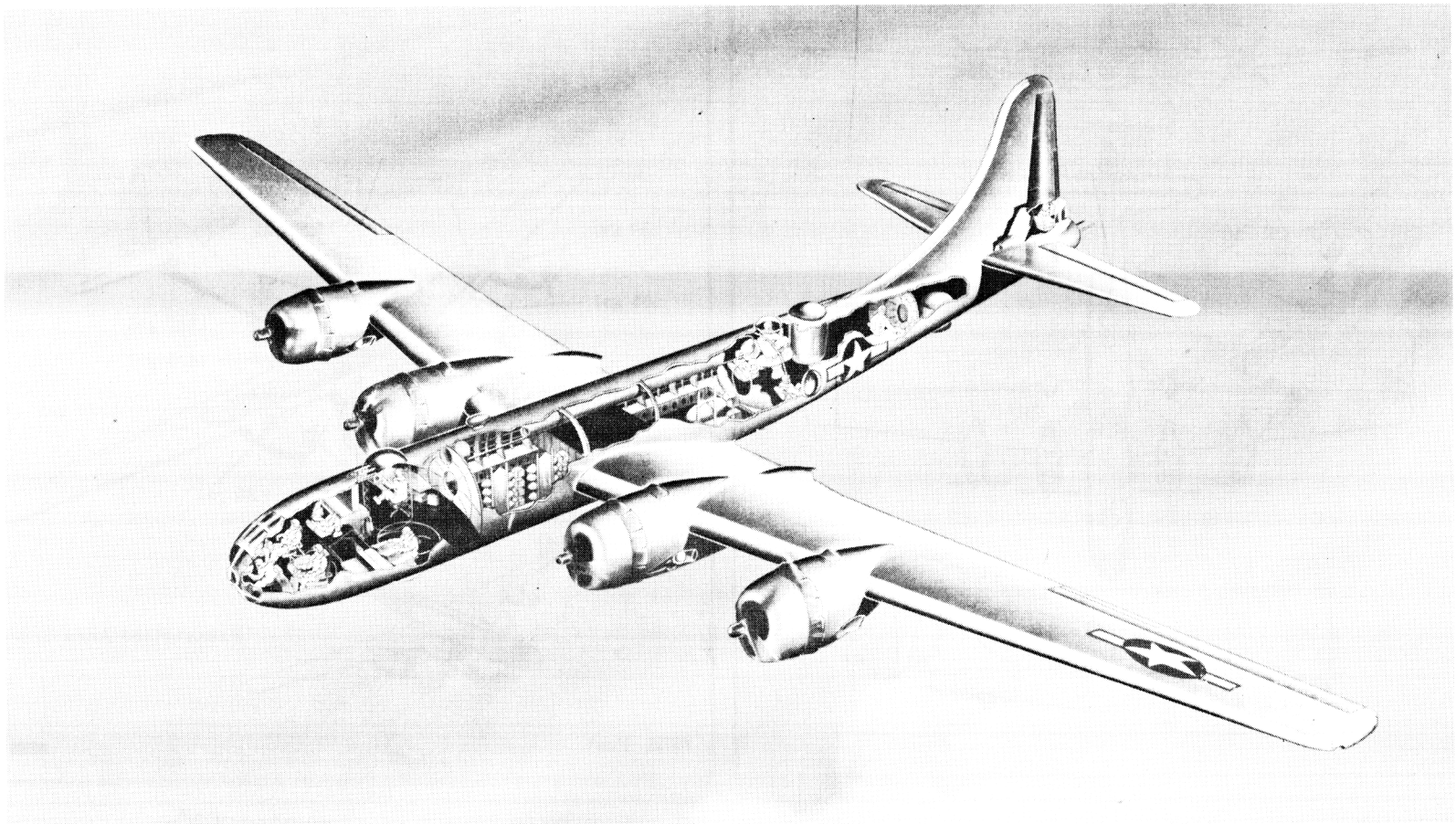


Standard Aircraft Characteristics

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

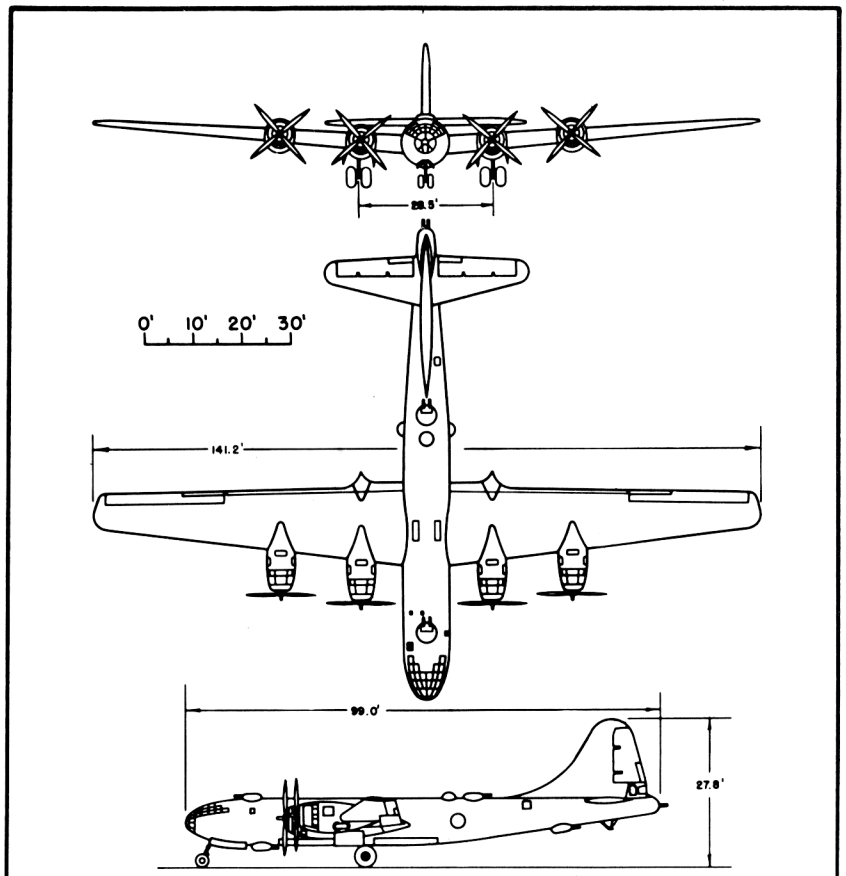
B-29A

SUPERFORTRESS

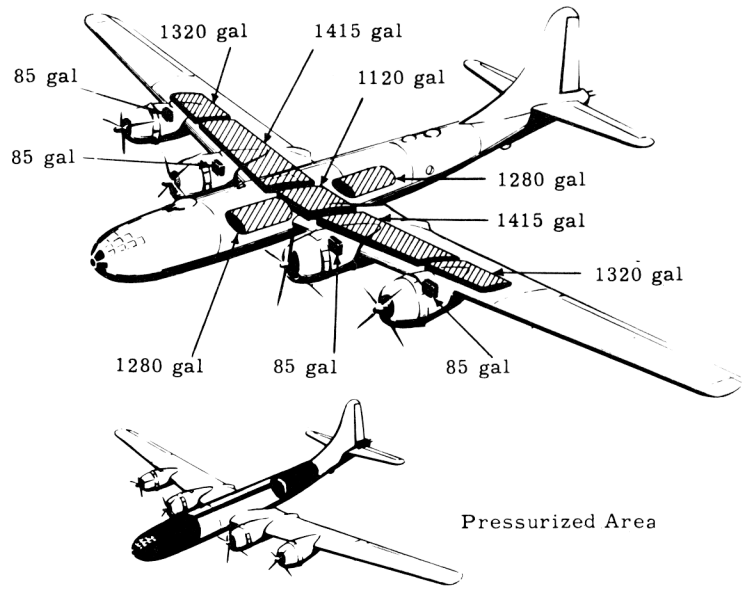
Boeing

FOUR R-3350-57or-57A

WRIGHT



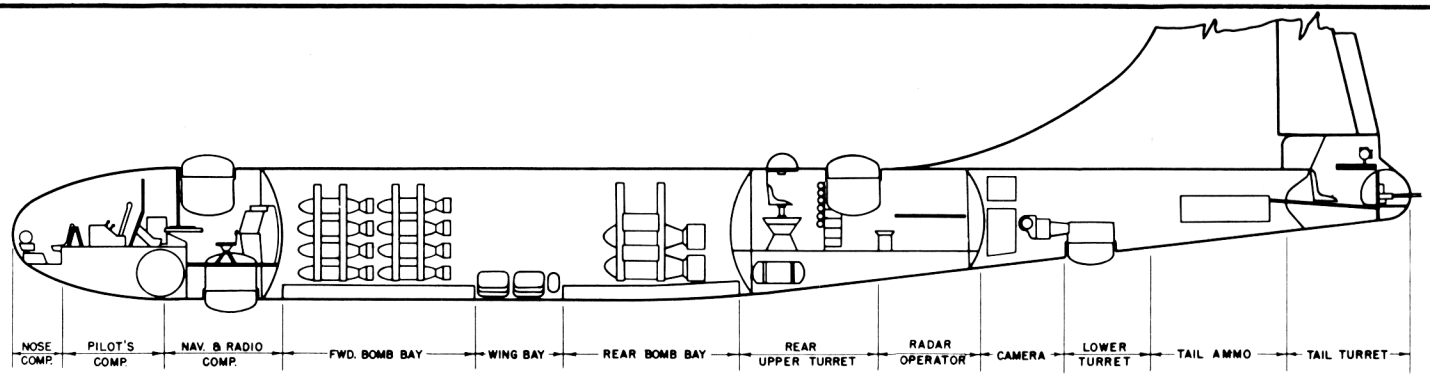
Wing Area ..... 1720 sq. ft
Aspect Ratio 11.5
Wing Section ..... Boeing 117
M. A. C. ..... 154.41"



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	-	5
Mil:	2200	2600	-	30
Nor:	2000	2400	-	Cont.

Mission and Description

The primary mission of the B-29A is the destruction of enemy materiel and installations by aerial bombardment.

It is provided with pressurized crew compartments and adequate heating and oxygen facilities on long range missions. The crew consists of pilot, co-pilot, bombardier, navigator, flight engineer, radio operator, four gunners and a radar operator.

Direct current electrical power is supplied by six (6) engine driven generators and one (1) auxiliary power plant.

Early models are equipped with transfer type fuel systems while later models use the manifold type system.

Armament provided consists of five (5) turrets controlled by a central fire control system.

In later aircraft a formation stick was added to the C-1 auto-pilot to facilitate formation flying.

The B-29A differs from the B-29 in the design of the wing center section resulting in a loss of 213 gallons of fuel in the center wing tank.

Development

First acceptance: . . . . . January 1944
Production completed: . . . . . June 1946

WEIGHTS

Loading	Lb	L. F.
Empty	72,206(A)	
Basic	74,760(A)	
Design	120,000	2.67
Combat	*101,472	3.10
Max T. O.	†140,000	2.28
Max Land	‡135,000	2.35

(A) Actual
*For Basic Mission
† Limited by performance
‡ Limited by strength

FUEL

Location	No. Tanks	Gal
Wg, outbd*	2	2640
Wg, inbd*	2	2830
Wg, ctr*	1	1120
Bomb bay*	2	2560
*s. s.	Total	9150

Grade 100/130

OIL

Cap. (gal) 340

Grade S-1120; W-1100

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'

BOMBS

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

GUNS

No.	Cal	Rds ea	Location
4	.50	500	Fus, upr, fwd
2	.50	500	Fus, upr, aft
2	.50	500	Fus, lwr, fwd
2	.50	500	Fus, lwr, aft
2	.50	500	Tail, tur

ELECTRONICS

VHF Command AN/ARC-3
Interphone AN/AIC-2A
Liaison AN/ARC-8
Radio Compass AN/ARN-7
Marker Beacon RC-193A
Homing Adapter AN/ARR-1
Localizer RC-103
Glide Path AN/ARN-5A
Radio Altimeter SCR-718C
Interrogator SCR-729
Radar. . AN/APQ-7 or AN/APQ-23A
Loran ... AN/APN-9 or AN/APN-4
Raven ..... RCM
IFF SCR-695

Loading and Performance - Typical Mission

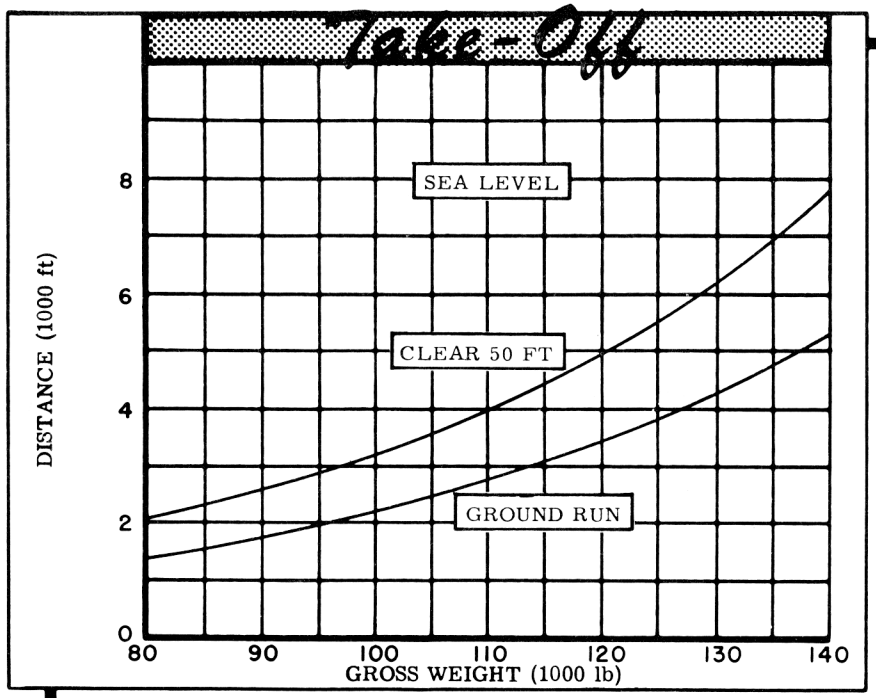
CONDITIONS			BASIC MISSION	MAX. BOMBS MISSION	HIGH ALT. MISSION	HIGH SPEED MISSION	FERRY RANGE
			I	II	III	IV	V
TAKE-OFF WEIGHT		(lb)	140,000	140,000	140,000	140,000	137,610
Fuel at 6.0 lb/gal		(lb)	46,490	38,690	46,490	46,490	54,900
Military load (Bombs)		(lb)	10,000	20,000	10,000	10,000	None
Wing loading		(lb/sq ft)	81.4	81.4	81.4	81.4	80.0
Stall speed (power off)		(kn)	103	103	103	103	102
Take-off ground run at SL	④	(ft)	5230	5230	5230	5230	4980
Take-off to clear 50 ft	④	(ft)	7825	7825	7825	7825	7410
Rate-of-climb at SL	③	(fpm)	500	500	500	500	530
Time: SL to 10,000 ft	③	(min)	23.5	23.5	23.5	23.5	21.8
Time: SL to 20,000 ft	③	(min)	61.5	61.5	61.5	61.5	56.5
Service ceiling (100 fpm)	③	(ft)	23,950	23,950	23,950	23,950	25,500
Service ceiling (one engine out)	②	(ft)	19,400	19,400	19,400	19,400	21,100
COMBAT RANGE	⑤	(n. mi)	3321	2583	3025	1838	4393
Avg cruising speed		(kn)	199	204	223	259	191
Cruising altitude		(ft)	10,000	10,000	20,000	10,000	10,000
Total mission time		(hr)	16.88	12.85	13.71	7.37	23.10
COMBAT RADIUS	⑤	(n. mi)	1800	1428	1563	1036	——
Avg cruising speed		(kn)	216	215	239	275	——
Cruising altitude (s)		(ft)	10,000 & 25,000	10,000 & 25,000	20,000 & 30,000	10,000 & 25,000	——
Total mission time		(hr)	16.90	13.41	13.33	7.78	——
COMBAT WEIGHT	⑥	(lb)	101,472	96,900	99,330	103,806	85,000
Combat altitude		(ft)	25,000	25,000	30,000	25,000	10,000
Combat speed	②	(kn)	331	332	347	330	293
Combat climb	②	(fpm)	1260	1395	1165	1195	2025
Combat ceiling (500 fpm)	②	(ft)	36,150	37,100	36,550	35,650	39,700
Service ceiling (100 fpm)	③	(ft)	39,550	40,500	40,000	39,050	43,100
Service ceiling (one engine out)	③	(ft)	34,550	36,000	35,300	32,750	39,050
Max rate-of-climb at SL	②	(fpm)	1620	1745	1675	1555	2140
Max speed at 30,000 ft	②	(kn)	347	348	347	346	353
LANDING WEIGHT		(lb)	84,236	83,245	84,236	84,236	85,000
Ground roll at SL	④	(ft)	2250	2225	2250	2250	2260
Total from 50 ft	④	(ft)	2980	2950	2980	2980	3000

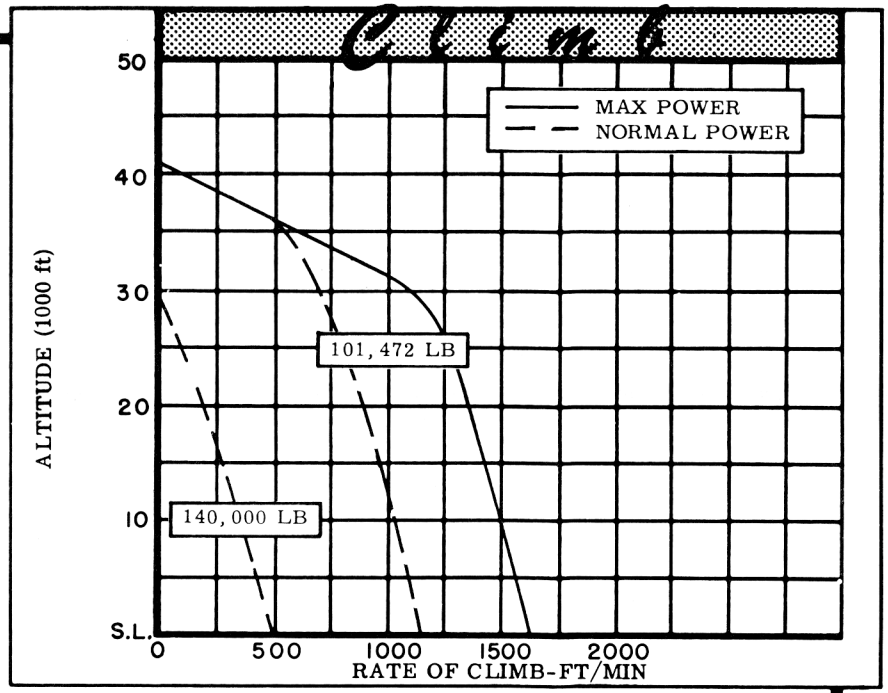
NOTES

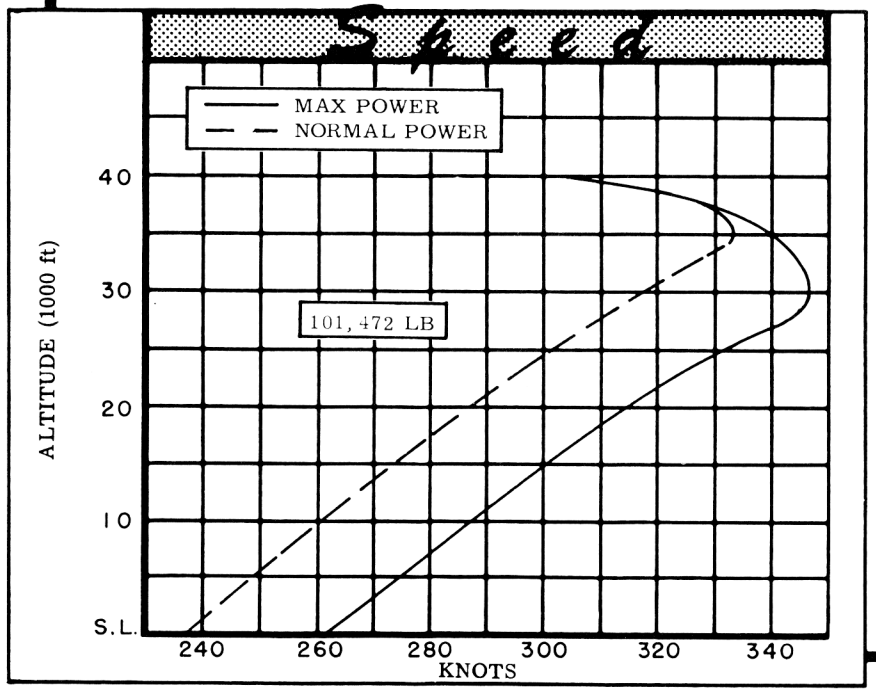
① Take-off power
② Max power
③ Normal power
④ Take-off and landing distances are obtainable at sea level using normal technique. For airport planning, distances should be increased by appropriate factors to determine runway requirements.
⑤ Detailed descriptions of the RADIUS & RANGE missions are given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

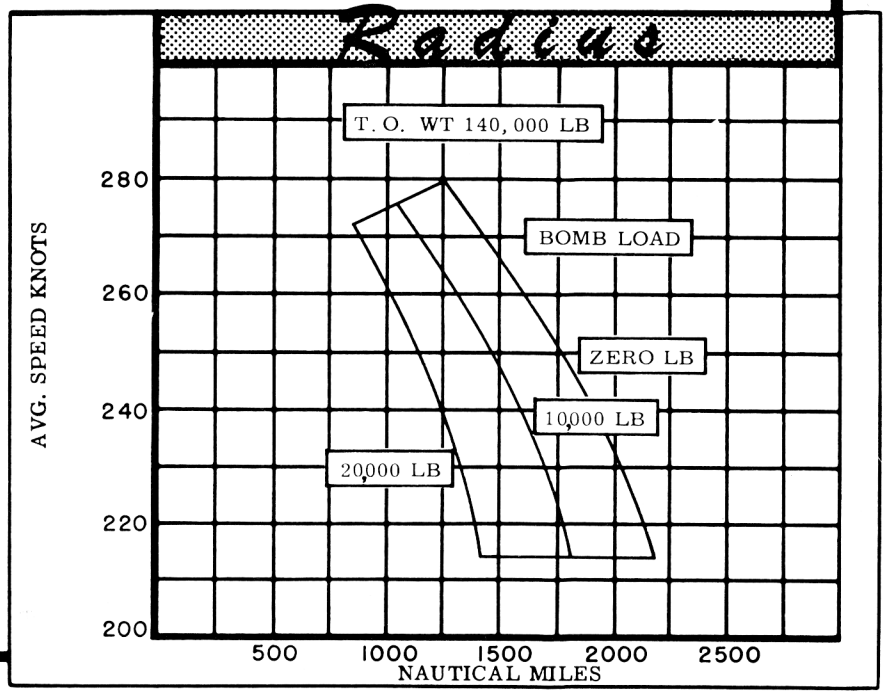
CONDITIONS:

(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.


Take-Off
DISTANCE (1000 ft)
0
2
4
6
8
SEA LEVEL
CLEAR 50 FT
GROUND RUN
80
90
100
110
120
130
140
GROSS WEIGHT (1000 lb)


Climb
ALTITUDE (1000 ft)
S.L.
10
20
30
40
50
MAX POWER
NORMAL POWER
101, 472 LB
140, 000 LB
0
500
1000
1500
2000
RATE OF CLIMB-FT/MIN


Speed
ALTITUDE (1000 ft)
S.L.
10
20
30
40
MAX POWER
NORMAL POWER
101, 472 LB
240
260
280
300
320
340
KNOTS


Radius
AVG. SPEED KNOTS
200
220
240
260
280
T. O. WT 140, 000 LB
BOMB LOAD
ZERO LB
10,000 LB
20,000 LB
500
1000
1500
2000
2500
NAUTICAL MILES

NOTES

FORMULA: RADIUS MISSIONS 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 Radius Mission I and II except initial climb is to 20,000 ft, and bombs are dropped at 30,000 ft.

FORMULA: RADIUS MISSION IV

Same as Radius Mission I and II except cruising is done at normal power.

FORMULA: RANGE MISSIONS 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 Missions I and II except initial climb is 20,000 ft and bombs are dropped at 30,000 ft.

FORMULA: RANGE MISSION IV

Same as Range Missions I and II except cruising is done at normal power.

FORMULA: RANGE MISSION V

Warm-up, take-off, climb on course to 10,000 ft at normal power, cruise at long range speeds to point where 90% of initial fuel is used. Range free allowances include 10 minutes normal power at sea level for warm-up and take-off plus 10% of 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 AN 01-20EJ-92 dated 15 June 1945.

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