Mainplane Fuel Tanks - Pressure Test

AFSC
42450
43250
42470

TIME EST

Safety and Servicing Notes are to be complied with throughout the work detailed on this card.

ASSOCIATED PROCEDURES

SP 1(P)
2(P)

SPECIAL TOOLS AND EQUIPMENT

Wing fuel tank filler cap pressure gauge (Quantity 1) (ST11/22126).

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1. PREPARATION

1.1 No.1 Engine. — Remove (SP 1(P)).

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2. PREPARATION

2.1	Heat Shields in No.1 engine bay.	Remove.
2.2	Outward vent-valves (Left or right).	(i) Remove cowl. (ii) Refit screws in vent-valve flange.
2.3	Gravity filler caps.	(i) Remove left or right filler cap. (ii) Fit wing fuel tank filler cap pressure gauge (ST11/22126).
2.4	Mainplane fuel tanks.	(i) Refuel mainplane with cap pressure gauge fitted to 1800-2000 lbs. (ii) Refuel other mainplane to full.

NOTE: During refuelling the tanks should be filled at a slow rate with the stop valve on the wing fuel tank filler cap pressure gauge open.

2.5	Outward vent-valve (Left or right).	Weight the valve head to prevent the valve opening (not less than 10 lbs).

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3. WING TANK INITIAL PRESSURE TEST

3.1	Wing fuel tank filler cap pressure gauge.	(i) Connect air supply to air line adapter. (ii) Slowly pressurize tank in increments of 2lbf/in2 until 10lbf/in2 is reached. This pressure must be held for 20 minutes.
3.2	Wing fuel tanks.	(i) Check for leaks. (ii) Record and classify all leaks in accordance with current procedures.

4. CLASSIFICATION OF LEAKS.

(a) STAIN	Area of whitening, discoloration but not wet.
(b) SEEP.	Area of whitening, discolouration and wet (glistens in bright light).
(c) RUNNING LEAK.	Flow from leak can be observed by eye.
(d) DRIP.	Separate drops form and fall to ground on upper surface, wet patches spread rapidly.

5. DEFINITION OF RISK AREAS

(a) HIGH RISK AREA.	The section of wing tank contained with fuselage i.e. inboard of rib 1 (See Fig.1).
(b) LOW RISK AREA.	The section of wing tank outboard of the fuselage, i.e. outboard of rib 1 (See Fig.1).

6. PRESSURE TEST FOR HIGH RISK AREAS AFTER REPAIRS

6.1 Repeat Sub-item 3.1 and 3.2.

NOTE: No leakage is permitted - any leakage must be repaired and the 10 lbf/in2 Sub item 3.1 (ii) test repeated.

7. TEST PROCEDURE FOR LOW RISK AREA

7.1	Mainplane fuel tanks.	(i) Refuel mainplane, with cap pressure gauge fitted, to 1800-2000 lbs. (ii) Refuel other mainplane to full.

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7. TEST PROCEDURE FOR LOW RISK AREA (Contd)

7.2	Wing fuel tank filler.	(i) Connect air supply to air line adapter. (ii) Slowly pressurize tank until a pressure of 3.5 to 4 lbf/in2 is reached. This pressure is to be held for 20 minutes.
7.3	Mainplane fuel tanks.	Record and classify leaks.
7.4	Repair of leakages (See Item 4 for leak classifications).	Repair all leakages in the classifications DRIP and RUNNING LEAK in accordance with current procedures. Leaks in the classifications STAIN and SEEP are acceptable provided they are isolated from each other and do not occur in groups in a particular area or from an individual component such as a web plate. If grouping of classification STAIN and SEEP leaks occur then repair action must be carried out to current procedures.
7.5	Final pressure test.	(i) Repeat sub-item 7.1 and 7.2. Leaks in classifications STAIN and SEEP are acceptable providing that classification grouping described in sub-item 7.4 does not occur.

NOTE: When leading edge or flap tanks have been removed from aircraft for sealing repairs, then these tanks must be tested at 10 lbf/in2, held for 20 minutes prior to assembly to aircraft.

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8. INSPECTION STAGE

8.1	Installation.	Inspect for leaks.

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9. COMPLETION

9.1	Wing fuel tank filler cap pressure gauge.	(i) Release air pressure. (ii) Remove gauge.

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9. COMPLETION (Contd)

9.1	Wing fuel tank filler cap pressure gauge (Contd).	(iii) Refit gravity filler cap.
9.2	Outward vent valves.	(i) Remove weight. (ii) Refit cowl.
9.3	Heat shields in No.1 engine bay.	Refit.

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10. COMPLETION

10.1	No.1 Engine.	Install (SP 2(P)).

NOTE: All wirelocking must be of 22 SWG stainless steel unless otherwise stated.

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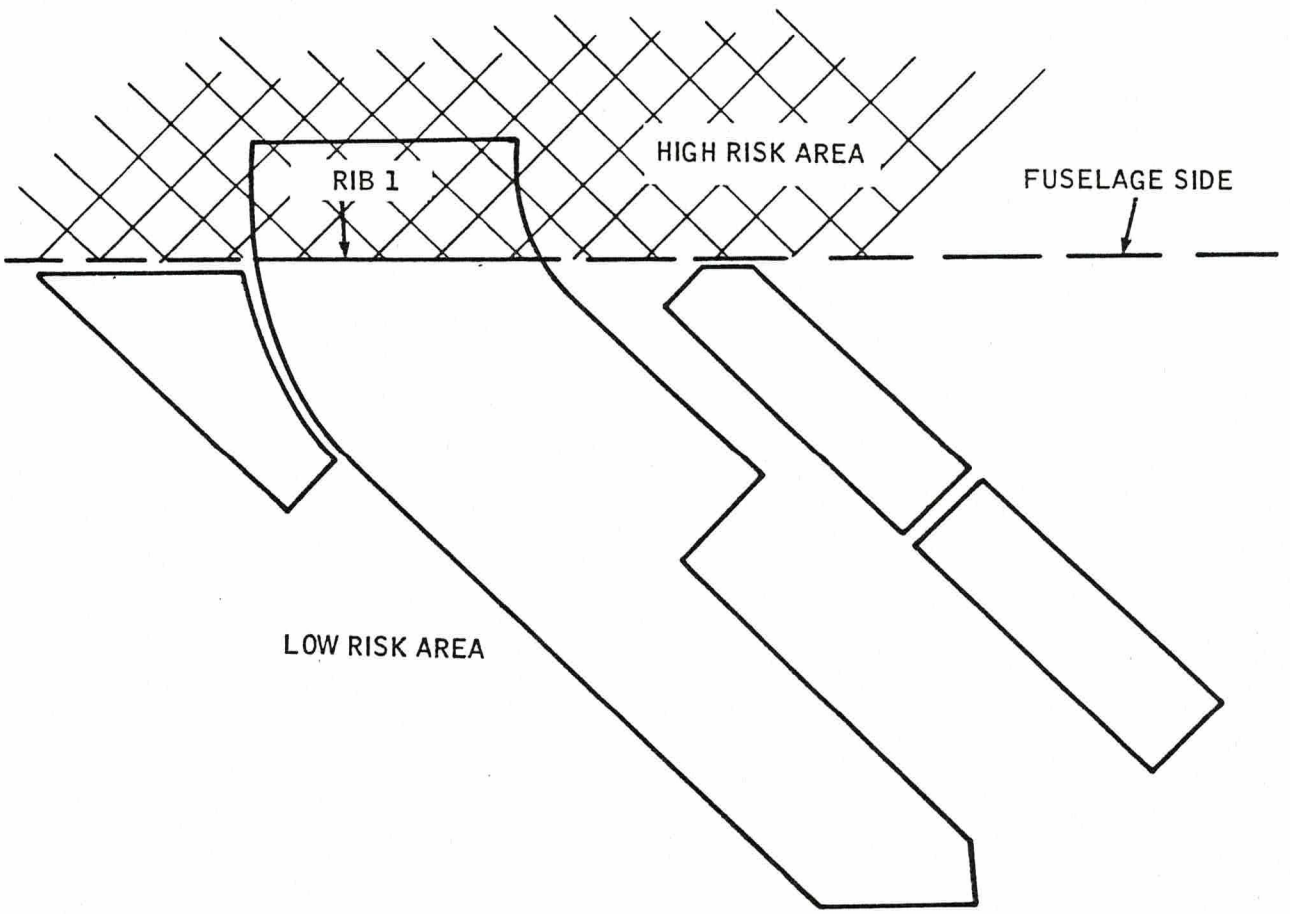

HIGH AND LOW RISK AREAS - PRESSURE TEST - MAINPLANE FUEL TANKS

FIGURE 1