

MANDATORY SERVICE BULLETIN NO. 33 Aviat Aircraft Inc.

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DATE: November 11, 2016 **<Mandatory Compliance>**

SUBJECT: RAPCO RA1798-00-1 FUEL VENT CHECK VALVE

REVISION: Initial Release (IR)

AIRCRAFT MODEL AFFECTED: HUSKY A-1C-180 & A-1C-200.

AIRCRAFT SERIAL NUMBERS AFFECTED: 3181 – 3282

PURPOSE

To inform aircraft owners and operators of affected aircraft listed above of a **Mandatory Requirement** to verify the Rapco fuel vent check valves part number RA1798-00-1 are operating properly as required for continued airworthiness. The instructions in this service bulletin are required until a long term solution is approved and published. This service bulletin does not apply to aircraft manufactured with Duke's fuel vent check valves part number 1798-001 (red in color).

DESCRIPTION

Fuel vent check valves allow air into the tanks as fuel is consumed from the fuel tanks and prevents fuel from escaping the fuel tank. The check valve is an essential part in the fuel system.

Aviat Aircraft Inc. has received a report from the field that involved the fuel tank vent check valves sticking resulting in fuel starvation to the engine which caused a forced landing of the aircraft.

COMPLIANCE

IMMEDIATE ACTION REQUIRED PRIOR TO NEXT FLIGHT AND PRIOR TO EACH FLIGHT THEREAFTER; VERIFY OPERATION OF RAPCO FUEL VENT CHECK VALVES.

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ACCOMPLISHMENT INSTRUCTIONS

AAI Parts Number	Description	Qty
40110 x 18"	Hose	1

Step 1 The pilot (PIC) or a mechanic must perform this inspection and verification of proper operation of both fuel vent check valves, one installed in each wing, is mandatory before every flight for continued airworthiness.

Verify the proper operation of the fuel vent check valve with use of the supplied hose attached to the fuel tank vent line at the aft edge of the wing at the wing tip attach point as shown in figure 1.

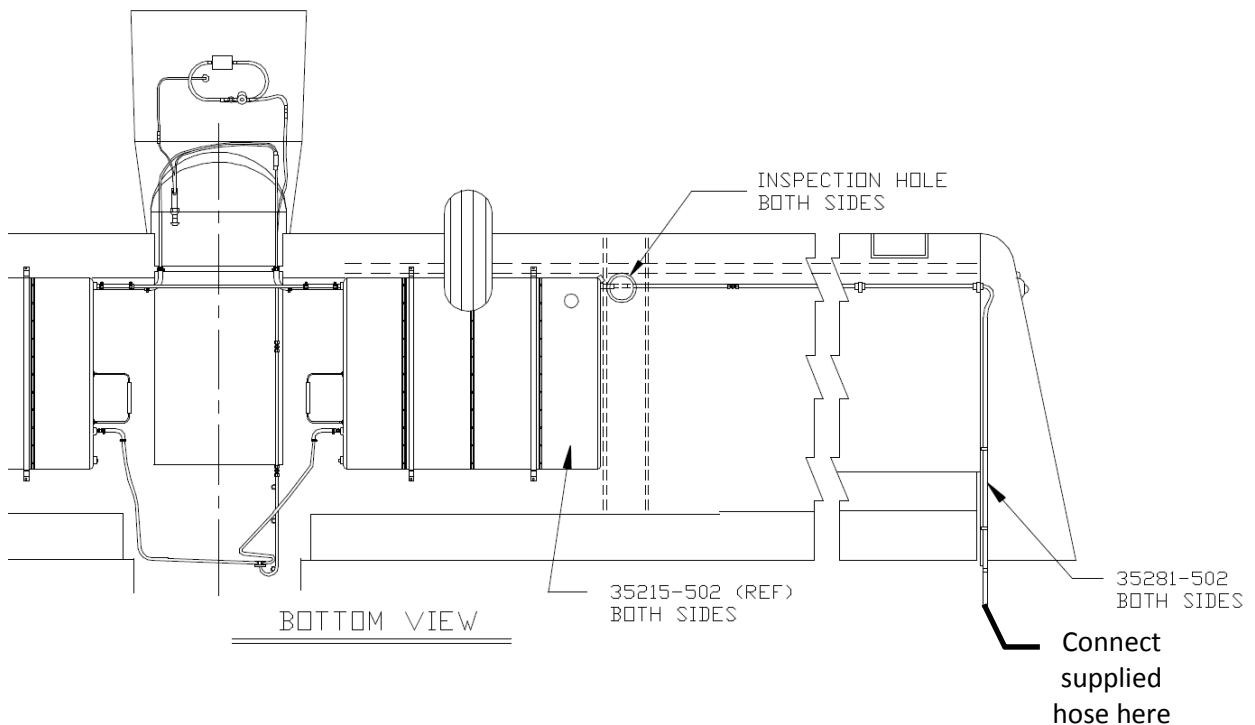


Figure 1. Fuel tank vent line and inspection ring.

Step 2 Once the vent line is located per figure 1, attach supplied hose to the wing vent line. The supplied hose should be pushed over the vent line to make a tight seal as shown in figure 2.

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Figure 2. Supplied clear plastic test tube pushed onto the fuel vent line.

Step 3 With the supplied hose attached per step 2, blow into the hose to tell if the vents are stuck as seen in figure 3. Using your mouth and not your lungs force air into the vent line. If you can blow and force air into the vent line then the check valve is operating properly. If no air can be forced into the vent line then the Rapco vent check valve is stuck.

To demonstrate a stuck check valve simply block one end of the supplied hose and try to force air into it, you will sense the same obstruction as with a stuck Rapco fuel vent check valve.

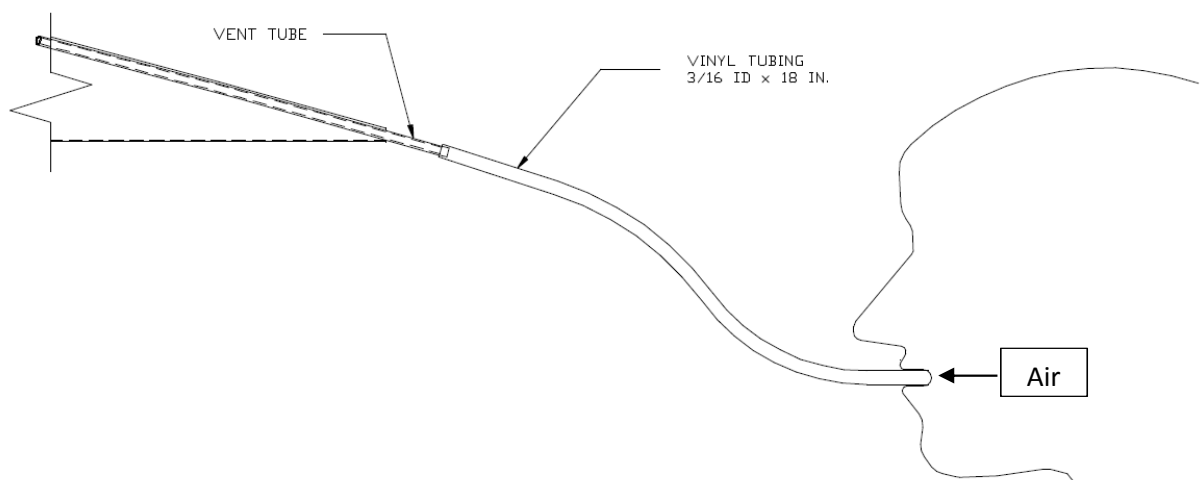


Figure 3. Testing fuel tank vent check valve.

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Step 4 If a stuck vent check valve is discovered in one or both wings, the vent line check valve must be removed from the aircraft and sent to Aviat Aircraft, Inc.

***NOTE**

- Only FAA or CAA authorized repairman should perform the removal instructions in this service bulletin.
- It is the responsibility of the owner/operator to have only FAA or CAA authorized repairman perform this work.
- Complete and send Aviat Aircraft, Inc. compliance letter to the provided address.

Step 5 For the removal of a stuck fuel vent check valve or valves, start by removing the attachment screws from the forward, rear and outboard sections of the fuel tank cover. Cut out the inspection access hole adjacent and below the check valve per figure 1. Next drain the fuel in accordance with aviation industry standards for draining fuel from an aircraft, Note: Be mindful static electricity buildup when draining fuel as static electricity can cause a spark that could ignite the draining fuel. Drain the fuel to approximately $\frac{3}{4}$ of a tank. Draining the fuel down to $\frac{3}{4}$ of a tank will assure no fuel will drain from the vent line when removing the affected check valve.

Step 6 Using an 11/16th inch wrench loosen the vent line from the check valve and move the line for removal of the check valve. To remove the check valve from the fuel use a 1 1/16th wrench on the portion of the check valve closest the tank at the brass nipple. The brass nipple may be removed with the check valve. See figure 4.

Step 7 Return the completed compliance letter to Aviat Aircraft Inc. In the event a stuck Rapco fuel vent check valve is discovered during the initial inspection or thereafter, contact Al Humbert or Steve Anderson at Aviat Aircraft, Inc. at the telefax number/email address above and a replacement vent check valve(s) will be sent to you with a pre-paid and addressed label to return the stuck vent check valve(s) and the executed compliance letter. **Do not unstick any stuck check valve.**

Step 8 If a stuck Rapco fuel vent check valve(s) is discovered and a replacement Rapco valve(s) sent, an approved mechanic must reinstall the new check valve using a thread sealant, such as fuel lube or equivalent on both ends of the brass nipple before installation. Using a 1 - 1/16 wrench tighten the replacement valve by the hex thread on the check valve closest to the tank. Next install the vent line to the newly installed fuel vent check valve. Inspect to verify the check valve and vent line are properly tightened. Next install the supplied inspection hole cover by centering the hole cover over the cut out inspection hole that and drill the two mounting holes using a #40 drill bit and install the two mounting screws.

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Step 9 Record in the aircraft's log book the replacement of the stuck Rapco check valve(s) per this Service Bulletin.

NOTE: The inspection procedures described in this service bulletin for a stuck fuel vent check valve must be performed during each and every pre-flight inspection by the Pilot (PIC) or a mechanic. This pre-flight inspection is required even after the installation of a replacement Rapco fuel vent check valve."

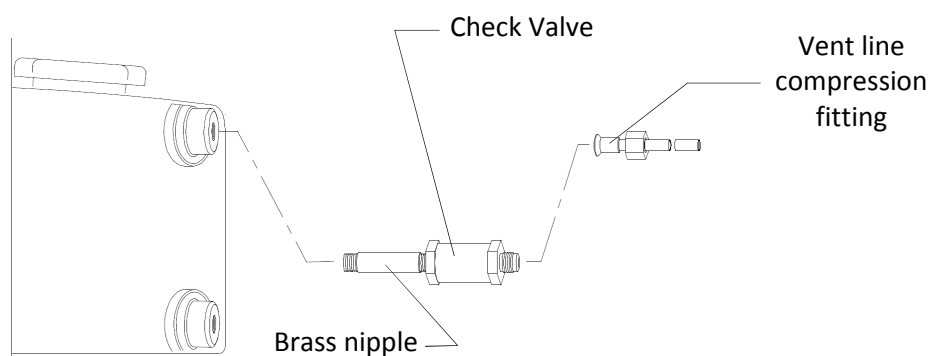


Figure 4. Removal of fuel tank vent check valve.

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COMPLIANCE LETTER

This is to certify that I have complied with Service Bulletin No. 33 on airplane:

Model Number: _____ Serial No: _____

Registration Number: _____

Were Rapco P/N RA1798-00-1 check valves installed? Yes: _____ No: _____

Were Duke P/N 1798-001 check valves installed? Yes: _____ No: _____

Were Rapco fuel check valves found to be operating properly? Yes: _____ No: _____

Were there non-operational (stuck) Rapco valve(s) discovered? Yes: _____ No: _____

How many the non-operational (stuck) Rapco valve(s) were removed and returned to Aviat Aircraft Inc. One: _____ Two: _____

Date: _____ Aircraft Hours: _____

FAA Authorized Repairman: _____

Certificate No.: _____

Signed: _____

Return completed compliance letter to Aviat Aircraft Inc. via fax at 307-885-9674 or email to engineering@aviataircraft.com after complying with Mandatory Service Bulletin No. 33 for the first time. In the event a stuck Rapco fuel vent check valve(s) is discovered during the initial inspection or thereafter, contact Al Humbert or Steve Anderson at Aviat Aircraft, Inc. at the telefax number/email address above and a replacement vent check valve(s) will be sent to you with a pre-paid and addressed label to return the stuck vent check valve(s).