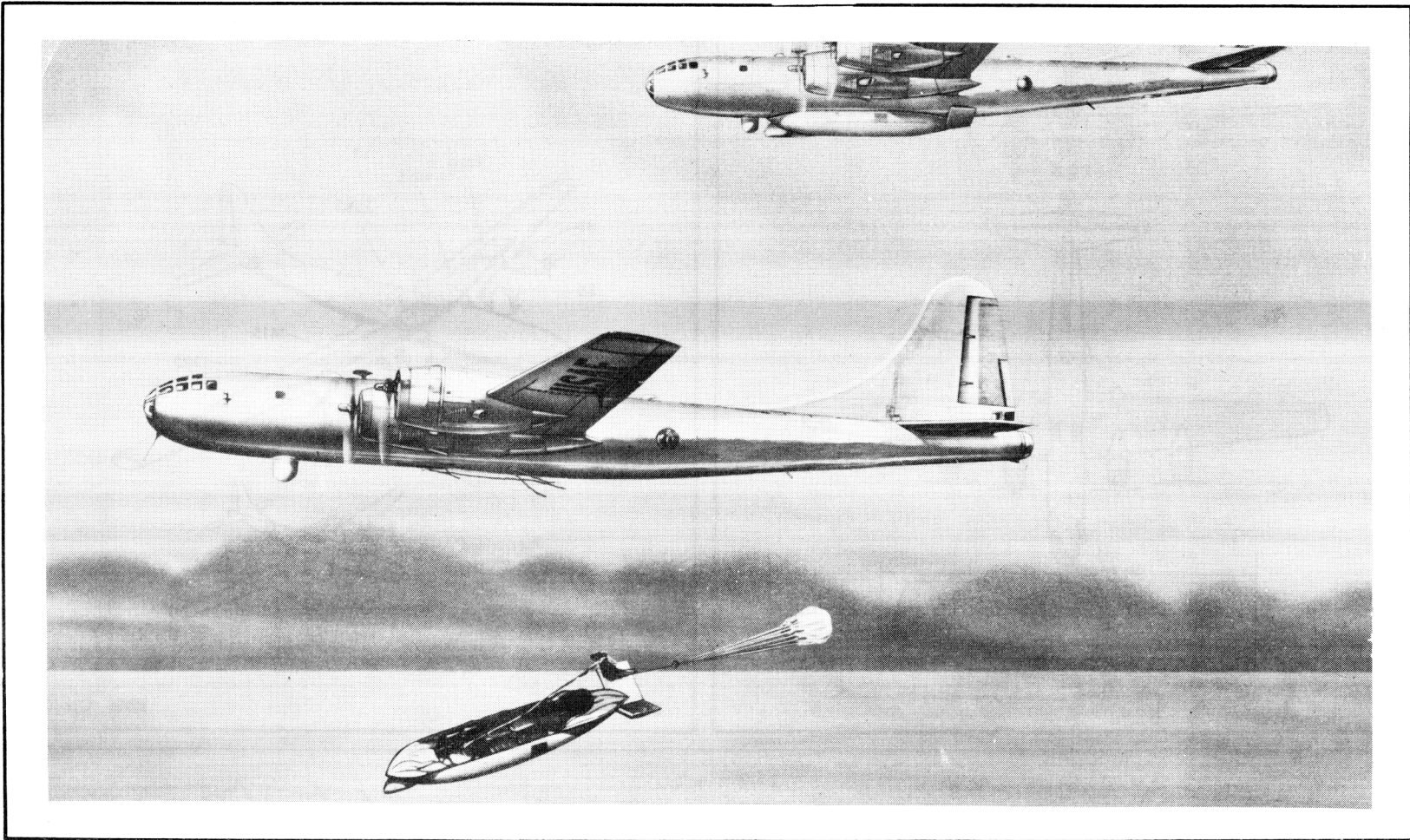


A1
(S)B-29/char



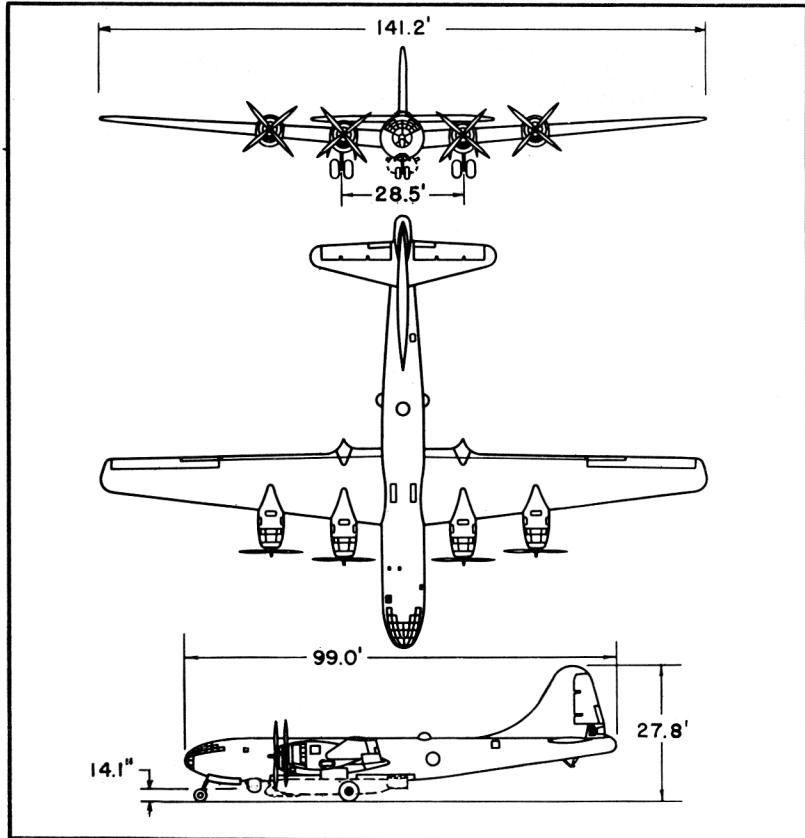
Standard Aircraft Characteristics

BY AUTHORITY OF
THE SECRETARY
OF THE AIR FORCE

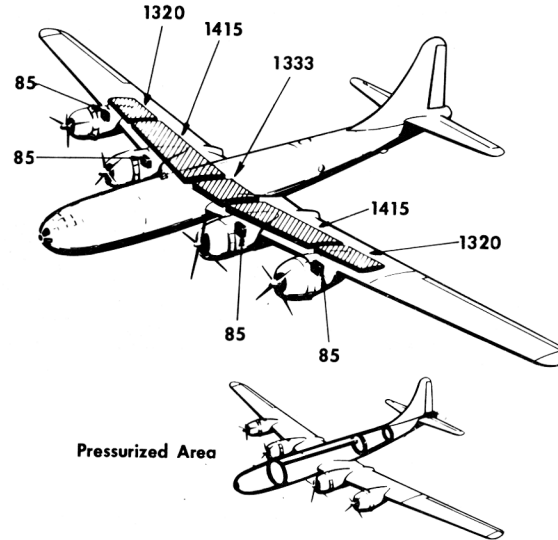
SB-29
SUPERFORTRESS
Boeing

FOUR R-3350-57, -57A or -83

WRIGHT

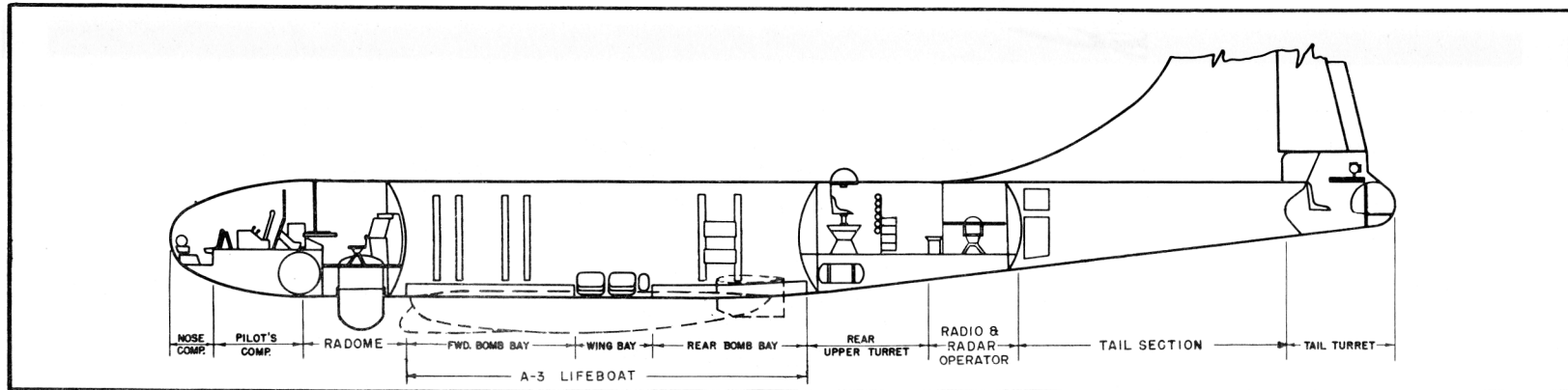


Wing Area 1720 sq ft Wing Section Boeing 117
 Aspect Ratio 11.5 M. A. C. 154.41"



Fuel (Gal)

Oil (Gal)



POWER PLANT

No. & Model:
 . . . (4) R-3350-57, -57A or -83
 Mfr Wright
 Engine Spec No. 787-C
 Superch 1 stg, 1 spd
 Turbo Superch B-11 or B-31
 Turbo Mfr General Electric
 Red. Gear Ratio 0.350
 Prop Mfr Hamilton Std
 Blade Design No. 6521A-6
 Prop Type C. S., F. F. Hydr.
 No. Blades 4
 Prop Dia 16"7"

ENGINE RATINGS

BHP - RPM - ALT - MIN
 T. O.: 2200 - 2800 - S. L. - 5
 Mil: 2200 - 2600 - Turbo - 30
 Nor: 2000 - 2400 - Turbo - Cont

DIMENSIONS

Wing
 Span 141.2'
 Incidence 4°
 Dihedral 4°29'
 Sweepback (LE) 7°1'
 Length 99.0'
 Height 27.8'
 Tread 28.5'
 Prop. Grd Clearance 14.1"

Mission and Description

Navy Equivalent: None Mfr's Model: 345-3-0
 The principal mission of the SB-29 is air search and rescue of personnel stranded in water. This mission is accomplished by means of radar and a disposable A-3 lifeboat.

The normal crew of (10) consists of pilot, co-pilot, engineer, navigator, bombardier, remote control turret operator, radar operator, (2) radio operators, and (2) scanners.

An A-3 lifeboat is mounted on the underside of the fuselage of a modified standard B-29 aircraft, by utilization of a suspension truss with boat displacing arms mounted on the exterior of the forward bomb bay doors. The lifeboat is attached to the suspension truss with the aid of a type U-1 bomb shackle, which engages a ring that is mounted in the center of the lifeboat's deck, while the four displacing arms are joined with a similar number of lugs. These lugs are mounted symmetrically on the interior side of the gunwales.

The lifeboat is dropped by means of a manual release which is controlled by the pilot. The displacing arms cause the boat to first move downward and away from the fuselage. During this operation all bomb bay doors remain closed.

The lifeboat is deployed to the rescue area by means of a parachute and is guided to the survivors by remote control.

A radome which houses the APQ-13 search radar replaces the fuselage lower forward turret.

Complete utilization of the bomb bay is possible except for the area adjacent to the suspension truss.

An outside filler permits the center wing tank to be serviced without removing the lifeboat.

Development

B-29's modified to perform search - rescue work.

B O M B S

Bomb racks are installed but bombing capacities are not considered.

G U N S

Guns removed

WEIGHTS

Loading	Lb	L. F.
Empty	68,350(E)	
Basic	72,616(E)	
Design	120,000	2.0
Combat	*99,410	
Max T. O. (normal) .	†120,662	
Max Land	‡120,662	

(E) Estimated
 * For Basic Mission
 † Limited by normal fuel capacity
 ‡ Limited by take-off weight

F U E L

Location	No. Tanks	Gal
Wg, outbd*	2	2640
Wg, inbd*	2	2830
Wg, ctr*	1	1333

Total 6803

Grade 100/130
 Specification MIL-F-5572

OIL

Nacelles 4 (tot) 340
 Grade S-1120; W-1100
 Specification MIL-o-6082
 *Self-Sealing

ELECTRONICS

UHF Command AN/ARC-27
 VHF Command AN/ARC-3
 Liaison AN/ARC-8
 Interphone AN/AIC-2A
 Radio Compass AN/ARN-7
 Marker Beacon RC-193A
 Homing Adapter AN/ARA-8
 Glide Path AN/ARN-5B
 Radio Altimeter SCR-718C
 Radio Altimeter AN/APN-1
 Interrogator SCR-729
 IFF SCR-695B
 Loran AN/APN-9
 Search Radar AN/APQ-13A
 Pulse Doppler AN/APA-52
 Remote Control AN/URW-3

Loading and Performance—Typical Mission

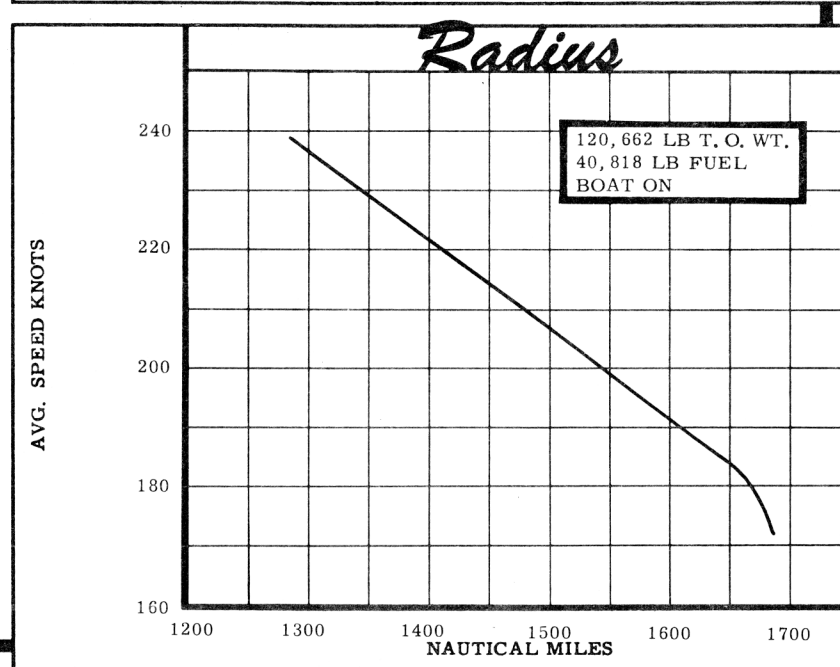
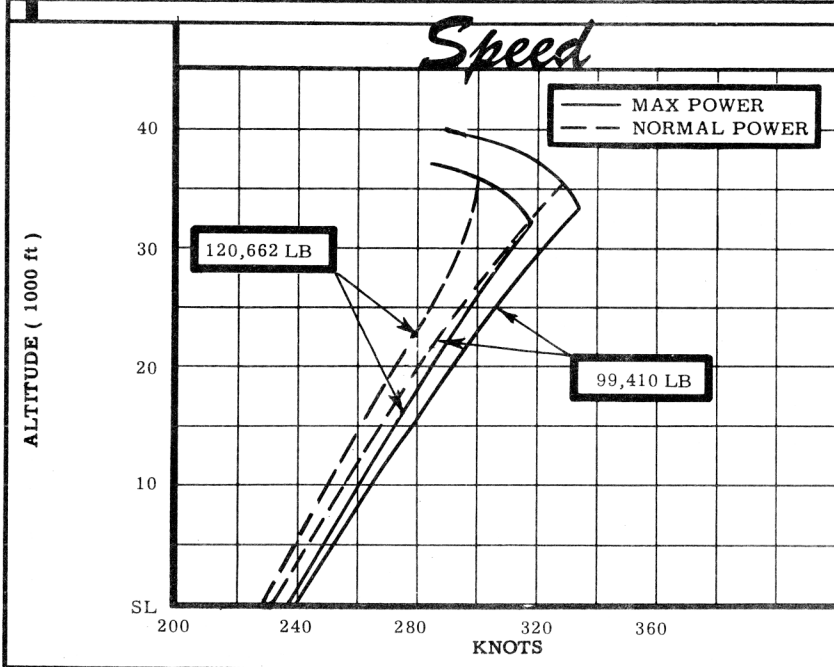
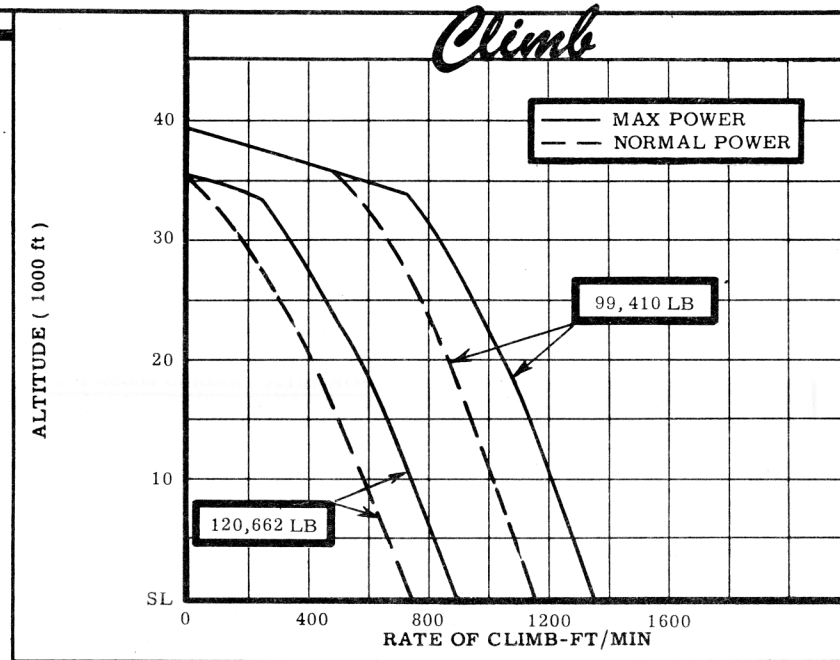
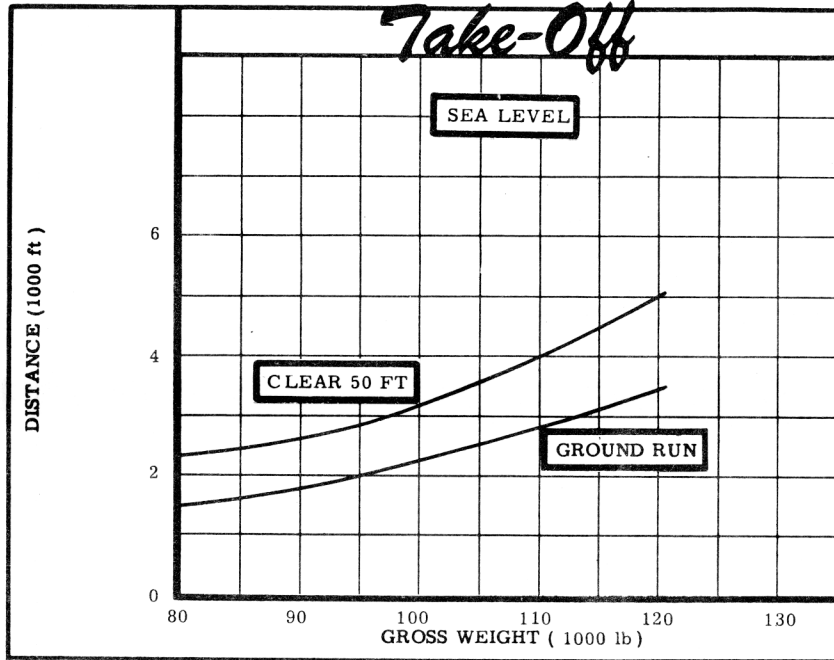
C O N D I T I O N S		BASIC MISSION	BOAT DROPPED	FERRY RANGE
TAKE-OFF WEIGHT	(lb)	^I 120,662	^{II} 120,662	^{III} 120,662
Fuel at 6.0 lb/gal (grade 100/130)	(lb)	40,818	40,818	40,818
Payload (Boat)	(lb)	3491 ④	3491	3491 ④
Wing loading	(lb/sq ft)	70.2	70.2	70.2
Stall speed (power off)	(kn)	95.7	95.7	95.7
Take-off ground run at SL	① (ft)	3475	3475	3475
Take-off to clear 50 ft	① (ft)	5075	5075	5075
Rate of climb at SL	② (fpm)	730	730	730
Rate of climb at SL (one eng. out)	① (fpm)	435	435	435
Time: SL to 10,000 ft	② (min)	15.0	15.0	15.0
Time: SL to 20,000 ft	② (min)	35.0	35.0	35.0
Service ceiling (100 fpm)	② (ft)	32,800	32,800	32,800
Service ceiling (one eng. out)	① (ft)	21,600	21,600	21,600
COMBAT RANGE	③ (n. mi)	—	—	3445
COMBAT RADIUS	③ (n. mi)	1685	1759	—
Average cruise speed	(kn)	172	173	173
Initial cruising altitude	(ft)	5000	5000	5000
Search altitude	(ft)	SL	SL	—
Final cruising altitude	(ft)	5000	5000	5000
Total mission time	(hr)	19.8	20.6	20.0
COMBAT WEIGHT	(lb)	99,410	95,119	82,579
Combat altitude	(ft)	SL	SL	5000
Combat speed	① (kn)	239	250	254
Combat climb	① (fpm)	1345	1520	1780
Combat ceiling (500 fpm)	① (ft)	35,600	37,300	39,500
Service ceiling (100 fpm)	② (ft)	38,600	39,700	42,600
Service ceiling (one eng. out)	② (ft)	32,400	36,800	38,800
Max rate of climb at SL	① (fpm)	1345	1520	1850
Max speed at optimum altitude	④ (kn)	334/33,300	349/33,300	344/33,300
Basic speed at 25,000 ft	① (kn/ft)	306	318	313
LANDING WEIGHT	(lb)	82,579	79,037	82,579
Ground roll at SL	(ft)	2200	2120	2200
Total from 50 ft	(ft)	2950	2840	2950

NOTES

- ① Max power
- ② Normal power
- ③ Detailed descriptions of Radius and Range missions given on page 6
- ④ Boat carried throughout mission

Performance Basis:

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



N O T E SFORMULA: RADIUS MISSION I

Take-off, climb on course to 5000 feet at normal power, cruise out at long range speeds to search area, descend to sea level and search at long range speeds for 15 minutes, climb on return course to 5000 feet, cruise back at long range speeds. Range free allowances include 10 minutes normal power fuel consumption for warm-up and take-off, 15 minutes long range fuel consumption at search altitude, 30 minutes long range fuel consumption at sea level plus 5% initial fuel load for landing and endurance reserve.

FORMULA: RADIUS MISSION II

Same as for Radius Mission I except that boat is dropped after search.

FORMULA: RANGE MISSION III

Take-off, climb on course to 5000 feet at normal power, cruise 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 the search fuel.

GENERAL DATA:

- (a) For detailed planning refer to Technical Order 1B-29(S)-1.
 (b) Engine ratings shown on page 3 are manufacturer's guaranteed ratings. Power values used for performance calculations are as follows:

(4) R-3350-57, 57A or -83				
	BHP	RPM	CRIT ALT*	MIN
T. O.	2200	2800		5
Max:	2200	2600	33,300	30
Nor:	2000	2400	35,600	Cont
* With Turbo				

PERFORMANCE REFERENCE:

AF Technical Report AFFTC 52-46, dated 9 February 1953.

REVISION BASIS: To reflect change in configuration.

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 45433