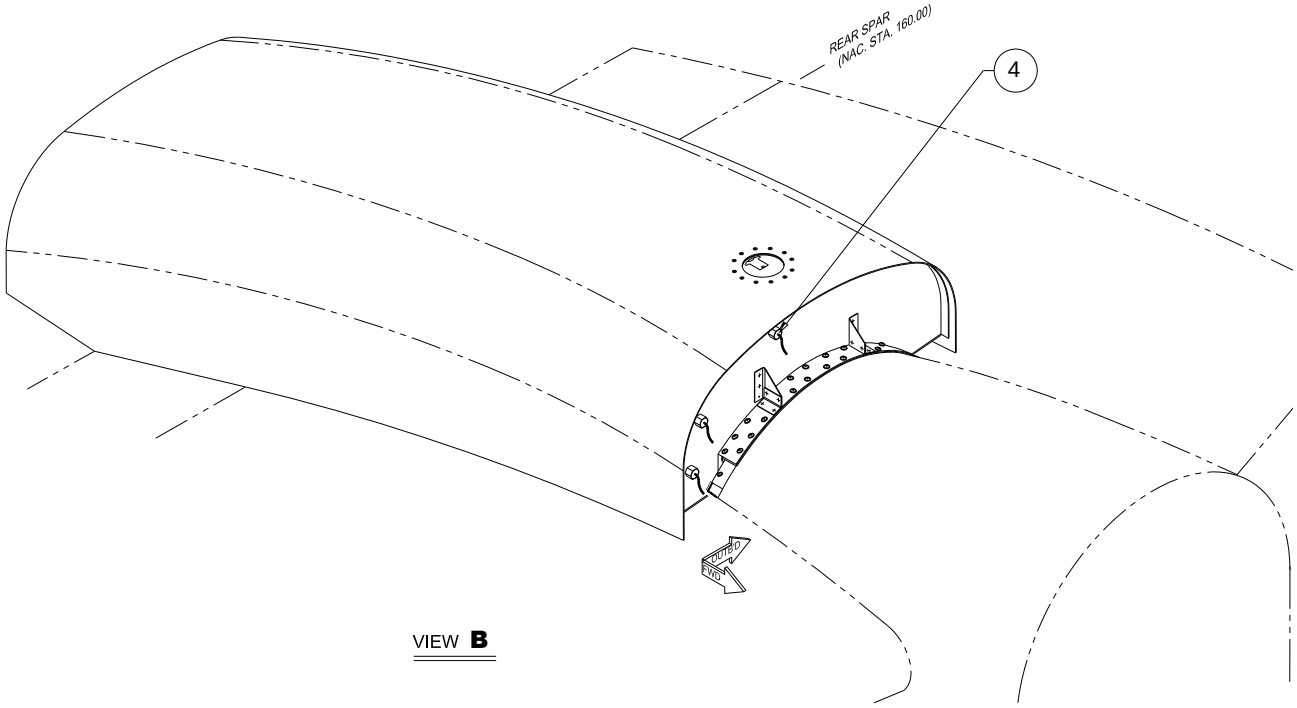




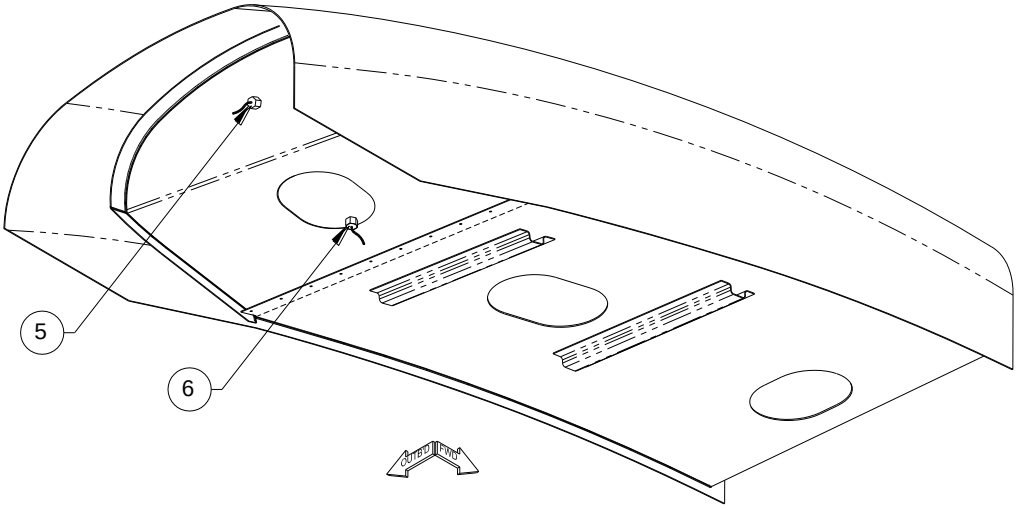
VIEW **A**

26005-6000-1 FUEL LEVEL INDICATION

ILLUSTRATED PARTS CATALOG



VIEW **B**



VIEW **C**

26005-6000-1 FUEL LEVEL INDICATION

ILLUSTRATED PARTS CATALOG

ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
	26005-6000-1	INSTALLATION, FUEL LEVEL INDICATION		1
1	26005-6004-1	. ANGLE ASSEMBLY		1
		ATTACHING PARTS		
	MS24639S27	. . SCREW (EXISTING)		1
	AN526-632R6	. . SCREW (EXISTING)		1
		-------*-------		
2	26005-6001-1	. ASSEMBLY		1
		ATTACHING PARTS		
3	AN526-632R6	. . SCREW		2
		-------*-------		
4	OPT4922-1	. OPTICAL LEVEL SWITCH, NO		6
	LLT210D324-003	. OPTICAL LEVEL SWITCH, NO (ALT.)		6
	LLPK1	. NUT & SEAL WASHER (ALT.)		6
	AN960-816L	. WASHER		6
5	OPT4922-1	. OPTICAL LEVEL SWITCH, NO		2
	LLT210D324-003	. OPTICAL LEVEL SWITCH, NO (ALT.)		2
	LLPK1	. NUT & SEAL WASHER (ALT.)		2
	AN960-816L	. WASHER		2
6	OPT4922-2	. OPTICAL LEVEL SWITCH, NC		2
	LLT210D3L24-003	. OPTICAL LEVEL SWITCH, NC (ALT.)		2
	LLPK1	. NUT & SEAL WASHER (ALT.)		2
	AN960-816L	. WASHER		2

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ILLUSTRATED PARTS CATALOG

26005-7000
PLACARDS

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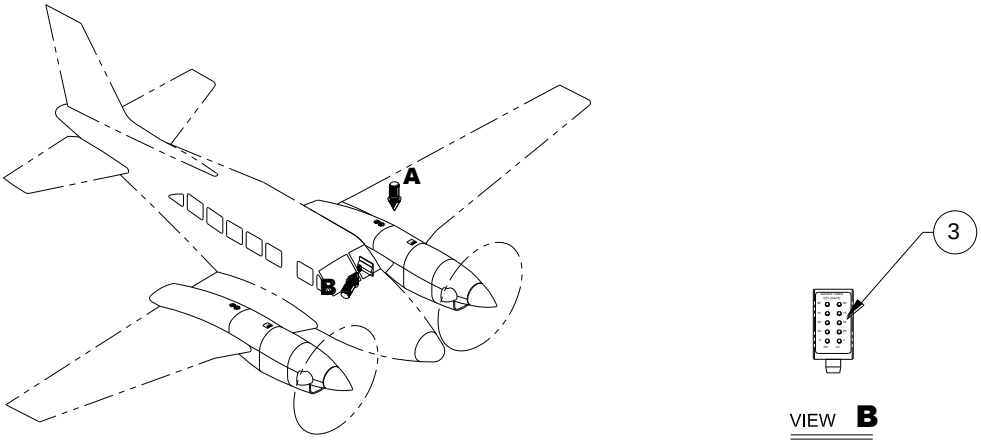
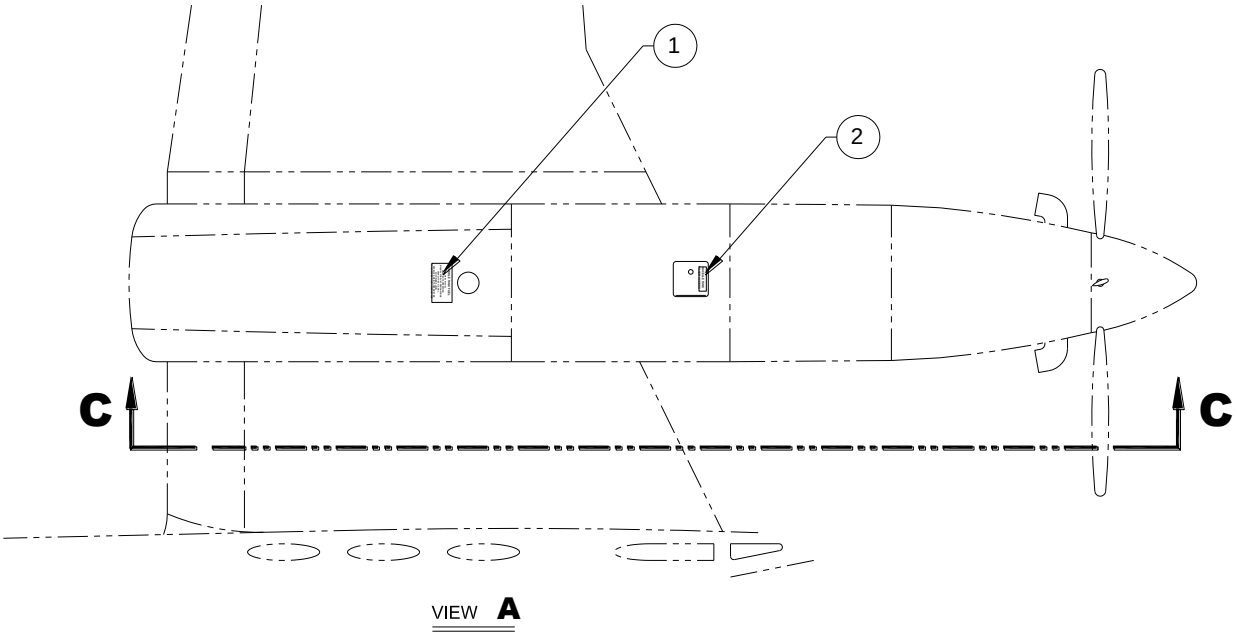
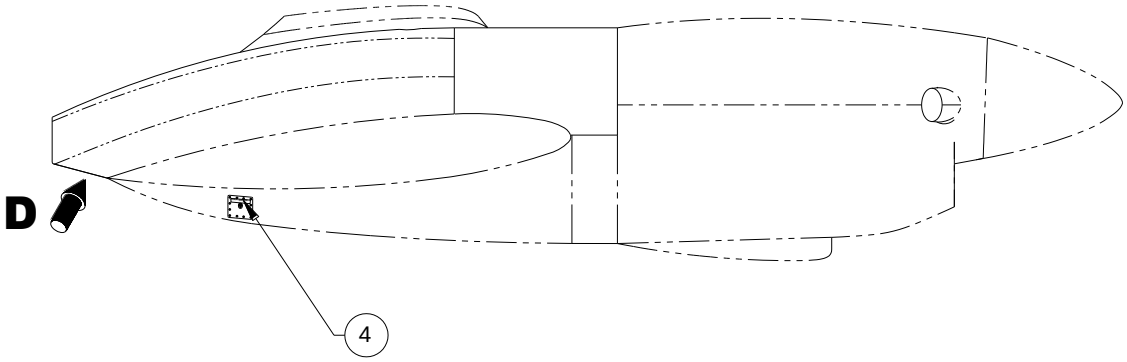
ILLUSTRATED PARTS CATALOG



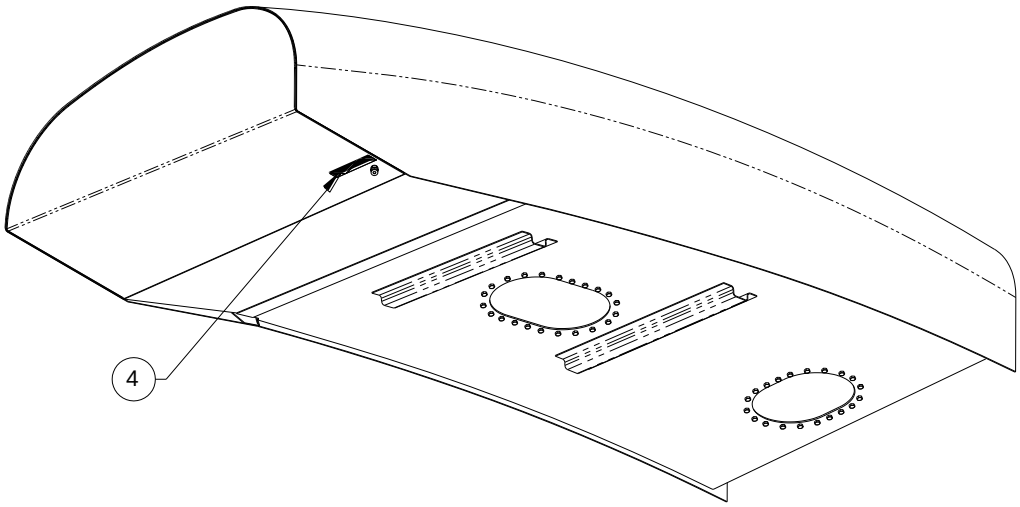


26005-7000-1 PLACARDS, SHEET 1 OF 2

ILLUSTRATED PARTS CATALOG



VIEW **C-C**



VIEW **D**

26005-7000-1 PLACARDS, SHEET 2 OF 2

ILLUSTRATED PARTS CATALOG

ITEM	PART NUMBER	NOMENCLATURE 1 2 3	EFFECTIVITY	UNITS/ ASSY
	26005-7000-1	INSTALLATION, PLACARDS		1
1	26005-7001-1	. PLACARD, “SADDLE TANK FUEL …”		2
2	26005-7001-2	. PLACARD, “NACELLE TANK FILLER …”		2
3	26005-7001-3	. PLACARD, “SADDLE TANKS QTY …”		1
4	26005-7001-4	. PLACARD, “FUEL DRAIN”		2

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APPENDIX B

BEECHCRAFT KING AIR 90 SERIES AUXILIARY FUEL TANKS

WIRING DIAGRAM MANUAL

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WIRING DIAGRAM MANUAL

SCOPE

This section provides wiring diagrams and lists of electrical components for the equipment installed under STC SA11142SC for Beechcraft King Air 90 series aircraft. The information contained herein should be used as reference only to help with ordering replacement parts when necessary. The STC drawings contain the FAA approved data and may supersede the information in this section until it can be updated to reflect the latest drawings.

FORMAT

The Wiring Diagram Manual is broken down into systems & components. The example below shows the basic format. The following terms used in the parts lists are defined below.

ITEM – the item number in the parts list corresponds to the item number in the diagram.

PART NUMBER – lists the part number of the item. The number can be a CTA part number, a vendor number, or a mil-spec number.

NOMENCLATURE – name of the part.

EFFECTIVITY – if listed, the serial numbers of the aircraft eligible for the specific part installation. If the parts are eligible for installation on all serial number airplanes, the column is left blank.

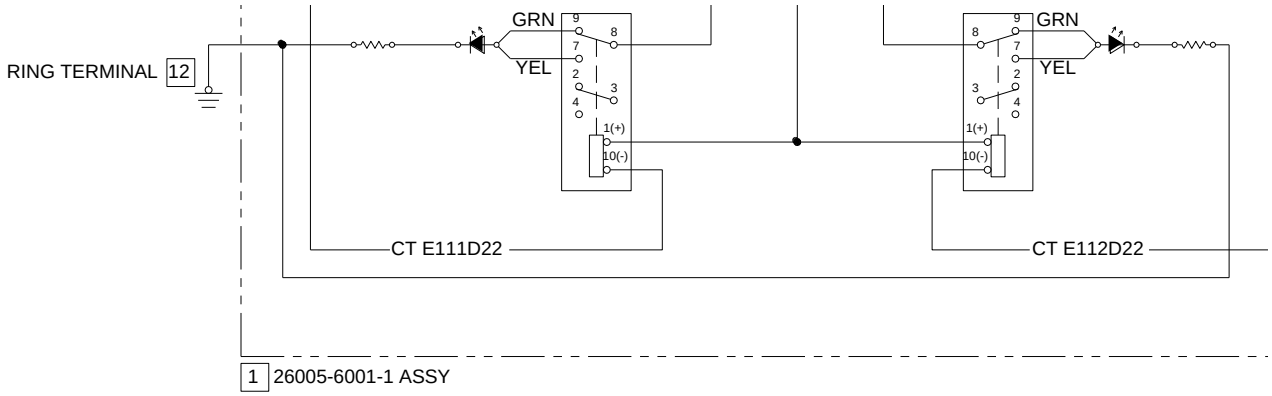
UNITS/ASSY – quantity of the parts used in each system installation per aircraft.

EXAMPLE

The example shows a basic wiring diagram and list of components. The wiring diagram uses conventional formats and symbols for various electrical components, ground points, etc.

Each wire has a wire code number. Each wire is physically labeled with this code.

Items and wire traces shown with dashed lines are existing items on the airplane.



ITEM	PART NUMBER	NOMENCLATURE	EFFECTIVITY	UNITS/ ASSY
1	26005-6001-1	ASSEMBLY		1
2	OPT4299-1	OPTICAL SWITCH, NO		8

WIRING DIAGRAM MANUAL

CONNECTION TO AIRPLANE ELECTRICAL SYSTEMS

Where connections to existing airplane electrical systems are noted, refer to the Beechcraft King Air 90 Series Wiring Diagram Manual by airplane serial number in order to see the applicable wiring diagrams for existing equipment.

WIRE TYPE

Use 22-gauge M227759/16 wire for repairing or replacing worn or damaged wire.

WIRE & ELECTRICAL COMPONENT REPLACEMENT

For inspection, repair, or replacement of wire and electrical components, follow the accepted procedures and practices specified in FAA Advisory Circular AC 43.13-1B/2B for aircraft electrical systems.

Be sure to label any replacement wire with the correct wire number shown on the wiring diagram.

WIRING DIAGRAM MANUAL

26005-5001
FUEL LEVEL INDICATION

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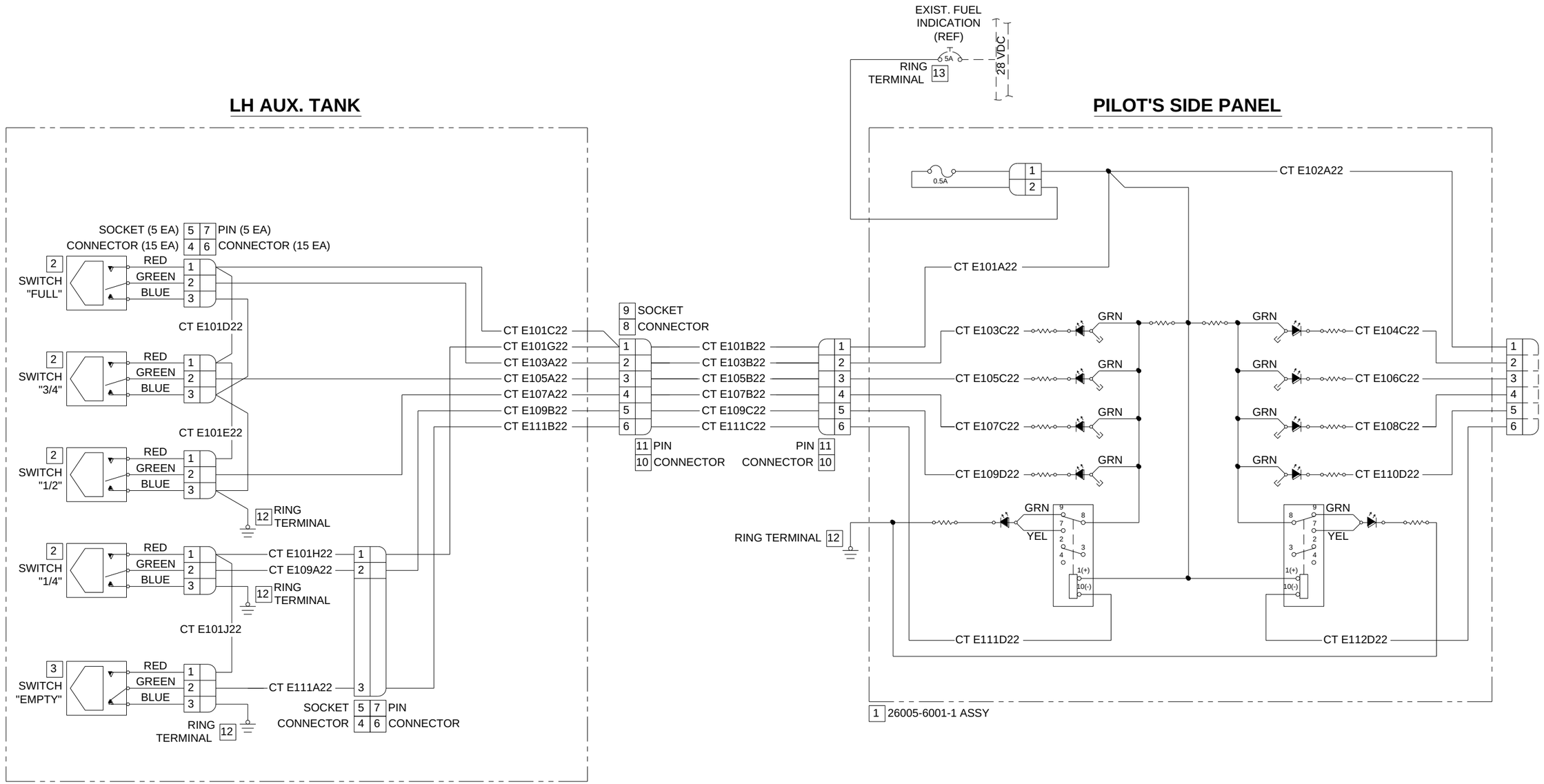
WIRING DIAGRAM MANUAL



26005-5001-1 FUEL LEVEL INDICATION, LH

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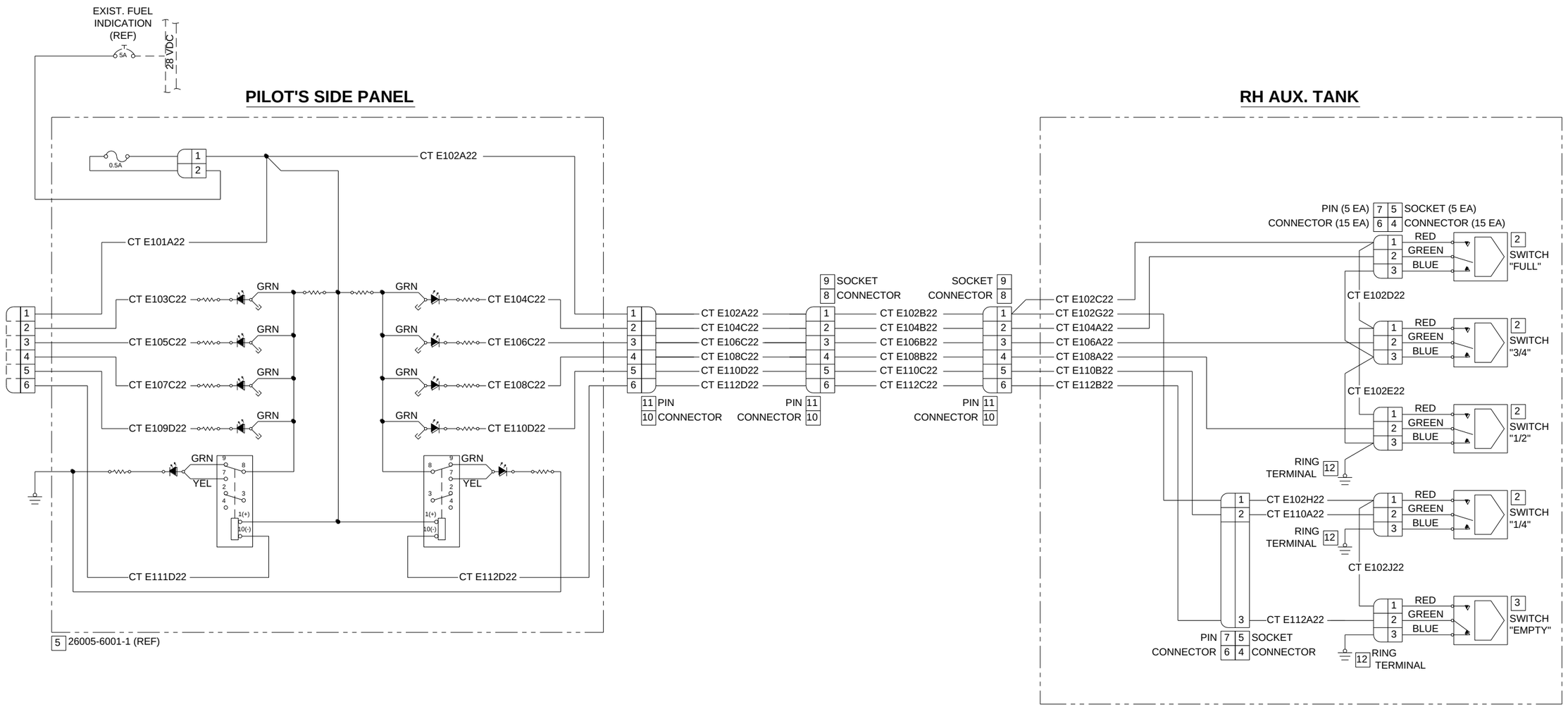
WIRING DIAGRAM MANUAL



26005-5001-2 FUEL LEVEL INDICATION, RH

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WIRING DIAGRAM MANUAL

ITEM	PART NUMBER	NOMENCLATURE	EFFECTIVITY	UNITS/ ASSY
	26005-5001-1	WIRING DIAGRAM, FUEL LEVEL INDICATION, LH		1
	26005-5001-1	WIRING DIAGRAM, FUEL LEVEL INDICATION, RH		1
1	26005-6001-1	ASSEMBLY		1
2	OPT4299-1	OPTICAL SWITCH, NO		8
	LLT210D324-003	OPTICAL SWITCH, NO (ALTERNATE)		8
3	OPT4299-2	OPTICAL SWITCH, NC		2
	LLT210D3L24-003	OPTICAL SWITCH, NC (ALTERNATE)		2
4	1-480303-0	RECEPTACLE, SOCKET		12
5	60617-1	SOCKET		36
6	1-480305-0	RECEPTACLE, PIN		12
7	60618-1	PIN		36
8	39-09-1061	RECEPTACLE, SOCKET		3
9	02-09-1119	SOCKET		18
10	03-09-2061	RECEPTACLE, PIN		5
11	02-09-2118	PIN		30
12	31890	RING TERMINAL		7
13	36512	RING TERMINAL		1

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