

UNCLASSIFIED

AD 258 428

*Reproduced
by the*

ARMED SERVICES TECHNICAL INFORMATION AGENCY
ARLINGTON HALL STATION
ARLINGTON 12, VIRGINIA



UNCLASSIFIED

UNCLASSIFIED

AD 258 428

*Reproduced
by the*

ARMED SERVICES TECHNICAL INFORMATION AGENCY
ARLINGTON HALL STATION
ARLINGTON 12, VIRGINIA



UNCLASSIFIED

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

ARD C

4-258

ASTIA
CATALOG
AS
H

61-3-5
XERO



APPENDIX III

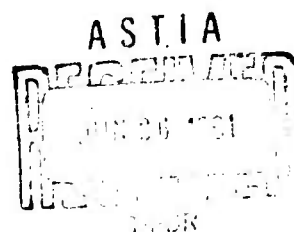
T-37B CATEGORY II

PERFORMANCE

TEST

FORREST W. WORTHINGTON
1/Lieutenant, USAF
Project Engineer

EMIL STURMTHAL
Captain, USAF
Project Pilot



UNITED STATES AIR FORCE
EDWARDS AIR FORCE BASE, CALIFORNIA
AIR RESEARCH AND DEVELOPMENT COMMAND
AIR FORCE FLIGHT TEST CENTER

AFETC-TR-61-16
April 1961

APPENDIX III T-37B CATEGORY II PERFORMANCE TEST

FORREST W. WORTHINGTON
1/Lieutenant, USAF
Project Engineer

EMIL STURMTHAL
Captain, USAF
Project Pilot

TABLE OF CONTENTS

	Page No.
TEST DATA CORRECTED FOR INSTRUMENT ERROR	
TAKE-OFFS	1
SAWTOOTH CLIMBS	16
CHECK CLIMBS	25
SPEED POWER	43
LANDING	73
THRUST RUN	86

NOMENCLATURE AND ABBREVIATIONS

EGP	Exhaust Gas Pressure	In Hg
EGT	Exhaust Gas Temperature	°C
FAT	Indicated Free Air Temperature	°C
IAS	Indicated Airspeed	Kt
OAT	Ambient Outside Air Temperature	°C

Aircraft Heading for all Take-Offs and Landings 040°.

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 3
 Date 31 OCT 1960
 OAT 20°C
 Bar. Press 27.705
 Wind Velocity CALM
 Wind Direction

Ground Roll 2570
 Distance to 50 Ft 460
 IAS at NWC
 IAS at T.O. 101.8
 IAS at 50 Ft 103.8
 Gross Weight 6503
 Left EGP 44.95
 Right EGP 44.17

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	983		22	2908	
1	991		23	3074	
2	1008		24	3244	
3	1038		25	3421	
4	1064		25.75	3557	0
5	1105		26	3604	1.23
6	1154		27	3789	12.27
7	1210		28	3973	41.63
8	1274		29	4148	88.23
9	1346		29.75	4274	128.31
10	1423				
11	1510				
12	1602				
13	1703				
14	1811				
15	1866				
16	1896				
17	1925				
18	2046				
19	2173				
20	2308				
21	2448				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. <u>4</u>	Ground Roll <u>2040</u>
Date <u>4 NOV 1960</u>	Distance to 50 Ft <u>470</u>
OAT <u>8.5° C</u>	IAS at NWO <u> </u>
Bar. Press <u>27.580</u>	IAS at T.O. <u>94.8</u>
Wind Velocity <u>2.17 KNOTS</u>	IAS at 50 Ft <u>97.8</u>
Wind Direction <u>220°</u>	Gross Weight <u>6466</u>
	Left EGP <u>46.05</u>
	Right EGP <u>45.92</u>

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1015		21	2834	
0 25	1016		21.25	2874	
1	1022		22	2999	
2	1038		22.25	3041	0
3	1062		23	3170	4.76
4	1095		24	3343	20.46
5	1136		25	3513	52.29
6	1186		26	3677	97.55
7	1243		26.75	3798	133.07
8	1309				
9	1382				
10	1463				
11	1552				
12	1648				
13	1753				
14	1862				
15	1981				
16	2106				
17	2239				
18	2376				
19	2522				
20	2674				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 8

Ground Roll 1631

Date 9 NOV. 1960

Distance to 50 Ft 490

OAT 19°C

IAS at NWO

Bar. Press 27.780

IAS at T.G. 87.3

Wind Velocity 6.95 KNOTS

IAS at 50 Ft 88.8

Wind Direction 030°

Gross Weight 6476

Left EGP 45.50

Right EGP 45.57

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	980		20.50	2610	0
1	985		21	2686	2.58
2	998		22	2840	12.13
3	1020		23	2994	31.69
4	1049		24	3146	59.92
5	1087		25	3293	94.65
6	1133		26	3436	132.27
7	1186				
8	1247				
9	1316				
10	1391				
11	1474				
12	1565				
13	1663				
14	1768				
15	1878				
16	1997				
16.75	2090				
17	2122				
18	2254				
19	2391				
20	2536				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. <u>9</u>	Ground Roll <u>1511</u>
Date <u>10 NOV 1960</u>	Distance to 50 Ft <u>569</u>
OAT <u>2.5° C</u>	IAS at NWO <u> </u>
Bar. Press <u>27.810</u>	IAS at T.O. <u>81.4</u>
Wind Velocity <u>2.17 KNOTS</u>	IAS at 50 Ft <u>84.2</u>
Wind Direction <u>240°</u>	Gross Weight <u>6543</u>
	Left EGP <u>45.75</u>
	Right EGP <u>45.53</u>

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	485		20	2651	3.47
1	997		21	2801	12.94
2	1003		22	2968	33.04
3	1025		23	3124	61.62
4	1056		24	3278	93.27
5	1076		25	3429	125.04
6	1145		26	3580	155.07
7	1201		27	3731	178.82
8	1266		28	3885	193.94
9	1339		29	4045	201.95
10	1421				
11	1510				
12	1607				
13	1712				
14	1824				
15	1945				
16	2072				
16.25	2105				
17	2206				
18	2348				
18.50	2421				
19	2496	0			

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 10

Ground Roll 1311

Date 10 NOV 1960

Distance to 50 Ft 724

OAT 14° C

IAS at NWO

Bar Press 27820

IAS at T.O. 74.9

Wind Velocity CALM

IAS at 50 Ft 78.8

Wind Direction

Gross Weight 6603

Left EGP 45.85

Right EGP 45.99

Time-Sec	Distance-Ft.	Height-Ft.	Time-Sec	Distance-Ft.	Height-Ft.
0	988		21	2812	
1	997		22	2962	
2	1015		23	3111	
3	1041		24	3259	
4	1076		25	3410	
5	1119		26	3565	
6	1170		27	3724	
7	1228		28	3889	
8	1295		29	4058	
9	1369		30	4232	
10	1452		31	4413	
11	1542		32	4600	
12	1639		33	4792	
13	1743		34	4991	
14	1855		35	5195	
15	1972		36	5404	
16	2098		37	5619	
17	2231		38	5837	
17.5	2299		39	6062	
18	2369		40	6290	
19	2513		41	6523	
20	2661				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 12

Ground Roll 2248

Date 16 NOV 1960

Distance to 50 Ft 505

OAT 5°C

IAS at NWO

Bar. Press 27.810

IAS at T.O. 101.8

Wind Velocity 34.8 KNOTS

IAS at 50 Ft 103.8

Wind Direction 295°

Gross Weight 6560

Left EGP 46.0

Right EGP 45.40

Time-Sec	Distance-Ft.	Height-Ft.	Time-Sec	Distance-Ft.	Height-Ft.
0	187		22	3099	
1	995		22.75	3235	0
2	1013		23	3280	0.87
3	1039		24	3467	10.09
4	1074		25	3654	33.70
5	1118		26	3836	73.17
6	1171		27	4012	119.99
7	1233				
8	1302				
9	1380				
10	1466				
11	1561				
12	1664				
13	1774				
14	1892				
15	2017				
16	2151				
17	2291				
18	2439				
19	2593				
20	2755				
21	2923				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 13

Ground Roll 1957

Date 17 NOV 1960

Distance to 50 Ft 480

OAT 1°C

IAS at NWC

Bar. Press 27.765

IAS at T.O. 96.8

Wind Velocity 3.48 KNOTS

IAS at 50 ft 99.8

Wind Direction 355°

Gross Weight 6601

Left EGP 46.0

Right EGP 45.9

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	981		20	2649	
1	986		21	2812	
2	999		21.50	2895	
3	1022		21.75	2938	0
4	1053		22	2980	1.09
5	1093		23	3153	9.42
6	1141		24	3328	41.19
7	1198		25	3501	57.10
8	1263		26	3674	89.82
9	1336		27	3847	120.52
10	1417		28	4021	144.60
11	1507		29	4197	159.77
12	1604		30	4381	166.25
13	1709				
13.50	1765				
14	1821				
15	1942				
15.75	2036				
16	2069				
17	2203				
18	2345				
19	2494				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 14
 Date 17 NOV. 1960
 OAT 16° C
 Bar. Press 27.775
 Wind Velocity CALM
 Wind Direction

Ground Roll 2577
 Distance to 50 Ft 501
 IAS at NWO
 IAS at T.O. 103.8
 IAS at 50 Ft 106.8
 Gross Weight 6637
 Left EGP 45.75
 Right EGP 45.43

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1017		21	2813	
1	1025		22	2975	
2	1041		22.25	3016	
3	1065		23	3145	
4	1098		24	3320	
4.25	1108		25	3501	
5	1139		25.50	3594	0
6	1188		26	3687	3.12
7	1244		27	3876	16.18
8	1309		28	4063	43.91
9	1381		29	4246	82.57
10	1461		30	4424	126.28
11	1548		31	4599	167.56
12	1643		32	4772	208.53
13	1745		33	4944	242.68
14	1855		34	5117	267.74
15	1971		35	5293	281.59
16	2095		36	5472	286.10
17	2225				
18	2362				
19	2506				
20	2656				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 15
 Date 18 NOV 1960
 OAT 2.5°C
 Bar. Press 27.645
 Wind Velocity 174 KNOTS
 Wind Direction 270°

Ground Roll 2081
 Distance to 50 Ft 900
 IAS at NWO
 IAS at T.O. 91.8
 IAS at 50 Ft 101.8
 Gross Weight 6589
 Left EGP 46.0
 Right EGP 45.0

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1081		21.25	3118	
1	1097		21.50	3162	0
2	1121		22	3250	3.46
3	1152		23	3426	11.20
4	1195		24	3610	—
5	1243		25	3795	33.0
6	1301		26	3982	45.16
7	1368		27	4173	57.31
8	1442		28	4365	69.70
9	1531		29	4560	81.21
10	1610		30	4755	91.08
11	1712		31	4955	99.80
12	1814		32	5158	105.33
13	1925		33	5362	107.06
14	2045		34	5573	—
15	2171		35	5786	—
16	2303		36	6003	108.41
17	2442		37	6226	—
18	2591		38	6455	115.97
19	2743		39	6692	118.04
20	2906				
21	3075				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 16 Ground Roll 1583
 Date 19 NOV 1960 Distance to 50 Ft 1097
 OAT 10°C IAS at NWO _____
 Bar. Press 27725 IAS at T.O. 85.8
 Wind Velocity 6.08 KNOTS IAS at 50 Ft —
 Wind Direction 045° Gross Weight 6619
 Left EGP 45.95
 Right EGP 46.04

Time-Sec	Distance-Ft.	Height-Ft.	Time-Sec	Distance-Ft.	Height-Ft.
0	1016		21	2791	3.60
1	1023		22	2948	10.48
2	1040		23	3109	18.95
3	1063		24	3273	27.75
4	1095		25	3441	37.02
5	1135		26	3612	45.85
6	1184		27	3787	54.81
7	1240		28	3965	62.53
8	1303		29	4147	67.51
9	1375		30	4331	67.51
10	1454		31	4526	72.34
11	1540		32	4722	75.27
12	1634		33	4925	75.40
13	1735		34	5133	78.81
14	1843		35	5347	76.53
15	1959		36	5567	71.96
16	2081		37	5794	67.66
17	2210		38	6026	65.52
18	2346		39	6267	65.87
19	2488		40	6506	67.94
19.75	2599	0	41	6753	72.33
20	2645	0.31	42	7007	78.83

TAKE-OFF

Flight No. 16 (CONT.)

Ground Roll 1583

Date 19 NOV 1960

Distance to 50 Ft 1057

OAT 10°C

IAS at NWO

Bar. Press 27.725

IAS at T.O. 85.8

Wind Velocity 6.08 KNOTS

IAS at 50 Ft

Wind Direction 045°

Gross Weight 6619

Left EGP 45.95

Right EGP 46.07

[illegible]

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No 60-0079

Flight No. 18

Date 21 NOV. 1960

OAT 17°C

Bar. Press 27.620

Wind Velocity 9.56 KNOTS

Wind Direction 225°

Ground Roll 2230

Distance to 50 Ft 1167

IAS at NWO

IAS at T.O. 84.7

IAS at 50 Ft —

Gross Weight 6627

Left EGP 45.55

Right EGP 45.43

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	14617		23	12387	
1	14606		24	12215	
2	14583		25	12037	
3	14552		26	11856	
5	14466		27	11648	
6	14411		28	11489	
7	14329		29	11292	
8	14276		30	11099	
9	14191		31	10901	
10	14108		32	10618	
11	14017		33	10491	
12	13916		34	10281	
13	13811		35	10063	
14	13699		36	9844	
15	13578		37	9616	
16	13451		38	9385	
17	13321		39	9149	
18	13179		40	8908	
19	13033		41	8662	
20	12881		43	8151	
21	12722		44	7887	
22	12556		45	7616	

TAKE-OFF

Flight No. 18 (CONT.)

Ground Roll 2230

Date 21 NOV. 1960

Distance to 50 Ft 1167

OAT 17°C

IAS at NWO

Bar. Press 27.620

IAS at T.O. 84.7

Wind Velocity 9.56, 'NOTS

IAS at 50 Ft --

Wind Direction 225°

Gross Weight 6627

Left EGP	45.35
----------	-------

Right EGP 45.43

[illegible]

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 19

Ground Roll 1585

Date 22 NOV. 1960

Distance to 50 Ft 1079

OAT 5°C

IAS at NWO

Bar. Press 27.760

IAS at T.O. 85.7

Wind Velocity 1.74 KNOTS

IAS at 50 Ft --

Wind Direction 050°

Gross Weight 6580

Left EGP 46.55

Right EGP 45.94

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1019		21	2922	6.41
1	1030		22	3088	13.04
2	1049		23	3258	22.21
3	1077		24	3430	32.99
4	1113		25	3605	45.17
5	1158		26	3784	53.91
6	1211		27	3968	57.03
7	1272		28	4157	57.24
8	1342		29	4352	58.72
9	1419		30	4551	62.71
10	1504				
11	1597				
12	1697				
13	1806				
14	1920				
15	2043				
16	2172				
17	2310				
18	2453				
18.25	2490				
19	2604	0			
20	2761	1.88			

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 20
 Date 23 NOV. 1960
 OAT .5° C
 Bar. Press 27.720
 Wind Velocity CALM
 Wind Direction

Ground Roll 1898
 Distance to 50 Ft 177
 IAS at NWO
 IAS at T.O. 93.8
 IAS at 50 Ft —
 Gross Weight 6557
 Left EGP 16.95
 Right EGP 46.75

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1018		20	2633	
0.75	1020		21	2793	
1	1021		21.25	2834	
2	1032		21.75	2916	0
3	1051		22	2958	.02
4	1080		23	3129	4.34
5	1118		24	3304	14.86
6	1163		25	3480	30.02
7	1217		26	3659	46.72
8	1280		27	3840	63.32
9	1351		28	4024	78.47
10	1429		29	4209	91.64
11	1516		30	4398	103.03
12	1610				
13	1712				
13.25	1741				
14	1823				
15	1939				
16	2063				
17	2195				
18	2334				
19	2481				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 25

Ground Roll 4732

Date 5 JAN 61

Distance to 50 Ft 10051

OAT 3.5°C

IAS at NWO

Bar. Press 27.905

IAS at T.O. 96

Wind Velocity CALM

IAS at 50 Ft

Wind Direction

Gross Weight 6465

Left EGP 24.2

Right EGP 46.98

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
44	4816		63	8225	8.70
45	4976		64	8421	11.90
46	5140		65	8616	14.48
47	5305		66	8811	16.28
48	5473		67	9007	17.81
49	5644		68	9207	16.91
50	5818		69	9405	16.04
50.25	5862		70	9603	16.69
50.75	5951	0	71	9802	20.40
51.00	5995	.04	72	10001	25.70
51.25	6038	1.21	73	10203	29.79
52.00	6173	.95	74	10406	34.97
53.00	6354	1.37	75	10608	39.64
54.00	6534	1.72	76	10815	45.03
55	6717	1.59	77	11022	49.65
56	6903	1.82	78	11229	51.62
57	7089	3.44	79	11435	56.53
58	7275	4.70	80	11638	63.83
59	7462	5.32			
60	7650	5.04			
61	7840	4.94			
62	8033	6.52			

TEST DATA CORRECTED FOR INSTRUMENT ERROR

TAKE-OFF

T-37B USAF No. 60-0079

Flight No. 25
 Date 5 JAN 61
 OAT 3.5° C
 Bar. Press 27.905
 Wind Velocity CALM
 Wind Direction

Ground Roll 4932
 Distance to 50 Ft 10031
 IAS at NWO
 IAS at T.C. 96
 IAS at 50 Ft
 Gross Weight 6465
 Left EGP 29.2
 Right EGP 46.98

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1019		22	2052	
1	1022		23	2143	
2	1030		24	2237	
3	1043		25	2335	
4	1060		26	2437	
5	1080		27	2542	
6	1105		28	2650	
7	1134		29	2762	
8	1168		30	2877	
9	1206		31	2995	
10	1247		32	3117	
11	1293		33	3241	
12	1343		34	3369	
13	1397		35	3501	
14	1454		36	3635	
15	1515		37	3773	
16	1581		38	3913	
17	1650		39	4056	
18	1724		40	4202	
19	1800		41	4351	
20	1881		42	4503	
21	1965		43	4658	

T-37B USAF NO. 60-0079

Weight at Engine Start 6585 lb[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6585 lb[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6623 lb

[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6623 lb

7

T-37B USAF NO. 60-0079

Weight at Engine Start 6580 lb

[illegible]

1 - 57B USAF NO. 60-0079

Weight at Engine Start 6580 lb[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6580 lb[illegible]

1 - 3713 USAF NO. 60-0079

Weight at Engine Start 6600 lb[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6600 lb[illegible]

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. 18

Date 21 Nov 1960

Fuel Specific Weight 6.32 lb/gal

Weight at Engine Start 6626 lb

[illegible]

F 47B USAF NO. 60-0079

Date 21 Nov 1960

Fuel Specific Weight 6.33 lb/galWeight at Engine Start 6626 lb[illegible]

[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6626 lb

[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6626 lb

[illegible]

T-37B USAF NO. 60-0079

Date 23 Nov. 1960

Weight at Engine Start 6562 lb30

T-37B USAF NO. 60-0079

Weight at Engine Start 6562 lb

[illegible]

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. 20

Date 23 Nov. 1960

Fuel Specific Weight 6.33 lb/galWeight at Engine Start 6562 lb[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6562 lb

[illegible]

T-37B USAF NO. 66-0079

Weight at Engine Start 6562 lb34

T-37B USAF NO. 60-0079

Weight at Engine Start 6625 lb[illegible]

T-37B USAF NO. 60-0079

Date 2 DEC. 1960

Weight at Engine Start 662.5 lb[illegible]

[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6625 lb

38

T-37B USAF NO. 60-0079

Date 17 NOV 1960

Fuel Specific Weight 6.36 lb/gal

Weight at Engine Start 6575 lb[illegible]

T-3713 USAF NO. 60-0079

Date 17 NOV. 1960

Weight at Engine Start 6575 lb

40

P-3713 USAF NO. 60-0079

Date 17 Nov. 1960

Fuel Specific Weight 6.36 lb/galWeight at Engine Start 6575 lb[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6575 lb

42

T-3713 USAF NO. 60-0079

Weight at Engine Start 6592 lb43

FD-371B USAF NO. 60-0079

Flight No 9

Date 10 NOV 1965

Fuel Specific Weight 6.26 lb/gal

Weight at Engine Start 6592 lb

Test	SPEED POWER TWO ENGINES - 5,000 FT
------	------------------------------------

T-37B USAF NO. 60-0079

Weight at Engine Start 6602 lb

[illegible]

1 - 3715 USAF NO 60-0079

Weight at Engine Start 657.5 lb[illegible]

T-3713 USAF NO. 60-0079

Weight at Engine Start 6575 lb47

1 3713 USAF NO 60-0079

Weight at Engine Start 6562 lb48

T DATA CORRECTED FOR INSTRUMENT ERROR							
F-37B USAF NO 60-0079							
Flight No <u>20</u>							
Date <u>23 Nov 1960</u>							
Fuel Specific Weight <u>6.35</u> 107 gal							
Weight at Engine Start <u>6562</u> lb							
Test		SPEED POWER TWO ENGINE - 25,000 FT					
Run No.		2	2				
Time - min/sec		3:47	3:47				
FAT - °C		-31.5	-34.5				
IAS - kts		121.3	101.7				
Altitude - ft		28155	28335				
RPM	1	18460	18570				
	2	18550	18675				
EGT - °C	1	422	428				
	2	422	428				
EGP - "Hg	1	15.11	14.81				
	2	15.01	14.71				
Fuel Flow - gal/hr	1	45.80	45.15				
	2	42.80	43.10				
Fuel Used - gal		196	210				
Fuel Temperature - °C		15.4	15.4				
RATE OF CLIMB - FT/MIN		+120	+85				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

1 - 3713 USAF NO 60-0079

Flight No 21

Date 3 DEC 1960

Fuel Specific Weight 6.5 lb/gal

Weight at Engine Start 6025 lb[illegible]

F-37B USAF NO. 60-0079

Weight at Engine Start 6600 lb

[illegible]

F-47B USAF NO. 60-0079

Weight at Engine Start 6636 lb[illegible]

1-37B USAF NO. 60-0079

Weight at Engine Start 6636 lb[illegible]

F-3713 USAF NO. 60-0079

Weight at Engine Start 6625 lb[illegible]

1 5713 USAF NO 60-0079

Weight at Engine Start — lb

[illegible]

1 - 3713 USAF NO. 60-0079

Weight at Engine Start 6602 lb[illegible]

1 - 57B USAF NO. 60-0079

Weight at Engine Start 6602 lb57

1 37B USAF NO 60-0079

Weight at Engine Start 6644 lb58

T-37B USAF NO. 60-0079

Date 16 Nov 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start 6560 lb

59

F-4713 USAF NO 60-0079

Weight at Engine Start 6560 lb[illegible]

F-37B USAF NO. 60-0079

Weight at Engine Start 2636 lb

[illegible]

1-3713 USAF NO 60-0079

Weight at Engine start 6617 lb[illegible]

1 - 37B USAF NO. 60-0079

Weight at Engine Start 60.7 lb[illegible]

T-3713 USAF NO. 60-0079

Weight at Engine Start 6.562 lb64

F-37B USAF NO. 60-0079

Weight at Engine Start 6562 lb[illegible]

T-3713 USAF NO 60-0079

Weight at Engine Start 4562 lb[illegible]

P-3713 USAF NO. 60-0079

Weight at Engine Start 6562 lb[illegible]

Flight No. 18
Date 21 NOV 1960
Fuel Specific Weight 6.33 lb/gal
Weight at Engine Start 4626 lb

68

T-3713 USAF NO. 60-0079

Weight at Engine Start 6626 lb[illegible]

T-37B USAF NO. 60-0079

Weight at Engine Start 6626 lb

[illegible]

Flight No 18
Date 21 NOV 1960
Fuel Specific Weight 6.33 10/gal
Weight at Engine Start 66.26 lb

71

T-37B USAF NO. 60-0079

Weight at Engine Start 6626 lb[illegible]

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No. 3

Ground Roll 2350

Date 31 OCT 1960

Distance from 50 Ft 2030

OAT 22°C

IAS at 50 Ft 121.6

Bar Press 27.680

IAS at Landing

Wind Velocity CALM

Gross Weight 5600

Wind Direction

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	--563	143.28	20	3057	
1	-353	109.63	21	3192	
2	-142	78.14	22	3319	
3	69	47.38	23	3439	
4	281	21.74	24	3556	
5	491	8.93	25	3669	
6	694	9.48	26	3776	
7	891	9.78	27	3875	
8	1082	8.65	28	3966	
9	1269	6.93	29	4049	
10	1451	4.84	30	4124	
11	1629	2.68	31	4189	
12	1804	1.24	32	4247	
13	1974	0.24	33	4293	
13.50	2058	0	34	4332	
14	2140		35	4363	
15	2303		36	4385	
16	2462		37	4398	
17	2618		38	4403	
17.25	2655				
18	2769				
19	2917				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No. 8

Ground Roll 1200

Date 9 NOV. 1960

Distance from 50 Ft 760

OAT 19°C

IAS at 50 Ft 91.8

Bar Press 27.765

IAS at Landing 71.8

Wind Velocity 6.95 KNOTS

Gross Weight 5300

Wind Direction 030

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	145	169.50	21	2987	
1	301	148.92	22	3071	
2	456	123.02	23	3151	
3	610	113.09	24	3225	
4	763	97.10	25	3291	
5	915	82.40	26	3348	
6	1065	67.11	27	3395	
7	1213	52.73	28	3430	
8	1360	38.07	29	3456	
9	1504	25.51	30	3470	
10	1647	15.01	30.75	3474	
11	1788	7.93			
12	1925	2.78			
13	2060	0.46			
13.50	2125	0			
14	2191				
15	2319				
16	2444				
17	2565				
18	2684				
19	2794				
20	2895				

TEST DATA CORRECTED FOR INSTRUMENT ERROR
LANDING

T-37B USAF No 60-0079

Flight No 12
Date 10 NOV 1960
OAT 6 °C
Bar. Press 27.820
Wind Velocity 3.47 KNOTS
Wind Direction 240°

Ground Roll 1281
Distance from 50 Ft 649
IAS at 50 Ft 82.4
IAS at Landing 68.7
Gross Weight 4900

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	280	139.78	21	2803	
1	423	123.35	22	2859	
2	566	107.50	23	2910	
3	708	91.99	24	2951	
4	848	77.13	25	2981	
5	989	61.72	26	3002	
6	1128	46.35	27	3012	
7	1267	31.26	28	3013	
8	1404	17.22			
9	1540	6.80			
10	1673	4.86			
10.50	1739	0			
11	1803				
12	1930				
13	2054				
14	2174				
15	2285				
16	2390				
17	2489				
18	2577				
19	2662				
20	2736				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No. 10

Ground Roll 1375

Date 10 NOV. 1960

Distance from 50 Ft 705

OAT 17°C

IAS at 50 Ft 86.4

Bar. Press 27.785

IAS at Landing 75.0

Wind Velocity CALM

Gross Weight 5000

Wind Direction _____

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	156	250.33	21	3128	
1	310	234.99	22	3240	
2	463	220.31	23	3346	
3	613	205.54	24	3444	
4	763	190.27	25	3536	
5	910	173.90	26	3619	
6	1056	157.30	27	3692	
7	1203	140.31	28	3757	
8	1349	121.92	29	3815	
9	1494	103.97	30	3863	
10	1639	86.89	31	3902	
11	1736	67.50	32	3935	
12	1927	47.56	33	3953	
13	2070	29.50	34	3972	
14	2212	15.53	35	3980	
15	2353	6.06	36	3987	
16	2490	2.11	37	3994	
17	2625	0	38	4003	
17.75	2724		39	4013	
18	2756		39.50	4018	
19	2885				
20	3009				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No 12
 Date 16 NOV. 1960
 OAT 9°C
 Bar Press 27830
 Wind Velocity CALM
 Wind Direction

Ground Roll 1522
 Distance from 50 Ft 995
 IAS at 50 Ft 89
 IAS at Landing 82
 Gross Weight 5200

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	-151	331.9	20.25	2915	
1	-17	306.7	21	3015	
2	150	280.8	22	3147	
3	303	255.1	23	3278	
4	457	230.1	24	3401	
5	612	206.3	25	3522	
6	768	183.9	26	3633	
7	924	161.7	27	3738	
8	1080	140.0	28	3834	
9	1235	118.8	29	3942	
10	1390	100.3	30	4002	
11	1545	82.0	31	4076	
12	1699	63.9	32	4136	
13	1853	45.5	33	4190	
14	2007	28.3	34	4238	
15	2159	14.6	35	4274	
16	2309	6.2	36	4304	
17	2457	3.1	37	4323	
18	2601	2.5	38	4331	
19	2742	0.3	38.25	4332	
19.50	2813	0			
20	2880				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No 60-0079

Flight No 13
 Date 17 NOV 1960
 OAT 8.2° C
 Bar. Press 27.800
 Wind Velocity CALM
 Wind Direction

Ground Roll 1213
 Distance from 50 Ft 913
 IAS at 50 Ft 66.4
 IAS at Landing 77.5
 Gross Weight 5300

Time-Sec.	Distance-Ft	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1109	154.6	22	3846	
1	1256	135.2	23	3904	
2	1403	116.0	24	3954	
3	1551	96.8	25	3993	
4	1697	77.5	26	4021	
5	1845	59.2	27	4037	
6	1991	40.7	27.75	4041	
7	2136	24.4			
8	2280	11.9			
9	2422	5.5			
10	2561	3.5			
11	2696	2.1			
12	2828	0			
13	2958				
14	3085				
15	3207				
16	3324				
17	3430				
18	3530				
19	3620				
20	3703				
21	3778				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No. 14

Ground Roll 1064

Date 17 NOV. 1960

Distance from 50 Ft 506

OAT 21°C

IAS at 50 Ft 76.5

Bar Press 27.710

IAS at Landing 73.0

Wind Velocity CALM

Gross Weight 5000

Wind Direction

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	-704		22	2247	
1	-567		23	2378	
2	-429		24	2509	
3	-292		25	2638	
4	-157		26	2766	
5	-21		26.75	2858	
6	114		27	2888	
7	249		28	3008	
8	384		29	3123	
9	520		30	3277	
10	656		31	3322	
11	790		32	3409	
12	925		33	3488	
13	1058		34	3560	
14	1191		35	3624	
15	1323		36	3682	
16	1455		37	3730	
17	1588		38	3769	
18	1720		39	3799	
19	1852		40	3819	
20	1984		41	3829	
21	2116		41.50	3830	

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No 15
 Date 18 NOV. 1960
 OAT 7°C
 Bar. Press 27.645
 Wind Velocity 7.82
 Wind Direction 260°

Ground Roll 2678
 Distance from 50 Ft 1233
 IAS at 50 Ft 107.5
 IAS at Landing 95.9
 Gross Weight 5800

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	709	147.9	20	4150	
1	905	124.6	21	4292	
2	1099	106.1	22	4429	
3	1292	91.7	23	4559	
4	1482	81.0	24	4687	
5	1668	71.3	25	4807	
6	1852	59.4	26	4921	
7	2034	45.0	27	5028	
8	2214	30.8	28	5128	
9	2392	18.0	29	5221	
10	2567	9.2	30	5306	
11	2739	4.4	31	5389	
12	2909	1.9	32	5468	
13	3075	0.7	33	5539	
13.15	3147	0	34	5604	
14	3238		35	5664	
14.50	3318		36	5716	
15	3397		37	5763	
16	3553		38	5801	
17	3707		39	5831	
18	3857		40	5853	
19	4005		41	5868	

LANDING

Flight No 15
Date 18 NOV 1960
OAT 7°C
Bar Press 27.645
Wind Velocity 782
Wind Direction 260°

Ground Roll 2672
Distance from 50 Ft 1233
IAS at 50 Ft 107.5
IAS at Landing 95.9
Gross Weight 5800

[illegible]

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No 16
 Date 19 NOV 1960
 OAT 11°C
 Bar. Press 27.735
 Wind Velocity 8.69
 Wind Direction 90°

Ground Roll 192.3
 Distance from 50 Ft 1001
 IAS at 50 Ft 90.8
 IAS at Landing 80.8
 Gross Weight 6000

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	1169	131.9	21	3951	
1	1322	103.4	22	4038	
2	1474	75.1	23	4120	
3	1628	47.4	24	4195	
4	1782	23.1	25	4261	
5	1936	7.9	26	4320	
6	2087	3.4	27	4372	
7	2234	2.7	28	4418	
8	2377	2.9	29	4457	
9	2517	1.4	30	4491	
9.75	2621	0	31	4515	
10	2654		32	4534	
11	2788		33	4543	
12	2919		34	4544	
13	3048				
14	3174				
15	3298				
16	3419				
17	3536				
18	3648				
19	3755				
20	3855				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 60-0079

Flight No 17
 Date 21 NOV. 1960
 OAT 5° C
 Bar Press 27.625
 Wind Velocity CALM
 Wind Direction

Ground Roll 1894
 Distance from 50 ft 1461
 IAS at 50 Ft 103.9
 IAS at Landing 87.7
 Gross Weight 5800

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	233	352.5	22	4172	1.9
1	423	325.4	23	4325	1.0
2	614	299.0	23.75	4436	0
3	804	273.2	24	4472	
4	992	248.5	25	4618	
5	1183	225.8	26	4761	
6	1371	204.9	27	4901	
7	1558	184.1	28	5036	
8	1744	164.1	29	5167	
9	1930	144.2	30	5294	
10	2115	124.7	31	5417	
11	2298	104.6	32	5535	
12	2480	87.6	33	5644	
13	2661	73.5	34	5747	
14	2840	60.6	35	5843	
15	3016	47.3	36	5929	
16	3190	34.4	37	6008	
17	3362	22.6	38	6079	
18	3531	13.0	39	6142	
19	3696	7.7	40	6195	
20	3858	4.4	41	6240	
21	4017	3.4	42	6276	

T-37B USAF No. 60-0079

Wind Direction

[illegible]

TEST DATA CORRECTED FOR INSTRUMENT ERROR

LANDING

T-37B USAF No. 69-0079

Flight No 20
 Date 23 NOV. 1960
 OAT 8°C
 Bar Press 27.740
 Wind Velocity CALM
 Wind Direction

Ground Roll 1628
 Distance from 50 Ft 1455
 IAS at 50 Ft 19.8
 IAS at Landing 82.9
 Gross Weight 5000

Time-Sec.	Distance-Ft.	Height-Ft.	Time-Sec.	Distance-Ft.	Height-Ft.
0	208	134.5	21	3231	
1	377	106.3	22	3320	
2	545	81.4	23	3402	
3	715	54.7	24	3475	
4	883	31.4	25	3540	
5	1052	13.1	26	3598	
6	1217	6.9	27	3647	
7	1379	7.1	28	3689	
8	1535	7.1	29	3722	
9	1688	5.3	30	3743	
10	1838	3.6	30.75	3755	
11	1984	2.5	31	3755	
12	2128	0.9	32	3757	
12.50	2197	0	33	3757	
13	2267				
14	2404				
15	2537				
16	2668				
17	2794				
18	2915				
19	3029				
20	3134				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

1-37B USAF NO. 60-0079

Flight No. _____

Date 27 OCT 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENGINE SER NO. T-E 400382 AIR CONDITIONING ON INSTALLED THRUST RUN ~ LEFT ENGINE						
Run No.								
Time - min/sec T.O.D.		8:04	8:09	8:13	8:18	8:21	8:25	8:28
FAT - °C		9.75	10.5	10.5	11.0	11.5	11.5	11.5
IAS - kts								
Altitude - ft								
RPM	1	7860	10825	12995	15175	17340	19440	18390
	2							
EGT - °C	1	528	505	489	466	487	540	510
	2							
EGP - "Hg	1	28.63	29.72	30.97	33.21	35.81	39.77	37.57
	2							
Fuel Flow - gal/hr	1	38.16	50.40	60.12	74.16	78.50	125.67	118.44
	2							
Fuel Used - gal								
Fuel Temperature - °C		30	32	33	33.5	33.5	33.5	33
THRUST ~ F _G - LBS		67	132	183	296	449	622	505
BAR PRESSURE ~ IN HG		27.66	27.66	27.66	27.66	27.66	27.66	27.66
WIND DIRECTION ~ DEG		90	110	95	100	120	90	115
WIND VELOCITY ~ KTS		0	0	0	0	0	0	0

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. _____

Date 27 OCT 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENGINE SER NO. T-E 400382 AIR CONDITIONING ON INSTALLED THRUST RUN -- LEFT ENGINE						
Run No.								
Time - min/sec T.O.D.		8:32	8:36	8:40	8:44	8:49	8:53	10:22
FAT - °C		12.0	13.0	13.0	13.75	14.75	15.0	19.0
IAS - kts								
Altitude - ft								
RPM	1	16275	14050	11900	7910	14080	11920	20475
	2							
EGT - °C	1	480	487	506	534	500	517	595
	2							
EGP - "Hg	1	34.41	31.94	30.38	28.75	31.90	30.41	41.79
	2							
Fuel Flow - gal/hr	1	81.36	65.52	55.08	35.64	68.04	55.80	146.4
	2							
Fuel Used - gal								
Fuel Temperature - °C		32.5	32.5	32	31	30.5	30	33
THRUST ~ FG - LBS		347	224	158	61	158	102	697
BAR. PRESSURE ~ IN. HG.		27.66	27.66	27.66	27.66	27.66	27.66	27.66
WIND DIRECTION ~ DEG		200-205	240	190	185	180	160-175	180-195
WIND VELOCITY ~ KTS		2-3	1-2	0	0	0	1-0	1-2

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. _____

Date 27 OCT 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENGINE SER. NO. T.E 400382 AIR CONDITIONING ON INSTALLED THRUST RUN ~ LEFT ENGINE					
Run No.							
Time - min/sec T.O.D.		10:24					
FAT - °C		19.0					
IAS - kts							
Altitude - ft							
RPM	1	21620					
	2						
EGT - °C	1	655					
	2						
EGP - "Hg	1	45.09					
	2						
Fuel Flow - gal/hr	1	169.0					
	2						
Fuel Used - gal							
Fuel Temperature - °C		33					
THRUST ~ FG - LBS		848					
BAR. PRESSURE ~ IN. Hg.		27.66					
WIND DIRECTION ~ DEG.		175					
WIND VELOCITY ~ KTS		1					

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. _____

Date 25 OCT 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENG. SER. NO. T. E 400 389 AIR CONDITIONING ON INSTALLED THRUST RUN IN RIGHT ENG.						
Run No.								
Time - min/sec T.O.D		13:02	13:06	13:11	13:15	13:19	13:23	13:27
FAT - °C		26.5	26.5	26.5	26.5	27.0	27.0	27.0
IAS - kts								
Altitude - ft								
RPM	1							
	2	7904	10771	13042	15269	17387	19532	21725
EGT - °C	1							
	2	595	570	549	519	535	575	654.5
EGP - "Hg	1							
	2	28.44	29.40	30.50	32.37	34.80	38.59	43.80
Fuel Flow - gal/hr	1							
	2	33.48	47.88	59.76	69.48	88.92	117.72	162.36
Fuel Used - gal								
Fuel Temperature - °C		30	30	31	31	32	33	33
THRUST N Fg N LBS		41	87	153	245	362	551	800
BAR. PRESSURE N IN. Hg		27.52	27.52	27.52	27.52	27.52	27.52	27.52
WIND DIRECTION N DEG		60	60	80	80	80	80	340
WIND VELOCITY N KTS.		3	3	2	2	3	1	1

TEST DATA CORRECTED FOR INSTRUMENT ERROR

F-37B USAF NO 60-0079

Flight No _____

Date 25 OCT 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENG SER NO T-E 400389 AIR CONDITIONING ON INSTALLED THRUST RUN - RIGHT ENG.						
Run No.								
Time - min/sec T.O.D.		13:31	13:35	13:39	13:43	13:47	13:50	13:54
EAT - °C		275	275	275	275	275	28.0	28.0
IAS - kts								
Altitude - ft								
RPM	1							
	2	20617	18427	16265	14054	11903	7934	14144
EGT - °C	1							
	2	603.5	543	528	545	560.9	591.6	555
EGP - "Hg	1							
	2	40.94	36.4	33.33	31.31	29.90	28.43	31.42
Fuel Flow - gal/hr	1							
	2	136.08	100.08	79.92	63.72	52.20	34.20	65.16
Fuel Used - gal								
Fuel Temperature - °C		35	35	36	36	36	35	65.5
THRUST F_q - LBS		667	460	306	204	127	42	15.9
BAR. PRESSURE - IN. Hg		27.52	27.52	27.52	27.52	27.52	27.51	27.51
WIND DIRECTION - DEG		350	30	80	90	90	90	80
WIND VELOCITY - KTS		2	2	2	1	1	1	1

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. _____

Date 25 OCT 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENG. SER. NO. T-E. 400389 AIR CONDITIONING ON INSTALLED THRUST RUN N RIGHT ENG.					
Run No.							
Time - min/sec T.O.D.		14.02					
FAT - °C		28.0					
IAS - kts							
Altitude - ft							
RPM	1						
	2	11903					
EGT - °C	1						
	2	571.8					
EGP - "Hg	1						
	2	29.90					
Fuel Flow - gal/hr	1						
	2	52.56					
Fuel Used - gal							
Fuel Temperature - °C		55					
THRUST N Fg N LB		102					
BAR. PRESSURE IN. Hg		27.51					
WIND DIRECTION N DEG		80					
WIND VELOCITY N KTS		1					

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. _____

Date 13 DEC 1960

Fuel Specific Weight 6.32 lb/gal

Weight at Engine Start _____ lb

Test		ENG. SER. NO. T-E 400382 AIR CONDITIONING ON INSTALLED THRUST RUN - LEFT ENGINE						
Run No.								
Time - min/sec T.O.D.		9:12	9:15	9:17	9:19	9:24	9:26	9:30
FAT - °C		3.0	3.0	3.0	3.0	3.0	3.0	3.0
IAS - kts								
Altitude - ft								
RPM	1	7850	13010	17365	21530	19470	15135	10895
	2							
EGT - °C	1	518	488	480	648	528	450	485
	2							
EGP - "Hg	1	28.75	31.30	36.32	46.94	40.73	33.52	30.11
	2							
Fuel Flow - gal/hr	1	36.36	62.28	121.32	181.44	128.88	72.00	49.32
	2							
Fuel Used - gal								
Fuel Temperature - °C								
THRUST - F_e - LBS		51	199	474	918	653	306	137
BAR. PRESSURE - IN. HG.		27.86	27.86	27.86	27.86	27.86	27.86	27.86
WIND DIRECTION - DEG		110	100	100	100	90-100	90-100	65
WIND VELOCITY - KTS		1-2	2	2	2	0-2	0-2	2

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. _____

Date 13 DEC 1960

Fuel Specific Weight 6.32 lb/gal

Weight at Engine Start _____ lb

Test	ENG. SER. NO. T-E 400382 AIR CONDITIONING ON INSTALLED THRUST RUN - LEFT ENGINE						
Run No.							
Time - min/sec T.O.D.	9:32						
FAT - °C	3.25						
IAS - kts							
Altitude - ft							
RPM	1	7900					
	2						
EGT - °C	1	502					
	2						
EGP - "Hg	1	29.02					
	2						
Fuel Flow - gal/hr	1	33.84					
	2						
Fuel Used - gal							
Fuel Temperature - °C							
THRUST ~ F ₀ ~ LBS	62						
BAR. PRESSURE ~ IN. HG	27.86						
WIND DIRECTION ~ DEG	75						
WIND VELOCITY ~ KTS	2						

TEST DATA CORRECTED FOR INSTRUMENT ERROR

F-37B USAF NO. 60-0079

Flight No. _____

Date 13 DEC 1960

Fuel Specific Weight 6.32 lb/gal.

Weight at Engine Start _____ lb

Test		ENG. SER. NO. T-E 400389 AIR CONDITIONING ON INSTALLED THRUST RUN~RIGHT ENGINE						
Run No.								
Time - min/sec T.O.D.		8:42	8:45	8:48	8:51	8:53	8:56	8:59
FAT - °C		2.0	2.0	2.0	2.0	2.0	2.0	2.0
IAS - kts								
Altitude - ft								
RPM	1							
	2	8000	12935	17385	21595	19370	15225	10835
EGT - °C	1							
	2	528	485	475	640	520	449	498
EGP - "Hg	1							
	2	-	-	36.35	46.90	40.85	33.35	29.91
Fuel Flow - gal/hr	1							
	2	38.88	59.04	106.20	91.88	132.48	70.56	77.88
Fuel Used - gal								
Fuel Temperature - °C								
THRUST ~ F ₂ ~ LBS		51	204	470	928	668	306	172
B.R.C. PRESSURE ~ IN. Hg.		27.86	27.86	27.86	27.86	21.86	27.86	27.86
WIND DIRECTION ~ DEG		110-120	115-120	100-105	100-105	90	110	105
WIND VELOCITY ~ KTS		0-1	0-1	0-1	0-1	0-1	2	2

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T-37B USAF NO. 60-0079

Flight No. _____

Date 13 DEC 1960

Fuel Specific Weight 6.32 lb/gal

Weight at Engine Start _____ lb

Test		ENG. SER. NO. T-E 400389 AIR CONDITIONING ON INSTALLED THRUST RUN~ RIGHT ENGINE					
Run No.							
Time - min/sec T.O.D.		9:04	9:07				
FAT - °C		2.5	2.75				
IAS - kts							
Altitude - ft							
RPM	1						
	2	7985	13020				
EGT - °C	1						
	2	512	472				
EGP - "Hg	1						
	2	28.87	31.21				
Fuel Flow - gal/hr	1						
	2	35.64	58.68				
Fuel Used - gal							
Fuel Temperature - °C							
THRUST ~ F _L ~ LBS		56	209				
BAR. PRESSURE ~ IN. HG		27.86	27.86				
WIND DIRECTION ~ DEG		120	105				
WIND VELOCITY ~ KTS		1.2	0.2				

TEST DATA CORRECTED FOR INSTRUMENT ERROR

T 37B USAF NO. 60-0079

Flight No. _____

Date 25 OCT. 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENG. SER. NOS. T.E. 400382 & 400389 AIR CONDITIONING OFF INSTALLED THRUST RUN-TO ENGINES				
Run No.		1	2	3	4	5
Time - min/sec		9:24	9:30	9:33	9:36	9:38
FAT - °C		16.25	16.50	16.75	16.75	17.0
IAS - kts						
Altitude - ft						
RPM	1	12950	15190	17350	19500	21750
	2	12830	15190	17350	19520	21750
EGT - °C	1	491	474	485	532	635
	2	505	475	494	540	640
EGP - "Hg	1	31.0	32.99	35.82	39.65	45.7
	2	30.82	32.85	35.35	39.50	45.35
Fuel Flow - gal/hr	1	55.4	71.6	99.3	123.5	170.6
	2	53.3	67.3	88.2	118.0	167.0
Fuel Used - gal						
Fuel Temperature - °C						
THRUST - F _g - LBS		347	551	841	1214	1791
BAR PRESSURE - "Hg		27.660	27.660	27.660	27.660	27.660
WIND DIRECTION - DEG.		110	110	120	130	90
WIND VELOCITY - KTS.		2	2	2	2	2

TEST DATA CORRECTED FOR INSTRUMENT ERROR

1-37B USAF NO 60-0079

Flight No _____

Date 25 OCT 1960

Fuel Specific Weight 6.25 lb/gal

Weight at Engine Start _____ lb

Test		ENG. SER. NOS. T. 400382 & 400389 AIR CONDITIONING ON INSTALLED THRUST RUN - TWO ENGINES					
Run No		1	2	3	4	5	6
Time - min/sec		9:03	9:06	9:10	9:13	9:17	9:19
FAT - °C		15.25	15.5	15.75	16.0	16.0	16.0
IAS - kts							
Altitude - ft							
RPM	1	10860	12980	15200	17340	19500	21750
	2	10890	12810	15190	17350	19580	21750
EGT - °C	1	510	500	482	492	542	648
	2	521	509	485	499	545	645
EGP - "Hg	1	29.92	31.00	33.2	35.80	39.71	45.8
	2	29.76	30.85	32.95	35.55	39.81	45.45
Fuel Flow - gal/hr	1	46.19	58.2	72.8	105.1	122.7	173.8
	2	44.2	58.0	67.9	89.6	120.8	168.2
Fuel Used - gal							
Fuel Temperature - °C							
THRUST & F _g - LBS		240	357	561	846	1224	1786
BAR. PRESSURE IN IN. HG		27.640	27.640	27.660	27.660	27.660	27.660
WIND DIRECTION IN DEG		175	200	190	180	140	100-110
WIND VELOCITY IN KTS		1	0	0-1	0	1	1-2

TEST DATA CORRECTED FOR INSTRUMENT ERROR

1-37B USAF NO 60-0079

Flight No _____

Date 13 DEC 1960

Fuel Specific Weight 6.32 lb./cu

Weight at Engine Start _____ lb

Test		ENG. SER. NOS. TE 400 382 & 400 389 AIR CONDITIONING ON INSTALLED THRUST RUN TWO ENGINES						
Run No		1	2	3	4	5	6	
Time - min/sec		9.42	9.45	9.47	9.49	9.52	9.55	
FAT - °C		4.0	5.0	5.0	5.0	5.25	5.5	
IAS - kts								
Altitude - ft								
RPM	1	13000	17350	21620	19480	15160	8000	
	2	13010	17400	21720	19460	15110	8000	
EGT - °C	1	471	468	635	518	444	494	
	2	476	465	639	512	446	505	
EGP - "Hg	1	31.45	36.5	47.1	40.75	33.7	29.15	
	2	31.50	36.3	46.95	40.65	33.5	29.08	
Fuel Flow - gal/hr	1	62.28	96.12	178.26	126.0	76.82	35.78	
	2	59.68	91.44	174.96	120.24	67.68	34.20	
Fuel Used - gal								
Fuel Temperature - °C								
THRUST - F ₀ - LBS.		367	852	1857	1240	591	107	
BAR. PRESSURE - IN. Hg		27.860	27.860	27.860	27.860	27.360	27.860	
WIND DIRECTION - DEG		90	90	90	90	270	65	
WIND VELOCITY - KTS.		0	0	0	1	0	0	

UNCLASSIFIED

UNCLASSIFIED