



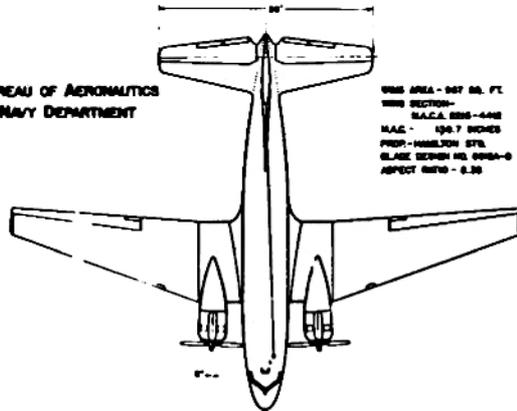
STANDARD AIRCRAFT CHARACTERISTICS

R4D-8 "SKYTRAIN"

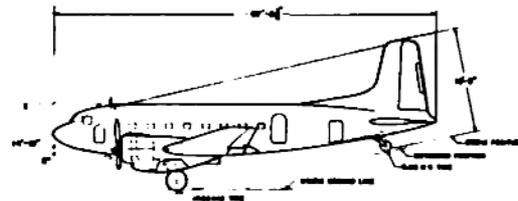
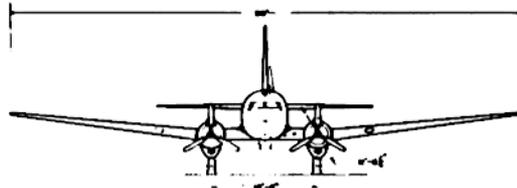
DOUGLAS

Standard Aircraft Characteristics, NAVALR 1335A (REV. 1-49)

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



WING AREA - 847 SQ. FT.
WING SECTION -
NACA 230-440
M.A.C. - 136.7 INCHES
PROP. - HAMILTON STD.
BLADE SECTION NO. 4000-0
ASPECT RATIO - 0.20



DESCRIPTIVE ARRANGEMENT

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

MISSION AND DESCRIPTION

The R4D-8 is a cargo transport airplane, adaptable to the transport of troops, passengers and litter patients. It is a converted R4D-5 or R4D-6, and is the military version of the Super DC-3, designed to the Civil Air Regulations.

The conversion from earlier R4D models includes strengthening the wing center section, fitting new outer wing panels having slotted flaps and new ailerons. New horizontal and vertical tail surfaces with increased area are installed. Fuselage is strengthened, and a 39-inch section added in the cabin. Landing gear is strengthened, and nacelles reworked for new power plant. Wing and tail deicing are by rubber shoe-type deicing boots. Carburetor and propeller alcohol anti-icing systems are fitted, and the windshield uses hot air anti-icing.

First flight — May 1951 (estimated)
Entering service — June 1951 (estimated)

DIMENSIONS

WING AREA.....967 sq. ft.
SPAN.....90' - 0"
LENGTH.....67' - 9"
HEIGHT.....18' - 3"
TREAD.....18' - 6"
M.A.C.....11' - 6"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	19,500.....	
BASIC.....	19,927.....	
DESIGN.....	31,000.....	3.0
MAX.T.O.....	36,800.....	2.5
MAX.LAND.....	30,000.....	

All weights estimated.

FUEL AND OIL

Gals.	No. Tanks	Location
804	2	Wing
800	2	Wing

FUEL GRADE.....100/130
FUEL SPEC...MIL-F-5572

OIL

CAPACITY (Gals.).....55.5
GRADE.....1120
SPEC.....MIL-O-6082

ELECTRONICS

VHF TRANSCEIVER.....AN/ARC-1
TRANSMITTER.....AN/ART-13
MARKER RECEIVER.....AN/ARN-8
GLIDE SLOPE REC.....AN/ARN-18
LOCALIZER REC.....AN/ARN-14
ALTIMETER.....AN/APN-1
IFF.....AN/APX-6
UHF.....AN/ARC-27
HF RECEIVER.....AN/ARR-15A
LORAN.....AN/APN-4
LF RECEIVER.....AN/ARC-5
RADIO COMPASS (2).....AN/ARN-7

POWER PLANT

NO. & MODFL.....(2) R-1820-80
MFR.....W.A.C.
SUPERCH.....1 Stage, 1 Speed
PROP. GEAR RATIO.....0.5625
PROP. MFR.....Har. Std.
PROP. DES. NO.....6615A-0
NO. PL./DIA.....3/11'-6 $\frac{1}{2}$ "

RATINGS

Bhp @ Rpm @ Alt.

T. O. 1,475 2,800 1,700'
NORMAL 1,275 2,500 3,500'

SPEC. NO. N-866

ACCOMMODATIONS

CREW.....3
TROOPS.....35
CARGO.....12,900 lbs.
DOOR SIZE:
Width (Maximum).....7' - $\frac{1}{2}$ "
Height (Maximum).....5' - 10 $\frac{1}{2}$ "
DOOR SILL TO GROUND...4' - 5"
FLOOR STRENGTH...250#/sq. ft.



PERFORMANCE SUMMARY				
LOADING CONDITION		(1) TRANSPORT	(2) TRANSPORT Max. Range	(3) TRANSPORT Max. Cargo
TAKE-OFF WEIGHT	lbs.	31,000	31,000	36,800
Fuel	lbs.	4,057	9,624	2,957
Bombs	lbs.	---	---	---
Cargo	lbs.	6,000	433	12,900
Wing/Power Loading (A)	lbs/sq.ft; lbs/bhp.	32.0/12.2	32.0/12.2	37.9/14.4
Stall Speed--Power off	kn.	71.7	71.7	78.1
Stall Speed--Power off - No Fuel	kn.	66.8	59.5	74.9
Stall Speed--Power on	kn.	71.3	71.3	77.6
Maximum Speed/Alt (B)	kn/ft.	233/4,900	233/4,900	230/4,900
Take-off Distance, deck -- calm	ft.	1,540	1,540	2,552
Take-off Distance, deck	kn.	ft.	---	---
Take-off Distance, Airport	ft.	2,906	2,906	4,133
Rate of climb -- sea level (B)	ft/min.	1,288	1,288	970
Service Ceiling	(B) ft.	22,700	22,700	19,200
Time-to-climb 10,000 ft.	(B) min.	8.9	8.9	12.2
Time-to-climb 20,000 ft.	(B) min.	28.7	28.7	56.2
Combat Range/V av 10,000	ft. n.mi/kn.	1,100/144	3,150/144	610/153
Combat Radius/V av	ft. n.mi/kn.	---	---	---
LOADING CONDITION				
GROSS WEIGHT	lbs.			
Engine power				
Fuel	lbs.			
Bombs/Tanks				
Max. speed at sea level	kn.			
Max. speed/Alt	kn/ft.			
Combat speed/Alt	kn/ft.			
Rate of climb SL	ft/min.			
Ceiling for 500 fpm R/C	ft.			
Time-to-climb/Alt.	min/ft.			

NOTES

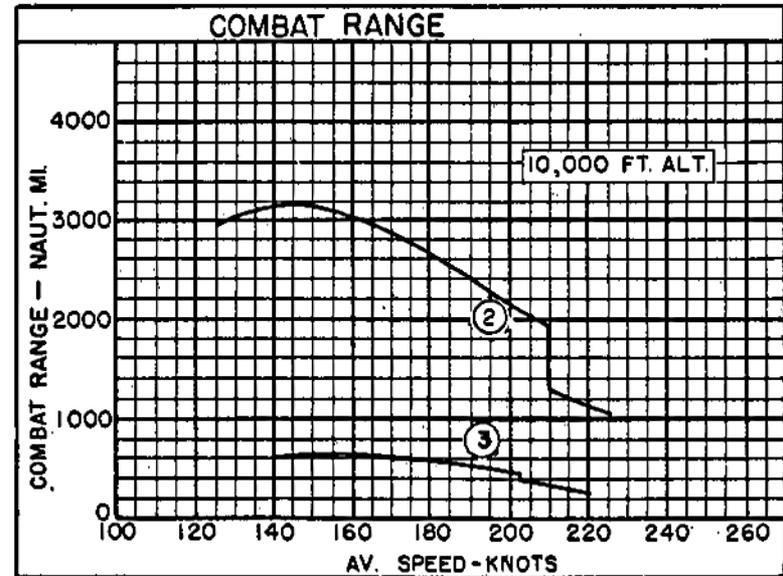
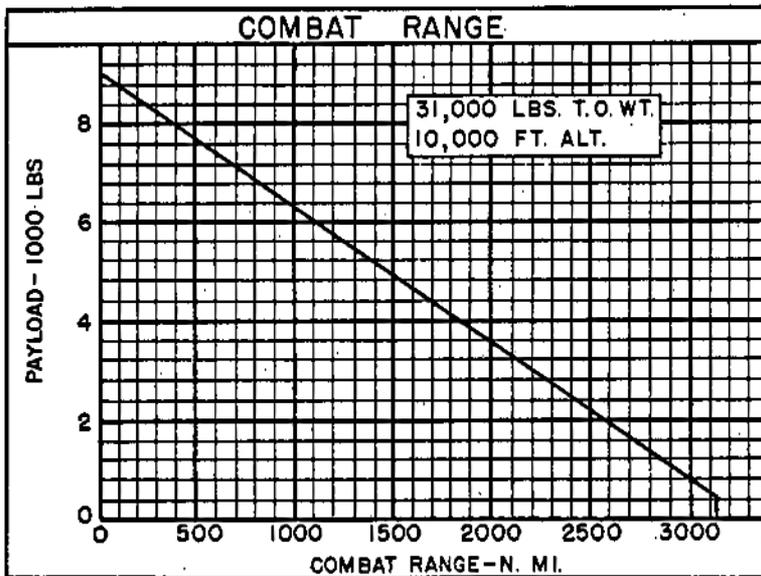
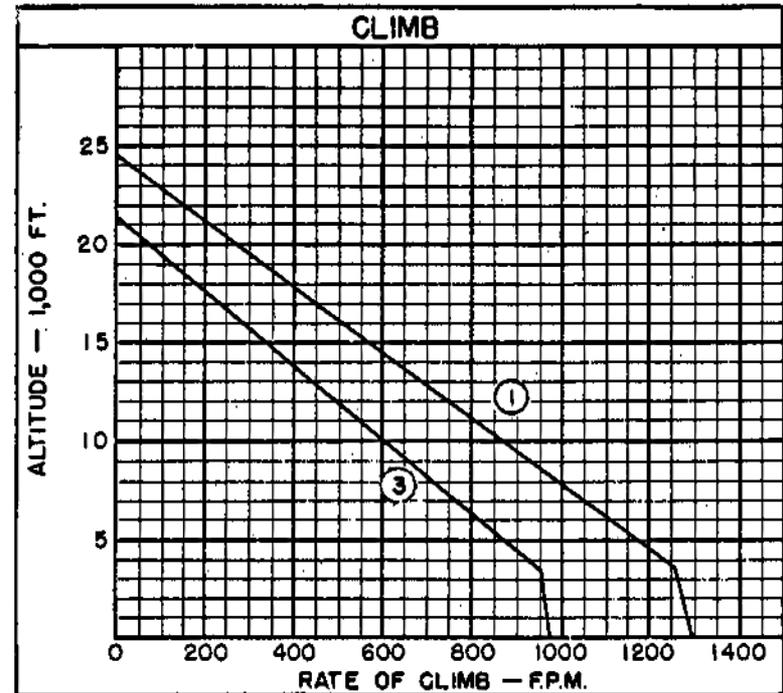
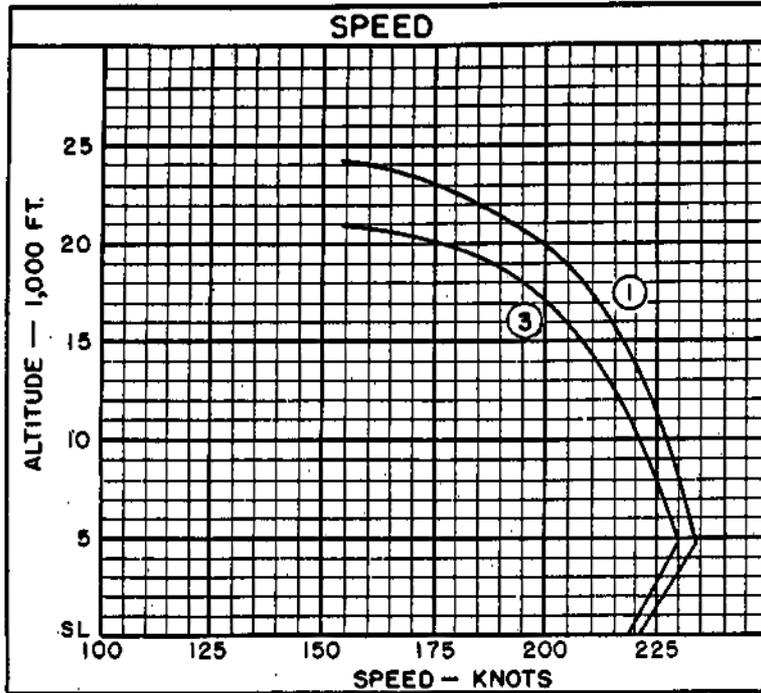
- (A) BHP at Maximum Critical Altitude
- (B) Normal BHP

Performance is based on calculations.

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

Performance includes allowance for weight and drag of de-icer boots.

STANDARD AIRCRAFT CHARACTERISTICS NAVAL AIR 13350 (REV. 1-49)



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics - NAVAP 1335E (REV. 1-50)

NOTES

Performance with one engine inoperative, flaps up, feathered propeller, are:

Gross Weight	lbs.	36,800
S. L. Rate of Climb, T. O. Power	ft/min.	259
Service Ceiling, Normal Power	ft.	2,000