

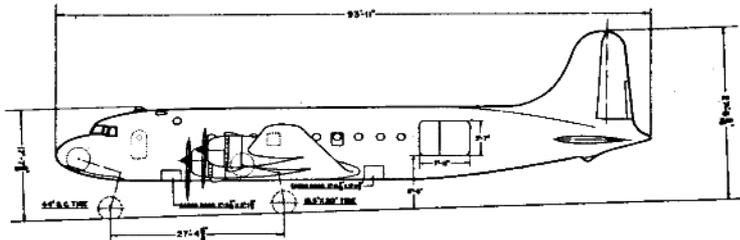
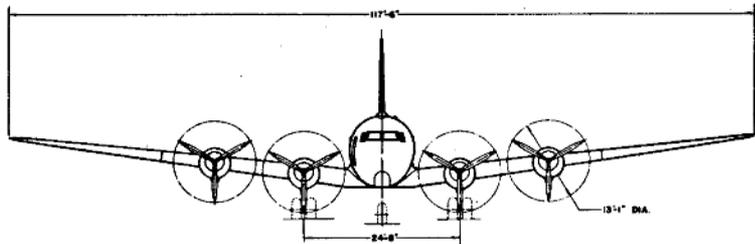
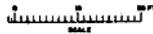
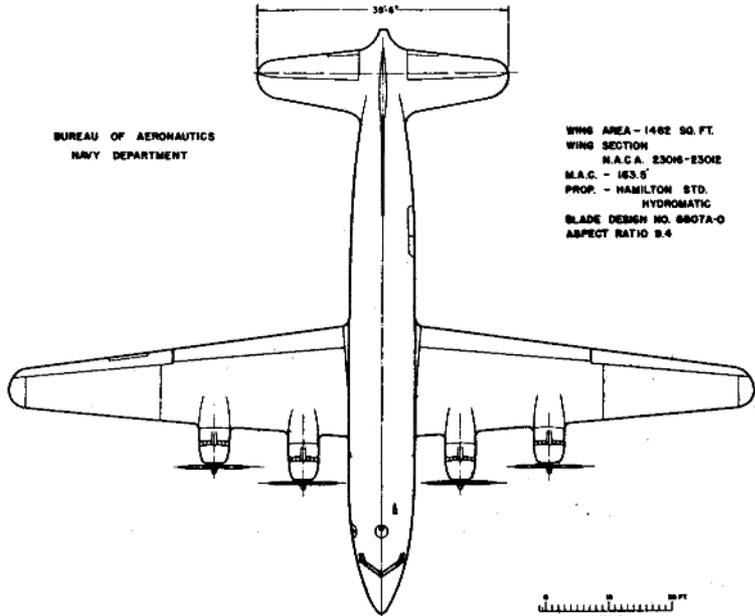
STANDARD AIRCRAFT CHARACTERISTICS

R5D-4 "SKYMASTER"

DOUGLAS

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 1402 SQ. FT.
WING SECTION
N.A.C.A. 23016-2301E
M.A.C. - 163.9'
PROP. - HAMILTON STD.
HYDROMATIC
BLADE DESIGN NO. 6607A-0
ASPECT RATIO 9.4



DESCRIPTIVE ARRANGEMENT

Standard Aircraft Characteristics NAVAL AV 1395B (REV. 1-4-49)

POWER PLANT

NO. & MODEL.....(4) R-2000-9
 MFR.....Pratt & Whitney
 SUPERCH.....1 Stage, 2 Speed
 RED. GEAR RATIO.....2:1
 PROP. MFR.....Ham. Std.
 PROP. DES. NO.....6507A.0
 NO. BLD./DIA.....3/13' -1"

RATINGS

	<u>BEP</u>	<u>RPM</u>	<u>ALT</u>
T.O.	1,450	2,700	S.L.
NORM.	1,100	2,550	S.L.
			to 7,500'
	1,000	2,550	10,000'
			to 17,000'

SPEC. NO. A-9021-B

ACCOMMODATIONS

Crew.....6
 Passenger seats.....40
 Max. Floor Load.....200 lbs/sq.ft.
 Boom Hoist Cap.....2,000 lbs.
 Cargo Door
 Height.....67"
 Width.....95"

Max. Payload.....29,000 lbs.

MISSION AND DESCRIPTION

The Douglas "Skymaster" R5D-4 personnel transport is the same as the Air Force C54-E.

It is of conventional structure, with a 3 spar center section and single spar wing. It is fitted with slotted flaps and tricycle landing gear. Power plants are demountable and interchangeable. Deicer shoes may be fitted to wing, fin and stabilizer. The glider tow fittings have been removed from Navy planes.

The design of the R5D-4 stems from the commercial DC-4 design.

DEVELOPMENT

Service use.....1945

DIMENSIONS

WING
 AREA.....1,462 sq.ft.
 SPAN.....117' -6"
 MAC.....13' -7"
 LENGTH.....93' -11"
 HEIGHT.....27' -6"
 TREAD.....24' -8"
 PROF. GRD. CLEARANCE.....3' -0"

WEIGHTS

<u>LOADINGS</u>	<u>LBS.</u>	<u>L.F.</u>
EMPTY.....	41,700.....	
BASIC.....	42,662.....	
DESIGN.....	62,000.....	2.5...
MAX.T.O.....	73,000.....	
MAX.LDG.....	66,000.....	

L.F. varies from 2.3 to 2.6 depending on the amount of fuel in the wings. See flight handbook.
 All weights are actual.

FUEL AND OIL

<u>No.Tanks</u>	<u>Tot.Gals.</u>	<u>Location</u>
8	3,540	Wing
FUEL GRADE.....100/130		
FUEL SPEC....MIL-F-5572		

OIL

CAPACITY (Gals).....	138
GRADE.....	1100
SPEC.....	MIL-L-6082

ELECTRONICS

LF & MHF COMMAND...SCR-274-N
 VHF COMMAND.....AN/ARC-1
 LIAISON.....(2) AN/ART-13
 IFF.....AN/APX-6
 COMPASS SCR-269-G
 and AN/ARN-7
 MARKER BEACON.....AN/ARN-8
 ALTIMETER.....SCR-718-A
 and AN/AFN-1
 LORAN.....AN/AFN-4

(Cont'd on NOTES page.)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		TRANSPORT FULL FUEL			
TAKE-OFF WEIGHT	lb.	73,000			
Fuel	lb.	21,240			
Payload	lb.	9,098			
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.	2,590			
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/altitude	kn./ft.				
Rate of climb/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

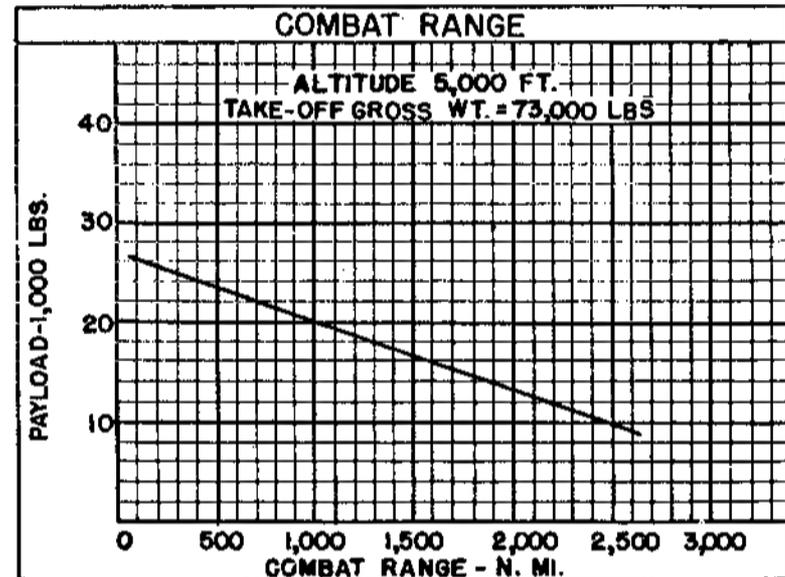
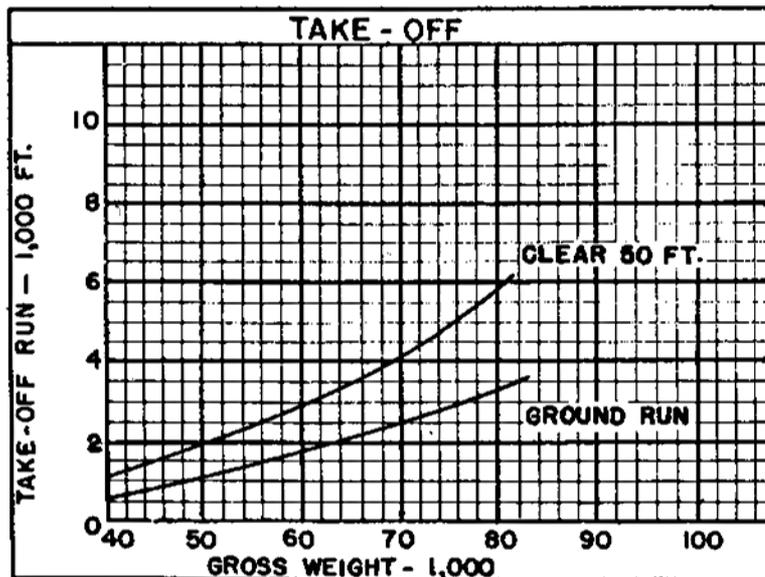
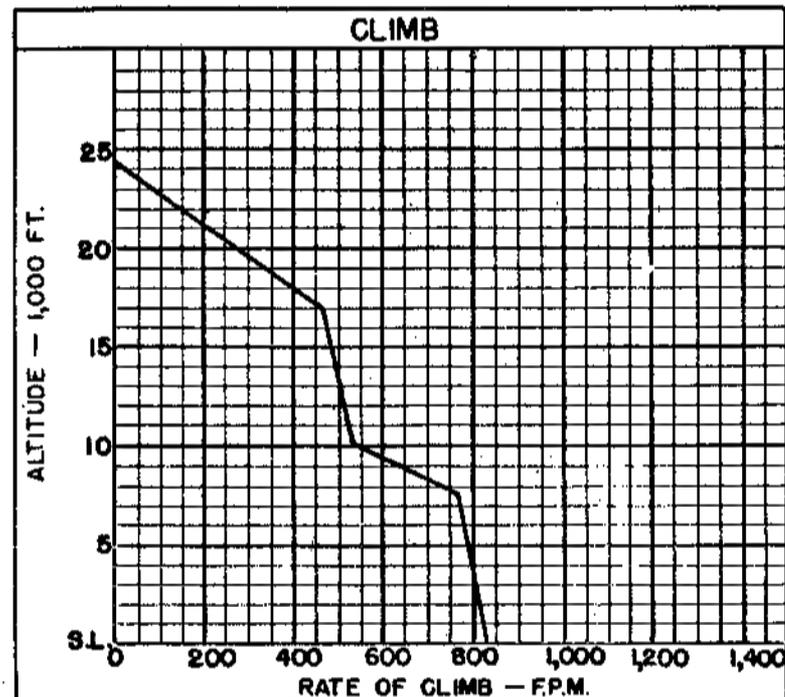
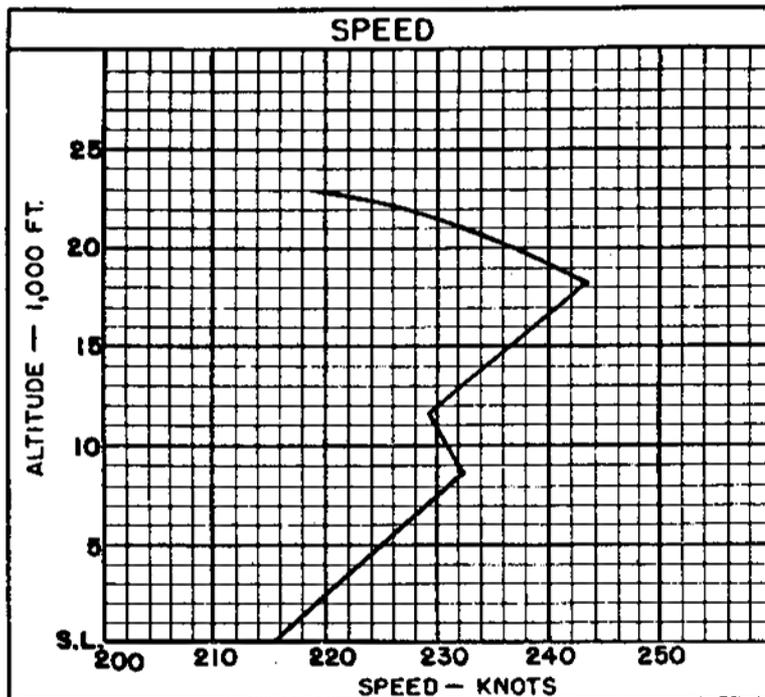
(A) Normal Rated Power

(B) Take-Off Power

Performance Basis: Flight test of R5D-4 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 V_{max} @ ACA by 4.5 knots.



Standard Air-raft Characteristics NAVAER 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 ft. 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

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