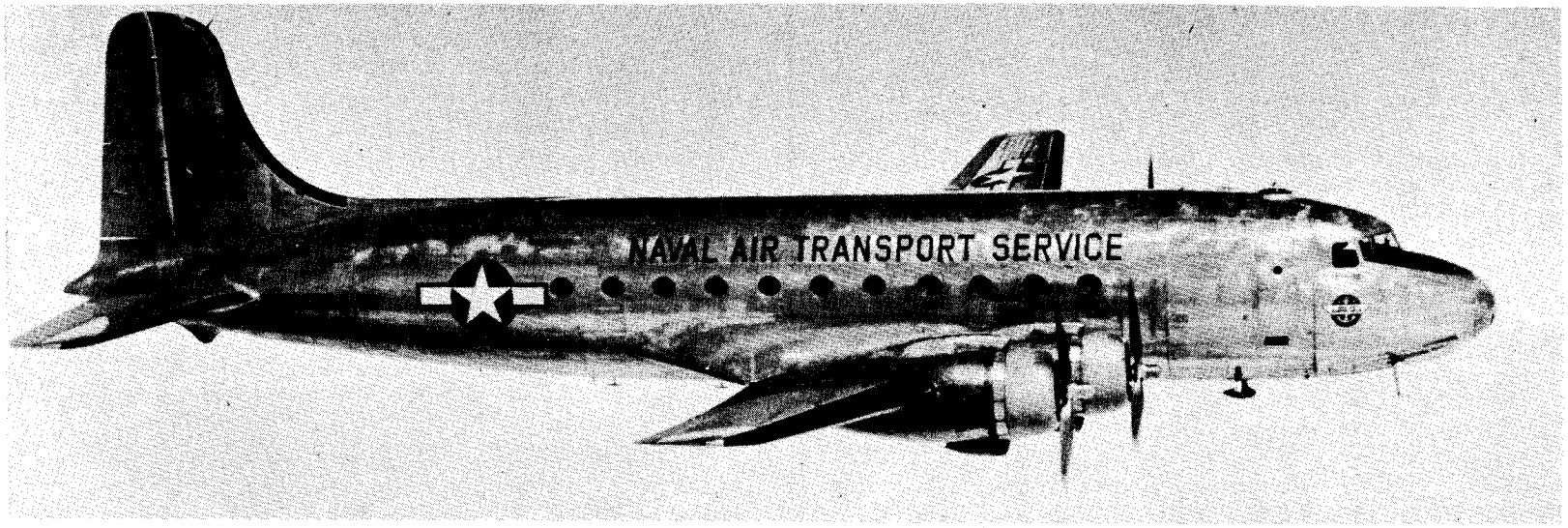
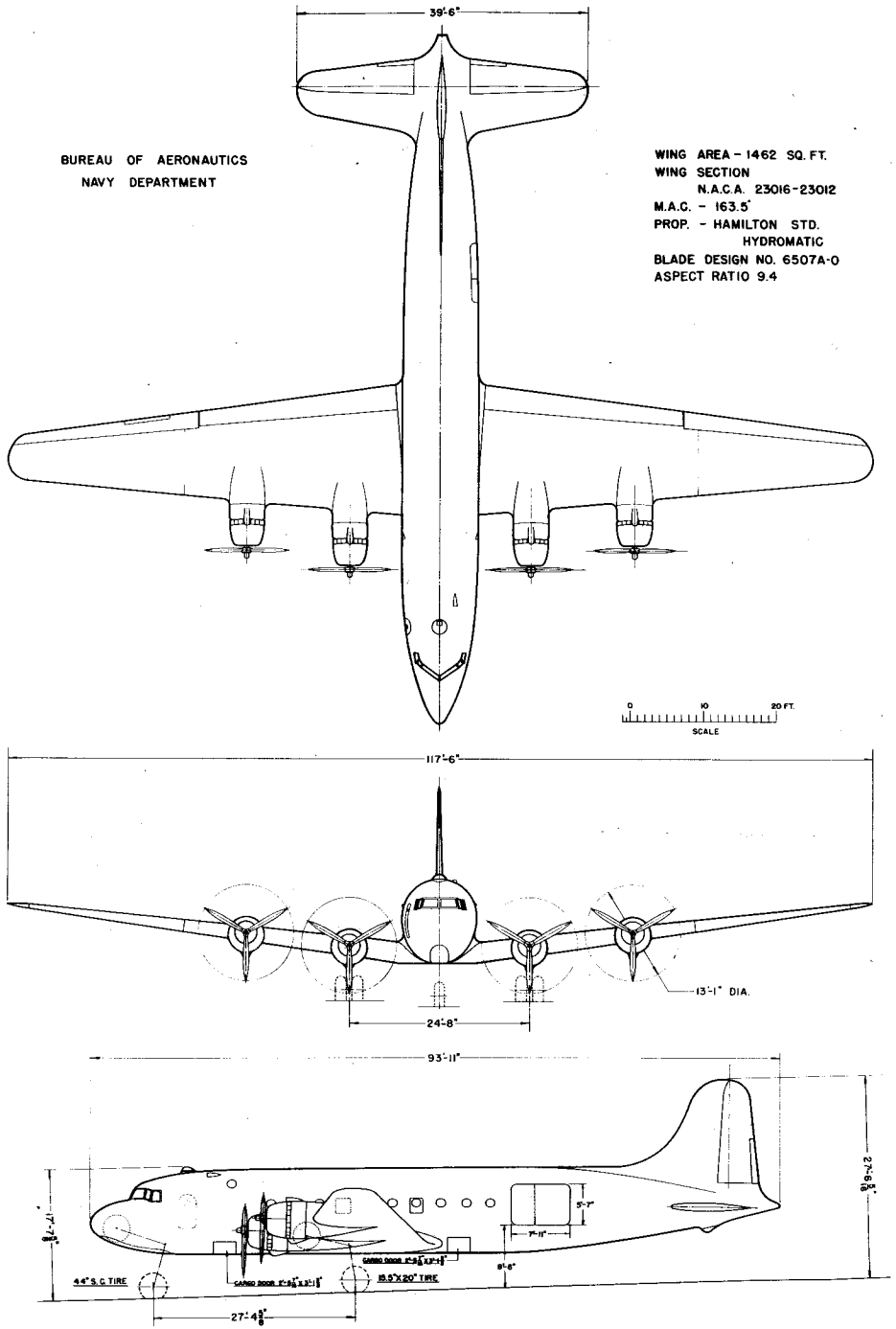


STANDARD AIRCRAFT CHARACTERISTICS

R5D-2 "SKYMASTER"

DOUGLAS



DESCRIPTIVE ARRANGEMENT

MISSION AND DESCRIPTION

The Douglas "Skymaster" R5D-2 troop and cargo transport is the same as the Air Force C-54B.

It is of conventional structure, with a 3-spar center section and single-spar wing. It is fitted with slotted flaps, tricycle landing gear and A-3 or A-3A auto-pilot. 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-2 stems from the commercial DC-4 design. The airplane is used extensively by MATS throughout the world. It entered service use in 1944.

DIMENSIONS

WING AREA.....1,462 sq. ft.
SPAN.....117' - 6"
LENGTH.....93' - 11"
HEIGHT.....27' - 6"
TREAD.....24' - 8"
M.A.C.....13' - 7"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY	38,625	
BASIC	39,558	
DESIGN	62,000	2.5
MAX.T.O.	72,000	*
MAX.LAND	65,000	

*Varies from 2.3 to 2.6, depending on amount of fuel in wings.

All weights are actual.

FUEL AND OIL

Gals.	No. Tanks	Location
900	2	Fuselage
2,820	6	Wing

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

OIL

CAPACITY (Gals.).....138
GRADE.....1100-1120
SPEC.....MIL-O-6082

ELECTRONICS

LF & MHF COMMAND....SCR-274-N
VHF COMMAND.....AN/ARC-1
LIAISON.....AN/ART-13
IFF....SCR-595-A or SCR-695-A
COMPASS.....SCR-269-G and AN/ARN-7
MARKER BEACON.....AN/ARN-8
ALTIMETER.....SCR-718-A and AN/APN-1
LORAN.....AN/APN-4
GLIDE SLOPE REC.....AN/ARN-5
LOCALIZER.....RC-103
LF COMM. REC.....BC-348

POWER PLANT

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

RATINGS

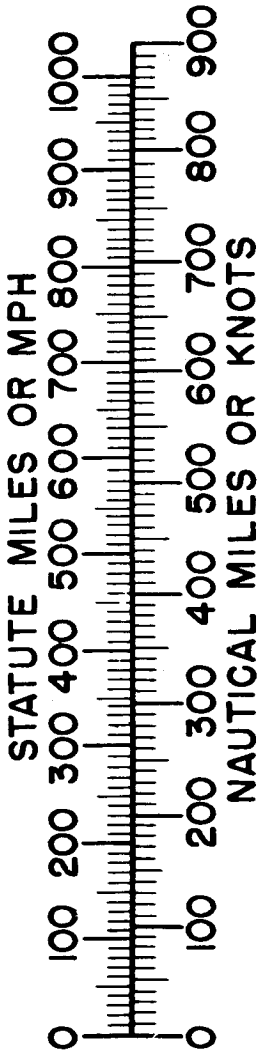
	Bhp	Rpm	Alt.
T. O.	1,450	2,700	S. L.
NORMAL	1,100	2,550	S. L.-7,500'
	1,000	2,550	17,000'

SPEC. NO. A-9021-B

ORDNANCE

MAXIMUM PAY LOAD..29,000 lbs.
CREW.....6
TROOP SEATS.....49
MAXIMUM FLOOR LOAD.... 200 lbs./sq. ft.
BOOM HOIST CAPACITY... 2,000 lbs.
CARGO DOOR.....
Height.....67"
Width.....95"
LITTERS.....36

dard Aircraft Characteristics NAVAER 1335C (REV. 1-49)



PERFORMANCE SUMMARY

LOADING CONDITION		(1) CARGO-TROOP TRANSPORT			
TAKE-OFF WEIGHT	lbs.	72,000			
Fuel	lbs.	20,324			
Bombs	lbs.	—			
Pay Load	lbs.	10,000			
Wing/Power Loading (A) lbs/sq.ft; lbs/bhp.		49.2/18.0			
Stall Speed--Power off	kn.	83.7			
Stall Speed--Power off - No Fuel	kn.	71.0			
Stall Speed--Power on	kn.	77.1			
Maximum Speed/Alt (B)	kn/ft.	244/18,300			
Take-off Distance, deck -- calm	ft.	1,565			
Take-off Distance, deck kn.	ft.	--			
Take-off Distance, 50 Ft. Height	ft.	3,090			
Rate of climb -- sea level (B)	ft/min.	830			
Service Ceiling (B)	ft.	22,700			
Time-to-climb 10,000 ft. (B)	min.	12.9			
Time-to-climb 20,000 ft. (B)	min.	33.2			
Combat Range/V av 1,500 ft.	n.mi/kn.	3,120/141			
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.				

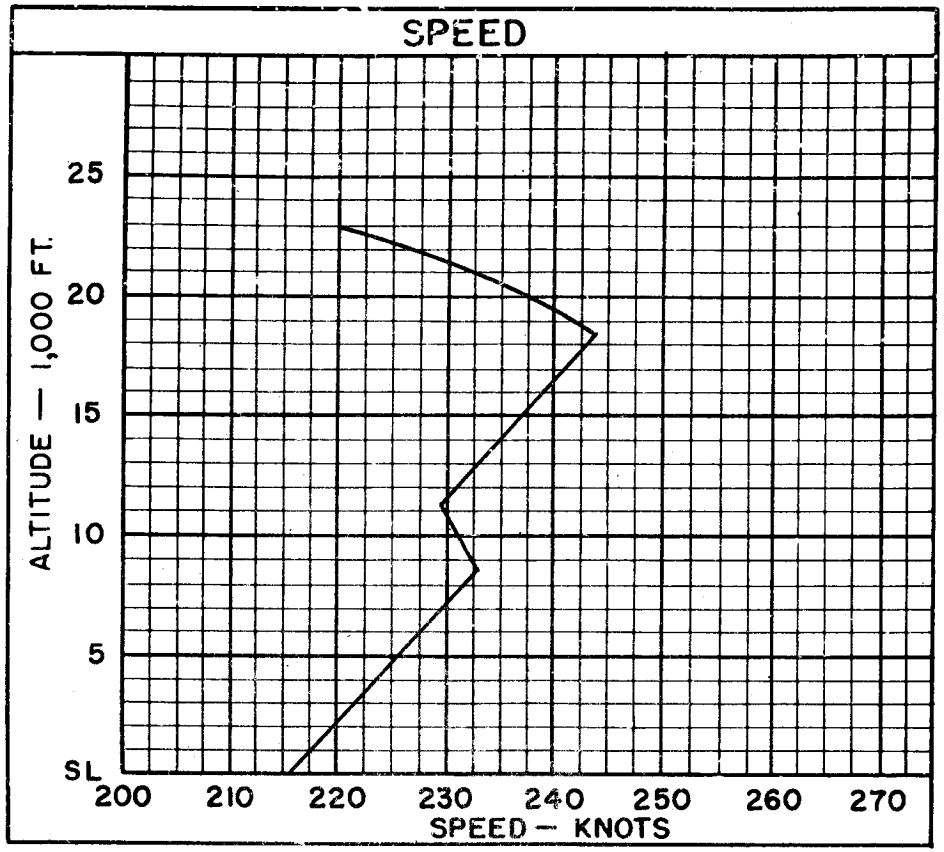
NOTES

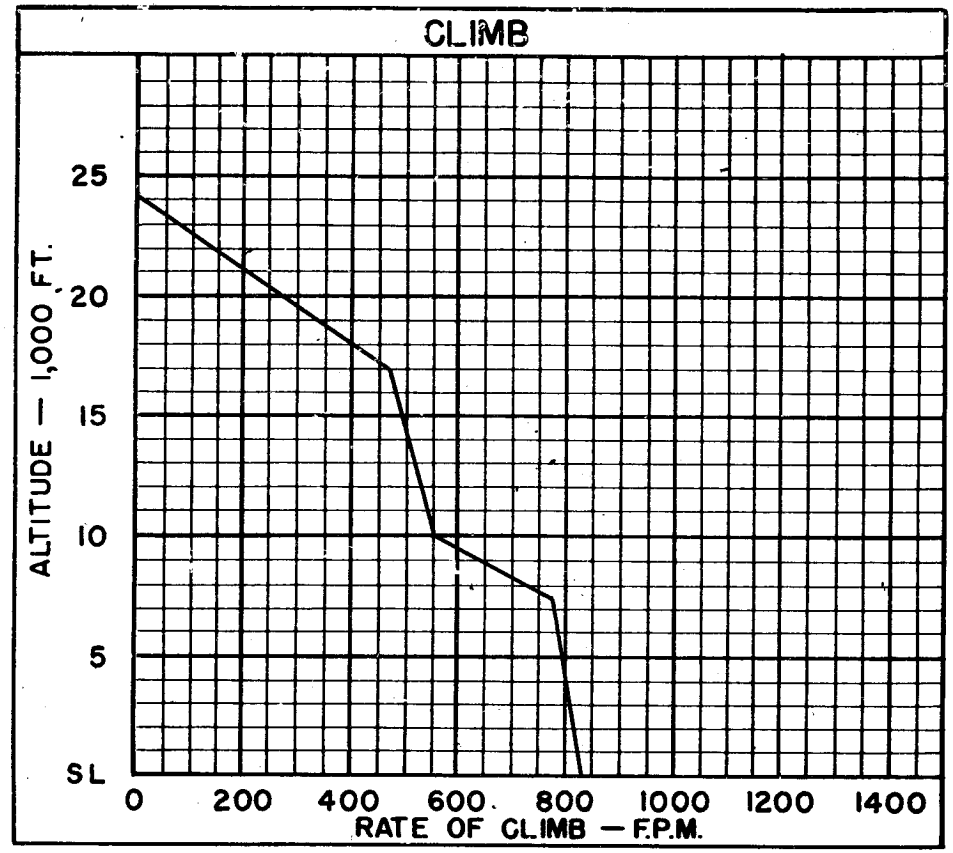
(A) BHP at Maximum Critical Altitude
(B) Normal BHP

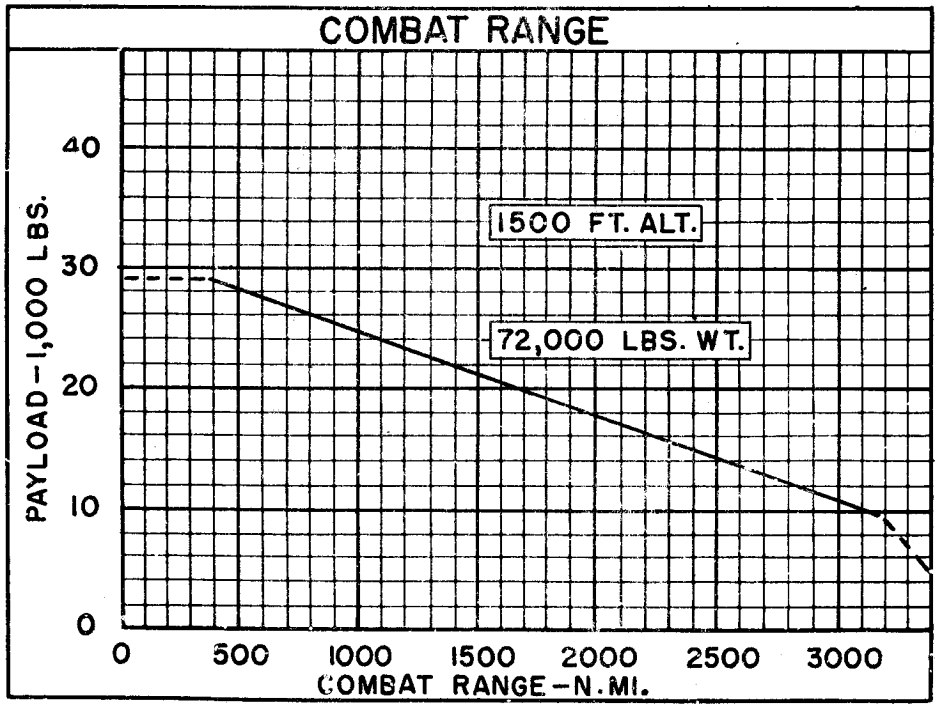
Performance is based on flight test of the R5D-1 airplane.

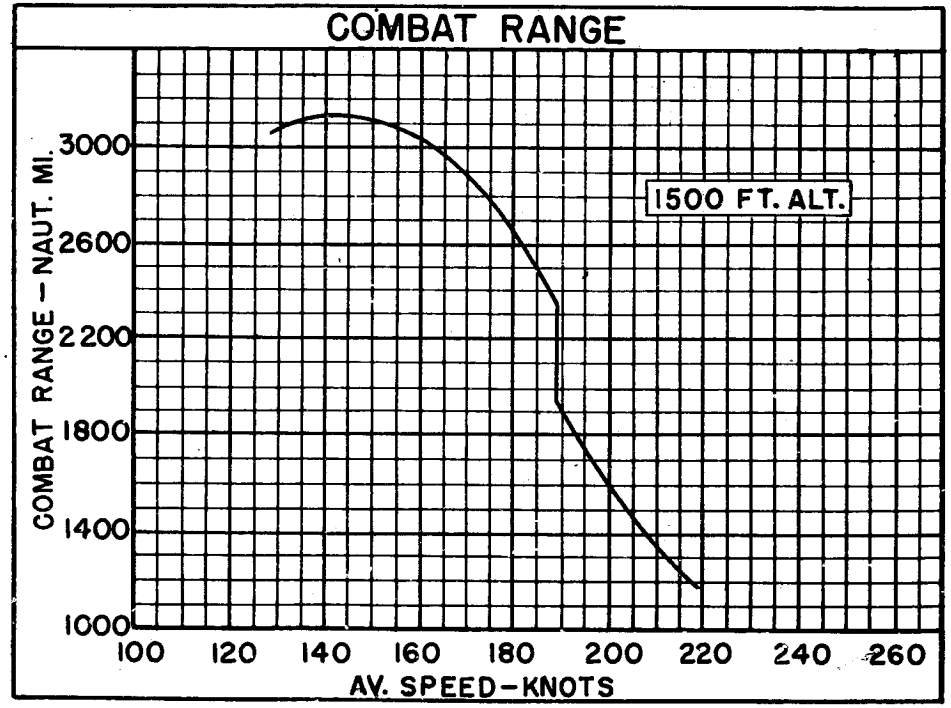
Range is based on engine specification fuel consumption data increased by 5%.

Provisions for 41 troop seats or 28 litter patients are incorporated.









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LOADING CONDITION COLUMN NUMBER

NOTES

Performance includes the effect of de-icer boots. Removal of de-icer boots increase Vmax @ ACA by 4.5 knots and maximum combat range at 1,500 feet by 3%.

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

GROSS WEIGHT	lbs.	72,000
Rate of climb - S. L. - T. O. Power	ft./min.	620
Service ceiling - Normal Power	ft.	15,400

This sheet supersedes previously issued sheet dated 15 August 1948. Reason for reissue: Decrease in gross weight.