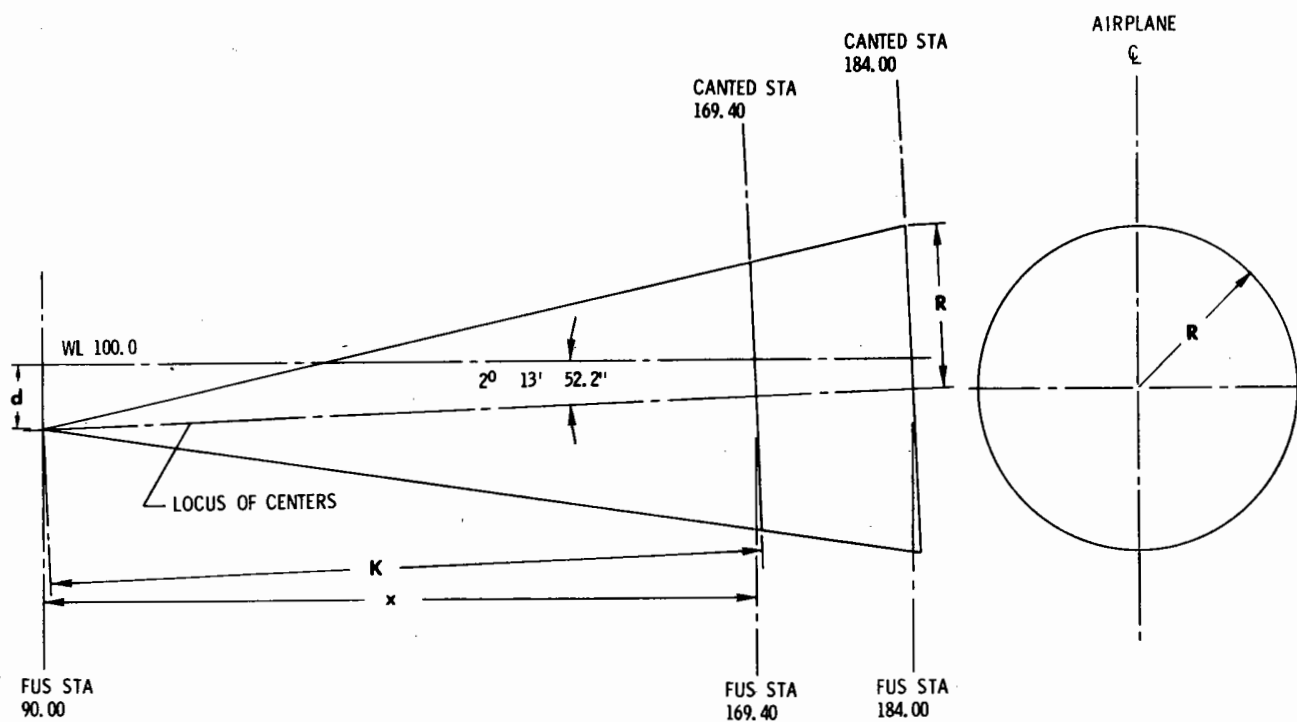


BASIC CONTOURS
FUS STA 90 TO FUS STA 184
 F-104G AND TF-104G



FUS STA	x	d	K	R
90.00	0.0000	7.0000	0.0000	0.000
95.00	5.0000	6.8052	5.0037	1.155
100.00	10.0000	6.6104	10.0075	2.284
105.00	15.0000	6.4156	15.0113	3.389
110.00	20.0000	6.2208	20.0151	4.468
115.00	25.0000	6.0250	25.0189	5.522
120.00	30.0000	5.8311	30.0227	6.551
125.00	35.0000	5.6364	35.0265	7.556
130.00	40.0000	5.4415	40.0303	8.535
135.00	45.0000	5.2468	45.0341	9.489
140.00	50.0000	5.0519	50.0379	10.417
145.00	55.0000	4.8471	55.0417	11.321
150.00	60.0000	4.6624	60.0455	12.200
155.00	65.0000	4.4675	65.0493	13.053
160.00	70.0000	4.2727	70.0531	13.882
165.00	75.0000	4.0780	75.0568	14.685
169.40	79.4000	3.9065	79.4602	15.371
170.00	80.0000	3.8831	80.0606	15.464
175.50	85.0000	3.6690	85.5648	16.291
182.88	92.8800	3.3813	92.9504	17.353
184.00	94.0000	3.3380	94.0713	17.510

NOTE (THIS SHEET ONLY)

- 1 BASIC CONTOURS GIVEN TO OUTSIDE OF SKIN.
- 2 DIMENSION d MEASURED NORMAL TO WL 100.00.
- 3 SEE FIGURE 1-1 FOR COORDINATE SYSTEM.

HC05778
 R151-1-4-92(1)

Figure 4-1. Body Group Basic Contours (Sheet 1 of 7)

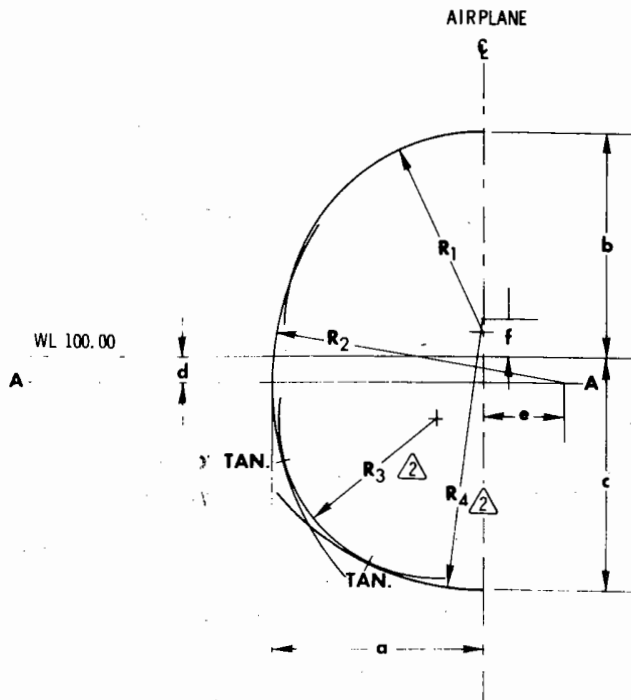
**BASIC CONTOURS
FUS STA 189 TO FUS STA 376
F-104G ONLY**

NOTE (THIS SHEET ONLY)

- 1 BASIC CONTOURS GIVEN TO OUTSIDE OF SKIN.
- 2 MODIFIED IN AREA OF NOSE LANDING GEAR DOOR.
- 3 SEE FIGURE 1-1 FOR COORDINATE SYSTEM.

PROCEDURE FOR LAYING OUT CONTOURS:

- 1 LAY OUT LINE A-A PARALLEL TO AND DISTANCE *d* BELOW WL 100.00.
- 2 LOCATE *e* ON LINE A-A.
- 3 LOCATE *f* ON AIRPLANE CENTERLINE.
- 4 LOCATE *b* AND *c* ON AIRPLANE CENTERLINE.
- 5 LOCATE *a* ON LINE A-A.
- 6 STRIKE ARCS *R*₁, *R*₂ AND *R*₄.
- 7 LOCATE CENTER FOR *R*₃ BY STRIKING ARC TANGENT TO *R*₂ AND *R*₄ (SEE TABLE FOR RADIUS.)

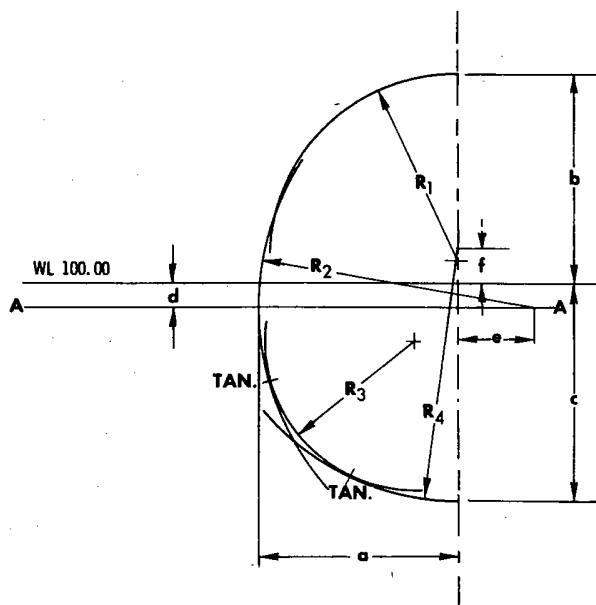


FUS STA	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>R</i> ₁	<i>R</i> ₂	<i>R</i> ₃	<i>R</i> ₄
189.50	18.254	15.251	21.304	3.139	0.245	-2.953	18.170	18.499	18.057	18.351
195.00	18.954	16.201	21.818	2.985	0.469	-2.616	18.839	18.423	18.538	19.202
200.50	19.608	17.130	22.307	2.878	0.843	-2.197	19.428	20.451	18.838	20.110
206.00	20.217	18.036	22.772	2.816	1.350	-1.706	19.935	21.567	18.983	21.066
212.50	20.878	19.075	23.290	2.800	2.100	-1.048	20.428	22.978	18.992	22.242
219.00	21.476	20.076	23.774	2.800	2.985	-0.322	20.857	24.461	18.867	23.452
225.50	22.010	21.038	24.225	2.800	3.978	+0.457	21.233	25.988	18.651	24.682
232.00	22.481	21.958	24.642	2.800	5.051	1.270	21.546	27.532	18.390	25.912
237.50	22.830	22.702	24.968	2.800	6.001	1.973	21.758	28.831	18.166	26.941
243.00	23.133	23.411	25.270	2.800	6.971	2.678	21.916	30.104	17.967	27.948
249.00	23.412	24.146	25.571	2.800	8.034	3.438	22.024	31.446	17.810	29.009
255.00	23.637	24.837	25.844	2.800	9.079	4.177	22.062	32.716	17.750	30.021
261.20	23.813	25.503	26.096	2.800	10.118	4.902	22.022	33.931	17.750	30.998
267.40	23.931	26.118	26.316	2.800	11.091	5.574	21.894	35.022	17.750	31.890
273.60	23.992	26.679	26.506	2.800	11.974	6.179	21.669	35.966	17.750	32.685
279.80	24.000	27.186	26.665	2.800	12.743	6.702	21.348	36.743	17.750	33.367
284.85	24.000	27.556	26.772	2.800	13.268	7.057	21.077	37.268	17.750	33.829
289.90	24.000	27.887	26.858	2.800	13.689	7.340	20.807	37.689	17.750	34.198
294.95	24.000	28.177	26.924	2.800	13.992	7.543	20.530	37.992	17.750	34.467
300.00	24.000	28.426	26.970	2.800	14.164	7.658	20.238	38.164	17.750	34.628
305.00	24.000	28.629	26.995	2.800	14.200	7.682	19.924	38.200	17.750	34.677
310.00	24.000	28.790	27.000	2.800	14.200	7.682	19.643	38.200	17.750	34.682
315.00	24.000	28.906	27.000	2.800	14.200	7.682	19.429	38.200	17.750	34.682
322.00	24.000	28.991	27.000	2.800	14.200	7.682	19.264	38.200	17.750	34.682
325.00	24.000	29.000	27.000	2.800	14.200	7.682	19.247	38.200	17.750	34.682
TO 375.50										

HC06110
R151-1-4-92(2)

Figure 4-1. Body Group Basic Contours (Sheet 2 of 7)

BASIC CONTOURS
FUS STA 189 TO FUS STA 243
 TF-104G ONLY

**NOTE**

- 1 BASIC CONTOURS GIVEN TO OUTSIDE OF SKIN
- 2 SEE FIGURE 1-1 FOR COORDINATE SYSTEM
- 3 BASIC CONTOURS FROM FUSELAGE STATION 243 TO FUSELAGE STATION 422 ARE SPECIALLY LOFTED, EXCEPT FOR SCOOP AREA SHOWN ON FOLLOWING SHEET

PROCEDURE FOR LAYING OUT CONTOURS:

- 1 LAY OUT LINE A-A PARALLEL TO AND DISTANCE d BELOW WL 100.00
- 2 LOCATE e ON LINE A-A
- 3 LOCATE f ON AIRPLANE CENTERLINE
- 4 LOCATE b AND c ON AIRPLANE CENTERLINE
- 5 LOCATE a ON LINE A-A
- 6 STRIKE ARCS R_1 , R_2 AND R_4
- 7 LOCATE CENTER FOR R_3 BY STRIKING ARC TANGENT TO R_2 AND R_4 . (SEE TABLE FOR RADIUS)

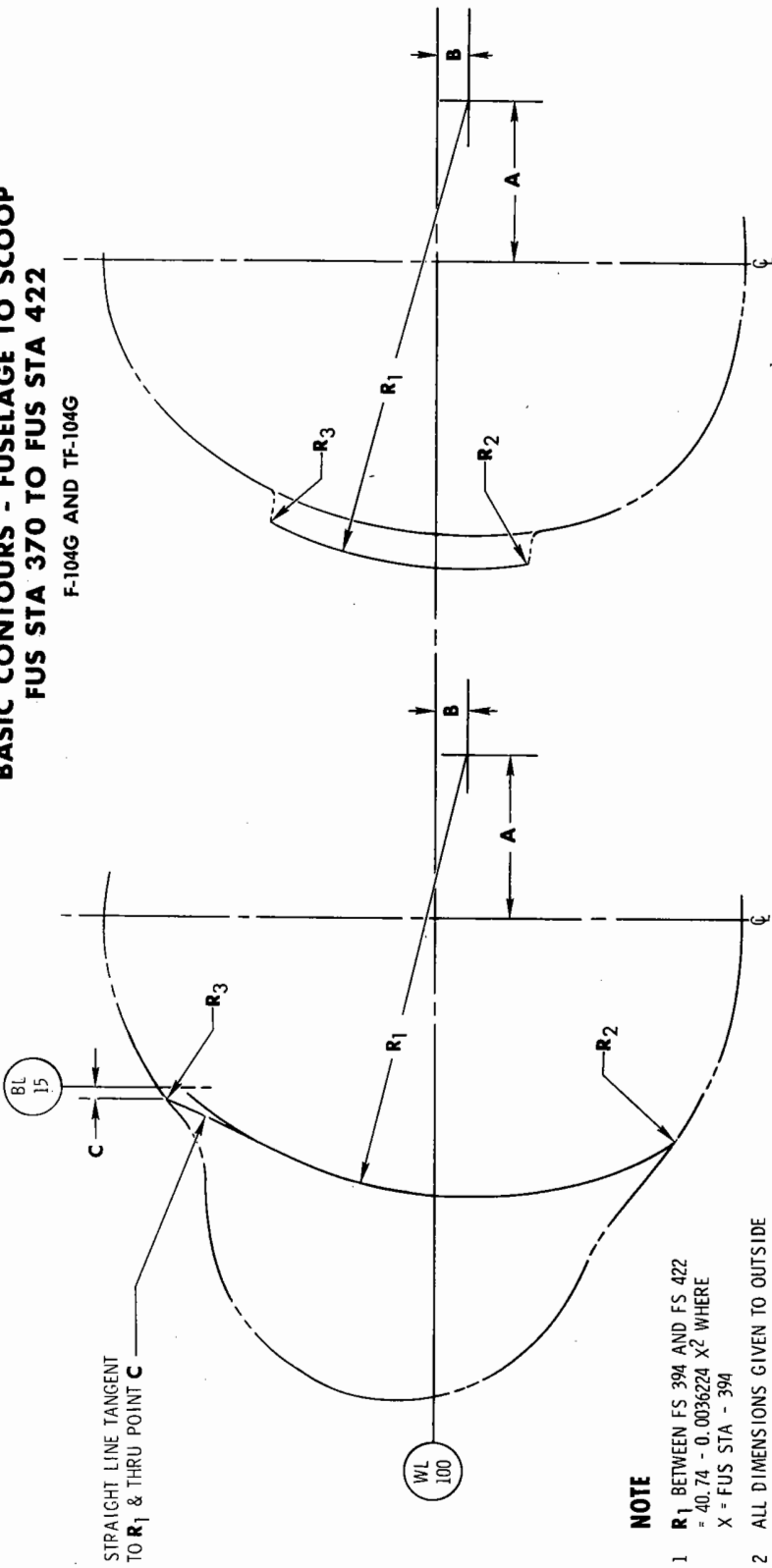
FUS STA	a	b	c	d	e	f	R ₁	R ₂	R ₃	R ₄
189.50	18.254	15.251	21.304	3.139	0.245	-2.953	18.170	18.499	18.057	18.351
195.00	18.954	16.201	21.818	2.985	0.469	-2.616	18.839	18.423	18.538	19.202
200.50	19.608	17.130	22.307	2.878	0.843	-2.197	19.428	20.451	18.838	20.110
206.00	20.217	18.036	22.772	2.816	1.350	-1.706	19.935	21.567	18.983	21.066
212.50	20.878	19.075	23.290	2.800	2.100	-1.048	20.428	22.978	18.992	22.242
219.00	21.476	20.076	23.774	2.800	2.985	-0.322	20.857	24.461	18.867	23.452
225.50	22.010	21.038	24.225	2.800	3.978	+0.457	21.233	25.988	18.651	24.682
232.00	22.481	21.958	24.642	2.800	5.051	1.270	21.546	27.532	18.390	25.912
237.50	22.830	22.702	24.968	2.800	6.001	1.973	21.758	28.831	18.166	26.941
243.00	23.133	23.411	25.270	2.800	6.971	2.678	21.916	30.104	17.967	27.948

HH 1711
 R151-13-4-92(2A)

Figure 4-1. Body Group Basic Contours (Sheet 3 of 7)

BASIC CONTOURS - FUSELAGE TO SCOOP
FUS STA 370 TO FUS STA 422

F-104G AND TF-104G



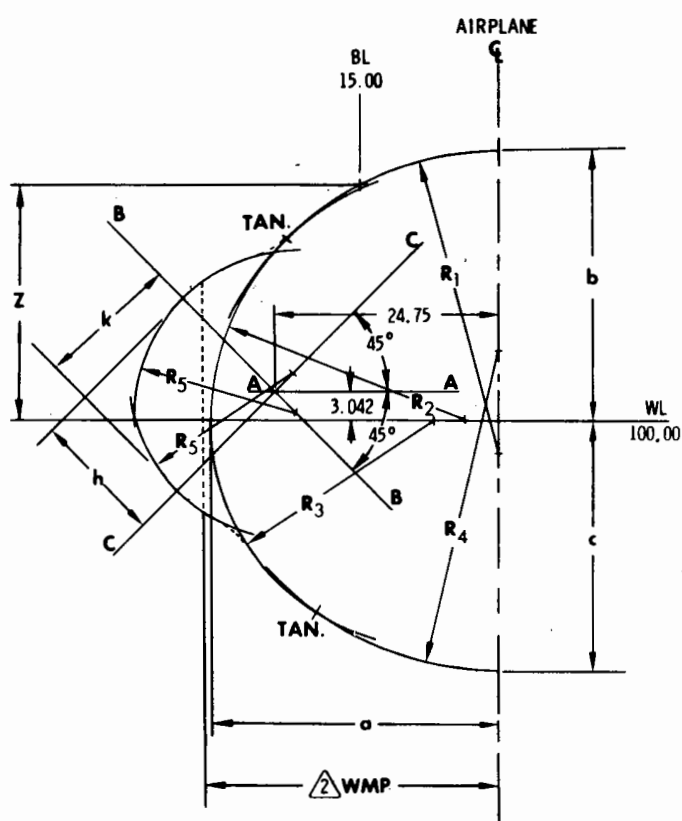
FUS STA	A	B	C	R ₁	R ₂	R ₃
370 THRU 388	14.200	2.800	—	40.740	0.32	0.32
394	14.200	2.800	—	40.740	0.47	0.47
400	14.200	2.800	—	40.610	0.85	0.85
406	14.200	2.800	—	40.218	1.58	1.58
411.38	14.200	2.800	2.12	39.646	2.04	2.04
416.75	14.200	2.800	0.88	38.865	1.79	1.79
422	14.200	2.800	0.25	37.900	1.54	1.54

HF 00762 RI51-3-4-92(3A)

Figure 4-1. Body Group Basic Contours (Sheet 3A of 7)

BASIC CONTOURS **FUS STA 422 TO FUS STA 490**

△ F-104G AND △ TF-104G AIRCRAFT



NOTE (THIS SHEET ONLY)

- 1 BASIC CONTOURS GIVEN TO OUTSIDE OF SKIN
- △ 2 APPLICABLE FROM FUS STA 457.00 THROUGH FUS STA 490.00 (WING MATING PLANE).
- 3 SEE FIGURE 1-1 FOR COORDINATE SYSTEM.
- △ 4 BASIC CONTOURS FROM FUS STA 376.00 TO FUS STA 422.00 ARE SPECIALLY LOFTED.
- △ 5 BASIC CONTOURS FROM FUS STA 280.00 TO FUS STA 422.00 ARE SPECIALLY LOFTED.

PROCEDURE FOR LAYING OUT CONTOURS:

- 1 LOCATE a ON WL 100.00
- 2 LOCATE b AND c ON AIRPLANE CENTERLINE.
- 3 STRIKE ARCS R_1, R_2, R_3 , AND R_4 .
- 4 LOCATE POINT A AND ESTABLISH LINE $A-A$ PARALLEL TO WL 100.00.
- 5 ESTABLISH LINE $B-B$ THROUGH POINT A AND 45° TO LINE $A-A$.
- 6 ESTABLISH LINE $C-C$ THROUGH POINT A AND 45° TO LINE $A-A$.
- 7 LOCATE h ON LINE $B-B$.
- 8 LOCATE k ON LINE $C-C$.
- 9 STRIKE ARCS R_5 FROM CENTERS ON LINES $B-B$ AND $C-C$.

FUS STA	a	b	c	WMP	h	k	Z	R_1	R_2	R_3	R_4	R_5
422.00	31.500	29.000	27.000	—	16.950	16.950	24.164	25.681	—	23.818	34.682	16.950
429.50	31.493	29.000	27.000	—	16.476	16.523	24.634	27.950	—	23.823	34.669	16.639
437.00	31.466	29.000	27.000	—	15.899	16.075	25.023	30.276	—	23.842	34.624	16.569
444.00	31.423	29.000	27.000	—	15.288	15.642	25.276	32.071	—	23.872	34.551	16.765
451.00	31.363	29.000	27.000	—	14.626	15.198	25.391	32.977	—	23.915	34.448	17.258
457.00	31.298	29.000	27.000	33.336	14.032	14.813	25.384	32.923	27.375	23.961	34.337	17.946
465.13	31.190	29.000	27.000	33.002	13.195	14.276	25.362	32.739	27.452	24.037	34.152	19.398
473.25	31.059	29.000	27.000	32.668	12.346	13.727	25.333	32.515	27.544	24.130	33.929	21.807
481.38	30.904	29.000	27.000	32.334	11.513	13.182	25.299	32.250	27.654	24.239	33.665	25.845
489.50	30.734	29.000	27.000	32.001	10.720	12.648	25.261	31.960	27.774	24.360	33.374	32.781

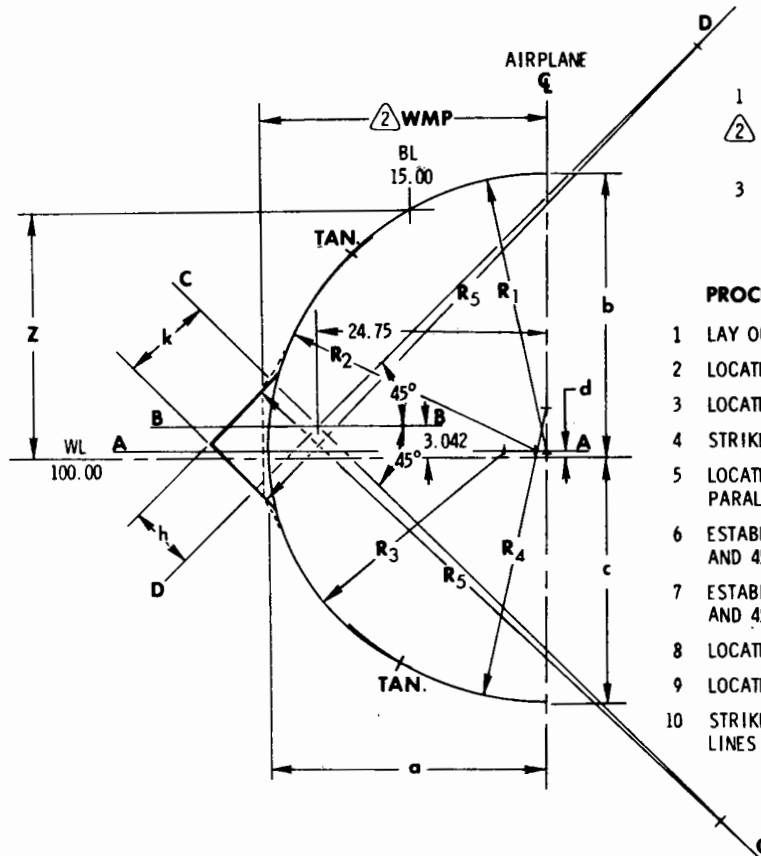
HC04709
R131-1-4-92(3)

Figure 4-1. Body Group Basic Contours (Sheet 4 of 7)

Changed 1 August 1963

4-6A/4-6B

BASIC CONTOURS
FUS STA 490 TO FUS STA 566
 F-104G AND TF-104G

**NOTE (THIS SHEET ONLY)**

- 1 BASIC CONTOURS GIVEN TO OUTSIDE OF SKIN.
- 2 APPLICABLE FROM FUS STA 490.00 THROUGH FUS STA 546.10 (WING MATING PLANE).
- 3 SEE FIGURE 1-1 FOR COORDINATE SYSTEM.

PROCEDURE FOR LAYING OUT CONTOURS:

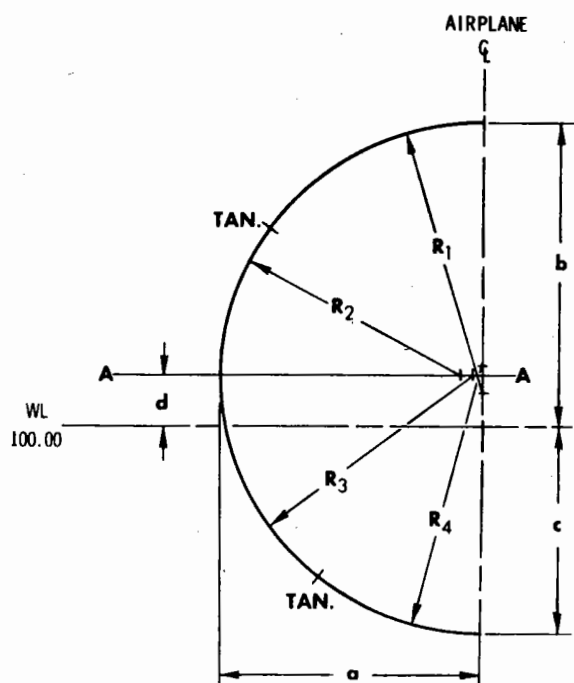
- 1 LAY OUT LINE A-A PARALLEL TO AND DISTANCE *d* ABOVE WL 100.00.
- 2 LOCATE *a* ON LINE A-A.
- 3 LOCATE *b* AND *c* ON AIRPLANE CENTERLINE.
- 4 STRIKE ARCS *R*₁, *R*₂, *R*₃, AND *R*₄.
- 5 LOCATE POINT B AND ESTABLISH LINE B-B PARALLEL TO WL 100.00.
- 6 ESTABLISH LINE C-C THROUGH POINT B AND 45° TO LINE B-B.
- 7 ESTABLISH LINE D-D THROUGH POINT B AND 45° TO LINE B-B.
- 8 LOCATE *h* ON LINE C-C.
- 9 LOCATE *k* ON LINE D-D.
- 10 STRIKE ARCS *R*₅ FROM CENTER ON LINES C-C AND D-D

FUS STA	a	b	c	d	WMP	h	k	Z	R ₁	R ₂	R ₃	R ₄	R ₅
490.00	30.724	29.000	27.000	0.000	31.980	10.673	12.616	25.259	31.943	27.781	24.367	33.357	33.351
497.25	30.572	29.029	27.000	0.000	31.682	10.011	12.149	25.251	31.663	27.938	24.474	33.098	44.527
505.00	30.409	29.126	26.984	0.023	31.364	9.350	11.650	25.302	31.332	28.180	24.603	32.815	66.571
512.75	30.247	29.290	26.902	0.148	31.046	8.730	11.137	25.422	31.028	28.361	24.789	32.508	112.509
520.50	30.084	29.521	26.749	0.371	30.727	8.135	10.588	25.614	30.744	28.490	25.024	32.180	226.142
526.90	29.950	29.763	26.570	0.623	30.465	7.646	10.087	25.823	30.523	28.567	25.243	31.898	226.142
533.30	29.815	30.040	26.345	0.932	30.202	7.140	9.523	26.074	30.349	28.640	25.482	31.610	226.142
539.70	29.681	30.320	26.075	1.291	29.939	6.595	8.870	26.331	30.196	28.616	25.729	31.318	∞
546.10	29.547	30.599	25.762	1.695	29.676	5.987	8.104	26.587	30.045	28.489	25.979	31.025	—
552.50	29.410	30.878	25.405	2.140	—	5.284	7.196	26.843	29.896	28.273	26.224	30.730	—
559.25	29.263	31.174	24.983	2.647	—	4.404	6.046	27.114	29.740	27.957	26.475	30.418	—
566.00	29.105	31.468	24.515	3.187	—	3.338	4.659	27.384	29.587	27.577	26.710	30.097	—

HC05779
 R151-1-4-92(4)

Figure 4-1. Body Group Basic Contours (Sheet 5 of 7)

**BASIC CONTOURS
FUS STA 572 TO FUS STA 652
F-104G AND TF-104G**

**NOTE (THIS SHEET ONLY)**

- 1 BASIC CONTOURS GIVEN TO OUTSIDE OF SKIN.
- 2 SEE FIGURE 1-1 FOR COORDINATE SYSTEM.

PROCEDURE FOR LAYING OUT CONTOURS:

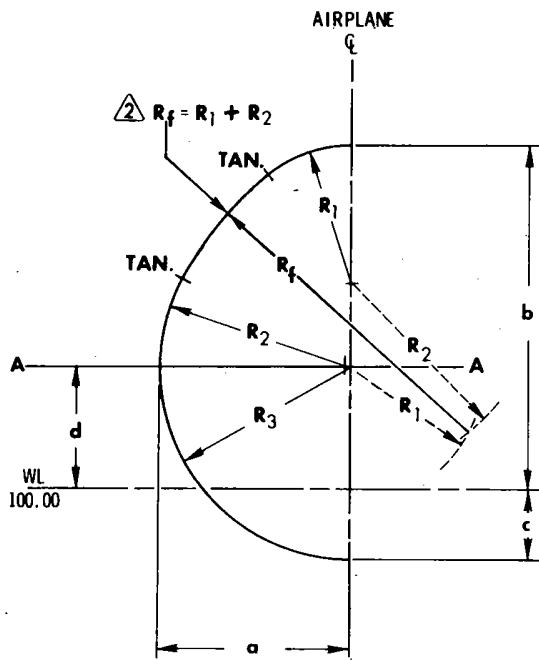
- 1 LAY OUT LINE A-A PARALLEL TO AND DISTANCE d ABOVE WL 100.00.
- 2 LOCATE a ON LINE A-A.
- 3 LOCATE b AND c ON AIRPLANE CENTERLINE.
- 4 STRIKE ARCS R_1, R_2, R_3 AND R_4 .

FUS STA	a	b	c	d	R ₁	R ₂	R ₃	R ₄
572.25	28.934	31.763	24.003	3.753	29.436	27.158	26.923	29.767
579.50	28.749	32.058	23.447	4.340	29.286	26.725	27.107	29.429
586.25	28.550	32.352	22.849	4.942	29.138	26.305	27.254	29.087
593.00	28.335	32.647	22.209	5.552	28.993	25.927	27.355	28.741
600.00	28.093	32.953	21.504	6.187	28.844	25.590	27.407	28.377
607.00	27.832	33.258	20.757	6.817	28.696	25.321	27.392	28.014
614.00	27.547	33.564	19.969	7.437	28.551	25.123	27.306	27.647
620.50	27.261	33.847	19.203	7.995	28.257	24.856	27.153	27.306
627.00	26.952	34.131	18.404	8.533	27.909	24.641	26.926	26.963
633.40	26.622	34.411	17.585	9.037	27.504	24.492	26.622	26.622
639.89	26.259	34.694	16.725	9.534	27.036	24.383	26.259	26.259
646.50	25.857	34.983	15.819	10.038	26.502	24.297	25.857	25.857
652.00	25.495	35.223	15.041	10.454	26.008	24.256	25.495	25.495

HC05780
R15'-1-4-92(5)

Figure 4-1. Body Group Basic Contours (Sheet 6 of 7)

BASIC CONTOURS
FUS STA 652 TO FUS STA 705
F-104G AND TF-104G

**NOTE (THIS SHEET ONLY)**

- 1 CONTOURS GIVEN TO OUTSIDE OF SKIN.
- 2 $R_f = R_1 + R_2$ AFT OF FUS STA 663.00.
- 3 SEE FIGURE 1-1 FOR COORDINATE SYSTEM.

PROCEDURE FOR LAYING OUT CONTOURS:

- 1 LAY OUT LINE A-A PARALLEL TO AND DISTANCE d ABOVE WL 100.00.
- 2 LOCATE a ON LINE A-A.
- 3 LOCATE b AND c ON AIRPLANE CENTERLINE.
- 4 STRIKE ARCS R_1 , R_2 AND R_3 .
- 5 LOCATE CENTER OF ARC R_f BY USING RADIUS R_1 AND STRIKING ARC FROM CENTER OF ARC R_2 AND USING RADIUS R_2 AND STRIKING ARC FROM CENTER OF ARC R_1 .
- 6 STRIKE ARC R_f .

FUS STA	a:R3	b	c	d	R1	R2
652.00	25.495	35.223	15.041	10.454	26.008	24.256
657.50	25.105	35.462	14.244	10.861	25.321	24.201
663.00	24.684	35.697	13.427	11.257	24.341	24.078
668.50	24.230	35.923	12.592	11.638	23.127	23.874
674.00	23.737	36.135	11.739	11.998	21.739	23.573
679.50	23.203	36.329	10.868	12.335	20.236	23.160
685.00	22.621	36.500	9.980	12.641	18.679	22.621
690.00	22.046	36.632	9.158	12.888	17.266	22.046
695.00	21.422	36.738	8.324	12.098	15.902	21.422
700.00	20.742	36.815	7.477	13.265	14.632	20.742
705.00	20.000	36.858	6.618	13.382	13.500	20.000

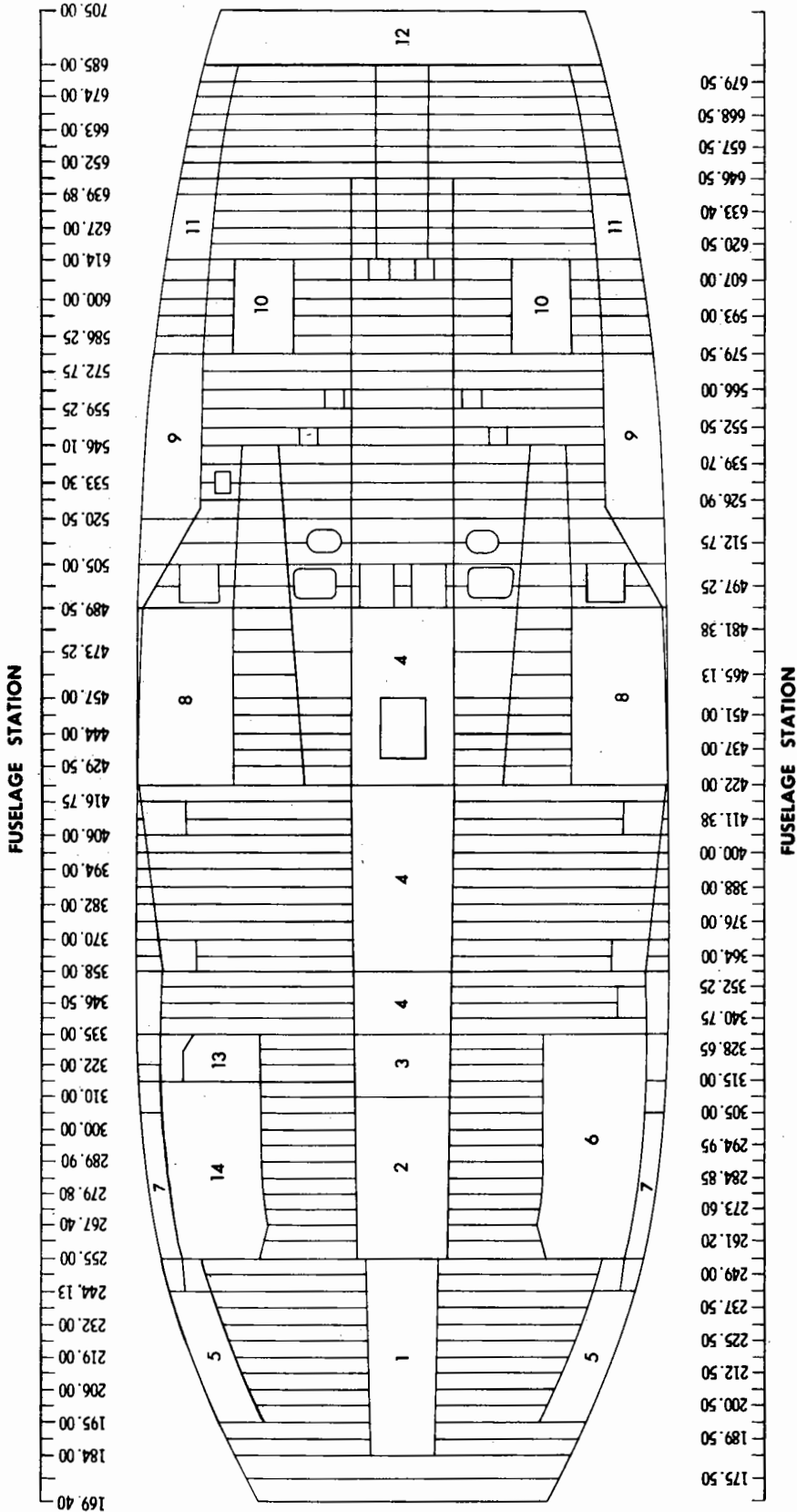
HC05781
R151-1-4-92(6)

Figure 4-1. Body Group Basic Contours (Sheet 7 of 7)

BASIC STATIONS
F-104G ONLY

Section IV

T. O. 1F-104G-3



- | ITEM | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--------------------------------|---|---|---|---|---|----|----|----|----|----|
| 1 WINDSHIELD AND CANOPY | | | | | | | | | | |
| 2 ELECTRONIC COMPARTMENT COVER | | | | | | | | | | |
| 3 AMMUNITION COMPARTMENT COVER | | | | | | | | | | |
| 4 FUEL TANK COVER | | | | | | | | | | |
| 5 COCKPIT LOWER HATCH | | | | | | | | | | |
| 6 ARMAMENT COMPARTMENT DOORS | | | | | | | | | | |
| 7 NOSE LANDING GEAR DOOR | | | | | | | | | | |
| 8 MAIN LANDING GEAR DOORS | | | | | | | | | | |
| 9 HYDRAULIC DOOR | | | | | | | | | | |
| 10 SPEED BRAKE | | | | | | | | | | |
| 11 DRAG CHUTE DOOR | | | | | | | | | | |
| 12 TAIL CONE | | | | | | | | | | |
| 13 RAM AIR TURBINE DOOR | | | | | | | | | | |
| 14 ELECTRICAL BAY DOOR | | | | | | | | | | |

Figure 4-2. Body Group Basic Stations (Sheet 1 of 2)

HC04710
#151-1-4-93 (1)

BASIC STATIONS TF-104G ONLY

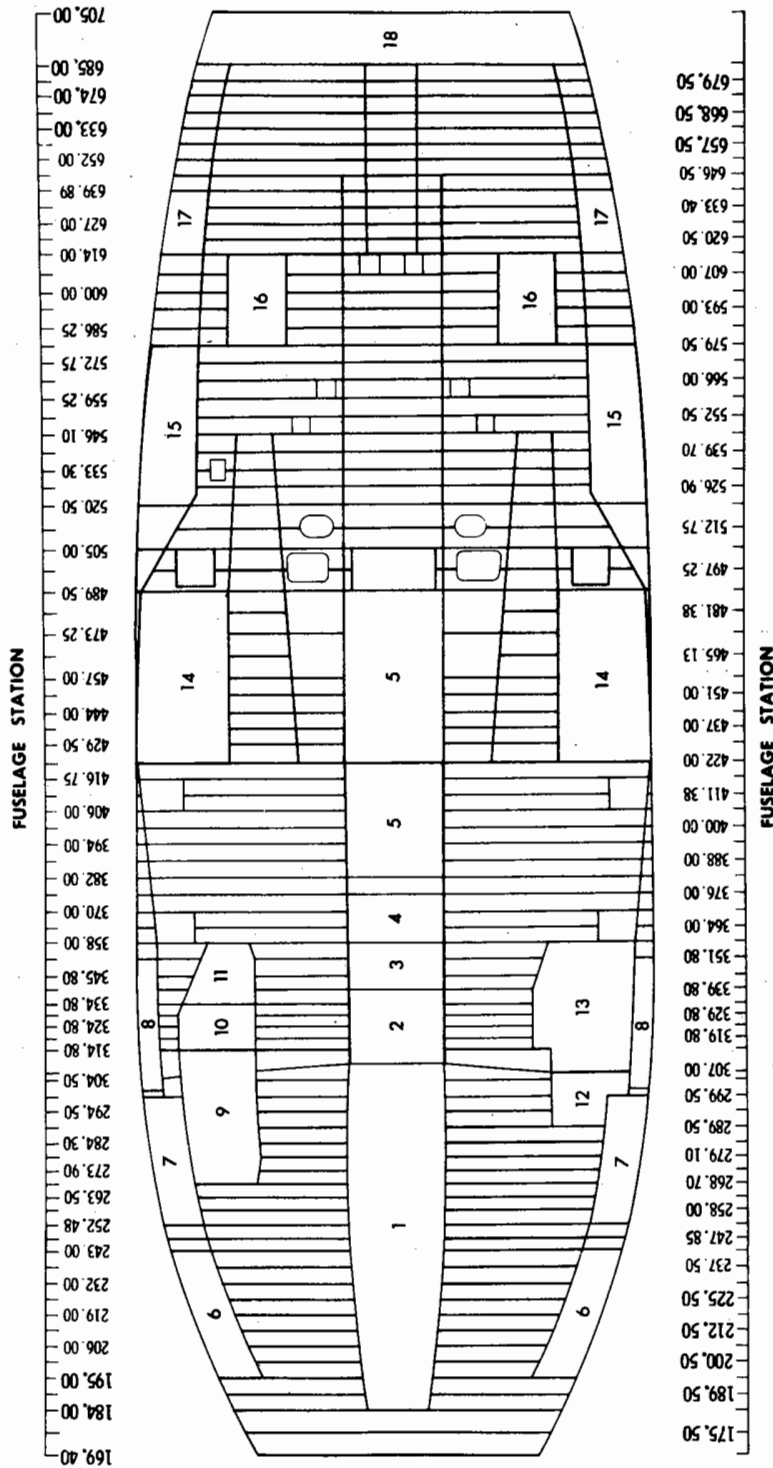
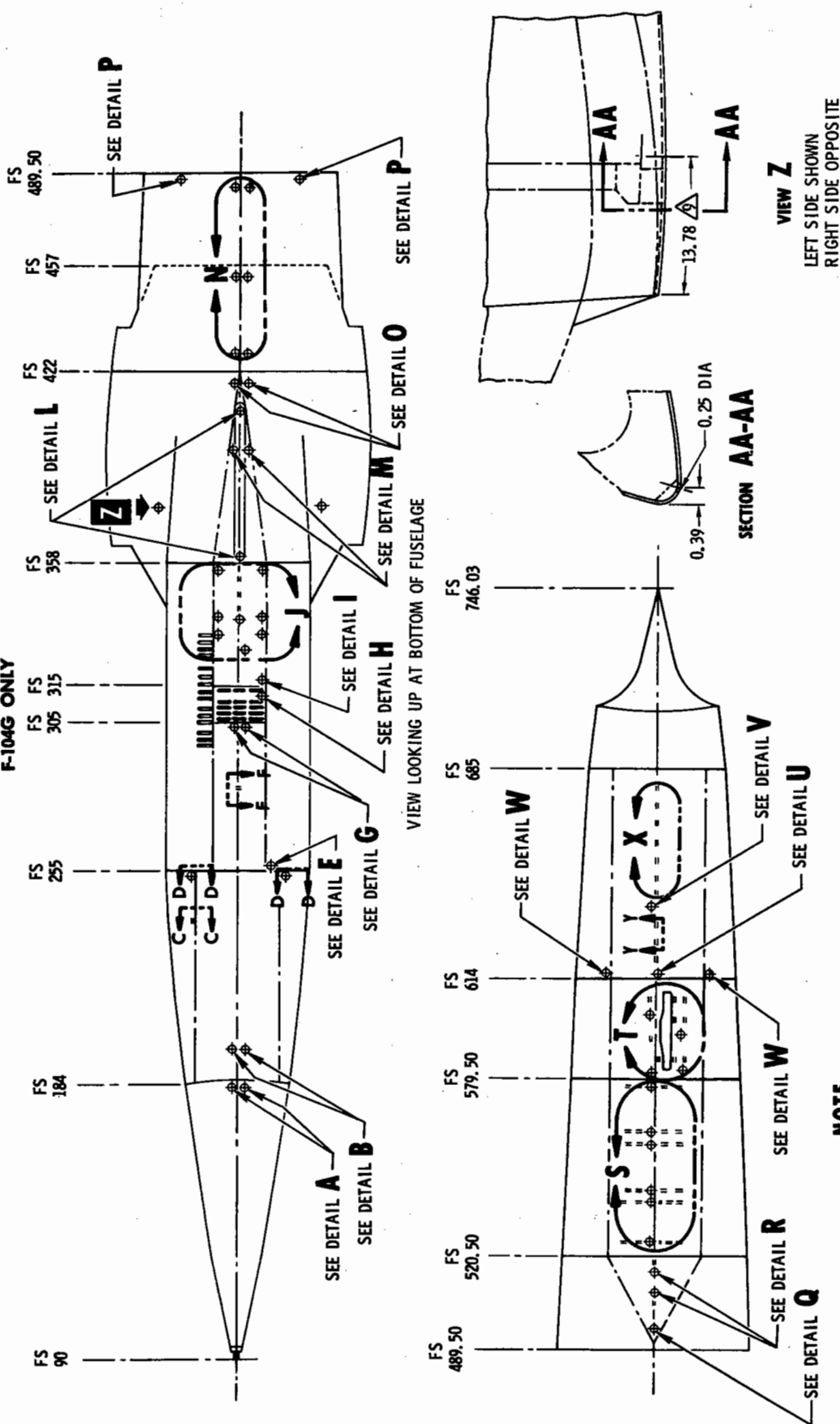


Figure 4-2. Body Group Basic Stations (Sheet 2 of 2)

HC015532
R151-1-493 (2)

DRAIN HOLE DIAGRAM
F-104G ONLY



NOTE

- 1 ♦ DENOTES HOLE IN SKIN.
- 2 = DENOTES HOLE IN STRUCTURE.
- 3 DRAIN HOLES MUST BE FREE AND CLEAR TO INSURE PASSAGE OF FLUID.
- 4 DRILL HOLES FROM INSIDE OF FUSELAGE WHERE POSSIBLE.
- 5 PROVIDE CLEAR PASSAGE AT LOWER ENDS OF FRAME SEGMENTS TO INSURE DRAINAGE TO SURFACE HOLES SHOWN.
- 6 GAP BETWEEN FRAME AND OUTBOARD SIDE OF LONGERON MUST BE FREE AND CLEAR TO INSURE PASSAGE OF FLUID BETWEEN FS 267.40 THROUGH FS 362.25, FS 364.00 THROUGH FS 416.75, FS 422.00 THROUGH FS 489.50, AND FS 497.25 THROUGH FS 679.50 (OMIT FS 614.00).
- 7 MEASURED FROM END OF STIFFENER.
- 8 TYPICAL EACH END OF STIFFENERS EXCEPT AS NOTED.
- 9 DIMENSION MEASURED IN PLANE OF METAL.

Figure 4-3. Drain Hole Diagram, F-104G Aircraft (Sheet 1 of 3)

MG 05776
RJ51-11-4-94(1)