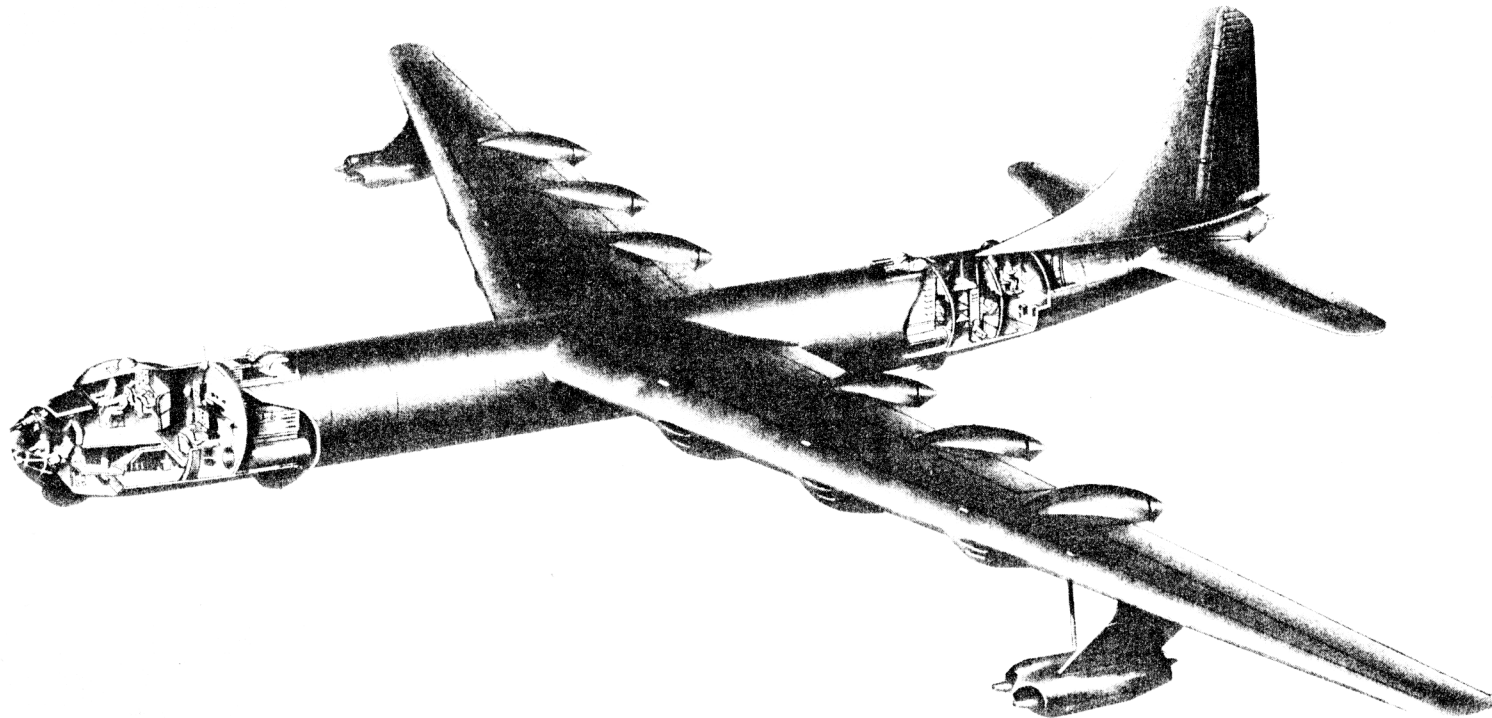


(Security Information)
R E S T R I C T E D

SERVICE



Standard Aircraft Characteristics

BY AUTHORITY OF
COMMANDING GENERAL
WRIGHT AIR DEVELOPMENT CENTER
U. S. AIR FORCE

B-36H

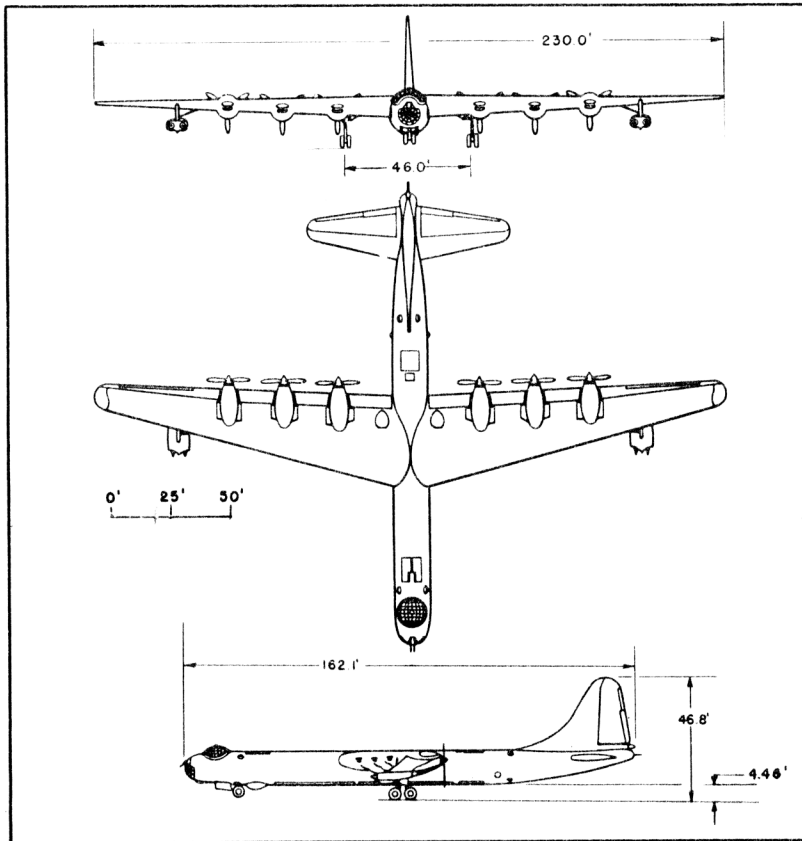
Consolidated-Vultee

SIX R-4360-53
PRATT & WHITNEY
FOUR J47-GE-19
GENERAL ELECTRIC

3 DECEMBER 1951

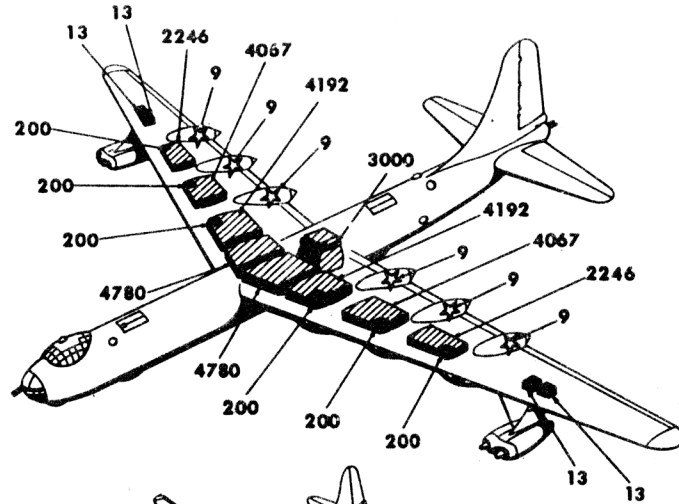
R E S T R I C T E D
(Security Information)

B-36H

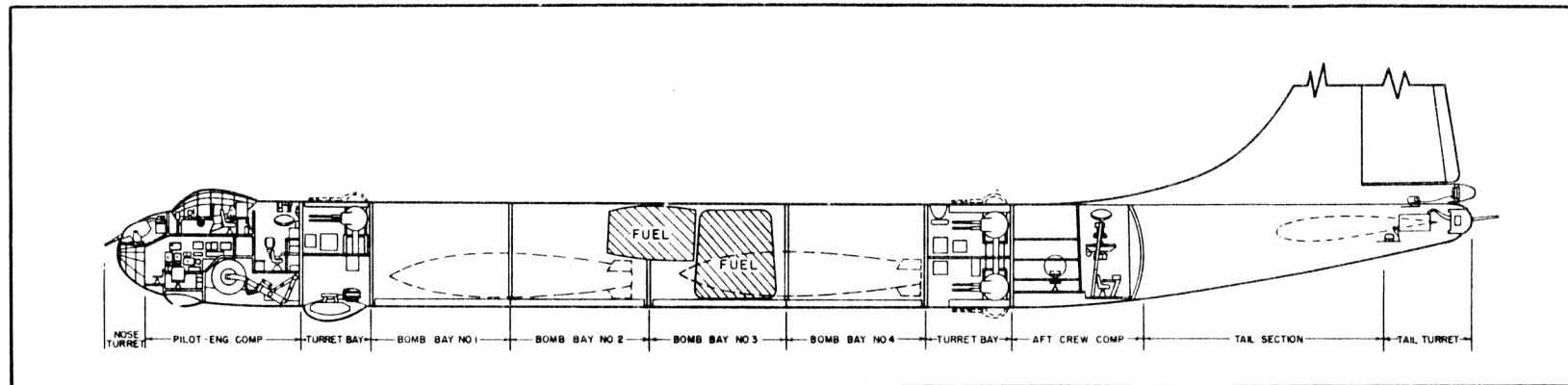


Wing Area 4772 sq ft
 Aspect Ratio 11.08
 M. A. C. 280.7 in

Wing Section
 (root) NACA 63, 4-422A
 (tip) NACA 63, 4-517A
 a = 1.0 (mod.)



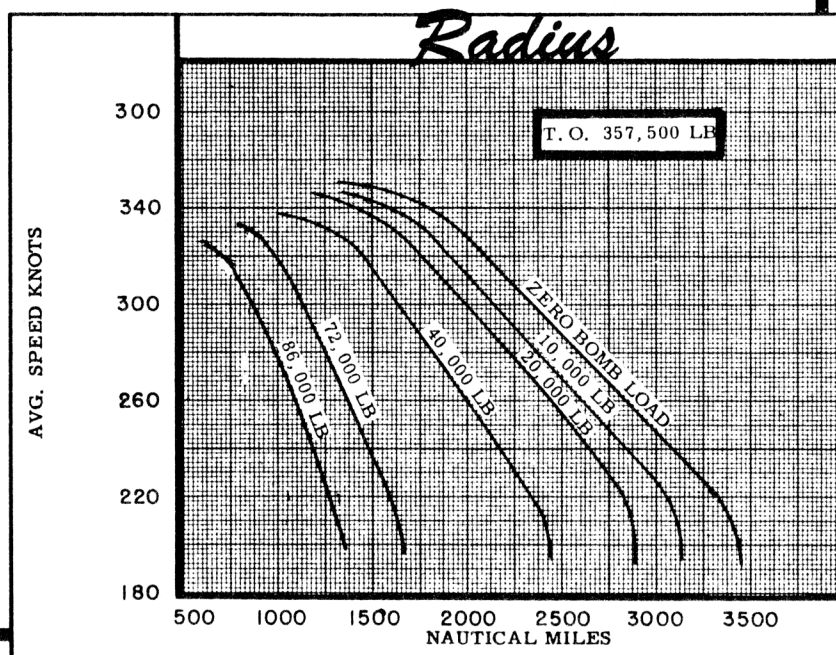
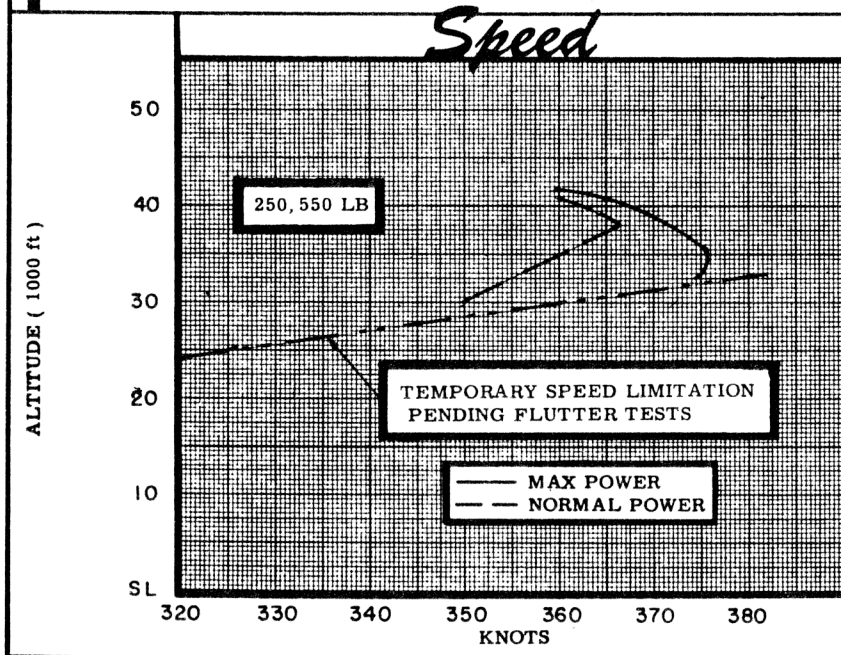
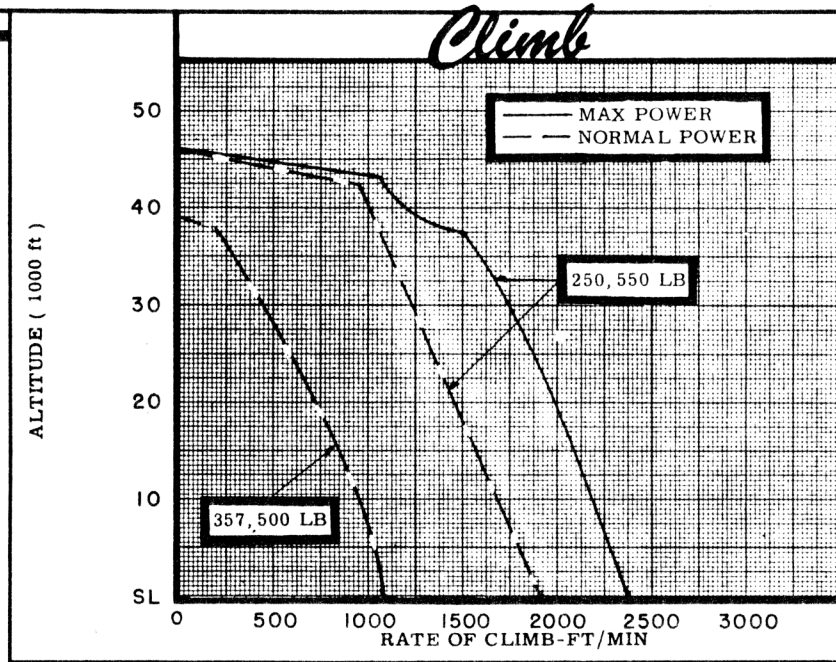
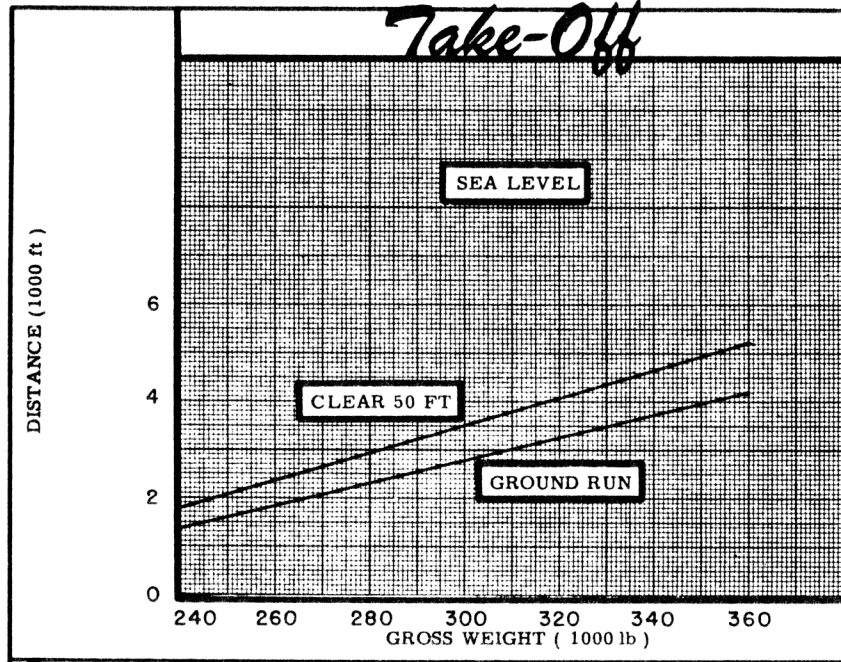
Pressurized Area



Loading and Performance - Typical Mission

C O N D I T I O N S			BASIC MISSION	MAX BOMBS	COMBAT ZONE		MAX SPEED	FERRY RANGE
					500 N. MI.	AT 40,000 FT 1000 N. MI.		
			I	II	III	IV	V	VI
TAKE-OFF WEIGHT	(lb)		357,500	357,500	357,500	357,500	357,500	357,500
Fuel at 6.0 lb/gal (grade 115/145)	(lb)		165,235	86,525	165,235	165,235	165,235	175,620
Military load (Bombs)	(lb)		10,000	86,000	10,000	10,000	10,000	None
Wing loading	(lb/sq ft)		74.92	74.92	74.92	74.92	74.92	74.92
Stall speed (power off, landing configuration)	(kn)		105	105	105	105	105	105
Take-off ground run at SL	① (ft)		4000	4000	4000	4000	4000	4000
Take-off to clear 50 ft	① (ft)		4971	4971	4971	4971	4971	4971
Rate of climb at SL	③ (fpm)		1120	1120	1120	1120	1120	1120
Time: SL to 10,000 ft	③ (min)		9.8	9.8	9.8	9.8	9.8	9.8
Time: SL to 20,000 ft	③ (min)		21.8	21.8	21.8	21.8	21.8	21.8
Service Ceiling (100 fpm)	③ (ft)		38,500	38,500	38,500	38,500	38,500	38,500
Service Ceiling (one engine out)	② (ft)		36,600	36,600	36,600	36,600	36,600	36,600
COMBAT RANGE	④ (n. mi.)		6270	2365	5870	5740	3425	7120
Average speed	(kn)		181	184	184	187	344	182
Initial cruising altitude	(ft)		10,000	10,000	10,000	10,000	34,500	10,000
Final cruising altitude	(ft)		25,000	25,400	25,000	25,000	38,000	24,900
Total mission time	(hr)		34.85	1315	32.07	30.82	7.22	39.35
COMBAT RADIUS	④ (n. mi.)		3190	1390	2955	2755	1280	—
Average speed	⑥ (kn)		188	195	199/285	216/282	345	—
Initial cruising altitude	(ft)		10,000	10,000	10,000	10,000	34,500	—
Bombing altitude	(ft)		25,000	25,000	40,000	40,000	38,000	—
Bomb run speed	③ (kn) ⑦		324	324	361	361	363	—
Final cruising altitude	(ft)		26,000	26,400	26,000	26,000	38,000	—
Total mission time	(hr)		34.20	14.50	29.85	25.75	7.67	—
COMBAT WEIGHT	⑤ (lb)		250,550	216,000	247,390	245,790	260,400	199,442
Combat altitude	(ft)		25,000	25,000	40,000	40,000	38,000	24,900
Combat speed	② (kn) ⑦		324	324	367	367	372	324
Combat climb	② (fpm)		1750	2160	820	840	940	2410
Combat ceiling (500 fpm)	② (ft)		41,950	44,000	42,100	42,200	41,350	45,000
Service ceiling (100 fpm)	③ (ft)		44,500	46,200	44,700	44,800	44,000	47,000
Service ceiling (one engine out)	③ (ft)		42,700	44,700	42,900	43,000	42,100	45,550
Max rate of climb at SL	② (fpm)		2380	2855	2420	2440	2270	3170
Max speed at optimum ft	② (kn/ft)		376/34,500	380/35,150	376/34,500	377/34,500	375/34,500	382/35,500
LANDING WEIGHT	(lb)		190,527	189,301	190,527	190,527	190,527	199,442
Ground roll at SL	(ft)		1800	1790	1800	1800	1800	1880
Total from 50 ft	(ft)		3095	3085	3095	3095	3095	3200

N O T E S	① Take-off power	⑤ For Radius Mission if radius is shown, flutter tests.	PERFORMANCE BASIS: (a) Data source: Preliminary flight tests (b) Performance is based on powers shown on page 6.
	② Max power	⑥ Where two speeds are shown the first is the average for the mission, the second for the zone.	
	③ Normal power	⑦ Temporary speed limitation pending	
	④ Detailed descriptions of RADIUS and RANGE missions are given on page 6.		



N O T E S

FORMULA: RADIUS MISSIONS I & II

Start engines, warm-up, take-off and climb on course using normal power to 10,000 feet, cruise at long range speeds at altitudes for best range (10,000 feet minimum). Climb so as to arrive at 25,000 feet 30 minutes prior to target. Cruise at long range speeds for 15 minutes, conduct 15 minute bomb run at normal power, drop bombs, conduct 5 minutes evasive action and 10 minutes escape from target at normal power. Return to base at long range speeds, cruising at optimum altitude for mileage. Jet engines are operating during take-off and climb. Range free allowances include 10 minutes normal power fuel consumption for R-4360-53 plus 5 minutes normal power fuel consumption for J47-GE-19 for warm-up and take-off, 5 minutes normal power fuel consumption for R-4360-53 for evasive action, plus 5% of initial fuel load for landing and endurance reserve.

FORMULA: RADIUS MISSIONS III & IV

Start engines, warm-up, take-off and climb on course using normal power to 10,000 feet, cruise at long range speeds at 10,000 feet altitude. Climb so as to arrive at 40,000 feet 500 or 1000 nautical miles prior to target. Cruise at long range speeds at 40,000 feet followed by 15 minutes bomb run at normal power, drop bombs, conduct 5 minutes evasive action and 10 minutes escape from target at normal power. Cruise at long range speeds at 40,000 feet until 500 or 1000 nautical miles from target. Return to base at long range speeds and optimum altitude for mileage. Jet engines are operative during take-off, all climbs, during normal power operation in target area and whenever operation gives better mileage-speed relationship than is obtainable with jet engines inoperative. Range free allowances are the same as for Missions I & II.

FORMULA: RADIUS MISSION V

Start engines, warm-up and take-off, climb on course using normal power to altitude for optimum speed-range operation (approx 34,500 feet), cruise toward target at altitude and powers for optimum speed-range. Conduct 15 minutes normal power bomb-run, drop bombs, conduct 5 minutes evasive action plus 10 minute escape from target at normal power, return to base at powers and altitude for best speed-range operation. Jet engines are operative during take-off, climb, during normal power operation in target area and whenever operation gives better mileage-speed relationship than is obtainable with jet engines inoperative. Range free allowances are the same as for Radius Missions I & II.

FORMULA: RANGE MISSIONS I, II, III, IV, & V

Same as outbound leg of radius missions continued until 90% of initial fuel load has been consumed. Range free allowances include 10 minutes normal power fuel consumption for R-4360-53 plus 5 minutes normal power fuel consumption for J47-GE-19 for warm-up and take-off, plus 10% of initial fuel load for landing and endurance reserve.

FORMULA: RANGE MISSION VI

Start engines, warm-up, take-off and climb on course to 10,000 feet using normal power, cruise at long range speeds at altitude for best range (minimum 10,000 feet) until 90% of fuel has been consumed. Jet engines are used for take-off and climb. Range free allowances are the same as Range Missions I through V.

GENERAL DATA:

(a) Total fuel capacity is usable for special loadings with equipment removed from the aircraft.

(b) Engine ratings shown on page 3 are manufacturers' guaranteed ratings. Power values used for performance calculations are as follows:

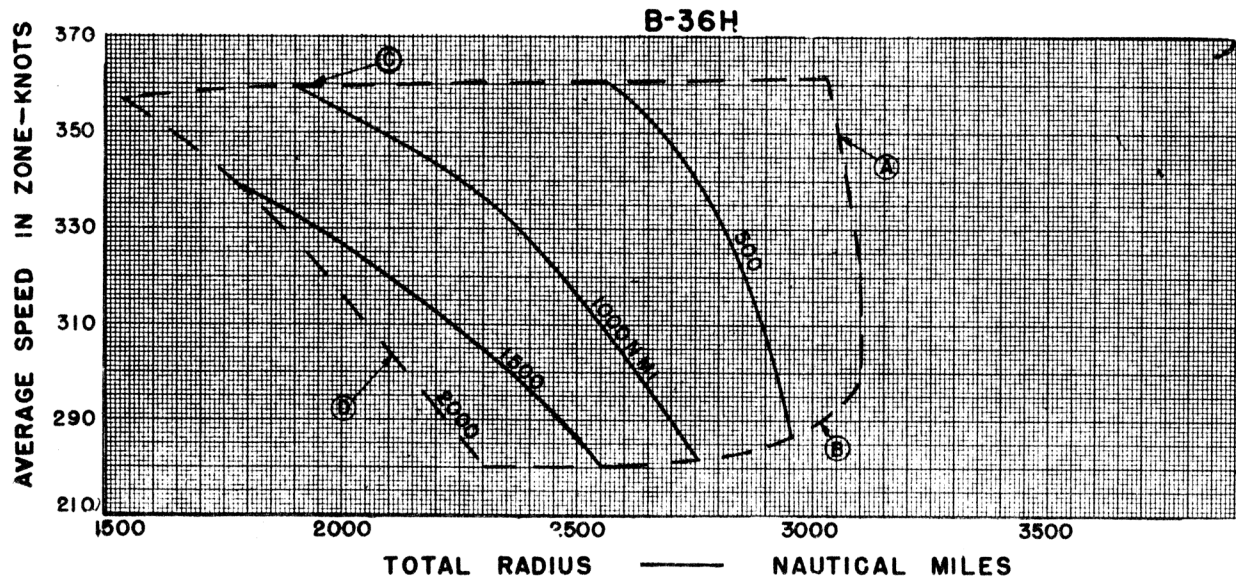
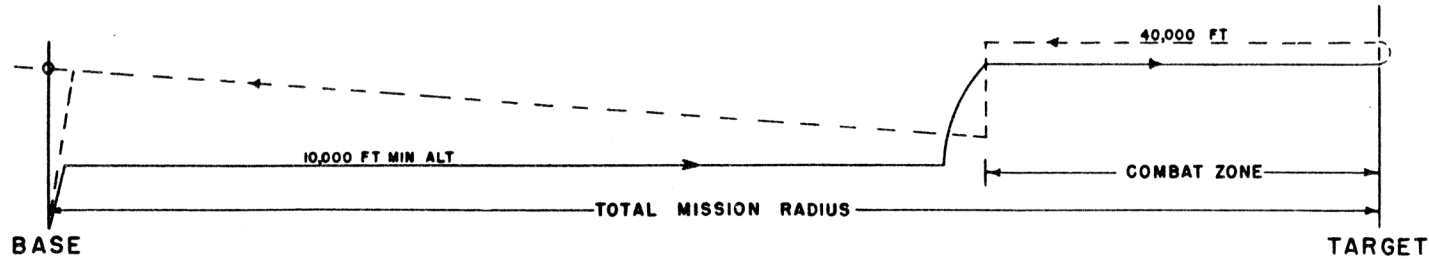
	R-4360-53		J47-GE-19
	BHP-RPM-ALT**-MIN	S. L. Static	LB-RPM-MIN
T. O.	*3800-2800-S. L.- 5	T. O:	5200-7950- 5
MAX	{Mil: 3500-2800-32,900- 30	Max:	5200-7950- 30
	{W. E: 3250-2400-34, 500- 30	Nor:	4730-7630-Cont
Nor:	2800-2600-38,000-Cont		
	*Wet		
	**Turbo critical (level flight)		

(c) These data are based on preliminary flight test and have not been substantiated by WADC.

~~RESTRICTED~~
SUPPLEMENTAL

SERVICE

COMBAT ZONE MISSIONS



- LIMITS**
- (A) 30 minutes minimum time at 40,000 ft.
 - (B) Operation at long range speeds on entire combat zone.
 - (C) Operation at max continuous power on entire combat zone
 - (D) Ability to make continuous climb from take-off to 40,000 ft.

The above plot is provided to supplement typical missions III & IV presented and defined on foregoing pages. Distance and average speed at 40,000 ft in the combat zone are plotted to indicate total mission radius within

the limitations listed. Fuel is off-loaded, if necessary, to assure a 300 ft per min rate of climb with normal power on all engines at 40,000 ft when entering the combat zone, otherwise loading is same as listed for mission III.

SUPPLEMENTAL
~~RESTRICTED~~
(Security Information)