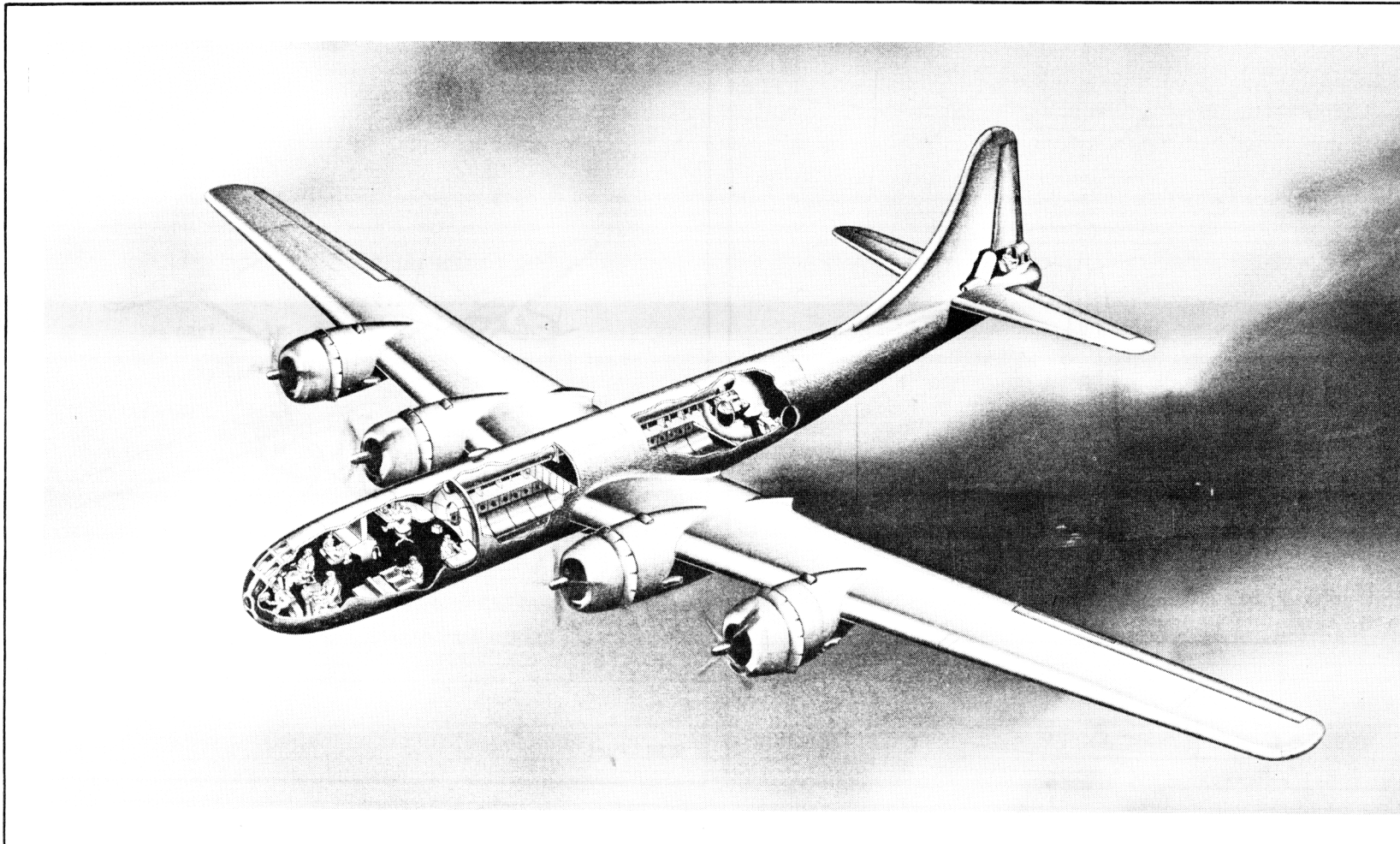


~~RESTRICTED~~

11/1
B-29B/char SERVICE



Standard Aircraft Characteristics

BY AUTHORITY OF
COMMANDING GENERAL
AIR MATERIEL COMMAND
U. S. AIR FORCE

B-29B
SUPERFORTRESS
Boeing

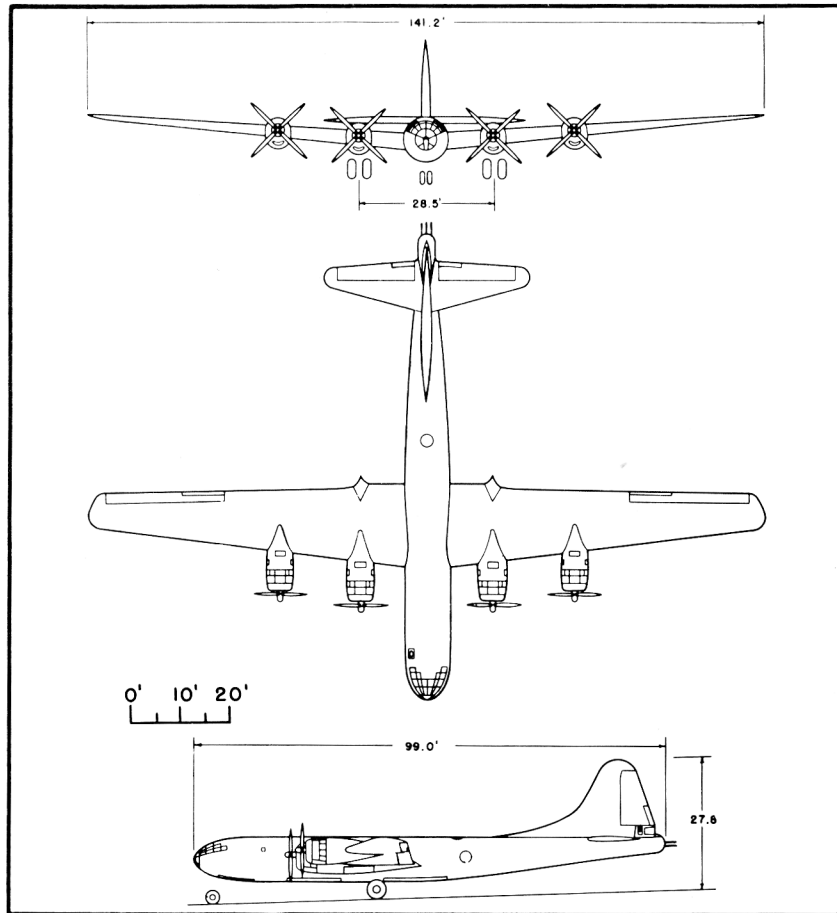
FOUR R-3350-57,-57A

WRIGHT

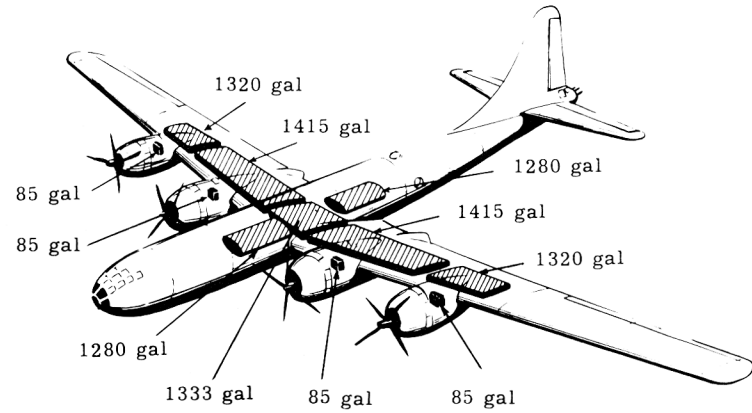
19 APRIL 1950

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B-29B



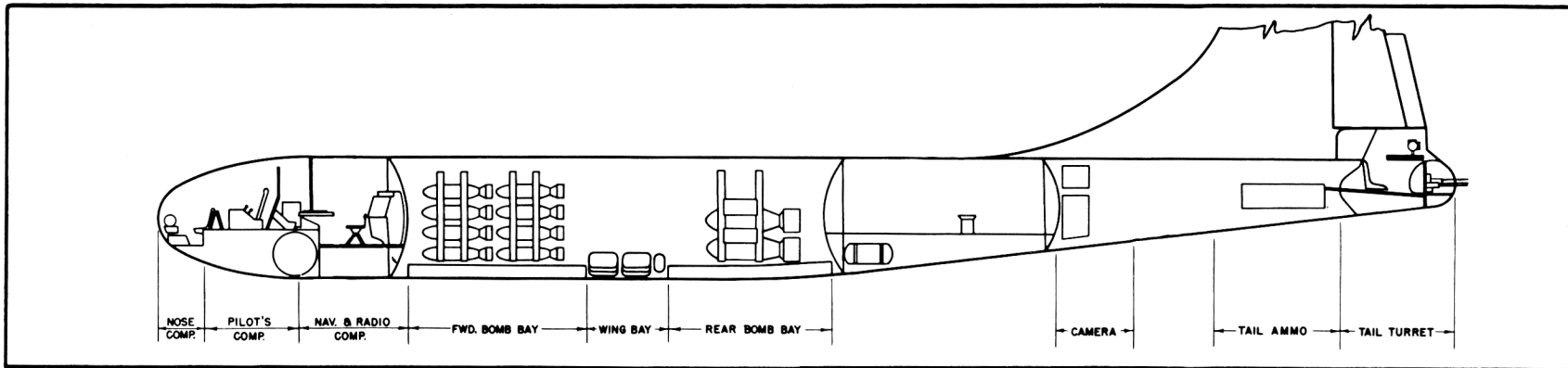
Wing Area 1720 sq ft Wing Section Boeing 117
 Aspect Ratio 11.5 M.A.C. 154.41"



Pressurized Area

Fuel

Oil



POWER PLANT

No. & Model. *(4) R-3350-57 or -57A
 Mfr Wright
 Engine Spec No. 95-28266-5
 Sup (Dual Turbo) B-11 or B-31
 Red. Gear Ratio 0.35
 Prop. Mfr Hamilton Std
 Blade Design No. 6521A-6
 Prop. Type Hydromatic
 No. Blades 4
 Prop. Dia. 16'-7"

*Modernized

ENGINE RATINGS

BHP - RPM - ALT - MIN

T. O: 2200 - 2800 - S. L.

Mil: 2200 - 2600 - Turbo - 30

Nor: 2000 - 2400 - Turbo - Cont.

DIMENSIONS

Wing
 Span 141.2'
 Incidence 4°
 Dihedral 4°29'23"
 Sweepback (LE) 7°1'26"
 Length 99.0'
 Height 27.8'
 Tread 28.5'
 Prop. Grd Clearance 1.3'

Mission and Description

The primary mission of the B-29B is the destruction of enemy materiel and installations by aerial bombardment. It is a stripped version of the B-29 airplane incorporating the following:

A transfer type fuel system; a crew of ten (10), pilot, co-pilot, navigator, engineer, bombardier, radio operator, radar operator, left scanner, right scanner and tail gunner; radar operator's station in forward compartment; all turrets and accessories removed except tail turret housing three (3) .50 caliber guns and gunner; smooth closures for all turret and sight openings installed; incorporation of radar systems for navigation, bombing through overcast and night fighter protection in the tail.

Some B-29B's were B-29's modified by AMC having only two tail guns, the majority were produced at Atlanta by Bell.

Development

First acceptance from Bell: January 1945
 Production completed: September 1945

WEIGHTS

Loading	Lb	L. F
Empty	68,821(A)	
Basic	70,682(A)	
Design	120,000	2.67
Combat	*96,126	3.40
Max T.O.	† 137,014	2.57
Max Land ...	‡ 135,000	2.35

(A) Actual

* For Basic Mission

† Limited by space

‡ Limited by strength

F U E L

Location	No. Tanks	Gal
Wg, outbd*	2	2640
Wg, inbd*	2	2830
Wg, ctr*	1	1333
Bomb bay*	2	2560
*s. s.	Total	9363

Grade 100/130

OIL

Cap. (gal) 340

Grade S-1120; W-1100

ELECTRONICS

VHF Command AN/ARC-3
 Interphone AN/AIC-2A
 Liaison AN/ARC-8
 Radio Compass AN/ARN-7
 Homing Adapter AN/ARR-1
 Marker Beacon RC-193A
 Loran AN/APN-9
 Localizer RC-103
 Glide Path AN/ARN-5A
 Radio Altimeter SCR-718C
 IFF SCR-695
 Interrogator SCR-729
 Radar AN/APQ-23A
 Raven RCM
 Gun Laying Radar ... AN/APG-15B
 Bomb. - Navigation Radar AN/APQ-7

B O M B S

No.	Size	Type
4	4000	G. P.
8	2000	G. P.
12	1600	A. P.
12	1000	G. P.
40	500	G. P.
Max Bomb Load 20,000 lb		

G U N S

No.	Cal	Rds ea	Location
2	.50	500	Tail, tur
1	.50	380	Tail, tur

Loading and Performance - Typical Mission

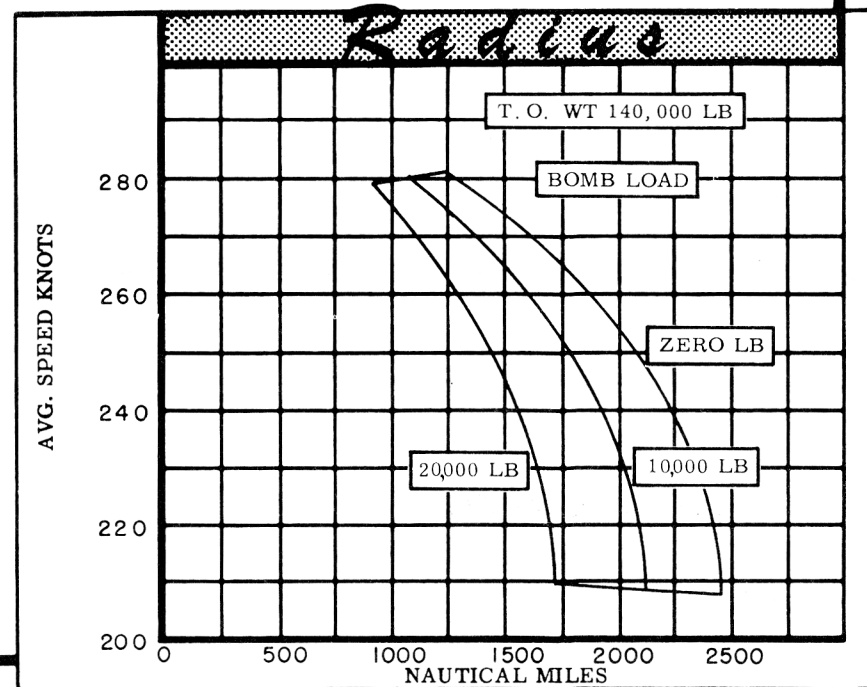
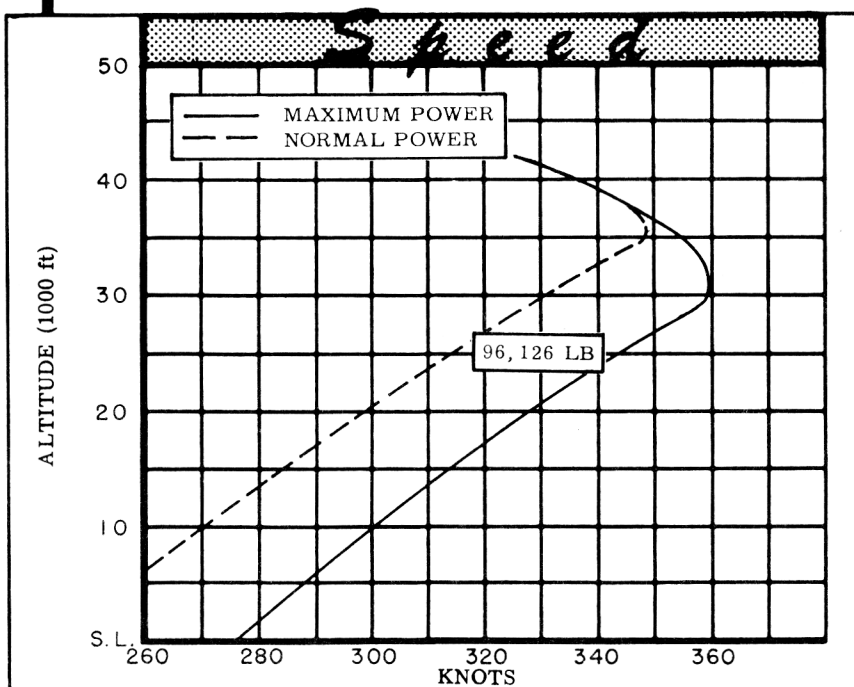
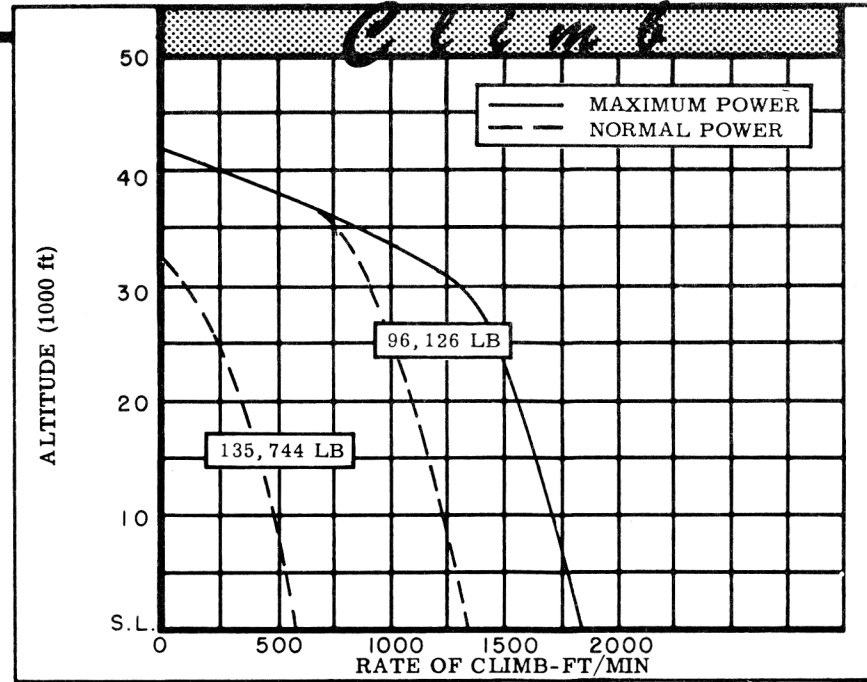
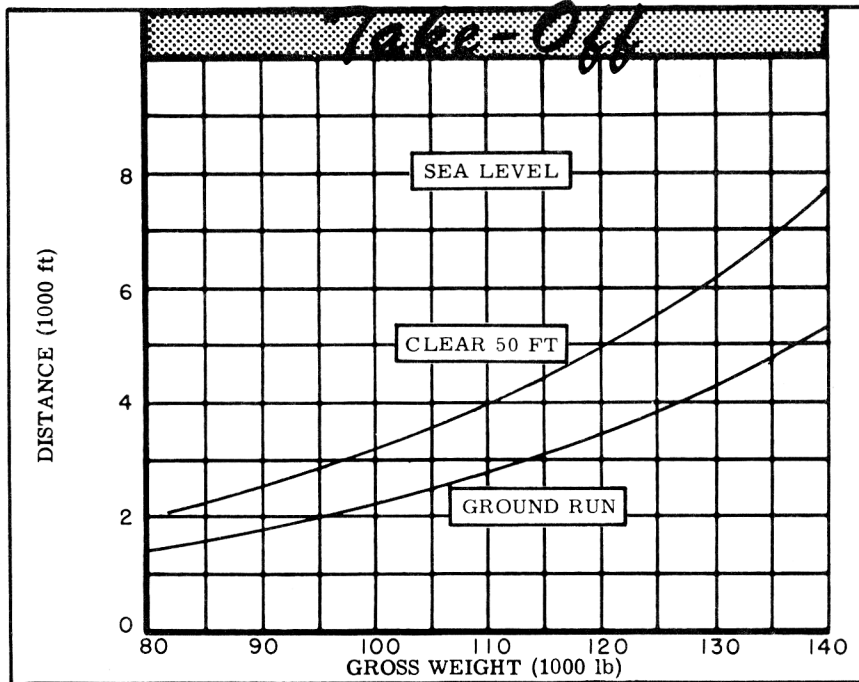
C O N D I T I O N S	BASIC		MAXIMUM		BOMBS		FERRY	
	MISSION		BOMBS		HIGH	ALT.	RANGE	
		I	II	III	IV			
TAKE-OFF WEIGHT	(lb)	135,744	136,464	135,744	135,024			
Fuel at 6.0 lb/gal	(lb)	48,498	40,818	48,498	56,178			
Military load (Bombs)	(lb)	10,000	20,000	10,000	None			
Wing loading	(lb/sq ft)	79.0	79.3	79.0	78.5			
Stall speed (power off)	(kn)	102	102	102	102			
Take-off ground run at SL	④ (ft)	4800	4860	4800	4725			
Take-off to clear 50 ft	④ (ft)	7125	7225	7125	7025			
Rate-of-climb at SL	③ (fpm)	618	602	618	625			
Time: SL to 10,000 ft	③ (min)	18.5	18.8	18.5	18.2			
Time: SL to 20,000 ft	③ (min)	43.5	45.0	43.5	43.0			
Service ceiling (100 fpm)	③ (ft)	30,250	29,900	30,250	30,600			
Service ceiling (one engine out)	② (ft)	26,200	25,800	26,200	26,550			
COMBAT RANGE	⑤ (n. mi)	3926	3076	3505	4939			
Avg cruising speed	(kn)	191	195	267	185			
Cruising altitude	(ft)	10,000	10,000	25,000	10,000			
Total mission time	(hr)	20.73	15.94	13.27	26.83			
COMBAT RADIUS	⑤ (n. mi)	2122	1725	1959	—			
Avg cruising speed	(kn)	208	210	235	—			
Cruising altitudes	(ft)	10,000 & 25,000	10,000 & 25,000	25,000 & 30,000	—			
Total mission time	(hr)	20.66	16.69	16.86	—			
COMBAT WEIGHT	⑥ (lb)	96,126	92,353	95,320	81,263			
Combat altitude	(ft)	25,000	25,000	30,000	10,000			
Combat speed	② (kn)	344	345	360	308			
Combat climb	② (fpm)	1480	1610	1375	2210			
Combat ceiling (500 fpm)	② (ft)	38,000	38,750	38,200	41,450			
Service ceiling (100 fpm)	③ (ft)	41,400	42,300	41,650	44,950			
Service ceiling (one engine out)	③ (ft)	37,200	38,100	37,400	40,900			
Max rate-of-climb at SL	② (fpm)	1820	1925	1840	2330			
Max speed at 30,000 ft	② (kn)	360	361	360	368			
LANDING WEIGHT	(lb)	78,071	77,687	78,071	81,263			
Ground roll at SL	④ (ft)	2100	2090	2100	2180			
Total from 50 ft	④ (ft)	2800	2790	2800	2900			

NOTES

① Take-off power
 ② Max power
 ③ Normal power
 ④ Take-off and landing distances are obtainable at sea level using normal technique. For airport planning, distances should be increased by appropriate factors to determine runway requirements.
 ⑤ Detailed descriptions of the RADIUS & RANGE missions are given on page 6.
 ⑥ For Radius Mission if Radius if shown.

CONDITIONS:

(a) Performance Basis: Flight test
 (b) In computing Radius and Range, specific fuel consumptions have been increased 5% to allow for variations of fuel flow in service aircraft.
 (c) Performance is based on powers shown on page 6.



N O T E SFORMULA: RADIUS MISSION I & II

Warm-up, take-off, climb on course to 10,000 ft at normal power, cruise at long range speeds to point where climb is made to arrive at 25,000 ft 30 minutes prior to bomb drop, cruise at long range speeds for 15 minutes, followed by 15 minutes normal power run into target, drop bombs and conduct 5 minutes normal power evasive action (no distance credit) and 10 minutes run out from target area at normal power, cruise back to base at long range speeds at 25,000 ft. Range free allowances include 10 minutes normal power at sea level for warm-up and take-off, 5 minutes normal power evasive action plus 5% of initial fuel for reserve.

FORMULA: RADIUS MISSION III

Same as I and II except initial climb is to 25,000 ft and bombs are dropped at 30,000 ft.

FORMULA: RANGE MISSION I & II

Warm-up, take-off, climb on course to 10,000 ft at normal power, cruise at long range speeds to point where climb is made to arrive at 25,000 ft 30 minutes prior to bomb drop, cruise at long range speeds for 30 minutes to point where 90% of initial fuel has been used, drop bombs. Range free allowances include 10 minutes normal power at sea level for warm-up and take-off plus 10% of initial fuel for evasive action and landing reserve.

FORMULA: RANGE MISSION III

Same as Range Mission I & II except initial climb is to 25,000 ft and

bombs are dropped at 35,000 ft.

FORMULA: RANGE MISSION IV

Warm-up, take-off, climb on course to 10,000 ft at normal power, cruise at long range speeds at 10,000 feet. Range free allowances include 10 minutes normal power warm-up and take-off, plus 10% initial fuel for landing reserve.

GENERAL DATA:

(a) For detailed planning refer to Tech Order AN 01-20EJA-1.

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

R-3350 -57 or -57A			
	BHP	RPM	CRIT ALT*
T. O:	2200	2800	
Max:	**2500	2800	31,400
Nor:	2000	2400	35,600
*With Turbo			
**As established by T. O. AN 01-20EJ-92 dated 15 June 1944.			

(c) Bomb bay tanks are dropped when empty for all missions shown on page 4.