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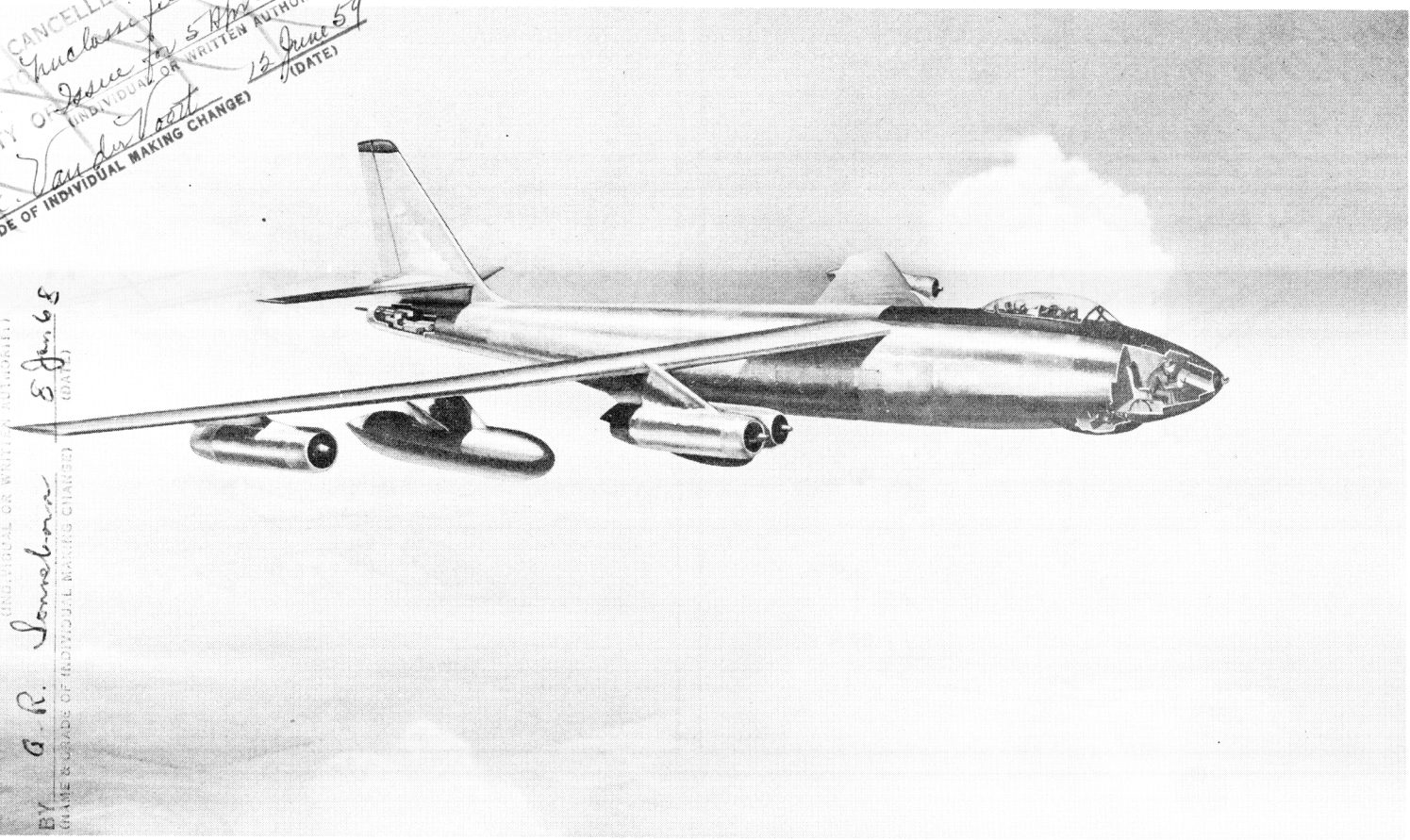
A-1  
B-47E/CHA.

SERVICE

Classification cancelled  
or changed to *Unclassified*  
AUTH: AFSC-AFSC Sec. Class. Guide 1 Jan 64  
By *A.R. Somerton* 1 Apr 64  
Signature and Grade

CLASSIFICATION CANCELLED  
(OR CHANGED TO *Unclassified*)  
BY AUTHORITY OF *Issue for 5 Apr 56*  
(INDIVIDUAL OR WRITTEN AUTHORITY)  
*E. Vander Voort*  
(NAME & GRADE OF INDIVIDUAL MAKING CHANGE) 12 June 59  
(DATE)

CLASSIFICATION CANCELLED  
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(INDIVIDUAL OR WRITTEN AUTHORITY)  
BY *A.R. Somerton* 5 Jan 68  
(NAME & GRADE OF INDIVIDUAL MAKING CHANGE) (DATE)



# Standard Aircraft Characteristics

BY AUTHORITY OF  
THE SECRETARY  
OF THE AIR FORCE

**B-47E**  
**STRATOJET**  
Boeing

SIX J47-GE-25  
GENERAL ELECTRIC

7 JUN 55

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**B-47E**  
(HEAVYWEIGHT)

*HG Ed addn #7*





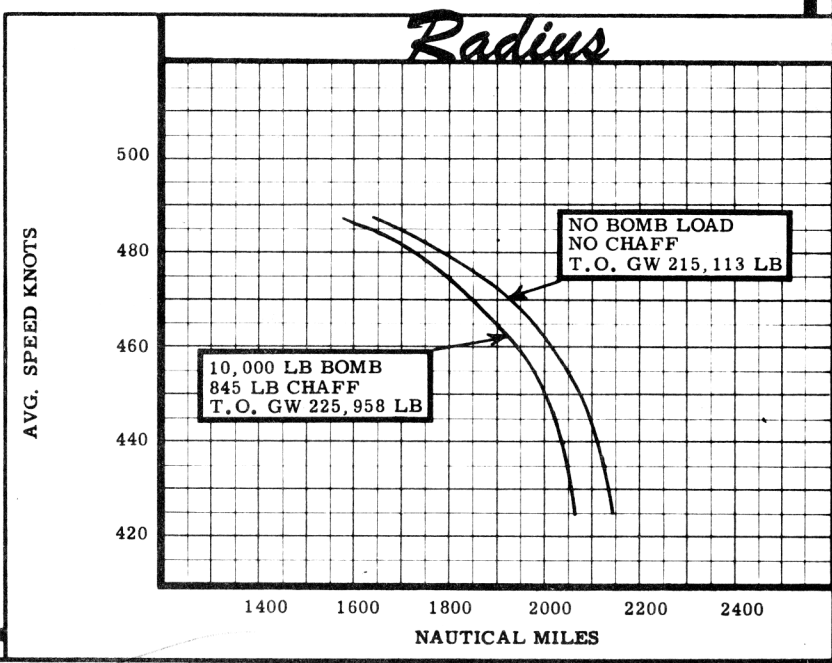
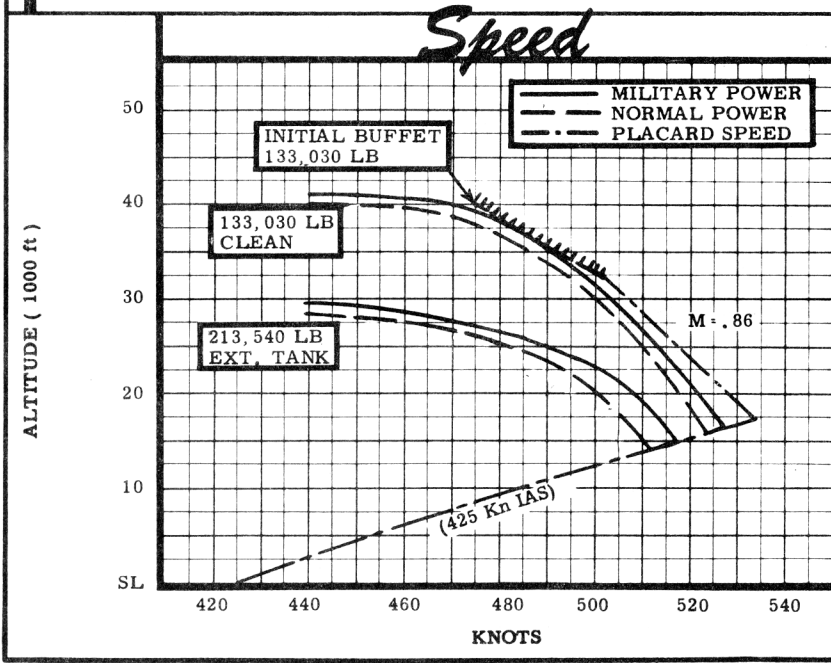
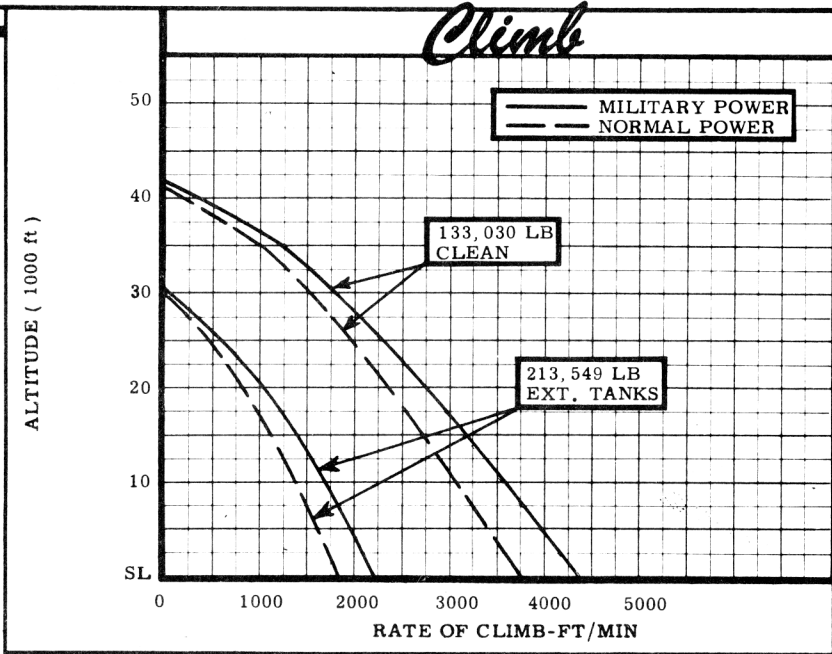
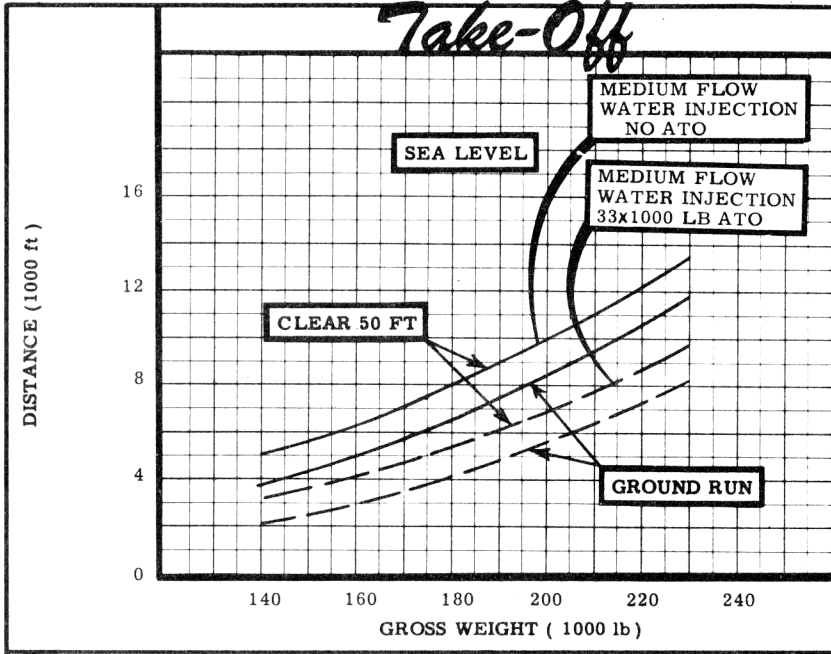
# Loading and Performance - Typical Mission

C O N D I T I O N S	BASIC MISSION	DESIGN BOMB LOAD	CRUISE CEILING	FERRY RANGE
TAKE-OFF WEIGHT (lb)	I 225,958	II 230,000	III 225,958	IV 215,113
Fuel at 6.5 lb/gal (grade JP-4) (lb)	117,000	113,030	117,000	117,000
Payload (Bomb) (lb)	10,000	18,000	10,000	None
Payload (Chaff) (lb)	845	845	845	None
Wing loading (lb/sq ft)	149.6	152.4	149.6	142.5
Stall speed (power off) (kn)	166.1	167.6	166.1	162.1
Take-off ground run at SL (ft)	11,300	11,800	11,300	10,150
Take-off ground run with ATO (ft)	7850	8200	7850	6900
Take-off to clear 50 ft (ft)	12,900	13,400	12,900	11,700
Take-off to clear 50 ft with ATO (ft)	9300	9700	9300	8350
Rate of climb at SL (fpm)	1850	1800	1850	1950
Rate of climb at SL (one engine out) (fpm)	1670	1610	1670	1720
Time: SL to 20,000 ft (min)	11.2	11.4	11.2	10.3
Time: SL to Cruise Alt (min)	19.4	19.6	22.4	18.8
Service ceiling (100 fpm) (ft)	29,500	29,000	29,500	30,400
Service ceiling (one engine out) (ft)	25,000	24,500	25,000	26,000
COMBAT RANGE (n. mi.)	4340	4340	4340	4340
COMBAT RADIUS (n. mi.)	2050	1940	1760	1760
Average cruise speed (kn)	435	436	475	434
Initial cruising altitude (ft)	27,000	26,700	29,000	28,350
Target speed (kn)	466	466	475	475
Target altitude (ft)	37,350	36,550	37,300	37,300
Final cruising altitude (ft)	43,500	43,550	46,750	43,500
Total mission time (hr)	9.42	8.94	7.49	10.02
COMBAT WEIGHT (lb)	133,030	130,485	133,330	93,990
Combat altitude (ft)	37,350	36,550	37,300	43,500
Combat speed (kn)	483	488	483	486
Combat climb (fpm)	850	1050	850	1000
Combat ceiling (500 fpm) (ft)	39,300	39,600	39,250	46,500
Service ceiling (100 fpm) (ft)	40,500	40,900	40,450	47,600
Service ceiling (one engine out) (ft)	38,500	39,100	38,500	46,000
Max rate of climb at SL (fpm)	4350	4450	4350	6130
Max speed at 16,300 ft (kn)	528	528	528	528
Basic speed at 35,000 ft (kn)	490	491	490	494
LANDING WEIGHT (lb)	93,990	93,785	93,990	93,990
Ground roll at SL (ft)	4600	4600	4600	4600
Ground roll (auxiliary brake) (ft)	2600	2600	2600	2600
Total from 50 ft (ft)	5500	5500	5500	5500
Total from 50 ft (auxiliary brake) (ft)	3500	3500	3500	3500

NOTES

- ① Take-off power
- ② Military power
- ③ Normal power
- ④ Detailed descriptions of RADIUS and RANGE missions given on page 6.
- ⑤ Volume limited. Includes ATO and water-alcohol.
- ⑥ 33 bottles ATO, medium flow water injection.
- ⑦ No ATO, medium flow water injection
- ⑧ Values quoted are for T.O. weight less 7109 lb ATO and 5300 lb water and alcohol.
- ⑨ Placard speed.
- ⑩ Brake chute deployed at touchdown

**PERFORMANCE BASIS:**  
 (a) Data Source: Flight test  
 (b) Performance is based on powers shown on page 6.



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**N O T E S**

FORMULA: RADIUS MISSIONS I & II

Take-off and climb on course to initial cruising altitude. Cruise out at long range speeds and altitudes, dropping external tanks when empty. Climb to cruise ceiling and conduct a 15 minute level-flight bomb run at normal rated thrust. Drop bomb load and chaff and conduct 2 minutes evasive action and 8 minutes escape at normal rated thrust. Return to base at long range speeds and altitudes. Range-free allowances are fuel for 5 minutes at normal rated thrust at sea level for take-off allowance, 2 minutes at normal rated thrust at combat altitude for evasive action, and 30 minutes at maximum endurance airspeeds at sea level plus 5% of initial fuel load for landing reserve.

FORMULA: RADIUS MISSION III

Take-off and climb on course to initial cruising altitude. Cruise out at normal rated thrust at cruise ceiling, dropping external tanks when empty. Conduct a 15 minute level flight bomb run, drop bomb load and chaff, and conduct 2 minutes evasive action at normal rated thrust. Return to base at normal rated thrust at cruise ceiling. Range-free allowances are as specified for Radius Missions I and II.

FORMULA: RANGE MISSION IV

Take-off and climb on course to initial cruising altitude. Cruise out at long range speeds and altitudes, dropping external tanks when empty. Land at remote base with only reserve fuel remaining. Range-free allowances are fuel for 5 minutes at normal rated thrust at sea level for take-off allowance and 30 minutes at maximum endurance airspeeds at sea level plus 5% of initial fuel load for landing reserve.

GENERAL DATA

(a) Thrust values shown on page 3 are engine manufacturer's guaranteed ratings. Thrust values used in performance calculations are as follows:

J47-GE-25 & -25A			
SL Static	LB	RPM	MIN
TO	7200	7950	5
Max	5970	7950	5
Mil	5640	7800	30
Nor	5270	7630	Cont

(b) For detail planning, refer to Technical Order IB-47-E-I and latest applicable technical orders.

(c) The following loadings reflect the capabilities of the B-47E (Heavy-weight) airplane utilizing general purpose bombs at combat altitude.

SHORT BOMB BAY Hi-Density Kit	LONG BOMB BAY Hi-Density Kit	SHORT BOMB BAY Lo-Density Kit
No. . . . . Class (lb) WW II (Box Fin) Not Carried	No. . . . . Class (lb) WW II (Box Fin) Not Carried	No. . . . . Class (lb) WW II (Box Fin) Not Carried
INTERIM (Conical Fin)	INTERIM (Conical Fin)	INTERIM (Conical Fin)
3 . . . . 2000	6 . . . . . 2000	3 . . . . 2000
6 . . . . 1000	18 . . . . . 1000	4 . . . . 1000
13 . . . . 500 (T-127)	28 . . . . . 500	4 . . . . 500 (T-127)
14 . . . . 500 (M-123)		8 . . . . 500 (M-123)
NEW SERIES	NEW SERIES	NEW SERIES
6 . . . . 750 Chem. Cluster	1 . . . . . 12,000	4 . . . . 750 Chem. Cluster
7 . . . . 750	1 . . . . . 10,000	4 . . . . 750
	4 . . . . . 3000	
	21 . . . . . 750	

1. The Short Bomb Bay Hi-Density Kits and Long Bomb Bay Hi-Density Kits are adaptable and effective on the 617th (B-47E) and subsequent. (500 kits each were procured)

2. The Short Bomb Bay Lo-Density Kit can be utilized only in airplanes 617 thru 730; airplanes 1 thru 616 have provisions for this kit but must be modified to accept it.

PERFORMANCE REFERENCE:

Boeing Report D-13194, "B-47 Performance Substantiation Models B-47B(-23 Engines), B-47E, and RB-47E", dated 3 June 1953.

REVISION BASIS:

To include Bomb Table.

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Ohio 45433