

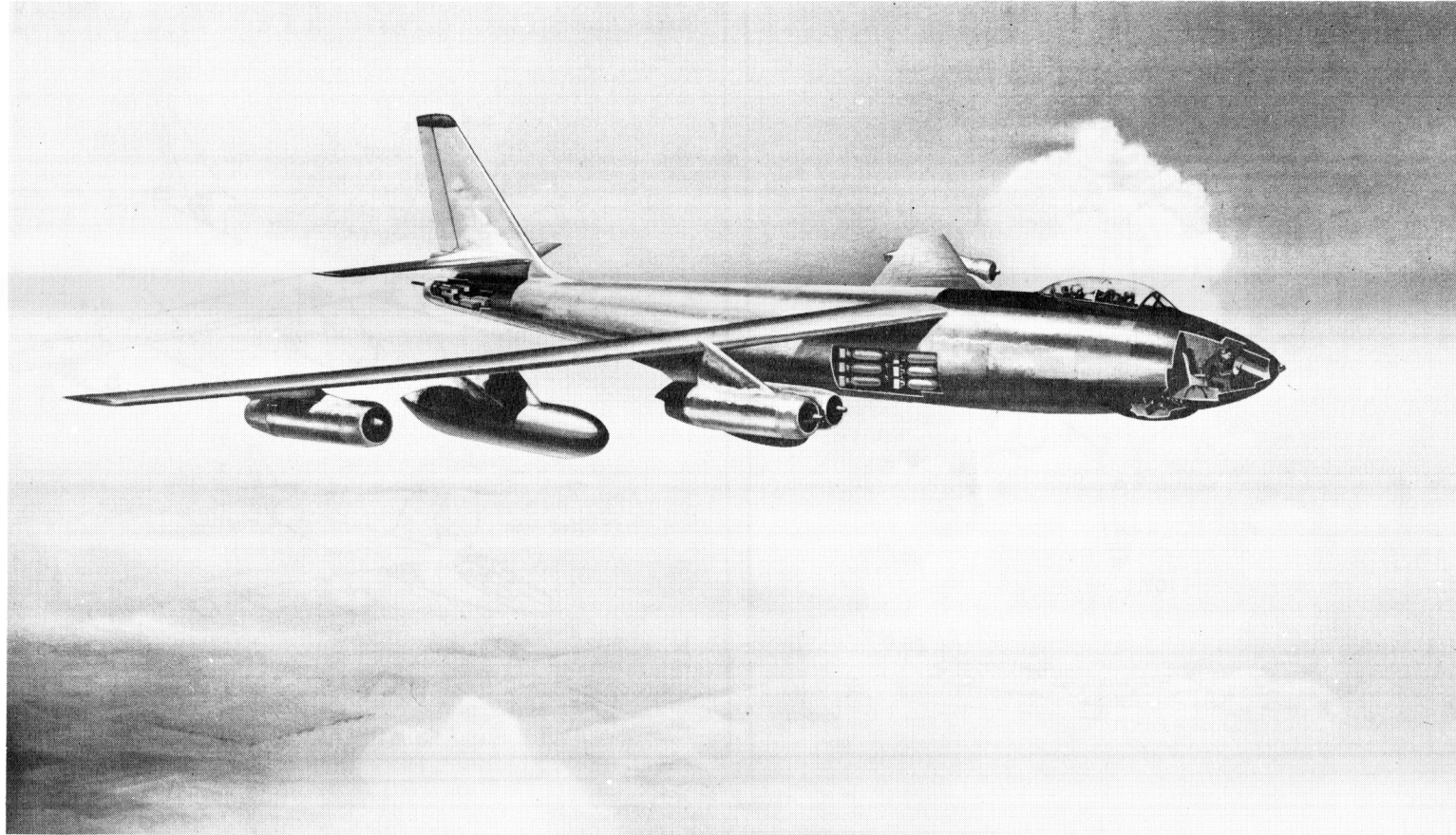
~~C O N F I D E N T I A L~~

SERVICE

A-1  
B-47E/char

Deleted  
4th Ed; Add Nr 7  
25J 4155

Classification cancelled  
or changed to Unclassified  
AUTH: AFSC- AF & C Sec. Class. Guide 1 Jan 64  
DoD Dir 5200.10  
By G. R. Lombeorn 1 Apr 64  
Signature and Grade 13 Dec 1966



# Standard Aircraft Characteristics

BY AUTHORITY OF  
THE SECRETARY  
OF THE AIR FORCE

## B-47E

### STRATOJET

Boeing

SIX J47-GE-25

GENERAL ELECTRIC

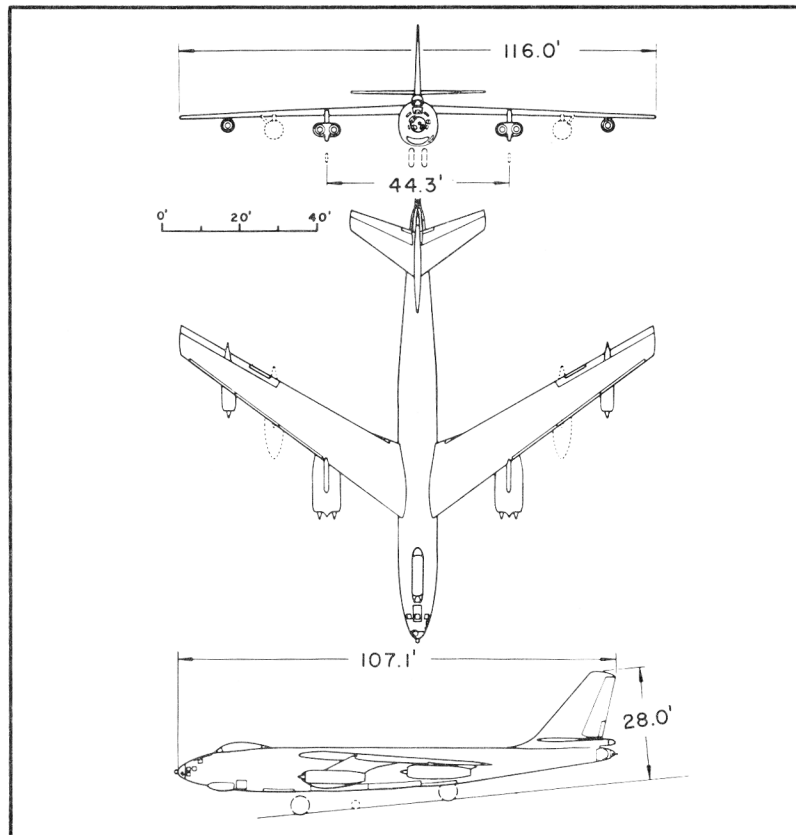
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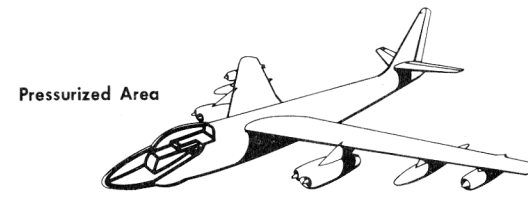
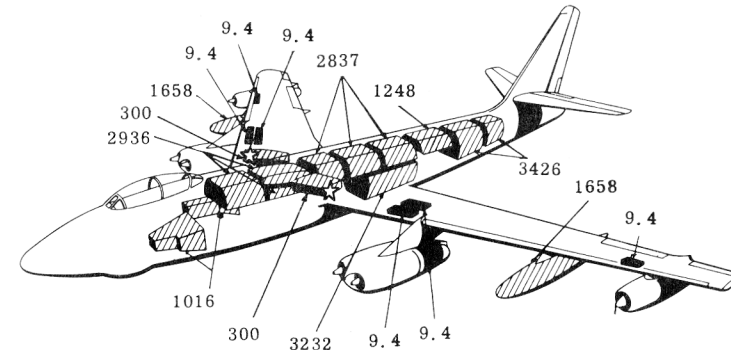
B-47E  
(RANGE EXTENSION)

3rd Ed addn #9

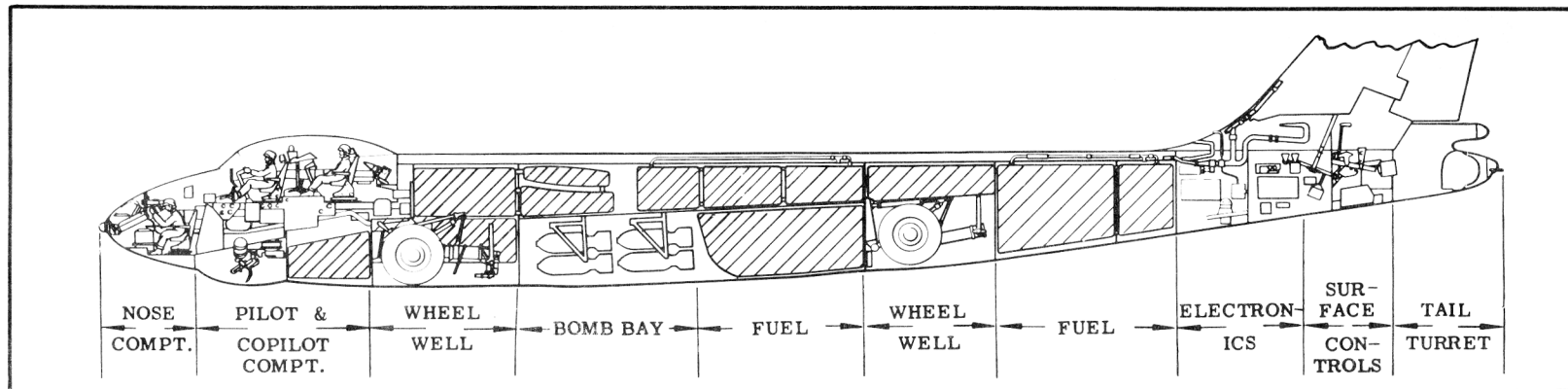
537C12001



Wing Area . . . . . 1428 sq ft    Wing Section . . . . . Boeing 145  
 Aspect Ratio . . . . . 9.43    M. A. C. . . . . . 156"



▨ Fuel (Gal)    ☆ Water Alcohol (Gal)    ■ Oil (Gal)



B-47E  
 2 (RANGE EXTENSION)



## Loading and Performance—Typical Mission

C O N D I T I O N S			BASIC MISSION	FERRY RANGE
TAKE-OFF WEIGHT	⑥	(lb)	200,000	200,000
Fuel at 6.5 lb/gal (grade JP-4)		(lb)	95,680	106,400
Payload (Bombs)		(lb)	10,000	None
Payload (Chaff)		(lb)	720	None
Wing loading		(lb/sq ft)	133.2	133.2
Stall speed (power off)	⑧	(kn)	140	140
Take-off ground run at SL	①	(ft)	8050	8050
Take-off ground run with ATO	⑤	① (ft)	5650	5650
Take-off to clear 50 ft		① (ft)	9450	9450
Take-off to clear 50 ft with ATO	⑤	① (ft)	7100	7100
Rate of climb at SL	⑧	③ (fpm)	2110	2110
Rate of climb at SL (one eng. out)	⑧	② (fpm)	1680	1680
Time: SL to 20,000 ft		③ (min)	11.6	11.6
Time: SL to 30,000 ft		③ (min)	21.0	21.0
Service ceiling (100 fpm)	⑧	③ (ft)	31,500	31,500
Service ceiling (one engine out)	⑧	② (ft)	28,200	28,200
COMBAT RANGE		④ (n. mi)	—	4095
COMBAT RADIUS		④ (n. mi)	1780	—
Average cruise speed		(kn)	433	433
Initial cruising altitude		(ft)	30,100	30,100
Target speed	③	(kn)	466	—
Target altitude		(ft)	38,600	—
Final cruising altitude		(ft)	44,100	44,000
Total mission time		(hr)	8.30	9.53
COMBAT WEIGHT		(lb)	123,080	91,550
Combat altitude		(ft)	38,600	44,000
Combat speed	②	(kn)	469 ⑨	469 ⑨
Combat climb	②	(fpm)	900	1050
Combat ceiling (500 fpm)	②	(ft)	40,800	47,200
Service ceiling (100 fpm)	③	(ft)	42,100	48,500
Service ceiling (one engine out)	③	(ft)	39,300	45,400
Max rate of climb at SL	②	(fpm)	4740	6320
Max speed at 20,000 ft	②	(kn)	497 ⑨	497 ⑨
Basic speed at 35,000 ft	②	(kn/ft)	469 ⑨	469 ⑨
LANDING WEIGHT		(lb)	91,015	91,550
Ground roll at SL		(ft)	4450	4450
Ground roll (auxiliary brake)	⑦	(ft)	2550	2550
Total from 50 ft		(ft)	5350	5350
Total from 50 ft (auxiliary brake)	⑦	(ft)	3450	3450

## NOTES

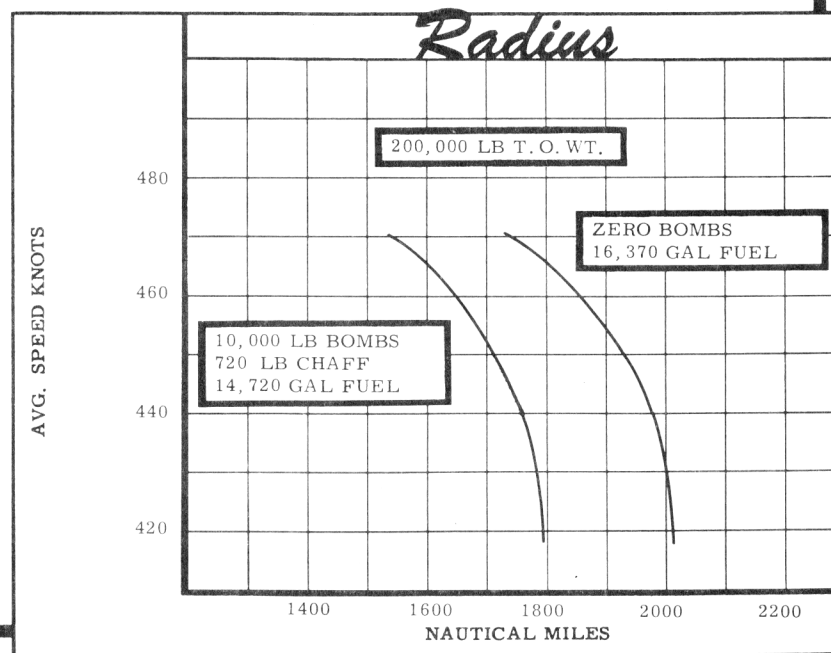
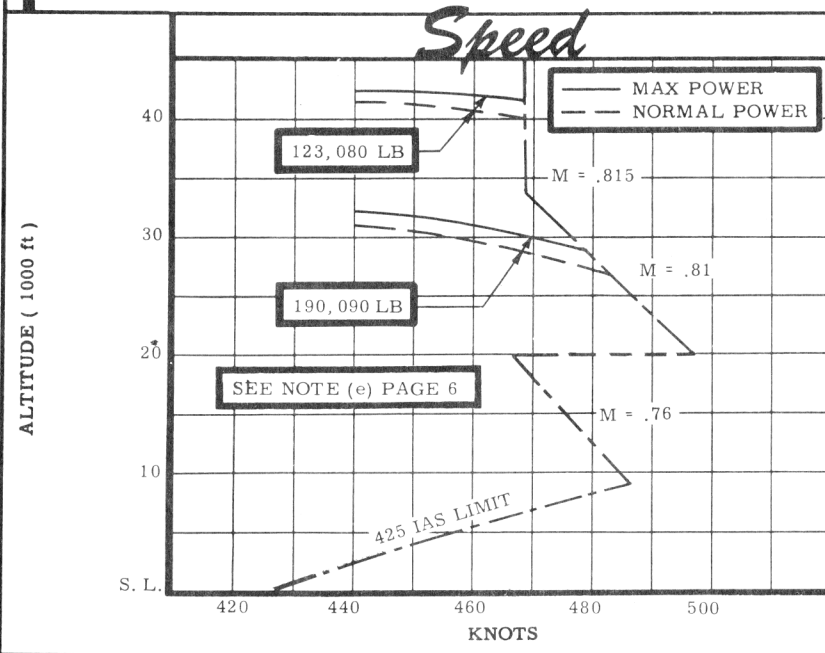
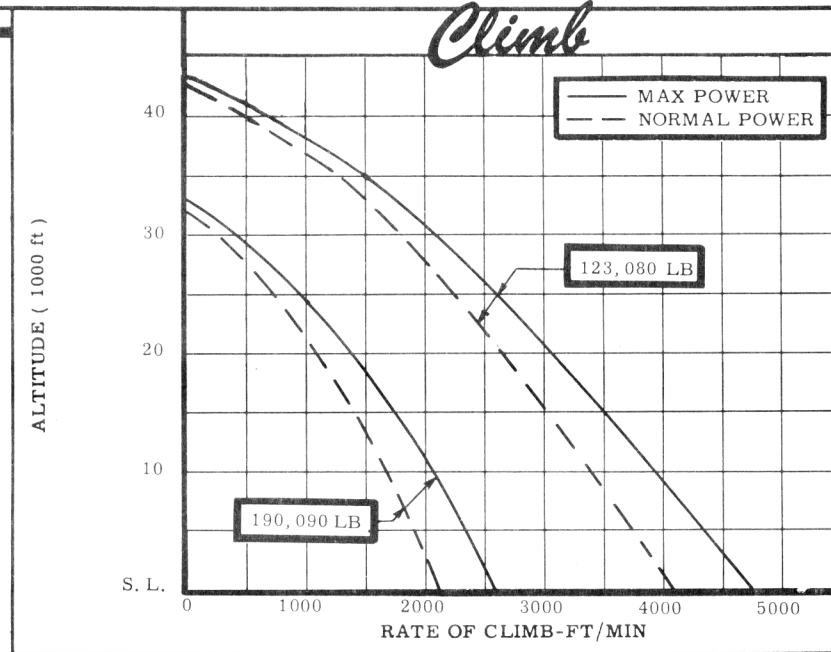
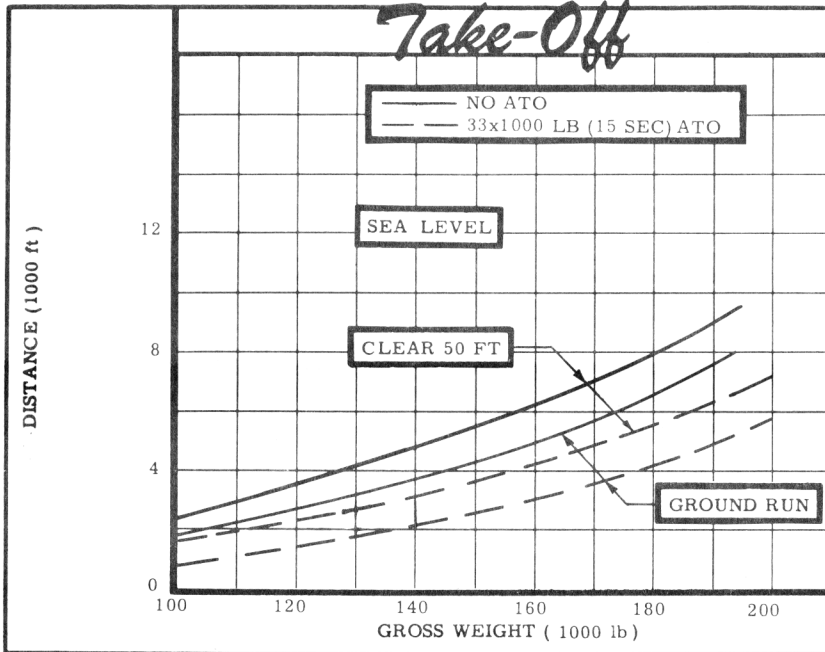
- ① T. O. power  
 ② Max power  
 ③ Normal power  
 ④ Detailed descriptions of Radius &

- Range missions given on page 6  
 ⑤ With 33,000 lb (ATO) thrust  
 ⑥ Includes 4610 lb ATO and 5300 lb water and alcohol

- ⑦ With braking parachute  
 ⑧ Values quoted are for T. O. weight less ATO, water and alcohol  
 ⑨ Structural limit

## Performance Basis:

- (a) Data source: Flight Test  
 (b) Performance is based on powers shown on page 6.



**N O T E S**

FORMULA: RADIUS MISSION I

Take-off and climb on course to optimum cruise altitude at normal power. Cruise out at long range speeds increasing altitude with decreasing airplane weight, external tanks (if carried) are dropped when empty. Climb so as to reach cruise ceiling 15 minutes from target. Run into target at normal power, drop bombs and chaff, conduct 2 minutes evasive action and 8 minutes escape from target at normal power. Cruise back to home base at long range speeds increasing altitude with decreasing airplane weight. Range free allowances include 5 minutes normal power fuel consumption for starting engines and take-off, 2 minutes normal power fuel consumption at combat altitude for evasive action and 30 minutes of maximum endurance (four engines) fuel consumption at sea level plus 5% of initial fuel load for landing reserve.

FORMULA: RANGE MISSION II

Take-off and climb on course to optimum cruise altitude at normal power. Cruise out at long range speeds increasing altitude with decreasing airplane weight until all usable fuel is consumed, external tanks are dropped when empty. Range free allowances include 5 minutes normal power fuel consumption for starting engines and take-off and 30 minutes of maximum endurance (four engines) fuel consumption at sea level plus 5% of initial fuel load for landing reserve.

GENERAL DATA:

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

(6)J47-GE-25			
S. L. Static	LB	RPM	MIN
T. O:	6770	7950	5
Max:	5640	7800	30
Nor:	5270	7630	Cont

- (b) For detailed planning refer to Technical Order AN01-20ENB-1 and latest applicable technical orders.
- (c) Maximum landing weight 180,000 lb based on approximately 8 ft/sec ultimate rate of descent with 1G wing lift.
- (d) All approved weight reduction items incorporated.
- (e) Speed limitations shown were taken from "Safety of Flight Supplement AN01-20ENB-1N", dated 10 July 1953.
- (f) The following loading reflect the capabilities of the B-47E (Range Extension) airplane utilizing general purpose bombs.

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 1 . . . . . 10,000	4 . . . . 750 Chem. Cluster
7 . . . . 750	4 . . . . . 3000 21 . . . . . 750	4 . . . . 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 Sort 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: Initial Issue.

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