STANDARD AIRCRAFT CHARACTERISTICS

R6D-1 "LIFTMASTER"

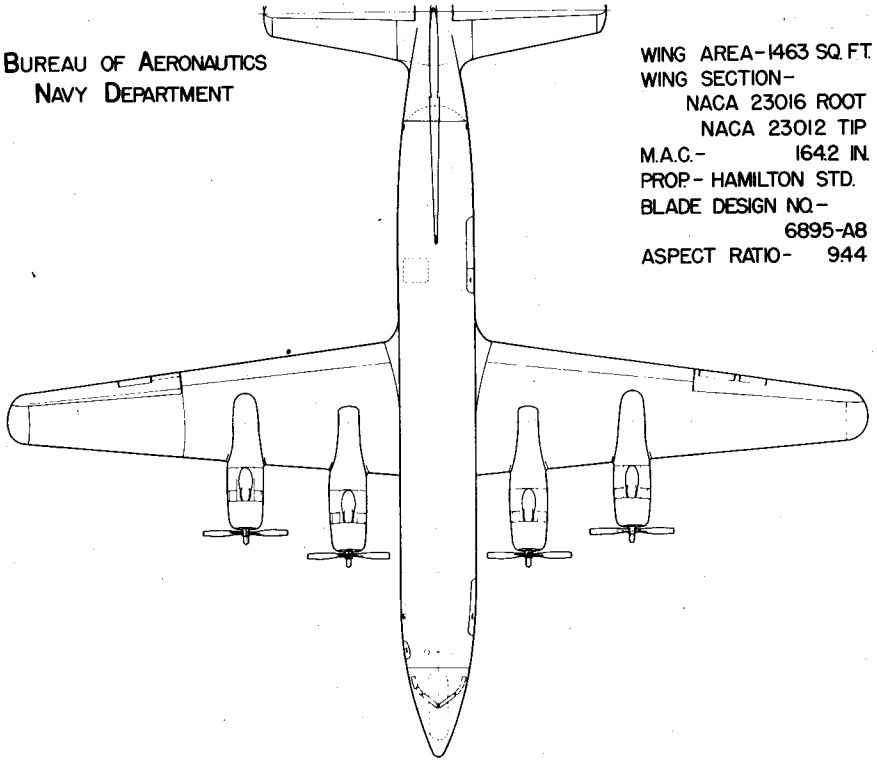
DOUGLAS

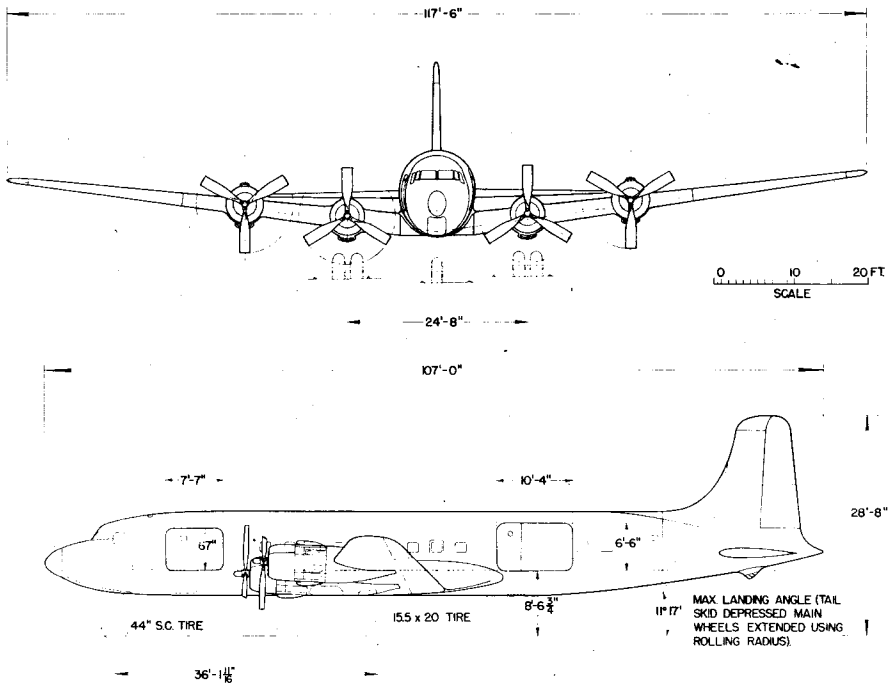
UNCLASSIFIED
DECLASSIFIED

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

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-1463 SQ. FT.
WING SECTION-
NACA 23016 ROOT
NACA 23012 TIP
M.A.C.- 164.2 IN.
PROP.- HAMILTON STD.
BLADE DESIGN NO.-
6895-A8
ASPECT RATIO- 9.44





DESCRIPTIVE ARRANGEMENT

DECLASSIFIED

POWER PLANT

NO. & MODEL....(4) R-2800-52W
MFR.....Pratt and Whitney
SUPERCH.....1 Stage, 2 Speed
PROP. GEAR RATIO.....0.450
PROP. MFR.....Ham. Std.
PROP. DES. NO.....6895-A8
NO. BL./DIA.....3/13'-6"

RATINGS

	Bhp @	Rpm @	Alt.
T. O.			
(Wet)	2,500	2,800	S. L.
(Dry)	2,200	2,800	S. L.
NORMAL	1,900	2,600	7,000'
	1,700	2,600	14,500'

SPEC. NO. N 8145

ACCOMMODATIONS

CREW.....5
TROOPS.....79
LITTERS.....60
ATTENDANTS.....6
PASSENGERS.....76
FLOOR LOAD....200 lbs./sq.ft.
CARGO SPACE..
Main 4,160 cu. ft.
Lower 517 cu. ft.
Total 4,677 cu. ft.

MAXIMUM PAY LOAD..31,611 lbs.

MISSION AND DESCRIPTION

The R6D-1 airplane is a long range cargo-personnel transport intended for use by MATS and for fleet logistic supply. It is similar to the commercial DC-6A and the USAF C-118A.

The airplane is of conventional structure with pressurized cabin. Two-spar wing carries double-slotted flaps. The standard configuration is cargo transport, but seats and/or litters and troop benches may be installed. Wing and tail thermal anti-icing, electric prop anti-icing, and windshield and carbureter anti-icing are provided.

Fuel dump valves and reversible propellers are fitted. Ten gallons of injection fluid are provided for each engine. Crew of five is the normal complement.

First flight -- flight test, August 1951
Entering service use -- September 1951

DIMENSIONS

WING AREA.....1,463 sq. ft.
SPAN.....117' - 6"
LENGTH.....107' - 0"
HEIGHT.....28' - 8"
TREAD.....24' - 8"
M.A.C.....13' - 8"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY	54,995	
BASIC	56,505	
DESIGN	103,000	2.5
MAX.T.O.	112,000*	2.3
MAX.LAND	112,000	

All weights are estimated.

*Limited by one-engine out rate of climb in take-off configuration.

FUEL AND OIL

Gals.	No. Tanks	Location
680	4	Outer Panel Wing
4,700	6	Cent. Sect.

FUEL GRADE.....115/145
FUEL SPEC....MIL-F-5572

OIL

CAPACITY (Gals.).....190
GRADE.....1100
SPEC.....MIL-O-6082

ELECTRONICS

VHF.....AN/ARC-1, -1A
HF TRANSCEIVER.....AN/ART-13
HF REC. EQUIP.AN/ARR-15, -15A
RANGE RECEIVER....R-23A/ARC-5
ALTIMETER.....AN/APN-1, -22
ALTIMETER.....SCR-718C
LORAN REC.EQUIP..AN/APN-4,-70
MARKER BEACON.....AN/ARN-12
IFF.....AN/APX-6
VOR COURSE.....AN/ARN-21
(To be Service Installed)

(See NOTES)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) TRANSPORT	(2) TRANSPORT	(3) TRANSPORT (Max. Cargo)	(4) TRANSPORT (Max. Range)	
TAKE-OFF WEIGHT	lb.	103,000	103,000	112,000	112,000	
Fuel	lb.	18,726	32,280	22,100	32,280	
Payload (Cargo)	lb.	25,985	11,989	31,611	20,989	
Wing loading	lb./sq.ft.	70.4	70.4	76.6	76.6	
Stall speed - power-off	kn.	89.2	89.2	93.1	93.1	
Take-off run at S.L. - calm	ft.	2,350	2,350	2,920	2,920	
Take-off run at S.L. kn. wind	ft.	--	--	--	--	
Take-off to clear 50 ft. - calm	ft.	3,750	3,750	4,550	4,550	
Max. speed/altitude (1)	kn./ft.	303/16,700	303/16,700	297/16,700	297/16,700	
Rate of climb at S.L. (1)	fpm	1,060	1,060	870	870	
Time: S.L. to 10,000 ft. (1)	min.	10.4	10.4	12.9	12.9	
Time: S.L. to 20,000 ft. (1)	min.	29.4	29.4	40.0	40.0	
Service ceiling (100 fpm) (1)	ft.	21,900	21,900	19,900	19,900	
Combat range	n.mi.	1,870	3,765	2,000	3,320	
Average cruising speed	kn.	208	204	214	210	
Cruising altitude(s)	ft.	10,000	10,000	10,000	10,000	
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	lb.	85,824	72,795	91,936	81,885	
Fuel	lb.	1,550	2,075	2,036	2,165	
Stall speed - power-off	kn.	81.5	75.1	84.4	79.6	
Stall speed - with approach power	kn.	73.5	67.7	76.1	71.8	

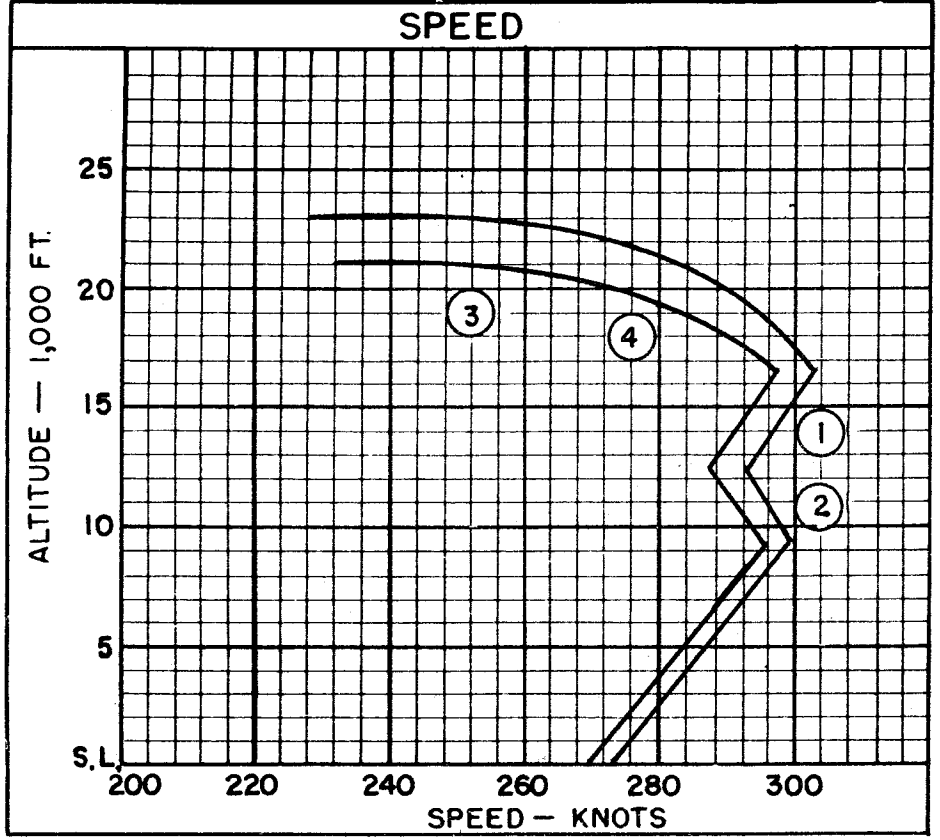
NOTES

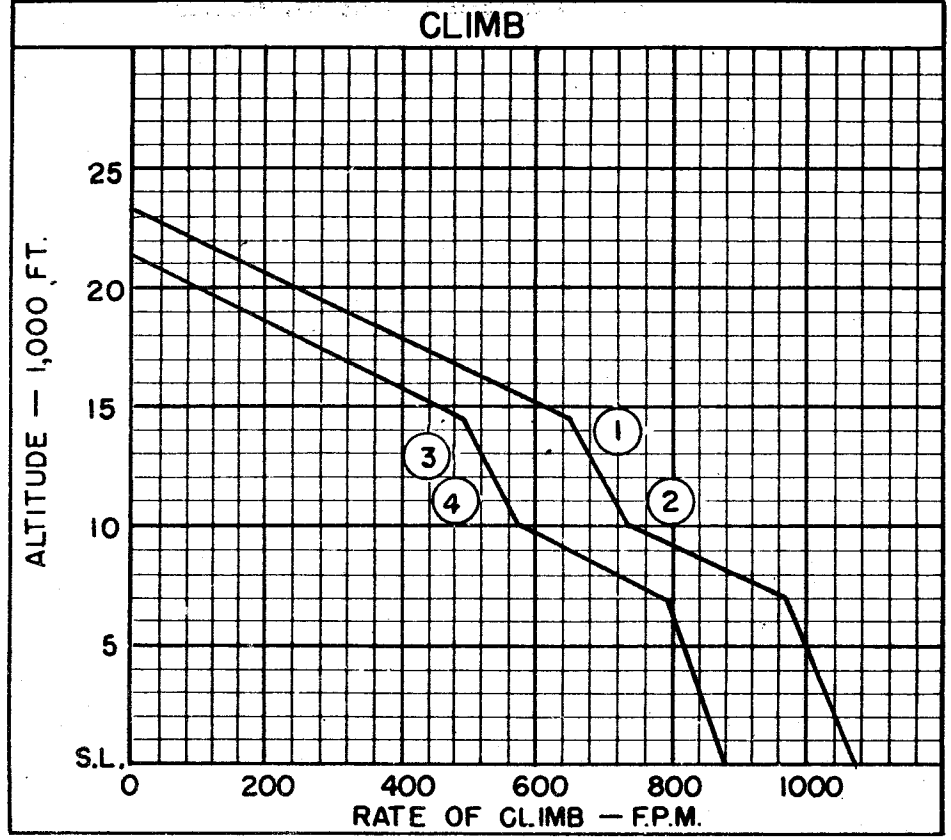
(1) Normal Power

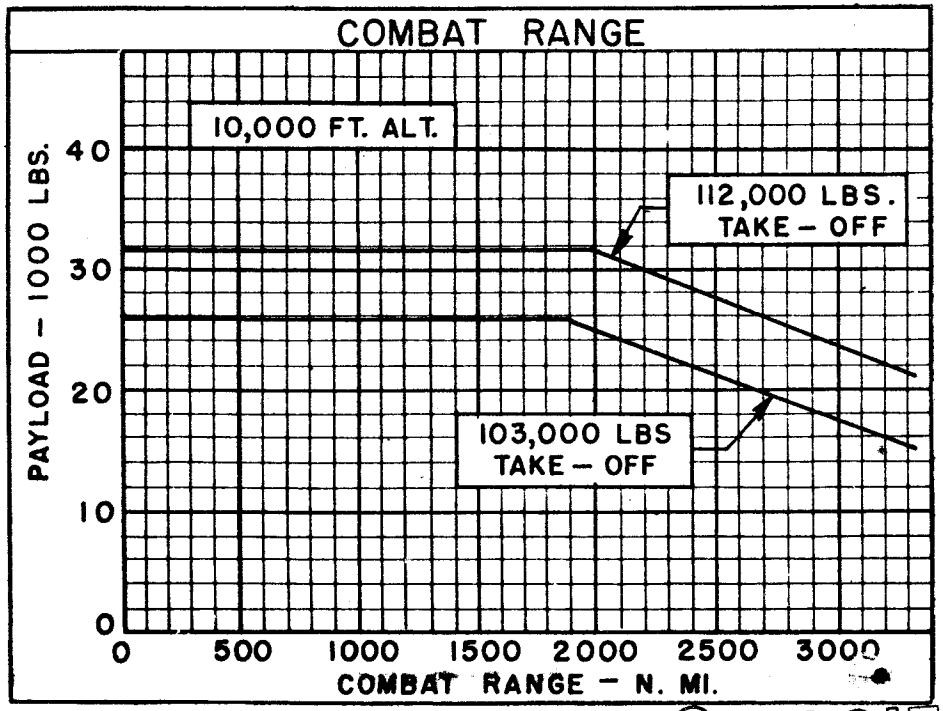
Performance is calculated.

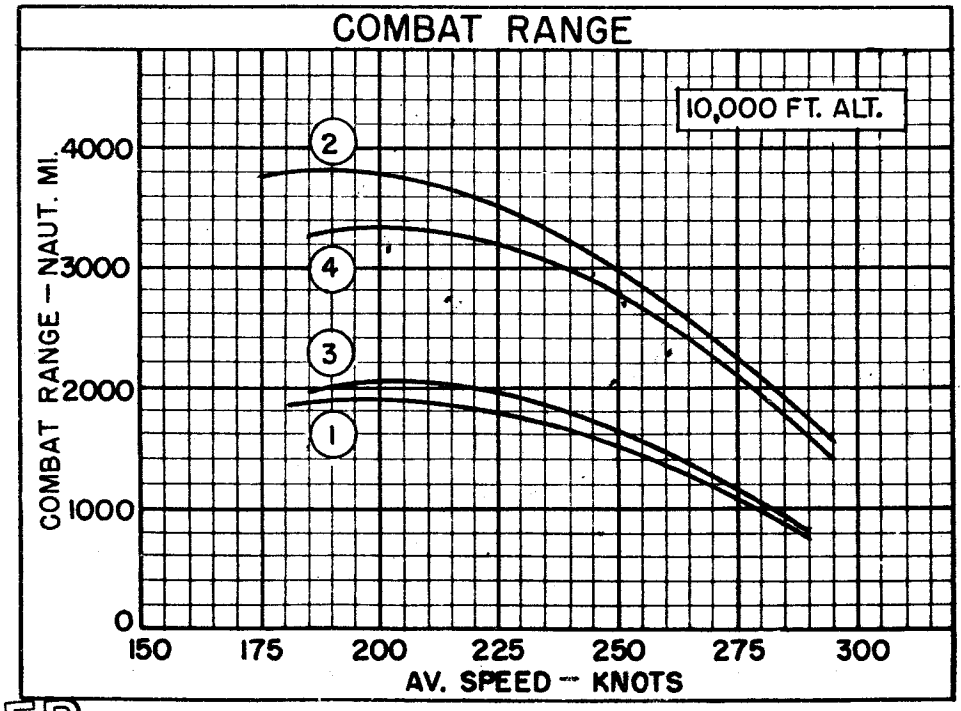
Range is based on engine manufacturer's fuel consumption data increased 5%. A reserve of 5% of initial fuel load plus fuel for 30 minutes at V long range at sea level is provided.

The commercial version of the R6D-1 has been CAA certificated at 103,000 pounds.









LOADING CONDITION COLUMN NUMBER

NOTES

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

Gross Weight	lbs.	103,000	112,000
Rate of Climb -- Sea Level -- T. O. Power (Wet)	ft./min.	990	820
Service Ceiling -- Normal Power	ft.	16,000	12,500

ELECTRONICS (Continued)

The following equipment were not in the first eleven aircraft. They are to be backfitted at first overhaul.

UHF.....AN/ARC-27
VISUAL OMNI-RANGE.....AN/ARN-14A
DME.....AN/APN-34
SEARCH RADAR.....AN/APS-42
CONTROL INDICATOR GROUP.....AN/APA-85

The following equipment are commercial equivalents installed in the first eleven aircraft. They are to be backfitted at first overhaul.

ADF....(Replaces Bendix MN-62A).....AN/ARN-6
GLIDE PATH REC.(Replaces Collins 51V-1).AN/ARN-18

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