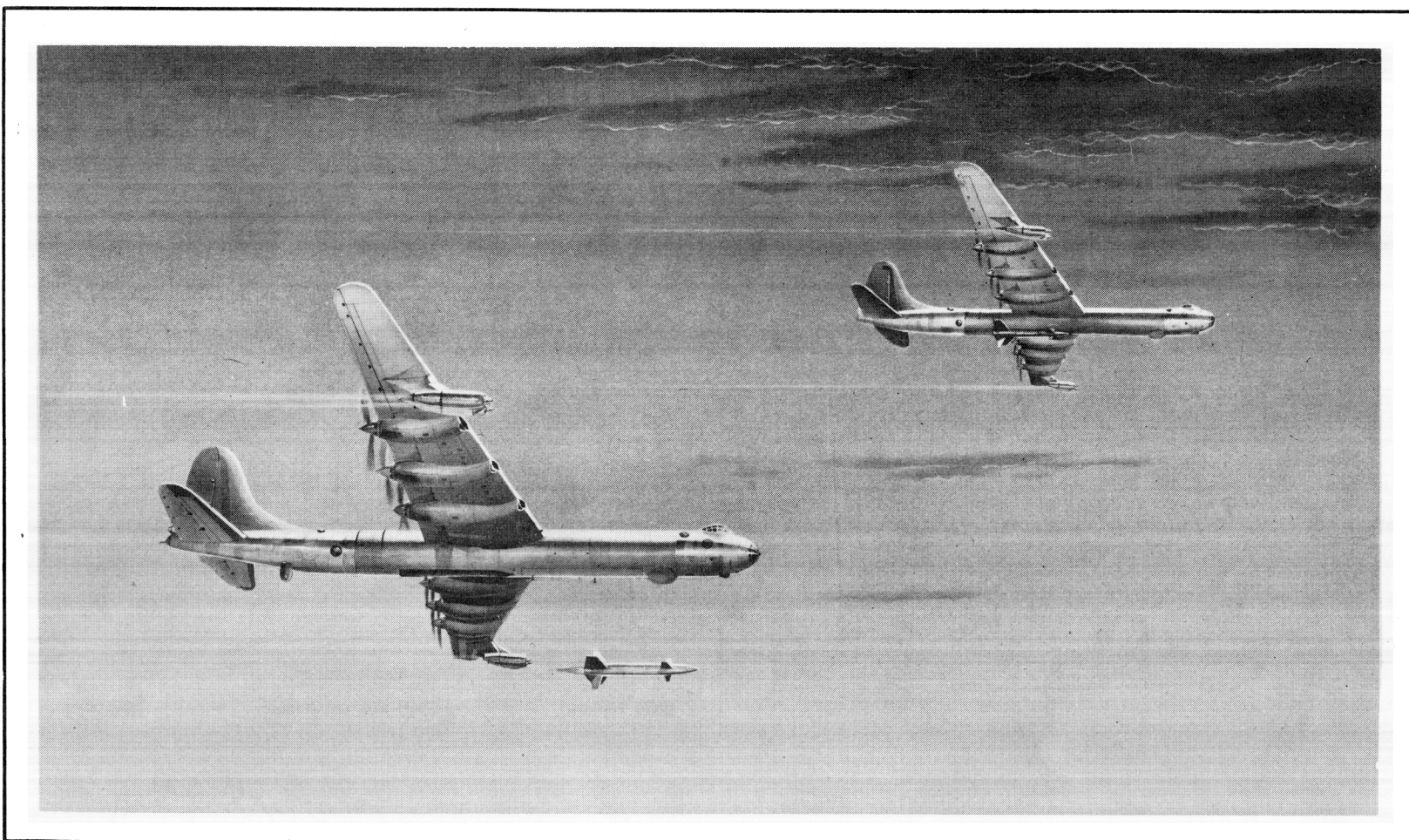


A-1
(W) B-36H/char

~~SECRET~~

SERVICE



Standard Aircraft Characteristics

BY AUTHORITY OF
THE SECRETARY
OF THE AIR FORCE

DB-36H

Consolidated-Vultee

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

20 APR 54

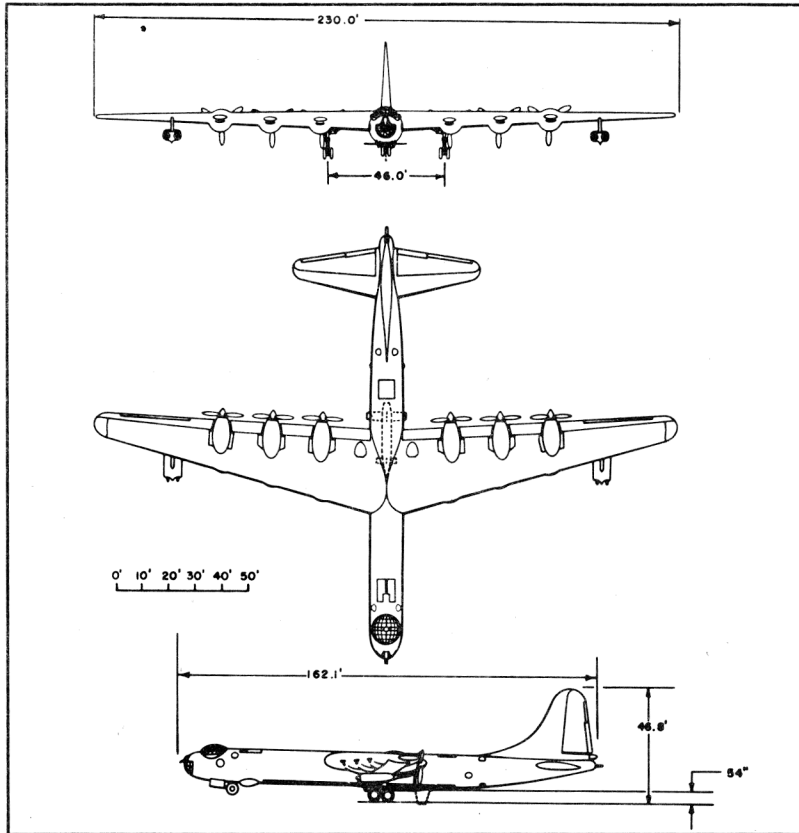
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DB-36H

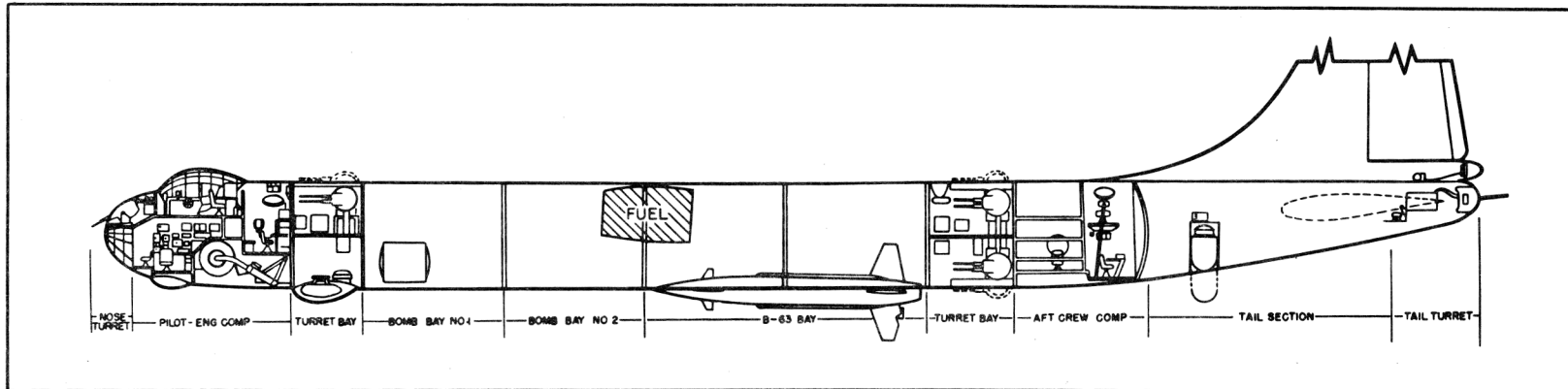
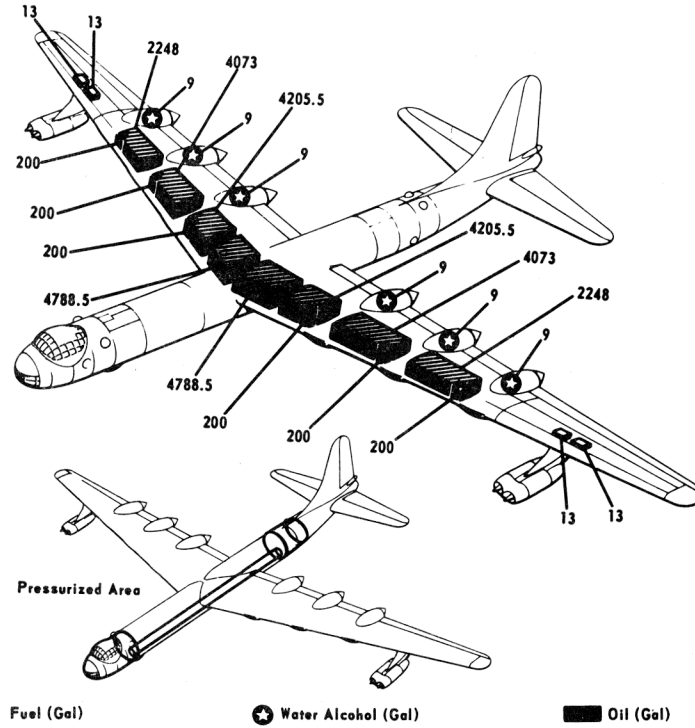
Classification cancelled
or changed to *Unclassified*
AUTH: AFSC AFPC Sec. Class. Guide 1 Jan 64
By A. R. Donnellon *1 Sept 64*
Signature and Grade *DJH/1967*

3rd Ed addn #12

53WC12001



Wing Area 4772 sq ft Wing Section (root): NACA 63,4-422A
 Aspect Ratio 11.08 (tip) NACA 63,4-517A
 M. A. C. 280.7 in. a = 1.0 (mod.)



Loading and Performance - Typical Mission

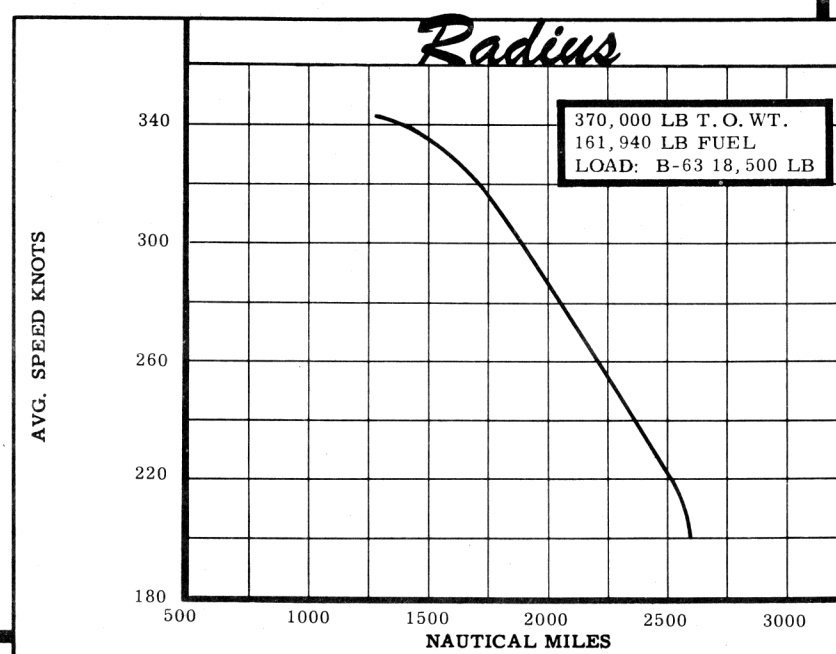
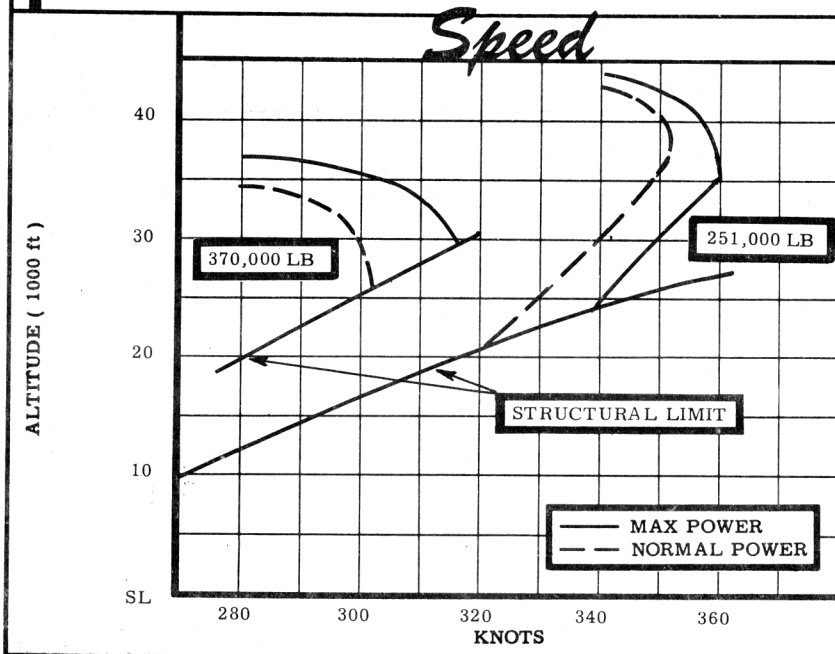
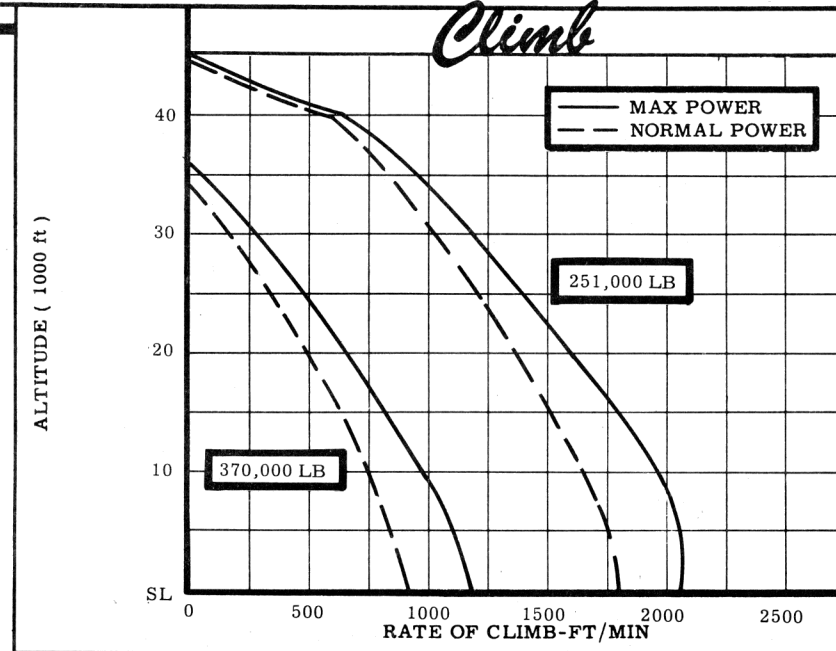
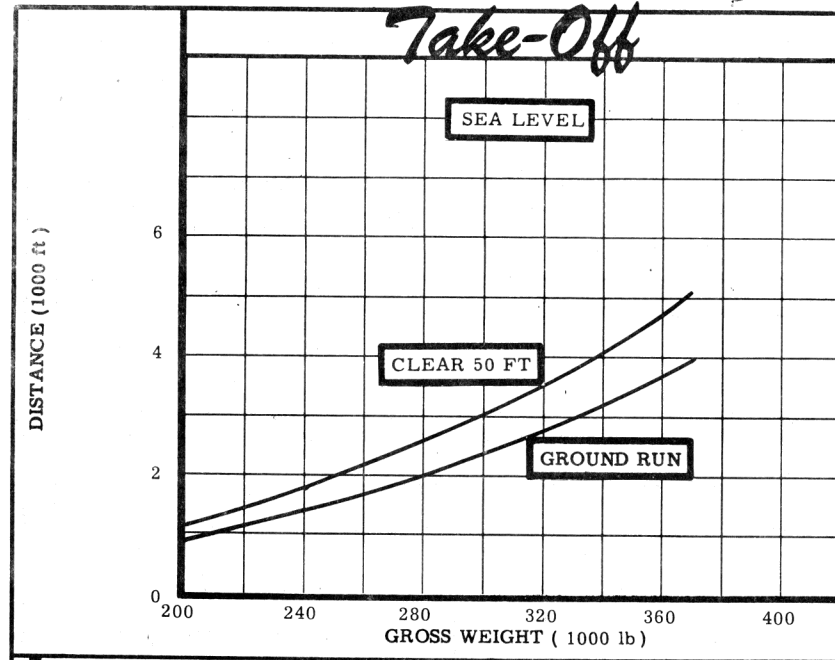
C O N D I T I O N S		BASIC MISSION	HIGH ALTITUDE	HIGH SPEED	BASIC STRIPPED DB-36H	FERRY RANGE DB-36H ONLY	BASIC MISSION	HIGH SPEED
TAKE-OFF WEIGHT	(lb)	370,000	II 370,000	III 370,000	IV 370,000	V 370,000	VI 357,500	VII 357,500
Fuel at 6.0 lb/gal (grade 115/145)	(lb)	161,940	161,940	161,940	180,680	181,860	149,445	149,445
Payload (B-63)	(lb) ⑤	18,500	18,500	18,500	18,500	None	18,500	18,500
Payload (Chaff)	(lb)	1408	1408	1408	None	None	1408	1408
Wing loading	(lb/sq ft)	77.5	77.5	77.5	77.5	77.5	74.9	74.9
Stall speed (power off)	(kn)	107	107	107	107	107	105	105
Take-off ground run at SL	(ft) ①	3990	3990	3990	3990	3990	3630	3630
Take-off to clear 50 ft	(ft) ①	5110	5110	5110	5110	5110	4640	4640
Rate of climb at SL	(fpm) ③	910	910	910	930	910	965	965
Rate of climb at SL (one eng. out)	(fpm) ②	920	920	920	940	920	985	985
Time: SL to 10,000 ft	(min) ③	12.5	12.5	12.5	12.5	12.5	11.5	11.5
Time: SL to 20,000 ft	(min) ③	27	27	27	26	27	25	25
Service ceiling (100 fpm)	(ft) ③	32,550	32,550	32,550	33,550	32,800	34,300	34,300
Service ceiling (one eng. out)	(ft) ②	30,150	30,150	30,150	30,750	30,250	31,500	31,500
COMBAT RANGE (Director only)	(n. mi) ④	—	—	—	—	6640	—	—
COMBAT RADIUS (Director & Missile)	(n. mi) ④⑥	2600	2355	1280	3255	—	2450	1220
Director average speed	(kn)	199.5	221.0	342.5	201.0	190.0	203.0	347.0
Director initial cruising altitude	(ft)	5000	25,000	30,000	5000	5000	5000	31,500
Launch speed	(kn) ②	346	348	340	350	—	347	342
Launch altitude	(ft)	39,900	40,300	38,700	41,500	—	40,200	39,200
Missile maximum altitude	(ft)	60,000	60,000	60,000	60,000	—	60,000	60,000
Missile maximum speed	(kn/M)	1380/2.4	1380/2.4	1380/2.4	1380/2.4	—	1380/2.4	1380/2.4
Missile range	(n. mi)	100	100	100	100	—	100	100
Missile endurance	(min)	7	7	7	7	—	7	7
Director final cruise altitude	(ft)	28,000	25,000	40,000	31,800	27,900	28,200	40,000
Director total mission time	(hr)	24.7	20.1	7.3	31.0	35.0	22.9	6.8
COMBAT WEIGHT (Director only)	(lb)	251,000	245,200	257,600	241,300	198,623	246,900	253,300
Combat altitude	(ft)	39,900	40,300	38,700	41,500	27,900	40,200	39,200
Combat speed	(kn) ②	357	358	356	360	353	358	357
Combat climb	(fpm) ②	600	610	650	590	1960	610	640
Combat ceiling (500 fpm)	(ft) ②	40,800	41,400	40,350	42,350	45,150	41,100	40,700
Service ceiling (100 fpm)	(ft) ③	44,200	44,700	43,700	45,700	48,700	44,550	44,050
Service ceiling (one eng. out)	(ft) ③	41,600	41,800	41,300	43,200	46,000	41,750	41,500
Max rate of climb at SL	(fpm) ②	2065	2155	1995	2265	2755	2125	2050
Max speed at optimum altitude	(kn/ft) ②	360/36,500	362/37,000	358/36,400	366/37,500	372/39,000	362/36,800	359/36,500
Basic speed at 25,000 ft	(kn) ②	341	342	340	344	347	342	341
LANDING WEIGHT	(lb)	197,553	197,553	197,553	181,145	198,623	196,930	196,930
Ground roll at SL	(ft)	1920	1920	1920	1770	1930	1910	1910
Ground roll (auxiliary brake)	(ft) ⑦	1680	1680	1680	1550	1690	1670	1670
Total from 50 ft	(ft)	3360	3360	3360	3210	3370	3350	3350
Total from 50 ft (auxiliary brake)	(ft) ⑦	3140	3140	3140	3000	3150	3130	3130

NOTES

- ① T. O. power
- ② Max power
- ③ Normal power
- ④ Detailed descriptions of Radius and Range missions given on page 6.

- ⑤ 3000 lb warhead
- ⑥ Director radius is 100 n. mi. less than combat radius
- ⑦ Props reversed.

Performance Basis:
 (a) Data source: Calculations based on flight test of B-36F with configuration adjustments.
 (b) Performance is based on powers shown on page 6.



NOTES

FORMULA: RADIUS MISSIONS I, IV & VI

Warm-up, take-off and climb on course to 5000 feet at normal power, cruise out at long range speeds to point of cruise climb operation. Climb so as to arrive at cruise ceiling 400 nautical miles before release of B-63. Cruise at long range speeds at launch altitude, using best engine (jet-reciprocating) combination; 15 minutes from target, conduct 10 engine normal power run-in, launch B-63, conduct 2 minutes evasive action and 8 minutes escape at normal power. After leaving launch area, cruise back at long range speeds using best engine combination until 400 nautical miles from point of launch; descend to optimum cruise altitude and cruise climb back to base. Range free allowances include 10 minutes normal power fuel consumption for reciprocating engines and 5 minutes normal power fuel consumption for jet engines for starting and take-off, 2 minutes normal power fuel consumption at combat altitude for evasive action, 30 minutes of fuel consumption at sea level for long range speeds (reciprocating engines only) plus 5% of initial fuel load for landing and endurance reserve.

FORMULA: RADIUS MISSION II

Warm-up, take-off and climb on course to 25,000 feet at normal power, cruise out at long range speeds at this altitude to point of climb so as to arrive at cruise ceiling 400 nautical miles before release of B-63. Conduct mission within 400 nautical mile zone the same as for Radius Mission I. Descend to 25,000 feet and cruise back to base. Range free allowances are the same as for Radius Mission I.

FORMULA: RADIUS MISSIONS III & VII

Entire mission is flown at normal power, Warm-up, take-off and climb on course to optimum altitude for high speed, cruise at optimum altitude for high speed to point where climb is made so as to arrive at cruise ceiling 400 nautical miles before release of B-63. Cruise at launch altitude to point of release, launch B-63, conduct 2 minutes of evasive action and cruise back 400 nautical miles. Descend to optimum altitude for high speed and return to base. If, after launching B-63, the flight path is above combat altitude, climb is begun after 2 minutes of evasive action. Range free allowances are the same as for Radius Mission I.

FORMULA: RANGE MISSION V

Warm-up, take-off and climb on course to 5000 feet at normal power, cruise climb at long range speeds until all usable fuel is consumed. Range free allowances are the same as for Radius Mission I except for omission of 2 minutes evasive action.

GENERAL DATA

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

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

(6) R-4360-53	and	(4) J47-19
BHP - RPM - ALT - MIN		S. L. STATIC LB - RPM - MIN
T. O. *3800 - 2800 - SL - 5		T. O. 5010 - 7950 - 5
Max: 3500 - 2800 - Up to - 30 35,000**		Max: 5010 - 7950 - 30
Nor: 2800 - 2600 - Up to - Cont 39,000**		Nor: 4700 - 7630 - Cont
*Wet		
** Turbo supercharger limitation		

(c) Take-off at 370,000 lb gross weight is authorized only for airplanes on which structural modifications to the main landing gear have been accomplished in accordance with ECP 1890B and ECP 1890L.

PERFORMANCE REFERENCE:

Consolidated Vultee Aircraft Corp. Report FZA-36-300, dated 1 Dec 1953.

REVISION BASIS: Initial Issue.

DEC 53

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