

# STANDARD AIRCRAFT CHARACTERISTICS

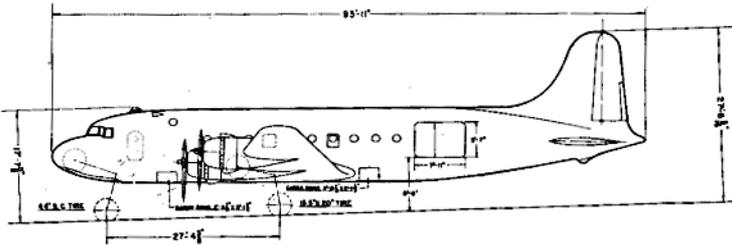
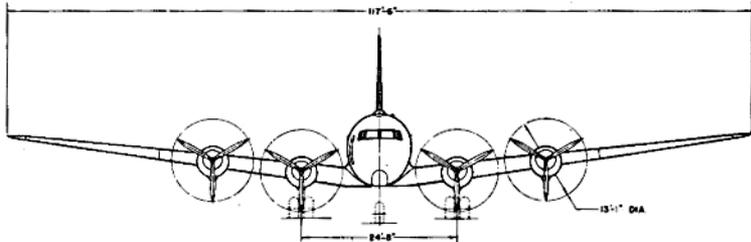
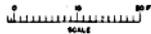
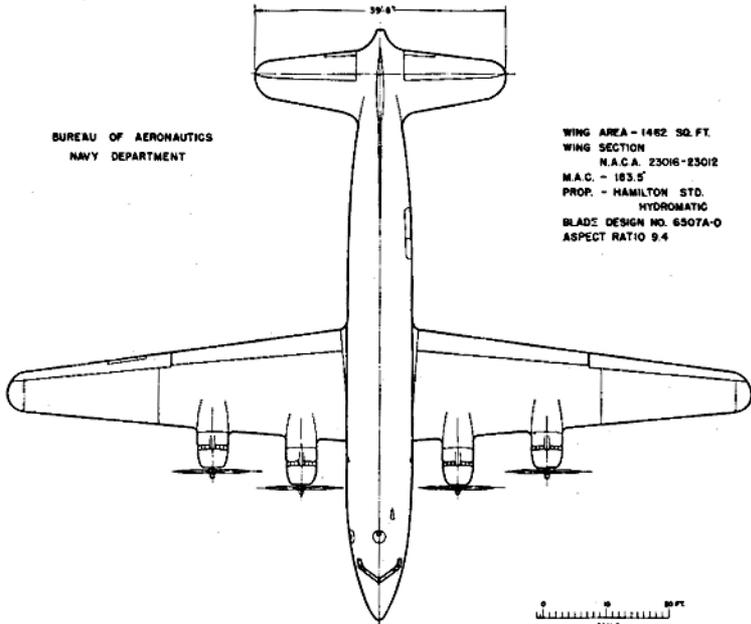
## R5D-3 "SKYMASTER"

DOUGLAS

Standard Aircraft Characteristics MVAER 1335A (REV. 3-59)

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

WING AREA - 1462 SQ. FT.  
WING SECTION  
N.A.C.A. 23016-25012  
M.A.C. - 183.5'  
PROP. - HAMILTON STD.  
HYDROMATIC  
BLADE DESIGN NO. 6507A-0  
ASPECT RATIO 9.4



DESCRIPTIVE ARRANGEMENT

Standard Aircraft Characteristics NAVAER 13358 (REV. 1-49)



## PERFORMANCE SUMMARY

| TAKE-OFF LOADING CONDITION          |            | CARGO<br>FULL FUEL |  |  |  |
|-------------------------------------|------------|--------------------|--|--|--|
| TAKE-OFF WEIGHT                     | lb.        | 73,000             |  |  |  |
| Fuel                                | lb.        | 22,320             |  |  |  |
| Payload                             | lb.        | 9,408              |  |  |  |
| Wing loading                        | lb./sq.ft. | 49.9               |  |  |  |
| Stall speed - power-off             | kn.        | 79.5               |  |  |  |
| Take-off run at S.L. - calm (B)     | ft.        | 2,700              |  |  |  |
| Take-off run at S.L. 25 kn. wind(B) | ft.        | 1,400              |  |  |  |
| Take-off to clear 50 ft. - calm (B) | ft.        | 4,650              |  |  |  |
| Max. speed/altitude (A)             | kn./ft.    | 243/18,300         |  |  |  |
| Rate of climb at S.L. (A)           | fpm        | 830                |  |  |  |
| Time: S.L. to 10,000 ft. (A)        | min.       | 14.6               |  |  |  |
| Time: S.L. to 20,000 ft. (A)        | min.       | 39.1               |  |  |  |
| Service ceiling (100 fpm)           | ft.        | 22,700             |  |  |  |
| Combat range                        | n.mi.      | 2,740              |  |  |  |
| Average cruising speed              | kn.        | 174                |  |  |  |
| Cruising altitude(s)                | ft.        | 5,000              |  |  |  |
| Combat radius                       | n.mi.      |                    |  |  |  |
| Average cruising speed              | kn.        |                    |  |  |  |
| COMBAT LOADING CONDITION            |            |                    |  |  |  |
| COMBAT WEIGHT                       | lb.        |                    |  |  |  |
| Engine power                        |            |                    |  |  |  |
| Fuel                                | lb.        |                    |  |  |  |
| Combat speed/combat altitude        | kn./ft.    |                    |  |  |  |
| Rate of climb/combat altitude       | fpm/ft.    |                    |  |  |  |
| Combat ceiling (500 fpm)            | ft.        |                    |  |  |  |
| Rate of climb at S.L.               | fpm        |                    |  |  |  |
| Max. speed at S.L.                  | kn.        |                    |  |  |  |
| Max. speed/altitude                 | kn./ft.    |                    |  |  |  |
| LANDING WEIGHT                      |            |                    |  |  |  |
| Fuel                                | lb.        |                    |  |  |  |
| Stall speed - power-off             | kn.        |                    |  |  |  |
| Stall speed - with approach power   | kn.        |                    |  |  |  |

## NOTES

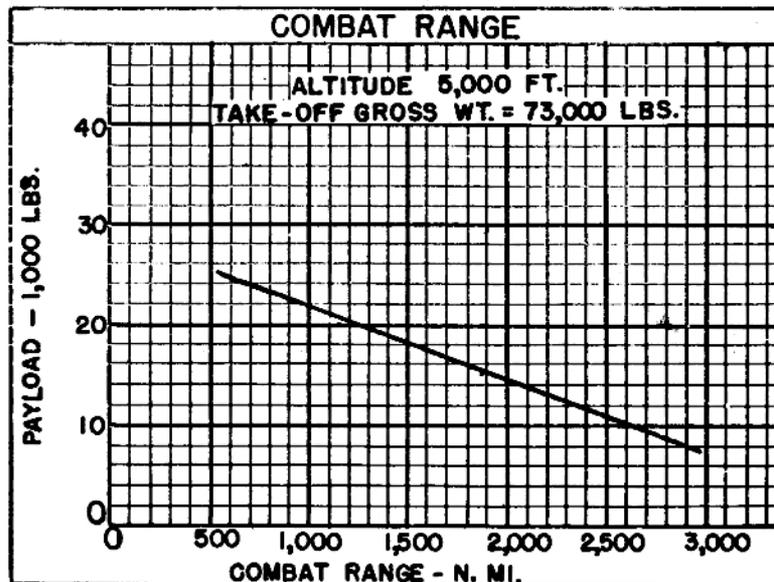
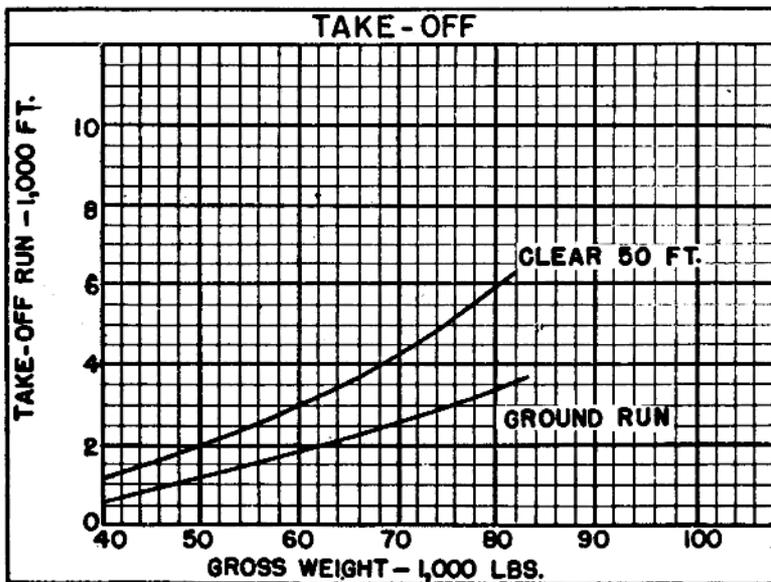
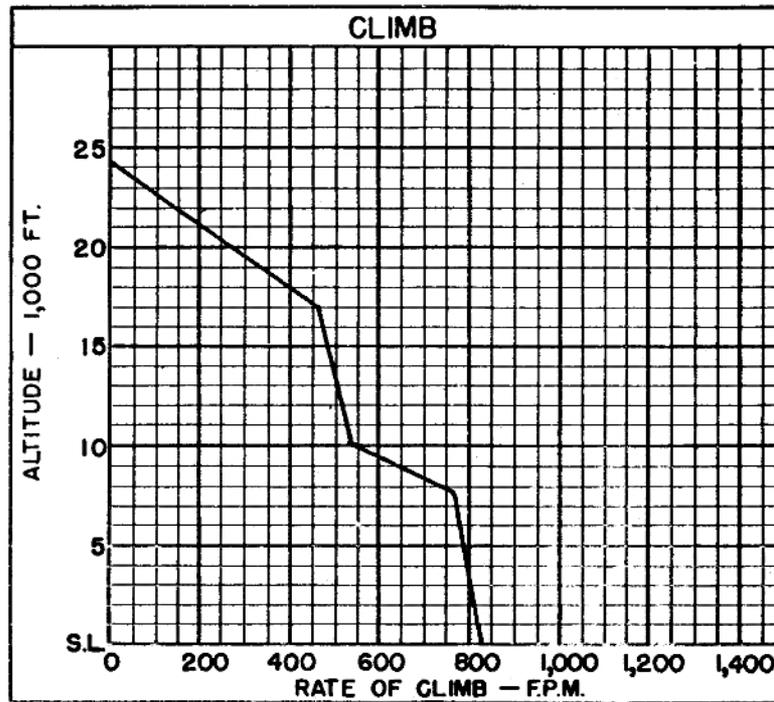
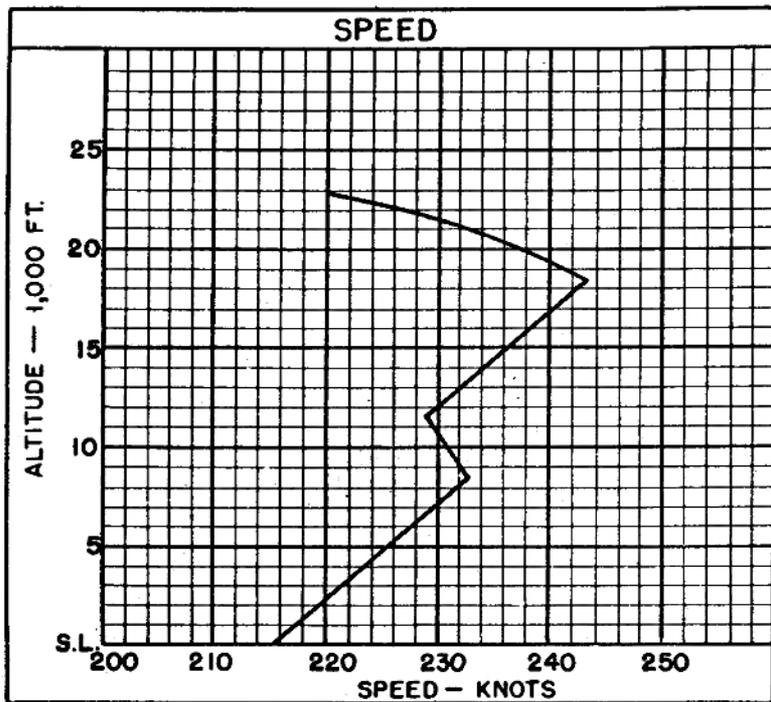
(A) Normal Rated Power

(B) Take-Off Power

Performance Basis: Flight Test of R5D-3 airplane.

Range and radius are based on engine specification fuel consumption data increased by 5%.

Performance includes the effect of deicer boots. Removal of deicer boots increases Vmax @ ACA by 4.5 knots.



Standard Aircraft Characteristics: ICS NAVALER 1335E (REV. 2-50)

○ LOADING CONDITION COLUMN NUMBER

# NOTES

Performance with one engine inoperative, flaps and landing gear retracted and propeller feathered is estimated to be:

|                                     |         |        |
|-------------------------------------|---------|--------|
| Gross Weight.....                   | Lbs.    | 73,000 |
| Rate of Climb - S.L., T.O. Power... | Ft/Min. | 620    |
| Service Ceiling - Normal Power..... | Ft.     | 15,400 |

## COMBAT RANGE

WARM-UP, TAKE-OFF, ACCELERATION: 10 minutes at normal rated power.

CLIMB: On course to 5,000 feet at normal rated power.

CRUISE: At speed for long range at 5,000 feet.

RESERVE: 30 minutes at speed for long range plus 5% of initial fuel load.

COMBAT RANGE = CLIMB + CRUISE

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## ELECTRONICS (CONT'D)

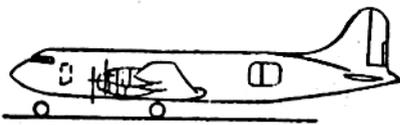
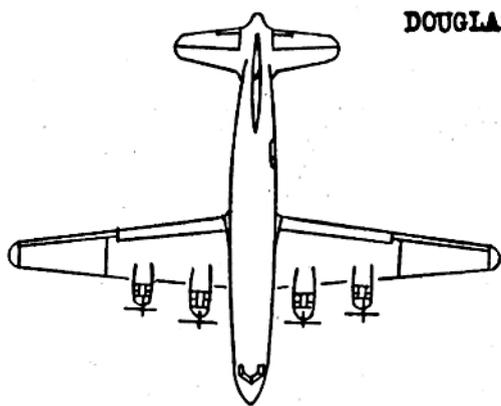
|                      |               |
|----------------------|---------------|
| GLIDE SLOPE REC..... | AN/ARN-18     |
| LOCALIZER.....       | (2) AN/ARN-14 |
| LF COMM. REC.....    | (2) BC-348    |
| NAV RADAR.....       | AN/AFS-42     |
| UHF COMMAND.....     | AN/ARC-27     |

# CHARACTERISTICS SUMMARY

**TRANSPORT**

**R5D-3**

**DOUGLAS "SKYMASTER"**



**WING AREA** 1,462 sq. ft.  
**WING SPAN** 117' -6"

**LENGTH** 93' -11"  
**HEIGHT** 27' -6"

| AVAILABILITY     |         |       | PROCUREMENT                         |  |  |  |  |
|------------------|---------|-------|-------------------------------------|--|--|--|--|
| NUMBER AVAILABLE |         |       | NUMBER DELIVERED<br>IN FISCAL YEARS |  |  |  |  |
| ACTIVE           | RESERVE | TOTAL |                                     |  |  |  |  |
|                  |         |       |                                     |  |  |  |  |

| STATUS               |
|----------------------|
| Service use.....1945 |

| ENGINES |            |            |             |
|---------|------------|------------|-------------|
| 4       | P & W      | R-2000-9   |             |
|         | <u>BHP</u> | <u>RPM</u> | <u>ALT.</u> |
| T.O.    | 1450       | 2700       | S.L.        |
| NORM.   | 1100       | 2550       | S.L.        |
|         |            |            | 7,500'      |
|         | 1000       | 2550       | 10,000      |
|         |            |            | 17,000      |

| FEATURES  |
|---|
| Crew - 6<br>Tricycle gear<br>Slotted flaps<br>Deicer shoes<br><br>3,720 gal. fuel.<br>Max. Cap. |

| ACCOMMODATIONS   |
|--|
| Troop seats.....50<br>Litters.....36<br>Max. Floor<br>Load.....200#/ft. <sup>2</sup><br>Boom Hoist<br>Cap.....2,000#<br><br>Max. Pay Load..29,000# |

NAVAER 0319 A (REV. 1-49) 51 35807

## CHARACTERISTICS SUMMARY

### BASIC MISSION

R5D-3

### COMBAT RANGE

**WARM-UP, TAKE-OFF, ACCELERATION:** 10 minutes at normal rated power.

**CLIMB:** On course to 5,000 ft. at normal rated power.

**CRUISE:** At speed for long range at 5,000 ft.

**RESERVE:** 30 minutes at speed for long range plus 5% of initial fuel load.

### PERFORMANCE

| COMBAT RADIUS  | COMBAT RANGE   | SPEED   |
|--|--|---|
| naut. mi.<br>knots avg.  | 2,740 naut. mi.<br>174 knots avg.                              | 216 knots at S.L. ft.<br>225 knots at 5,000 ft.<br>213 knots at 18,300 ft.<br>T.O. Weight<br>Normal Power |
| CLIMB  | CEILING  | TAKE OFF  |
| 830 ft./min.<br>Sea Level, T. O. wt.<br>Normal Power           | 22,700 ft.<br>100 ft./min., T. O. wt.<br>Normal Power          | 2,700 ft. Calm<br>Ground Run, No Assist<br><br>11,650 ft. Calm<br>Over 50 ft. Obstacle<br>No assist       |
| LOAD   | WEIGHTS  | STALLING SPEED  |
| Fuel 3,720 gal.<br>fixed 3,720 drop - - -<br>Payload 9,408 lb. | Empty 10,310 lbs.<br>Combat - - - lbs.<br>Take-off 73,000 lbs. | 79.5 knots<br>Full Flaps down, T. O. wt.  |
|  |  | TIME TO CLIMB   |
|  |  | 10,000 ft. in 14.6min.<br>T.O. Wt., Max. Power  |

### NOTES

**PERFORMANCE BASIS:** Flight test of the R5D-3 airplane.

**Reason for reissue:** Change in ground rules for range problem.

**This sheet supersedes previously issued sheet dated 1 March 1951**

C 20085

NAVAER-15198 (Rev. 10-51)