CF-105 INSTRUMENTATION - ISSUE 7

FUEL SYSTEM

Changes from issue no. 5 are indicated either by being underlined or by a vertical line in the margin.

1. LIST OF INSTRUMENTATION

Numbers refer to location in system, see Figs. 1, 2 and 3, which show Layout of Fuel Tanks, Fuel Transfer System, and Fuel Tank Pressurization System, respectively. Locations 1 to 8 correspond to fuel tanks 1 to 8.

T - instrument to measure temperature.

P - instrument to measure pressure.

Q - instrument to measure fuel contents of tank.

M - instrument to measure mass flow of fuel.

Location See Sketches	Instruments Required			Description
1			Q	forward fuselage tank.
2		P	Q	rear fuselage tank.
3	T		Q	temperature in stbd. wing only, contents in port and stbd. tanks.
4			Q	port and stbd. wing tanks.
5	T	P	Q	temperature and pressure in stbd. tank only. Contents in port and stbd. tanks.
6			Q	port and stbd. wing tanks.
7		P	Q	pressure in stbd. tank only. Contents port and stbd.
8			Q	port and stbd. tanks.
9	T			fuel entering H.E., stbd. line.
10		P	M	fuel to port engine/AB combination.
11	T	P	M	fuel to stbd. engine/AB combination.
12	T			pressurization air entering tank.

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2. SUMMARY

2.1 Temperature

Instrument	Range (°F)	Accuracy (F°)	Accuracy (% of Range)	Recording Frequency
T5	-65 +160	±5	2%	2/min
T9	-65 +200	±5	±2%	2/min
T11	-65 +250	±5	2%	1/min
T3	-65 +185	±5	2%	1/min
T12	-65 +350	±5	2%	1/min

2.2 Pressure

Instrument	Range (psia)	Accuracy (psi)	Accuracy (% of Range)	Recording Frequency
P2	0-30	±0.5	2%	1/min
P5	0-35	±0.5	2%	10/min
P7	0-30	±0.5	2%	1/min
P10	0-75	±2	2%	2/min
P11	0-75	±2	2%	2/min

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2.3 Fuel Contents (This information has been added since Issue 4)

Instrument	Range (Gals.)	Accuracy (Gals.)	Accuracy (% of Range)	Recording Frequency
Q1	0-277	± 6	± 2%	1/Min.
Q2	0-281	± 6	± 2%	1/Min.
Q3 Port	0-151	± 3	± 2%	1/Min.
Stbd.	0-151	± 3	± 2%	1/Min.
Q4 Port	0-90	± 2	± 2%	1/Min.
Stbd.	0-90	± 2	± 2%	1/Min.
Q5 Port	0-146	± 3	± 2%	6/Min.
Stbd.	0-146	± 3	± 2%	6/Min.
Q6 Port	0-154	± 3	± 2%	1/Min.
Stbd.	0-154	± 3	± 2%	1/Min.
Q7 Port	0-279	± 6	± 2%	1/Min.
Stbd.	0-279	± 6	± 2%	1/Min.
Q8 Port	0-173	± 4	± 2%	1/Min.
Stbd.	0-173	± 4	± 2%	1/Min.

2.4 Mass Flow

The total flow to each engine is required (see locations 10 and 11). This may be measured as the total to each engine/afterburner combination or as the separate flows to afterburner and engine; whichever is most convenient.

The range of flows to be covered is as follows (for J.75 engine):

Engine only, 600-25,000 lbs/hr, accuracy 1% of max. i.e. ±250 lbs.

Afterburner only, 5000-65,000 lbs/hr, accuracy 1% of max. i.e. ±650 lbs.

Total Flow: 2000-90,000 lbs/hr.

LAYOUT OF FUEL TANKS SHOWING
STARBOARD WING ONLY

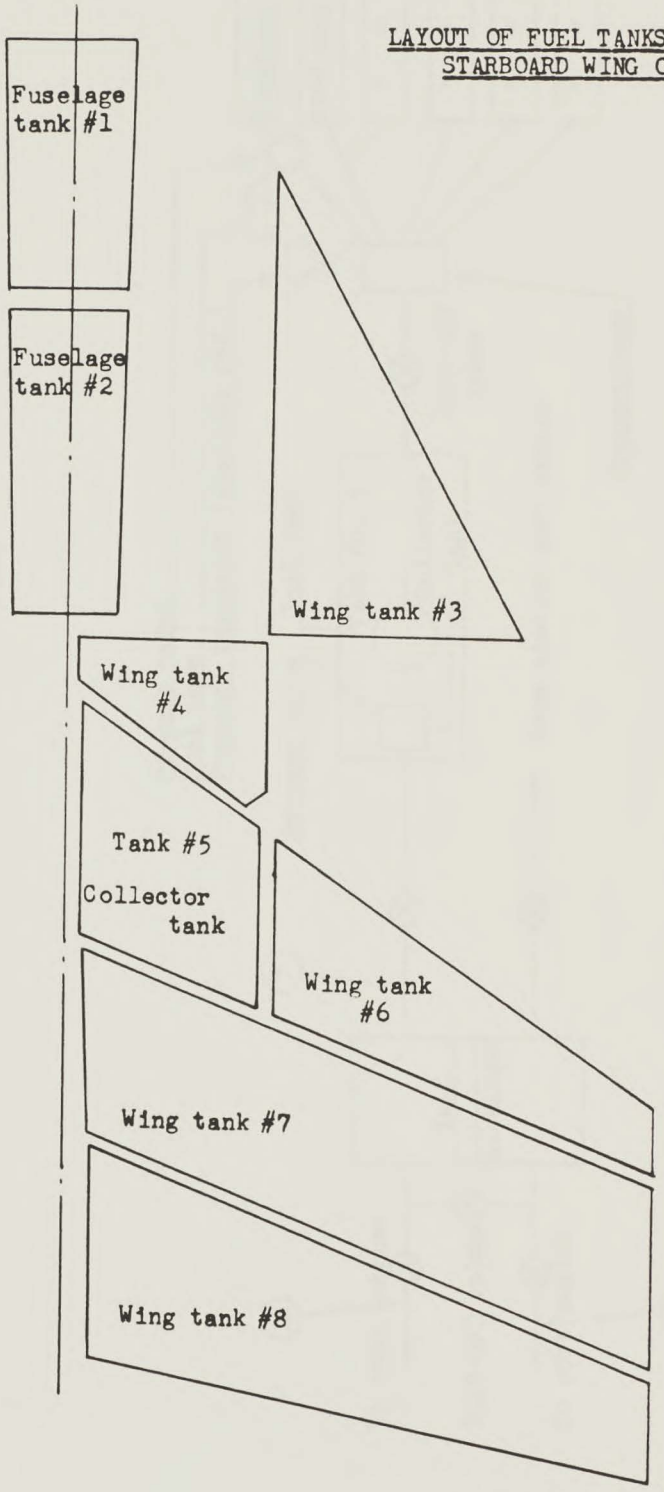
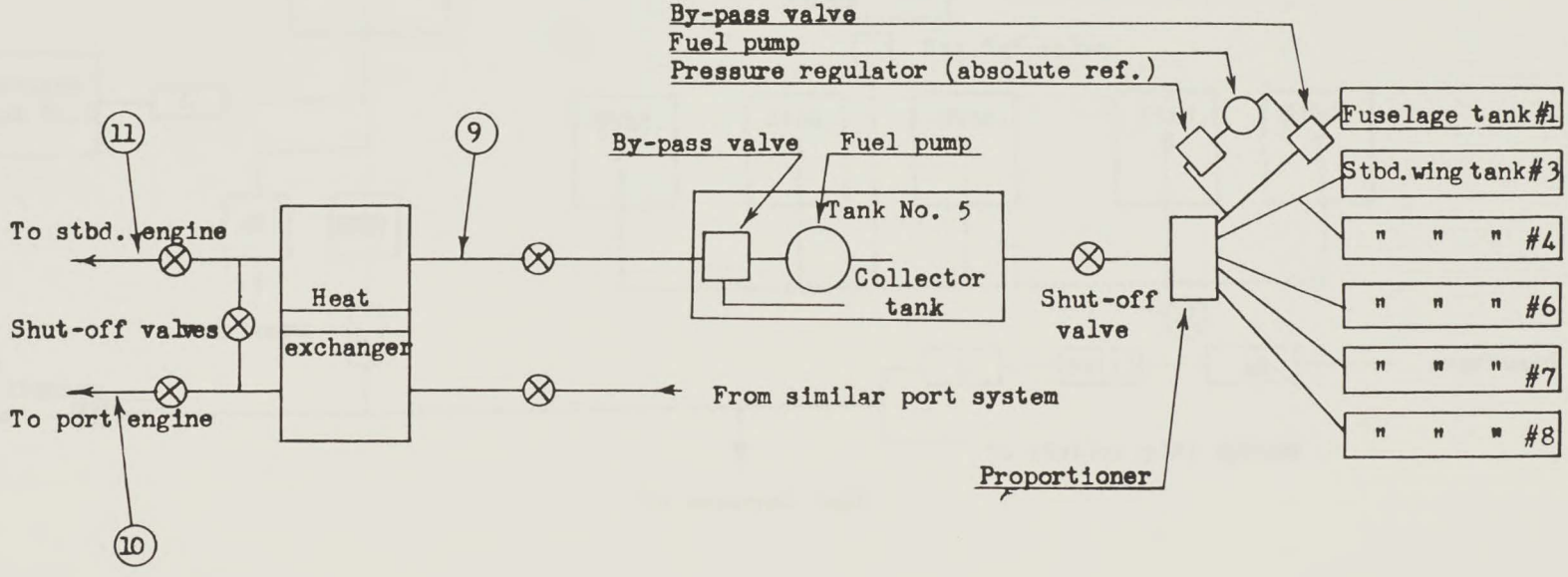


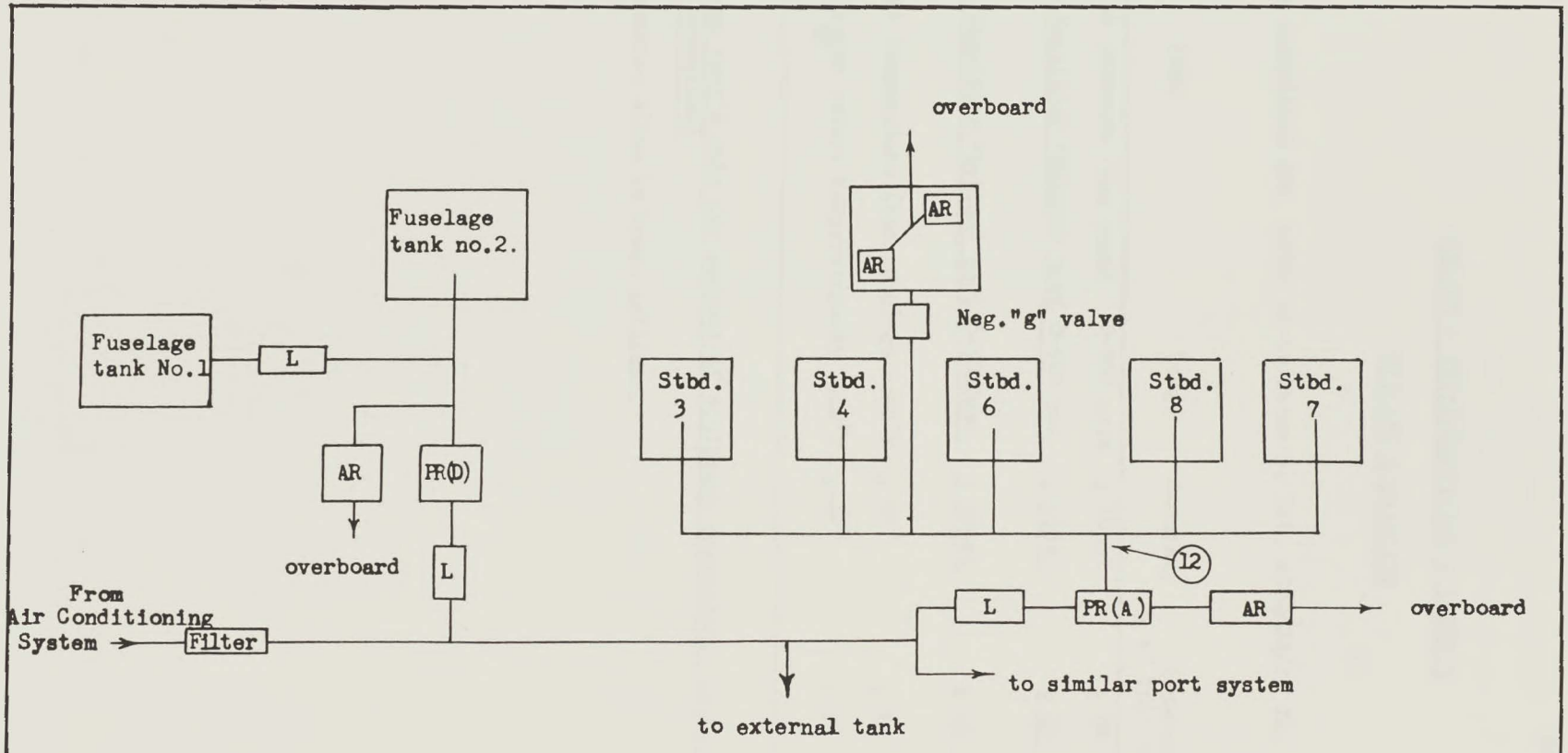
FIG. I



FUEL TRANSFER SYSTEM

Ref: Drawing No. 7-1600-38

FIG. 2.



L - Air flow limiter
PR (D) - Pressure regulating valve (differential)
PR (A) - Pressure regulating valve (absolute)
AR - Air relief valve

FUEL TANK PRESSURISATION SYSTEM

Ref: Drawing No. 7-1600-40

FIG. 3