1. LUBRICATION (No Sketch)

	Item	Range	Accuracy	Accuracy % of full range	Sampling Frequency
1.	Port engine oil pressure	0 to 80 psi	± 2 psi	±4%	5/min
2.	Stbd.engine oil pressure	0 to 80 psi	± 2 psi	±4%	5/min
3.	Oil Temp at port engine inlet	-75 to +250°F	±6.5°F	±2%	2/min
4.	Oil temp at Stbd.engine inlet	-75 to +250°F	±6.5°F	±2%	2/min
5.	Port engine gearbox air/oil heat exchanger inlet temperature	-75 to +500°F	±10°F	±2%	2/min
6.	Stbd.engine gearbox air/oil heat exchanger inlet temperature	-75 to +500°F	±10°F	±2%	2/min

2. ENGINE CONDITIONS (No Sketch)

7.	Port engine power lever position+	0 to 100 deg.	± 1 deg.	±1%	2/min
8.	Stbd.engine power lever position+	0 to 100 deg.	± 1 deg.	±1%	2/min
9.	Port engine L.P. compressor R.P.M.‡	0 to 110%		±0.5%	12/min
10.	Stbd.engine L.P. compressor R.P.M.‡	0 to 110%		±0.5%	12/min
11.	Port engine H.P. compressor R.P.M. ♣	0 to 110%		±0.5%	12/min
12.	Stbd.engine H.P. compressor R.P.M. ♣	0 to 110%		±0.5%	12/min
13.	Port engine intake static pressure (P_{s_2})	0 to 30 psia	±0.3 psi	±1%	20/sec
14.	Stbd.engine intake static pressure (P_{s_2})	0 to 30 psia	±0.3 psi	±1%	20/sec
15.	Port engine intake total head pressure (P_{t_2})	0 to 30 psia	±0.3 psi	±1%	12/min
16.	Stbd.engine intake total head pressure (P_{t_2})	0 to 30 psia	±0.3 psi	±1%	12/MIn

+ To be measured at the engine end of the flexible drive to the engine.

‡ Visual indication of both L.P. compressor speeds is required in pilot's cockpit if possible

♣ Visual indication of both H.P. compressor speeds is a definite requirements in the pilot's cockpit.

2. ENGINE CONDITIONS (cont'd)

	Item	Range	Accuracy	Accuracy % of full range	Sampling Frequency
17. 18. 19. 20.	DELETED				
21.	Turbine discharge press. (P_{t_7}) Port	0 to 45 psia	±0.45 psi	±1%	12/min
22.	Turbine discharge press. (P_{t_7}) Stbd.	0 to 45 psia	±0.45 psi	±1%	12/min
23.	Turbine discharge temp. (T_{t_7}) Port.	0 to 1400° F	±14F°	±1%	12/min
24.	Turbine discharge temp. (T_{t_7}) Stbd.	0 to 1400° F	±14F°	±1%	12/min
25.	L.P. compressor inlet temp. (T_{t_2}) Port	-75 to+350°F	±4F°	±1%	12/min
26.	L.P. compressor inlet temp. (T_{t_2}) Stbd.	-75 to+350°F	±4F°	±1%	12/min
26a	Bleed valve shut indication ++				Cont. ind.

++ Wiring provision only, to auto observer. For ground test only.

3. FUEL FLOW (no sketch)

27.	Fuel weight flow to port engine	600 to 25,000 lb/hr	±125 lb/hr	±0.5%	12/min
28.	Fuel weight flow to Stbd.engine	600 to 25,000 lb/hr	±125 lb/hr	±0.5%	12/min
29.	Fuel temp. at inlet to port engine burner	-75 to +350°F	±8°F	±2%	2/min
30.	Fuel temp. at inlet to stbd.engine burner	-75 to +350°F	±8°F	±2%	2/min

4. COOLING (see fig. 1)

(Port engine only except item no. 58 q.v.)

Unless otherwise stated, structural temperatures are required at the locations listed.

Item	Range	Accuracy	Accuracy % of full range	Sampling Frequency
31. Centre rear mount, station 711	0 to 1000°F	± 10°F	± 1%	1/min
32. Former below turbine (on upper flange)	0 to 500°F	± 5°F	± 1%	1/min
33. On hat section at T1-24ST shroud joint at Stn. 698	0 to 500°F	± 5°F	± 1%	1/min
34. Top inboard shroud (on outer surface of shroud) at Stn.742	0 to 500°F	± 5°F	± 1%	1/min
35. Top inboard shroud (on outer surface of shroud) at Stn.780	0 to 500°F	± 5°F	± 1%	1/min
36. Top of titanium former (shroud) at Stn. 803	0 to 500°F	± 5°F	± 1%	1/min
37. Shroud at bolt from lower latch at Stn. 803	0 to 500°F	± 5°F	± 1%	1/min
38. Top of shroud inner flange at Stn. 803	0 to 500°F	± 5°F	± 1%	1/min
39. Top of shroud inner flange at kink, Stn.803	0 to 500°F	± 5°F	± 1%	1/min
40. Inner surface of slitter on slitter ℄ Stn.855	0 to 1000°F	± 20°F	± 2%	5/min
41. Inboard, shroud (on outer surface, on engine ℄) Stn. 836	0 to 500°F	± 10°F	± 2%	5/min
42. Air temp. top rear compressor, zone 1	0 to 500°F	± 5°F	± 1%	1/min
43. Air temp. under turbine, zone 2	0 to 500°F	± 5°F	± 1%	1/min
44. Air temp. above turbine, zone 2	0 to 500°F	± 5°F	± 1%	1/min
45. Air temp. above engine, zone 2, stn. 803	0 to 500°F	± 5°F	± 1%	1/min
46. Air temp. below engine, zone 2, stn. 803	0 to 500°F	± 5°F	± 1%	1/min
47. Ambient air temp. forward of parachute bay (not shown in fig)	0 to 500°F	± 5°F	± 1%	1/min
48. Engine can next centre rear mount, Stn. 710	0 to 1000°F	± 10°F	± 1%	1/min
49. Lower side of engine can, Stn. 710	0 to 1000°F	± 10°F	± 1%	1/min
50. Top flange of I-beam on ℄ through heat exchangers Stn. 592¥	0 to 500°F	± 5°F	± 1%	1/min
51. Top flange of former directly below firewall, stn. 663	0 to 500°F	± 5°F	± 1%	1/min
52. Structure 3 1/2" aft of aux. ejector (inner surface of lower skin) Stn. 663	0 to 500°F	± 5°F	± 1%	1/min

¥ On beam, as near to top as possible

4. COOLING (cont'd)

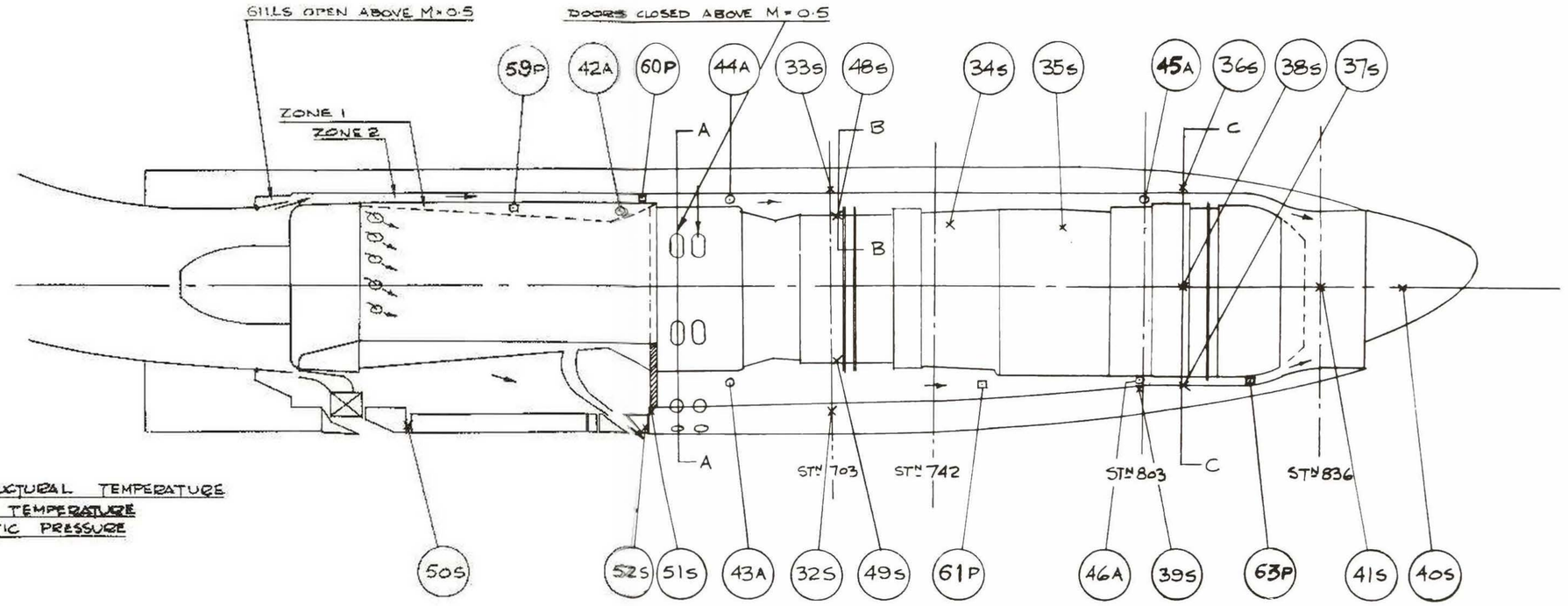
Item	Range	Accuracy	Accuracy % of full range	Sampling Frequency
53. Blow-in doors outside of bend of lower hose, at Stn. 673	0 to 1000°F	± 10°F	± 1%	1/min
54. Lower longeron engine bay, Stn. 591 (Not shown in fig.)	0 to 500°F	± 5°F	± 1%	1/min
55. Bottom of light frame (on web) at Stn. 586 (Not shown in fig.)	0 to 500°F	± 5°F	± 1%	1/min
56. Bottom of light frame (on web) at Stn. 656 (Not shown in fig.)	0 to 500°F	± 5°F	± 1%	1/min
57. Gills shut indication lights, port, 2 * per engine	* One on side gills indicating "shut - not shut"; one on oil cooler gill, at the bottom, indicating "shut - fully open"			Cont.
58. Gills shut indication lights, stbs. 2 * per engine				Cont.
58a Air temperature, alternator exhaust (Not shown in fig.)	75 to 500°F	± 6°F	± 1%	5/min

5. STATIC PRESSURES (see fig. 1.)

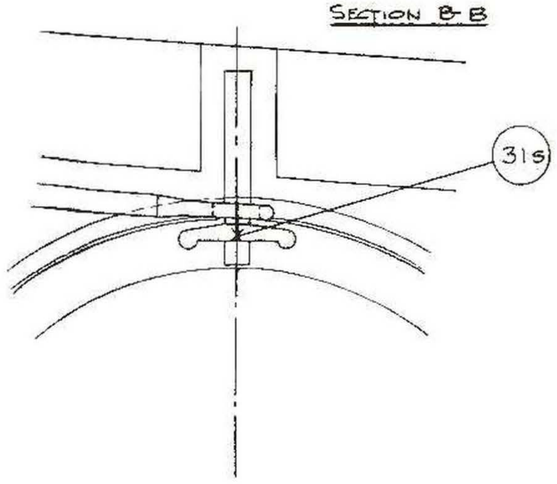
(Port engine only)

59. Top centre compressor, differential between zone 1 and 2.	5 to 20 psid	±0.25 psi	± 1%	6/min
60. Zone 2, top rear compressor	0 to 35 psia	±0.35 psi	± 1%	6/min
61. Zone 2, bottom mid section of tailpipe	0 to 35 psia	±0.35 psi	± 1%	6/min
62. Differential between zone 2 and parachute bay at centre fuselage (not shown in fig.)	5 to 5 psid	±0.1 psi	± 1%	6/min
63. Differential in ejector shroud, rel. to ambient. Between Stns. 820 & 825 at bottom of shroud	3 to 0 psig‡	±0.05 psi	± 2%	6/min

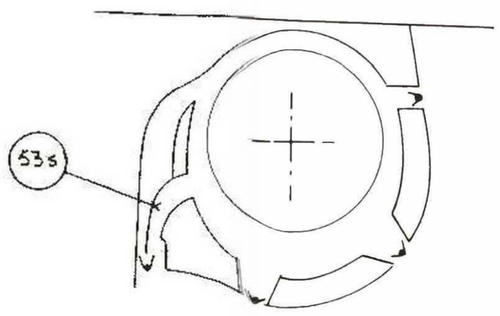
‡ Actual differential pressure range may be -3 to +18 psi.



SECTION B-B



SECTION A-A



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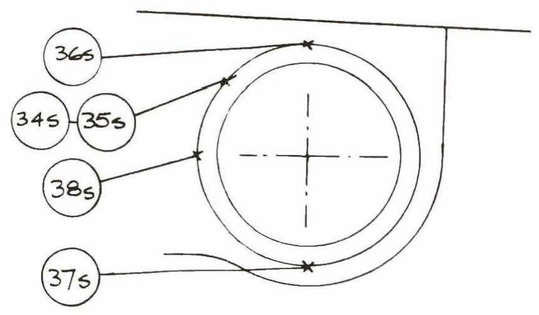

COOLING SYSTEM INSTRUMENTATION FOR J-75 ENGINE INSTALLATION

FIG. 1