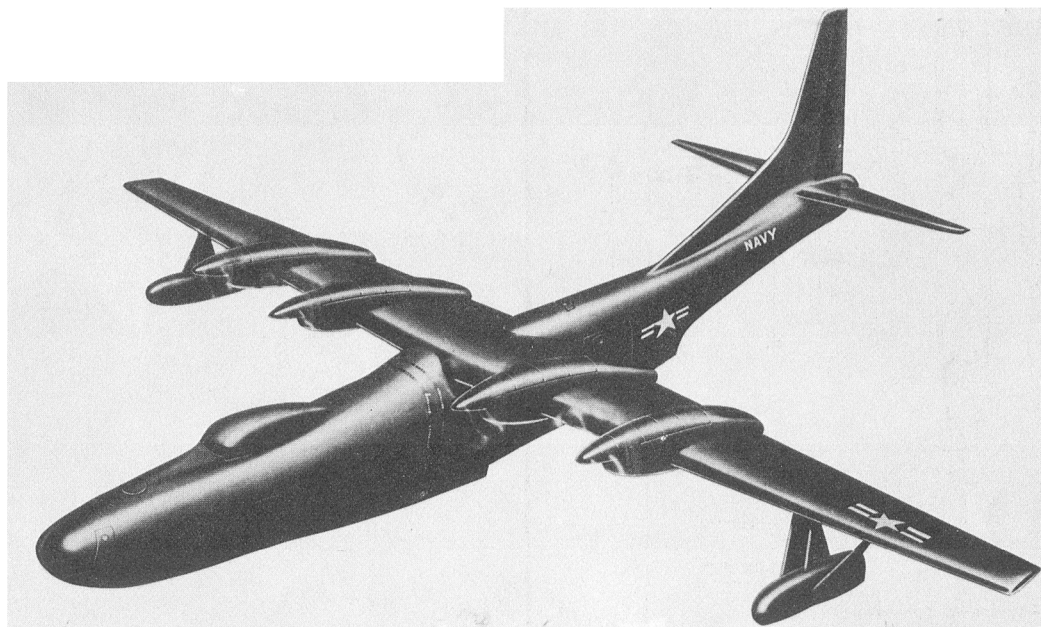


DECLASSIFIED

Transport
SERVICE

DECLASSIFIED IAW OPNAVINST 5513.10 SERIES 1, ~~EXEMPT~~ (S)
BY T-G. Hill ON 12/19/96



STANDARD AIRCRAFT CHARACTERISTICS

R3Y-1

CONSOLIDATED
DECLASSIFIED

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

1 APRIL 1952

R3Y-1

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BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 2,300 SQ. FT.
WING SECTION -
CENTERLINE - NACA 1420
SPRUE - NACA 4417
 - NACA - 4418
MAC - 189.3
PROP. AEROPRODUCTS
BLADE DESIGN NO. -
 F780 - F40A3-198-1985
 AFT - F40A3-198L-20
HALL DISPLACEMENT
 (at 64 NACA FL.) - 906,000 LBS
WING TIP FLOATS DISPLACEMENT
 (at 64 NACA FL.) - 10,368 LBS

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

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POWER PLANT

NO. & MODEL.....(4) T40-A-10
MFR.....Allison
PROP. GEAR RATIO.....0.0638
PROP. MFR.....Aeroproducts
PROP. DES. NO.....AD8664FN-44A
NO. BL./DIA.....6/15 Ft.

RATINGS

All ratings Static Sea Level

	Smp	Lbs.	Rpm
T. O.	5,060	1,162	14,300
MIL.	5,120	1,013	13,700
NORM.	4,525	970	13,700
SPEC. NO. 300-A			

ACCOMMODATIONS

CREW (On Duty).....5
(Off Duty).....2
PASSENGERS OR TROOPS.....80
LITTER PATIENTS.....72
ATTENDANTS.....8

SPACE DIMENSIONS:

LENGTH.....68' - 2"
MAX. WIDTH.....9' - 6"
LIMIT FLOOR LOADS:
LOCAL.....300 lb./ft²
RUNNING.....750 lb./ft²
CARGO DOOR.....83" x 120"

MAX. PAY LOAD.....48,000 lbs.

MISSION AND DESCRIPTION

The principal mission of the R3Y-1 airplane is to transport cargo, passengers, troops or litter patients.

The model R3Y-1 airplane is a development of the model XP5Y-1 flying boat. It is a high wing, full cantilever monoplane, having two fixed auxiliary floats and a single tail. The hull is of high length/beam ratio design and incorporates a large cargo door on the after port side.

The cargo floor is equipped for cargo tie-down and handling and includes attachment for seats for 80 passengers or troops, or litters for 72 patients and seats for 8 medical attendants. Maximum cargo load is 48,000 pounds.

Slotted type flaps are installed at the wing trailing edge between the hull and the inboard end of each aileron.

Mock-up date -- November 1950
First flight -- January 1953
Service use -- June 1953

DIMENSIONS

WING AREA.....2,100 sq. ft.
SPAN.....145' - 10"
LENGTH*.....142' - 6"
HEIGHT*.....51' - 5"
M.A.C.....15' - 8"

* On Beaching Gear

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	80,650.....	
BASIC.....	81,979.....	
DESIGN.....	145,500.....	3.0
MAX.T.O.....	165,000*.....	2.5
MAX.LAND....	165,000**.....	

All weights are calculated.

* Limited by hull strength
** Sheltered water

FUEL AND OIL

Gals.	No. Tanks	Location
5,500	2	L.Wing,S.S.
5,500	2	R.Wing,S.S.

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

OIL

CAPACITY (Gals.).....81
SPEC.....MIL-L-7808

ELECTRONICS

VHF.....AN/ARC-1 or -1A
UHF TRANS. REC.....AN/ARC-27A
COMM. TRANS.....AN/ART-13
RANGE REC.....R-23A/ARC-5
HF REC. EQUIP.....AN/ARR-15
or AN/ARR-15A
MF AUTO.RADIO COMP...AN/ARN-6
BEACON REC.....AN/ARN-12
VISUAL OMNI-RANGE..AN/ARN-14A
SEARCH RADAR.....AN/APS-42
ALTIMETER-LCW ALT...AN/APN-1
ALTIMETER-HIGH ALT...SCR-718C
(See NOTES)

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PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION		(1) CARGO	(2) PERSONNEL 80 Passengers	(3) MAX. CARGO	(4) MAX. FUEL
TAKE-OFF WEIGHT	lb.	145,500	145,500	165,000	156,284
Fuel	lb.	50,000	40,164	32,348	66,000
Payload	lb.	10,848	16,800	48,000	6,282
Wing loading	lb./sq.ft.	69.2	69.2	78.5	74.5
Stall speed - power-off	kn.	92	92	98	95.5
Take-off Time - calm	sec.	34	34	50	42
Take-off run at S.L.	kn. wind ft.	--	--	--	--
Take-off to clear 50 ft. - calm	ft.	--	--	--	--
Max. speed/altitude	(1) kn./ft.	308/23,000	308/23,000	299/21,000	303/22,000
Rate of climb at S.L.	(1) fpm	2,310	2,310	1,910	2,080
Time: S.L. to 20,000 ft.	(1) min.	12.3	12.3	16.0	14.0
Time: S.L. to 30,000 ft.	(1) min.	25.3	25.3	43.2	32.1
Service ceiling (100 fpm)	(1) ft.	34,800	34,800	30,300	32,300
Combat range	n.mi.	2,620	1,940	1,240	3,470
Average cruising speed	kn.	294	297	300	293
Cruising altitude(s)	ft.	33,000/37,000	33,000/36,800	29,000/34,200	30,400/37,500
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	lb.	99,740	109,384	136,739	95,324
Fuel	lb.	4,240	4,048	4,087	5,040
Stall speed - power-off	kn.	76.4	80	89.4	74.6
Stall speed - with approach power	kn.	74.7	78.3	87.5	73

NOTES

(1) Normal Power

Performance is calculated.

Range is based on engine manufacturer's fuel consumption data increased 5%.

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NAVAER-1335D (Rev. 10-51)

R3Y-1

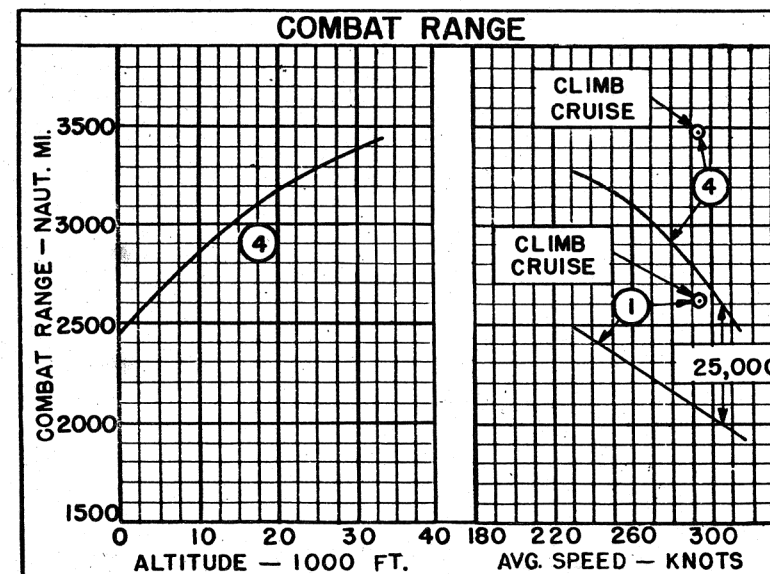
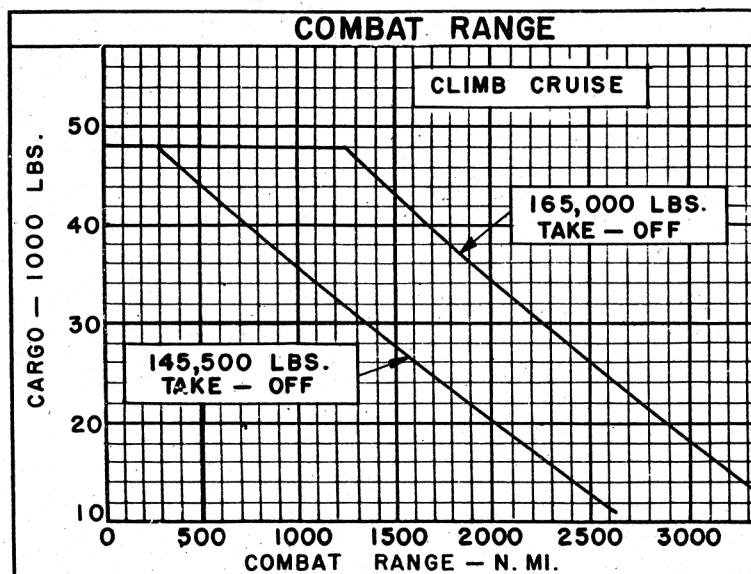
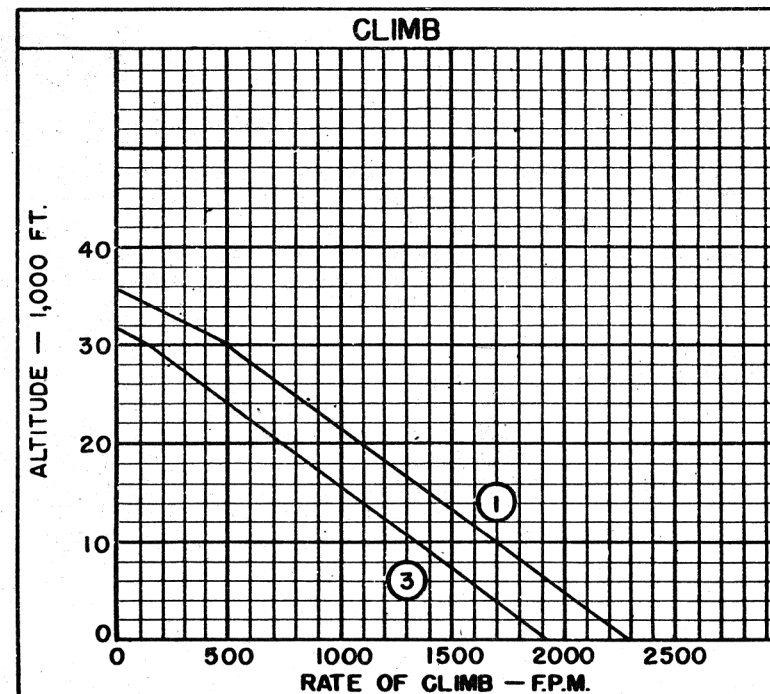
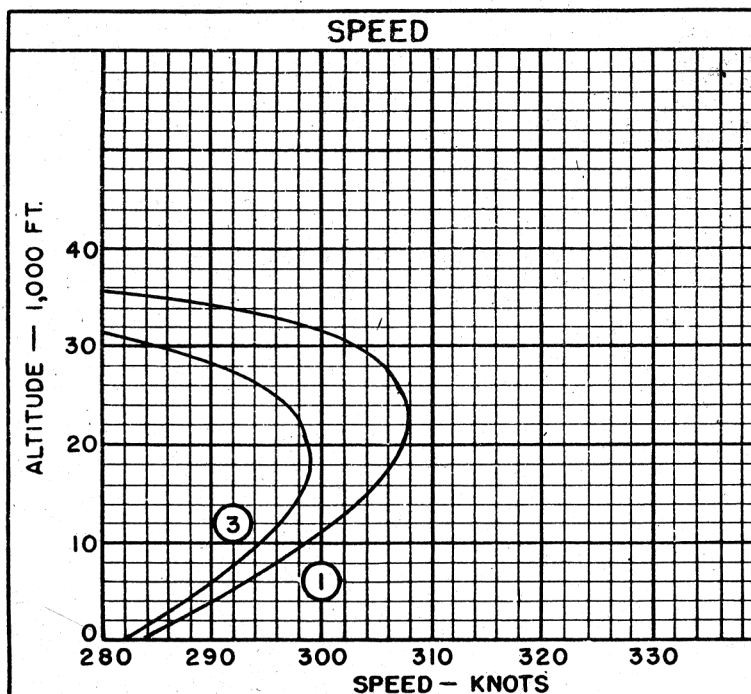
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Standard Aircraft Characteristics NAVAER 1335E (REV. 2-50)



○ LOADING CONDITION COLUMN NUMBER

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NOTES

TRANSPORT COMBAT RANGE PROBLEM (GAS TURBINE)

WARM-UP, TAXI, TAKE-OFF: 5 minutes at normal power.

CLIMB: On course to cruising ceiling at normal power. (Cruising ceiling = altitude for 300 ft./min. rate of climb at normal power.)

CRUISE: At V for long range at cruising ceiling. Cruise with optimum number of power units operating.

RESERVE: 30 minutes at V for maximum endurance at Sea Level plus 5% of initial fuel load.

COMBAT RANGE = CLIMB + CRUISE

ELECTRONICS (Continued):

LORAN.....AN/APN-14
INTERPHONE.....AN/AIC-5B
VISUAL HOMING.....AN/ARN-21
(Planned Service Installation)
IFF.....AN/APX-6

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Standard Aircraft Characteristics NAVAER 1335F (REV. 1-49)~~CONFIDENTIAL~~~~DECLASSIFIED~~