

MANDATORY SERVICE BULLETIN

NUMBER: SB-017 Rev A

DATE: 7/21/09

SUBJECT: FUEL SYSTEM; RESERVE FUEL BLADDER INSPECTION

SUMMARY

RECURRENT REQUIREMENTS

No recurrent requirements associated with this Mandatory Service Bulletin.

BACKGROUND

We noted during a recent 100 hour inspection of an aircraft, that there were two stickers found in the reserve fuel bladder. Investigation of the issue found that the stickers were not removed from one of the vent tubes in the reserve fuel bladder. The identification stickers are small and do not cause a restriction of fuel flow due to the design of the fuel system.

ACTION

One time inspection of the reserve fuel bladder to identify any foreign material. Follow the procedures included in this Service Bulletin.



Figure 1: Part Marking Stickers

EFFECTIVITY

KODIAK 100 Series Aircraft, Serial Numbers 100-0001 through 100-0018.

AFFECTED PARTS

KODIAK PART AFFECTED:

- 100-828-4661

REPLACEMENT PART FOR AIRCRAFT RECORDS:

- N/A

COMPLIANCE

This Mandatory Service Bulletin must be completed no later than the next 100 flight hours or next annual inspection, whichever comes first.

INDUSTRY SUPPORT INFORMATION

None

MANPOWER

This procedure will take approximately 1.5 hours to complete.

COMPLETION

Update the KODIAK Maintenance Log Books.

WARRANTY INFORMATION

This is warranty reimbursable for the manpower listed above after Quest Aircraft has been notified of your completion.

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Forward Fuel Reservoir Inspection Instructions

1.1 Overview

This document provides instruction for inspecting the Forward Fuel Reservoir.

Estimated Time to Complete: 1.5 hours

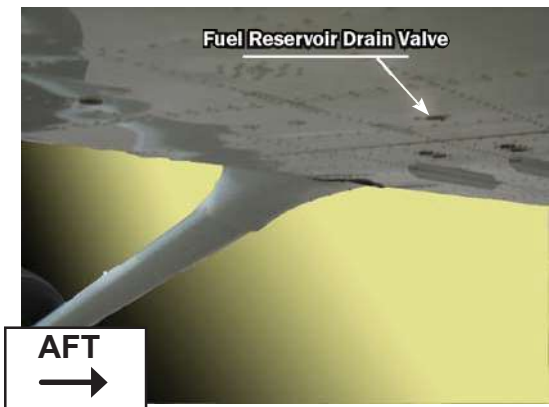
Parts Included in the Service Kit:

Part Number	Description	Quantity
100-828-4425	FUEL RESERVOIR LARGE OVAL GASKET	1
T100-828-4413	HEADER TANK BLADDER COVER ATTACHMENT AIDS	4


Tools Required:

Tool Name	Tool Duty
Phillips #2 Screwdriver	Remove the bay access covers.
30T Torx Socket	Remove and install the reservoir tank access cover.
0-120 in lbs Torque Wrench	Check the torque of the fuel Reservoir Cover

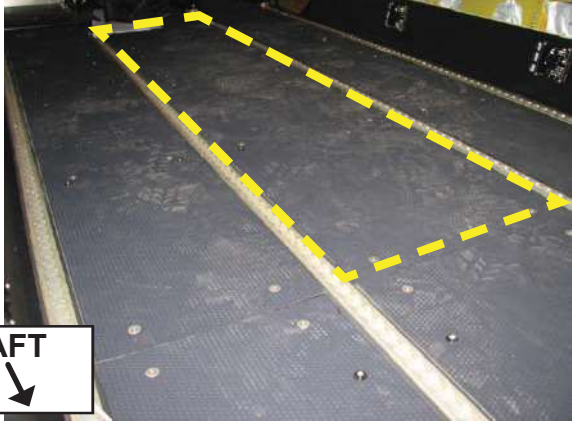
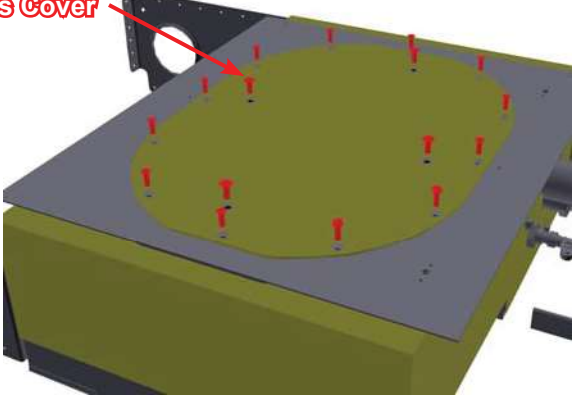
1.2 Step One: Turn off Fuel Valves and Drain Residual Fuel from Lines

Task	Instruction	Visual
1	Ground the Aircraft using an approved grounding wire and grounding point. Ensure master switch is in the OFF position.	No Visual
2	Turn the overhead fuel selector valves located in the cockpit to CLOSED .	No Visual
3	Using the fuel drain valves, drain the residual fuel from the fuel lines following the Instructions and procedures listed in the KODIAK 100 Pilot Operating Handbook, Page 4-9 of Section 4 .	No Visual
4	Empty the forward fuel tank reservoir into a suitable container (approximately 4.5 gallons) using the fuel reservoir drain valve.	

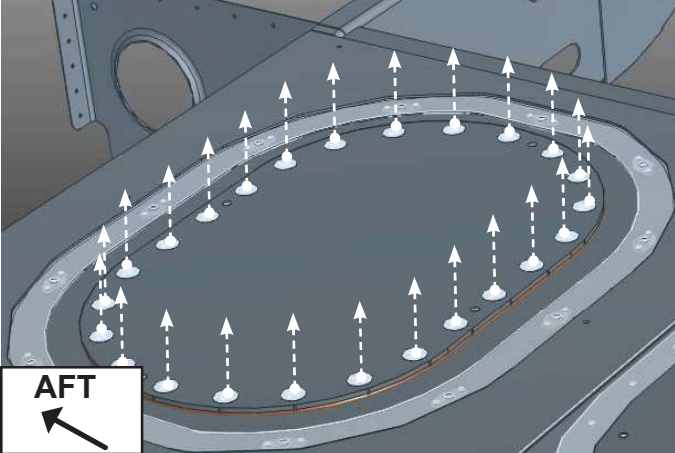
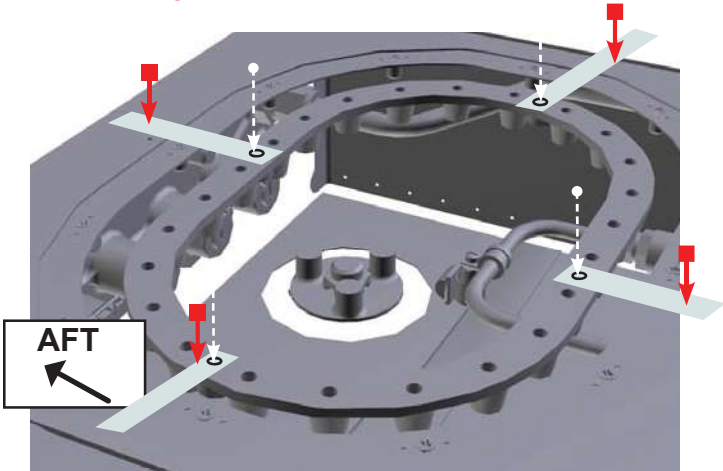

1.3 Step Two: Remove Passenger Seats and Cargo Floor.

Task	Instruction	Visual
1	Remove the pilot, copilot, and passenger seats as necessary in the cockpit and cargo compartment using the procedures defined in the KODIAK 100 Maintenance Manual .	

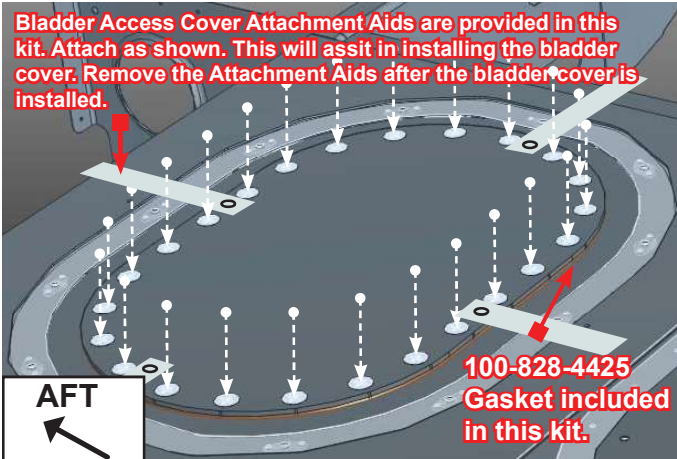
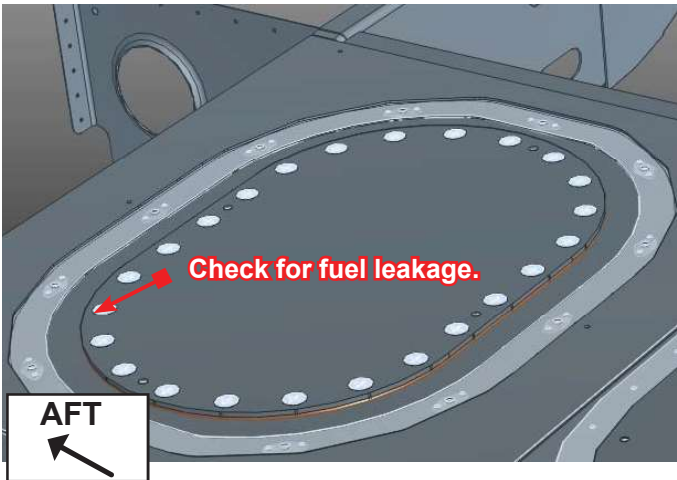
1.4 Step Two: Remove Passenger Seats and Cargo Floor Continued...

Task	Instruction	Visual
2	Once seats have been removed, use a Phillips #2 Screwdriver to remove the forward center cargo floor panel. (one panel, 8 screws)	
3	<p>Remove the fuel reservoir bay access cover and bladder access cover.</p> <p>Using a Phillips #2 Screwdriver, remove the 12 screws that secure the fuel bay reservoir compartment access panel to the floor and the four access panel to fuel bay cover screws. Remove the access cover after removing the screws.</p>	<p>Inner screws are attachments to the Header Tank Access Cover</p> 
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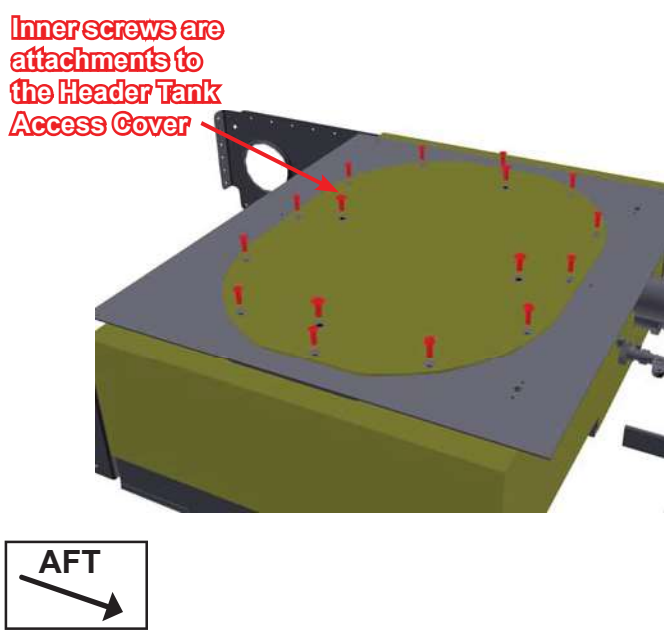
1.5 Accessing the Bladder

Task	Instruction	Visual
1	<p>Using a 30T Torx socket or a Phillips screw driver, carefully remove the screws that secure the fuel reservoir compartment access panel to the floor.</p> <p>NOTE: If #2 Phillips screws are installed, Torx screws are available to the customer upon request.</p> <p>CAUTION! While working in or around the reservoir bladder, ensure that tools and parts are accounted for. DO NOT use sharp tools in the bladder.</p>	
2	<p>Install Bladder Access Cover Attachment Aids.</p>	<p>Bladder Access Cover Attachment Aids are provided in this kit. Attach as shown. This will prevent the Bladder Cover from resting on the Low Fuel Sensor.</p> 
3	<p>Using an inspection mirror, inspect the fuel vent lines (x2) for marking stickers. Once the lines have been inspected, visually inspect the following areas of the bladder:</p> <ol style="list-style-type: none"> 1. Inspect all areas of the fuel bladder with an inspection mirror. 2. Inspect the fuel intake port filters (x2). <p>Once it is determined that no stickers are present in the reserve fuel bladder, continue to the next step.</p> <p>If the stickers are found attached to the lines or in the fuel bladder, remove them carefully and dispose of them.</p>	
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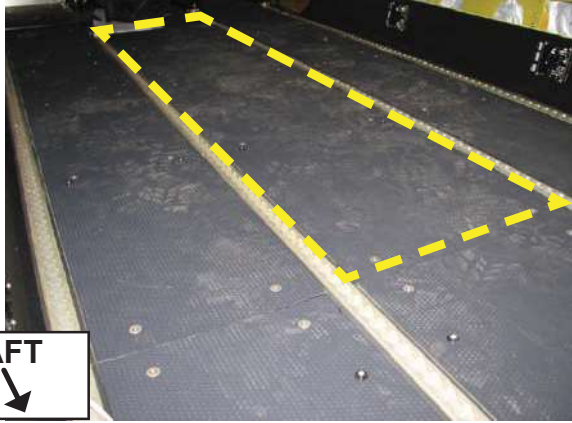

1.6 Post Inspection

Task	Instruction	Visual
1	<p>Install the reservoir fuel access gasket and cover.</p> <p>Temporarily install the Bladder Access Cover Attachment aids as shown. Using a 30T Torx socket, install the 24 Torx screws that secure the fuel reservoir compartment access panel to the floor. Torque the 24 screws in a star pattern to 60 ±10 inch-pounds and re-torque after 30 min.</p> <p>CAUTION! While installing the Bladder Access Cover, DO NOT apply down pressure on the fuel bladder without the Attachment Aids installed. Damage to the low fuel sensor could occur.</p>	
2	<p>Leak Check</p> <p>Prior to installing the reservoir fuel bay cover, open the overhead fuel selector valves and fill reservoir with fuel until the bladder rises to the level of the surrounding floor structure, then shut-off the overhead fuel selector valves. Visually ensure that there are no leaks.</p> <p>CAUTION! Pay close attention to the bladder while the overhead fuel selector valves are open. Damage to the bladder could occur if the bladder is filled in excess which would lead to the bladder bulging out of the bay. Ensure that the bladder cover does not rise above the aircraft floor.</p>	
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1.7 Post Inspection Continued...

Task	Instruction	Visual
3	<p>Reinstall the reservoir bay access cover.</p> <p>Using a Phillips #2 Screwdriver, Install the four screws to the header tank lid first (10-32 screws), then align the 12 outer screw holes (8-32 screws) and install all screws before tightening down.</p> <p>CAUTION! When installing, do not damage the seal located underneath the forward fuel compartment access panel.</p>	 <p>Inner screws are attachments to the Header Tank Access Cover</p> <p>AFT</p>
Continue to next page >>>		

1.8 Post Inspection Continued...

Task	Instruction	Visual
4	<p>Reinstall flooring</p> <p>Using a Phillips #2 Screwdriver, tighten the 8 screws that secure the floor to the aircraft.</p>	
5	<p>Install pilot and copilot seats.</p> <p>Install the pilot, copilot, and passenger seats in the cockpit and cargo compartment using the procedures defined in the KODIAK 100 Maintenance Manual.</p>	
6	<p>Annotate this work in the KODIAK Maintenance Log Books.</p>	
<p>End of Instructions.</p>		