Wing Area .................. 1720 sq ft  
Aspect Ratio ................. 11.5  

Wing Section .............. Boeing 117  
M.A.C. ......................... 154.41"  

Pressurized Area  

Fuel (Gal)  

Oil (Gal)  

SB-29
POWER PLANT

No. & Model: ......... (4) R-3350-57, -57A or -83
Mr. ...... Wright
Engine Spec No. ......... 787-C
Superch. ......... 1, 1 sqd
Turbo Superch. ......... B-11 or B-31
Turbo Mrf. ......... General Electric
Red Gear Ratio ......... 0.350
Prop Mfr. ......... Hamilton Std
Blade Design No. ......... 6521A-8
Prop Type. ......... C.S., F.F. Hydr.
No. Blades ......... 4
Prop Dia. ......... 1677"

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 ......... 141.2'
Incidence ......... 4°
Dihedral ......... 4°22'
Sweepback (LE) ......... 7°1'
Length ......... 99.0'
Height ......... 27.8'
Tread ......... 28.5'
Prop, Grd Clearance ......... 14.1"

BOMBS

Bomb racks are installed but bombing capacities are not considered.

GUNS

Guns removed

MISSION AND DESCRIPTION

Navy Equivalent: None
Mfr's Model: 345-3-o

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 shackles 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 that is controlled by the pilot. The displaceing arms cause the boat to 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.

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

WEIGHTS

Loading ......... Lb
Empty ......... Lb
Basic ......... Lb
Design ......... Lb
Combat ......... Lb
Max T.O. ......... Lb
Max Land ......... Lb

(F) Estimated
* Per Basic Mission
† Limited by normal fuel capacity
†† Limited by take-off weight

FUEL

Location No. Tanks Gal
Wg. outbd* ......... 2 ......... 2640
Wg. inbd* ......... 2 ......... 2830
Wg. ctr* ......... 1 ......... 1333
Total ......... 6883
Grade ......... 100/130
Specification ......... MIL-F-5572

OIL

Nacelles ......... 4 ......... 340
Grade ......... S-1120; W-1100
Specification ......... MIL-O-6682
*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/A RA-8
 Glide Path ......... AN/ARN-5B
Radio Altimeter ......... SCR-778
Radio Altimeter ......... AN/APN-1
Interrogator ......... SCR-758
IFF ......... SCR-695B
Loran ......... AN/APN-9
Search Radar ......... AN/APS-13A
Pulse Doppler ......... AN/APA-52
Remote Control ......... AN/URW-3
## Loading and Performance—Typical Mission

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Basic Mission</th>
<th>Boat Dropped</th>
<th>Ferry Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKE-OFF WEIGHT (lb)</td>
<td>120,662</td>
<td>120,662</td>
<td>120,662</td>
</tr>
<tr>
<td>Fuel at 6.0 lb/gal (grade 100/130) (lb)</td>
<td>40,818</td>
<td>40,818</td>
<td>40,818</td>
</tr>
<tr>
<td>Payload (Boat) (lb)</td>
<td>3491</td>
<td>3491</td>
<td>3491</td>
</tr>
<tr>
<td>Wing loading (lb/sq ft)</td>
<td>70.2</td>
<td>70.2</td>
<td>70.2</td>
</tr>
<tr>
<td>Stall speed (power off) (kn)</td>
<td>95.7</td>
<td>95.7</td>
<td>95.7</td>
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<tr>
<td>Take-off ground run at SL (ft)</td>
<td>3475</td>
<td>3475</td>
<td>3475</td>
</tr>
<tr>
<td>Take-off to clear 50 ft (ft)</td>
<td>5075</td>
<td>5075</td>
<td>5075</td>
</tr>
<tr>
<td>Rate of climb at SL (fpm)</td>
<td>730</td>
<td>730</td>
<td>730</td>
</tr>
<tr>
<td>Rate of climb at SL (one eng. out) (fpm)</td>
<td>435</td>
<td>435</td>
<td>435</td>
</tr>
<tr>
<td>Time: SL to 10,000 ft (min)</td>
<td>15.0</td>
<td>15.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Time: SL to 20,000 ft (min)</td>
<td>35.0</td>
<td>35.0</td>
<td>35.0</td>
</tr>
<tr>
<td>Service ceiling (100 fpm) (ft)</td>
<td>32,800</td>
<td>32,800</td>
<td>32,800</td>
</tr>
<tr>
<td>Service ceiling (one eng. out) (ft)</td>
<td>21,600</td>
<td>21,600</td>
<td>21,600</td>
</tr>
<tr>
<td>COMBAT RANGE (n, mi)</td>
<td></td>
<td></td>
<td>3445</td>
</tr>
<tr>
<td>Average cruise speed (kn)</td>
<td>172</td>
<td>173</td>
<td>173</td>
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<tr>
<td>Initial cruising altitude (ft)</td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
</tr>
<tr>
<td>Search altitude (ft)</td>
<td>SL</td>
<td>SL</td>
<td></td>
</tr>
<tr>
<td>Final cruising altitude (ft)</td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
</tr>
<tr>
<td>Total mission time (hr)</td>
<td>19.8</td>
<td>20.6</td>
<td>20.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Basic Mission</th>
<th>Boat Dropped</th>
<th>Ferry Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMBAT WEIGHT (lb)</td>
<td>99,410</td>
<td>95,119</td>
<td>82,579</td>
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<tr>
<td>Combat altitude (ft)</td>
<td>SL</td>
<td>SL</td>
<td>5000</td>
</tr>
<tr>
<td>Combat speed (kn)</td>
<td>239</td>
<td>250</td>
<td>254</td>
</tr>
<tr>
<td>Combat climb (fpm)</td>
<td>1345</td>
<td>1520</td>
<td>1780</td>
</tr>
<tr>
<td>Combat ceiling (500 fpm) (ft)</td>
<td>35,800</td>
<td>37,300</td>
<td>39,500</td>
</tr>
<tr>
<td>Service ceiling (100 fpm) (ft)</td>
<td>38,600</td>
<td>39,700</td>
<td>42,600</td>
</tr>
<tr>
<td>Service ceiling (one eng. out) (fpm)</td>
<td>32,400</td>
<td>36,800</td>
<td>38,800</td>
</tr>
<tr>
<td>Max rate of climb at SL (fpm)</td>
<td>1345</td>
<td>1520</td>
<td>1850</td>
</tr>
<tr>
<td>Max speed at optimum altitude (kn)</td>
<td>334/33,300</td>
<td>349/33,300</td>
<td>344/33,300</td>
</tr>
<tr>
<td>Basic speed at 25,000 ft (kn/ft)</td>
<td>306</td>
<td>318</td>
<td>313</td>
</tr>
<tr>
<td>LANDING WEIGHT (lb)</td>
<td>82,579</td>
<td>79,037</td>
<td>82,579</td>
</tr>
<tr>
<td>Ground roll at SL (ft)</td>
<td>2200</td>
<td>2120</td>
<td>2200</td>
</tr>
<tr>
<td>Total from 50 ft (ft)</td>
<td>2950</td>
<td>2840</td>
<td>2950</td>
</tr>
</tbody>
</table>

**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.
NOTES

FORMULA: 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-239(5)-1.
(b) Engine ratings shown on page 3 are manufacturer's guaranteed ratings. Power values used for performance calculations are as follows:

<table>
<thead>
<tr>
<th></th>
<th>BHP</th>
<th>RPM</th>
<th>CRIT ALT*</th>
<th>MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. O.</td>
<td>2200</td>
<td>2800</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Max:</td>
<td>2200</td>
<td>2600</td>
<td>33,300</td>
<td>30</td>
</tr>
<tr>
<td>Nor:</td>
<td>2000</td>
<td>2400</td>
<td>35,600</td>
<td>Cont</td>
</tr>
</tbody>
</table>

* With Turbo

PERFORMANCE REFERENCE:


REVISION BASIS: To reflect change in configuration.