

Service Letter: 456

Date: December 05, 2022

Title: Fuel Shut-Off Valve Assembly

Models: 7ECA (S/N's 1356-95 to 1412-2023)
7GCAA (S/N's 400-97 to 526-2019)
7GCBC (S/N's 1200-94 to 1483-2022)
8KCAB (S/N's 686-92 to 1203-2022 Excluding 1202-2022)
8GCBC (S/N's 862-92 to 623-2022)

Description: This service letter outlines the procedures necessary to change to the new style fuel shut-off valve. Service Kit 456

Fuel System

The fuel valve upgrade requires the following new parts:

11-0658-2 Red fuel shut-off lever arm
11-0659 (8KCAB Only)
2-2198 (7ECA, 7GCAA, 7GCBC, 8GCBC)
2-2299-1
2-2299-2
2-2399

Procedure

Begin by draining the fuel system. Remove the fuel cap on the top of each wing. Next, open the under wing fuel drain on each wing and let the fuel drain to a trickle. If the aircraft is equipped with dual tanks in each wing, open both under wing fuel drains to fully drain the fuel system. Next, open the fuselage quick drain and release any remaining fuel. Last, purge the gascolator located on the firewall.

Removal of Existing Fuel Shut-off Valve Assembly

1. To begin the removal of the existing fuel shut-off valve, loosen the two screws holding the plastic cover (part number 2-2088) for the fuel shut-off valve lever in the cockpit.
2. Remove the cotter pin (part number AN380-3-4), red shut-off lever arm (part number 11-0658-1), and coupler (part number 11-0663).
3. Remove the lower fuel line loop (part number 2-2258).
4. Remove the remaining fuel lines attached to either the fuel manifold or singular fuel fitting depending on aircraft model.
5. Detach the fuel shut-off valve (part number 11-0660) from its supporting bracket (part number 11-0831) and remove the fuel shut-off valve and attached components.

Retrofitting Existing Bracket to Accommodate New Bracket

1. Place and clamp drill pattern (part number 2-2299-2) flat against and level with top of existing fuel valve bracket (Figure 1).
2. Drill holes, #30 drill bit (.128 diameter), using hole pattern (4 req'd).
3. Mark existing bracket using the step at the top of the drill pattern.
4. Remove drill pattern and finish drill holes with #12 drill bit (.189 diameter). (Figure 2)
5. Cut existing bracket at mark made in step 3. Deburr cut edges and paint raw steel to prevent corrosion.
6. Place new bracket (part number 2-2299-1) on rearward side of the existing modified bracket (Figure 3).
7. Bolt new bracket to old mounting bracket with supplied hardware. AN3-3A Bolt, AN960-10L Washer, AN365-1032 Nut / (4 REQ'D each)

Installation of New Fuel Shut-off Valve and Supporting Hardware

1. Install new fuel shut-off valve assemblies 11-0659 (per: ACAC drawing 7-1586 for 7EC, ACAC drawing 7-1414 for 8KCAB) or 2-2198 (per ACAC drawing 7-1476 for 7ECA, 7GCAA, 7GCBC, 8GCBC).
2. Install new lower fuel line loop (part number 2-2399).
3. Reattach remaining fuel lines.
4. Install new fuel shut-off valve lever arm (11-1226).
6. Tighten the two screws holding the plastic cover for the fuel shut-off valve lever in the cockpit.
7. Verify fuel shutoff valve is functioning properly. New valve may be stiffer to operate.
8. Perform a leak check of the newly installed components and fuel line connections.
9. Record compliance with this service letter in an aircraft logbook entry.

Approval

The figures and data contained within this service letter are FAA approved via the following ACAC technical drawings: (These drawings are for your reference, they are not required)

<u>Drawing</u>	<u>Title</u>	<u>Revision</u>	<u>Date</u>
11-0659	Assembly – Valve – Fuel Shutoff	E or later	03/19/2020
11-1225	Valve Stop Key	No rev or later	04/12/2022
11-1226	Tube – Fuel Shutoff	No rev or later	04/12/2022
2-2198	Assembly – Manifold Fuel – FWD	H or later	06/16/2020
2-2299	Bracket – Fuel Shutoff Valve	No rev or later	06/16/2020
2-2399	Fuel Line – Assembly	No rev or later	06/16/2020
7-1290	Frame – Assembly – Fuselage	H or later	06/11/2013
7-1410	Frame – Assembly – Fuselage	P or later	06/10/2020
7-1414	Installation – Inverted Fuel System	N or later	11/20/2008
7-1476	Installation – Fuselage Fuel System	I or later	07/22/2013
7-1470	Frame – Assembly – Fuselage	L or later	09/22/2011
7-1586	Install Fuselage Fuel System	C or later	02/08/2018
AC-1552	Frame – Assembly – Fuselage	No rev or later	04/13/2022
AC-1553	Installation - Fuel System	No rev or later	04/13/2022

Table I: Parts Required

Part Number	Description	Quantity
11-0659	Assembly – Valve – Fuel Shutoff (7EC, 8KCAB)	As Required
11-1225	Valve Stop Key	1
11-1226	Tube – Fuel Shutoff	1
2-2198	Assembly - Manifold Fuel – FWD (7ECA, 7GCAA, 7GCBC, 8GCBC)	As Required
2-2299-1	Bracket - Fuel Shutoff Valve	1
2-2299-2	Drill Pattern	1
2-2399	Fuel Line - Assembly	1
90604A240	Screw	2
AN3-3A	Bolt	4
AN365-1032	Nut	4
AN936-A10	Lock Washer	2
AN960-10	Washer	2
AN960-10L	Washer	4



