

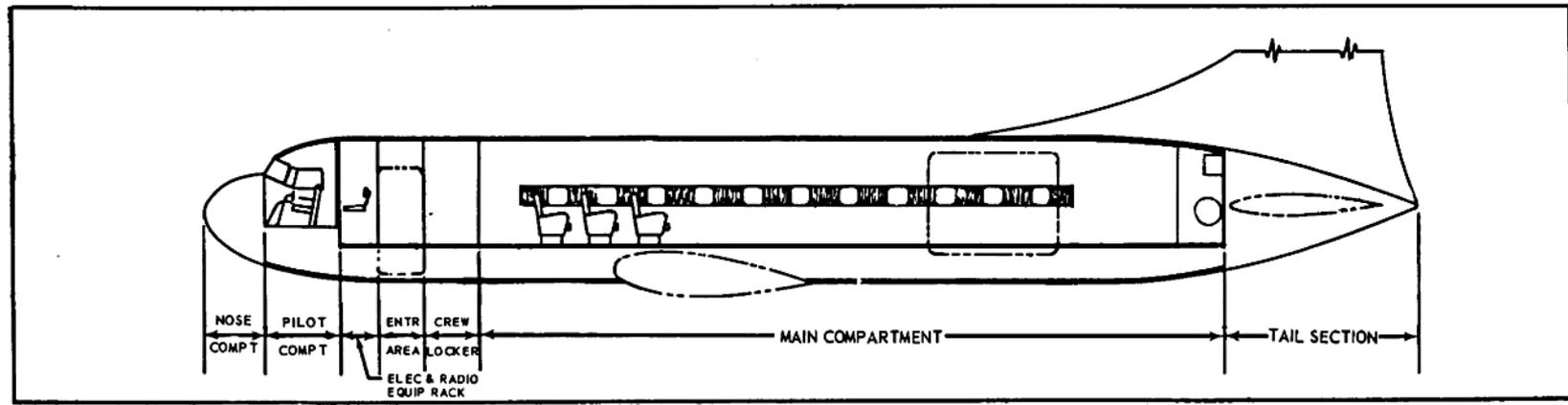
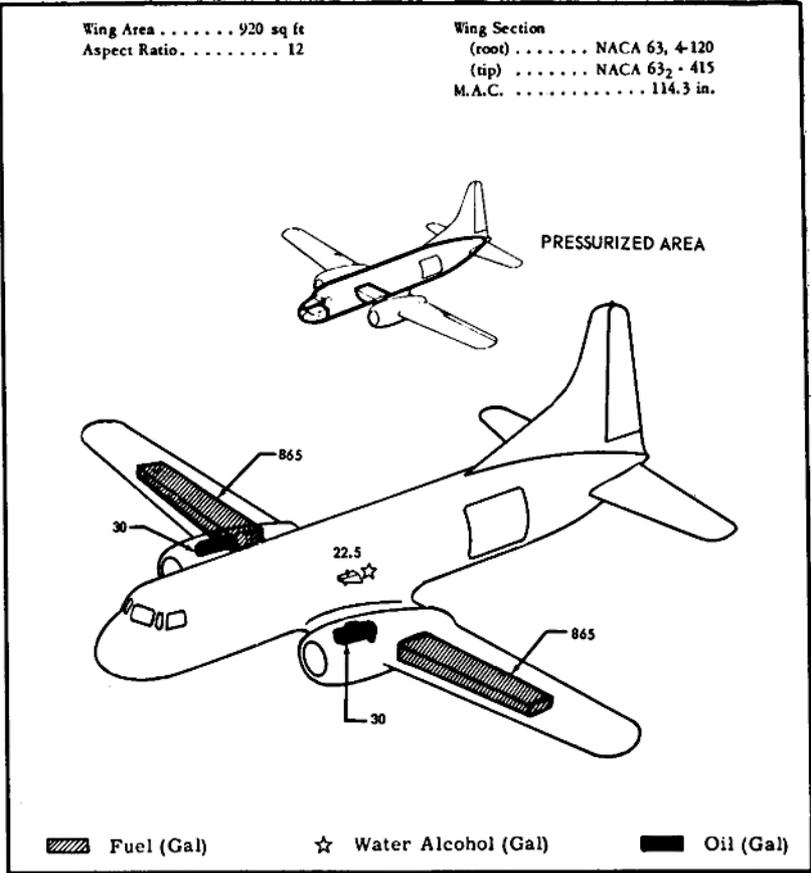
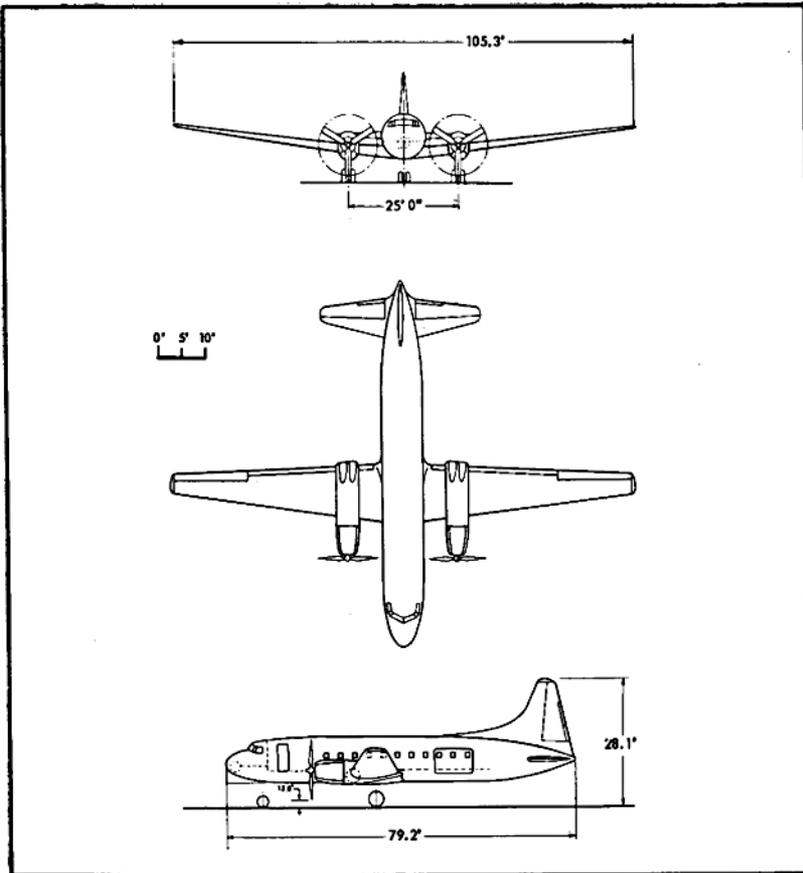


Standard Aircraft Characteristics NAVAR 1335A (REV. 1-55)

STANDARD AIRCRAFT CHARACTERISTICS

R4Y-1 (C-131)

CONVAIR



Standard Aircraft Characteristics NAVAR 1335P (Rev. 3-55)

POWER PLANT

NO. & MODEL.....(2) R-2800-52W (Mod)
 MFR.....Pratt & Whitney
 ENGINE SPEC. NO.....N-8145-A
 SUPERCH.....1 stg, 2 spd
 RED GEAR RATIO.....4.50:1
 AUGMENTATION.....Water/Alcohol
 PROP. MFR.....Hamilton Standard
 PROP. TYPE.....Hydro F.F., Rev'r
 BLADE DESIGN NO.....6895E-8
 NO. BLADE.....3
 PROP. DIA.....13' 6"

RATINGS

	<u>BHP</u>	<u>RPM</u>	<u>ALT.</u>	<u>MIN.</u>
T.O.	*2500	2800	2500	5
	2200	2800	4500'	5
NORM.	1900	2600	7000'	Cont.
	1700	2600	14,500'	Cont.

* Wet

CARGOINSIDE CLEARANCE

LENGTH (OVERALL).....48' 2.4"
 WIDTH (MAX) (FLOOR LEVEL).....7' 9.6"
 HEIGHT (MAX).....6' 4.3"

MAIN CARGO DOOR

HEIGHT (MAX).....6' 0"
 WIDTH (MAX).....10' 0"
 HEIGHT ABOVE GROUND.....7' 11.7"

LIFT FLOOR LOAD

OVERALL.....300 lb/sq ft

PERSONNEL

44 passenger seats or 4 passenger
 seats with 21 litters.

MISSION AND DESCRIPTION

The primary mission of the R4Y-1 is the transporting of cargo.

The airplane is a twin-engine, low-wing landplane incorporating tricycle type landing gear, fowler flaps, conventional control surfaces and reciprocating engines. Heating, ventilating and cabin pressurization equipment is provided and a thermal type anti-icing system is installed for wing and tail surface leading edges.

A large loading door is provided to facilitate loading of equipment and cargo. Provisions are made for 44 passenger seats or 4 passenger seats with 21 litters.

DEVELOPMENT

First Flight.....July 1955
 Service Use.....August 1955

WEIGHTS

<u>LOADING</u>	<u>LBS.</u>	<u>L.F.</u>
EMPTY.....	30,684	
BASIC.....	30,950	
DESIGN.....	47,000	3.42
COMBAT.....	38,669	
MAX. T.O.....	47,000	
DESIGN LANDING.....	46,500	

FUEL AND OIL

<u>LOCATION</u>	<u>NO. TANKS</u>	<u>GAL.</u>
Wing	2	1,730
GRADE.....	115/145	
SPECIFICATION.....	MIL-F-5572	

OIL

NACELLE (GALS.)60
 GRADE.....1100
 SPECIFICATION.....MIL-L-6880

DIMENSIONS

WING
 SPAN.....105'-4"
 AREA.....920 sq.ft.
 INCIDENCE (ROOT).....4° 0'
 (TIP).....0° 47'
 DIHEDRAL (INBOARD).....4° 50'
 (OUTBOARD).....6° 30'
 SWEEPBACK (LE).....7° 0'
 LENGTH.....79'-2"
 HEIGHT.....28'-1.64"
 TREAD.....25'-0"
 PROP.GRD. CLEARANCE.....0'-12"

ELECTRONICS

FLIGHT INTERPHONE.....MI-32A
 SERVICE INTERPHONE.....LA-17A
 PUBLIC ADDRESS.....MI-36A
 STATIC DISCHARGERS.....AN/ASA-3
 GLIDE PATH RECEIVER.....51V-1 or -2
 RADIO COMPASS.....MN-62A
 HF COMMAND.....Collins 185-4
 VHF COMMAND.....TA-18BB & 51R-3
 MARKER BEACON.....MN-61B
 OMNI-DIRECTIONAL.....51R-3
 RADIO (UHF) (CFE Ant).....AN/ARC-27A
 RADAR IFF.....AN/APX-6
 RADAR ALTIMETER.....AN/APN-22
 CODER GROUP (except video
 ...coder).....AN/APA-89

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) BASIC MISSION CARGO TRANSPORT (MAX. FUEL)	(2) CARGO TRANSPORT (MAX. FUEL)	(3) PERSONNEL TRANSPORT	(4) EVACUATION TRANSPORT	
TAKE-OFF WEIGHT	lb.	47,000	47,000	47,000	47,000
Fuel	lb.	10,380	2,000	5,912	9,724
Fayload	lb.	4,171	12,746	7,480	4,080
Wing loading	lb./sq.ft.	51.1	51.1	51.1	51.1
Stall speed - power-off	kn.	75.5	75.5	75.5	75.5
Take-off run at S.L. - calm	(A) ft.	2,450	2,450	2,450	2,450
Take-off run at S.L. kn. wind	ft.	--	--	--	--
Take-off to clear 50 ft. - calm	(A) ft.	3,430	3,430	3,430	2,430
Max. speed/altitude 17,000	(B) kn./ft.	267	267	267	267
Rate of climb at S.L.	(B) fpm.	1,330	1,330	1,330	1,330
Time: S.L. to 10,000 ft.	(B) min.	8.7	8.7	8.7	8.7
Time: S.L. to 20,000 ft.	(B) min.	21.5	21.5	21.5	21.5
Service ceiling (100 fpm)	(B) ft.	25,500	25,500	25,500	25,500
Combat range	(C) n.mi.	2,089	174	1,029	1,929
Average cruising speed	kn.	163.3	168.8	166.8	164
Cruising altitude(s)	ft.	5,000	5,000	5,000	5,000
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.	37,433	45,476	41,731	38,065
Fuel	lb.	813	476	643	789
Stall speed - power-off	kn.	71	74	73	71.5
Stall speed - with approach power	kn.	85.2	88.8	87.6	85.8

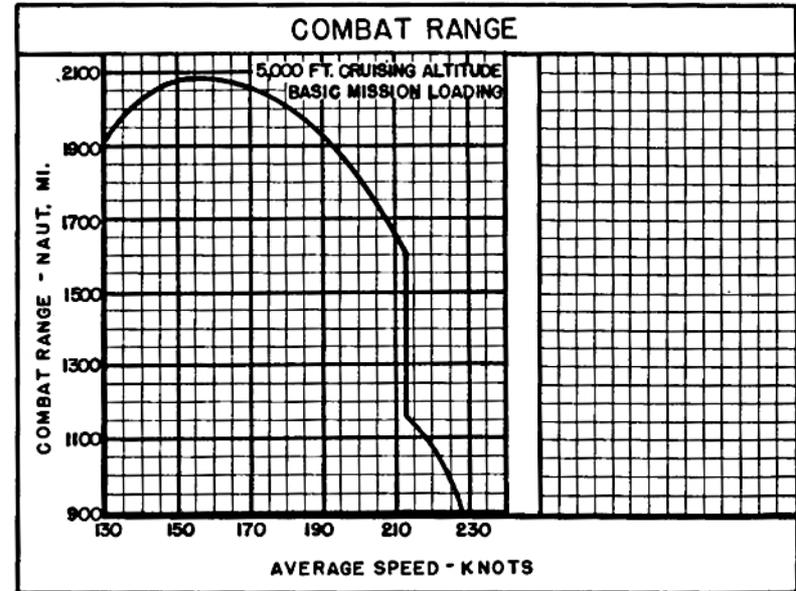
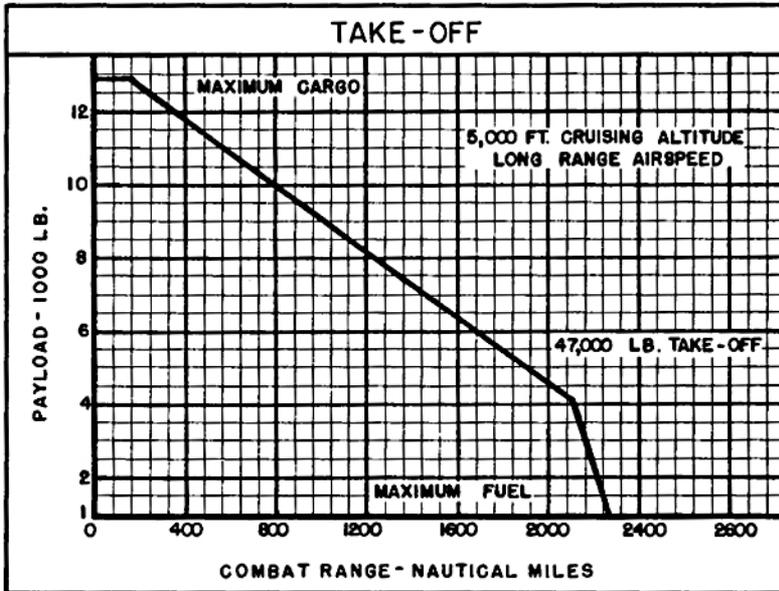
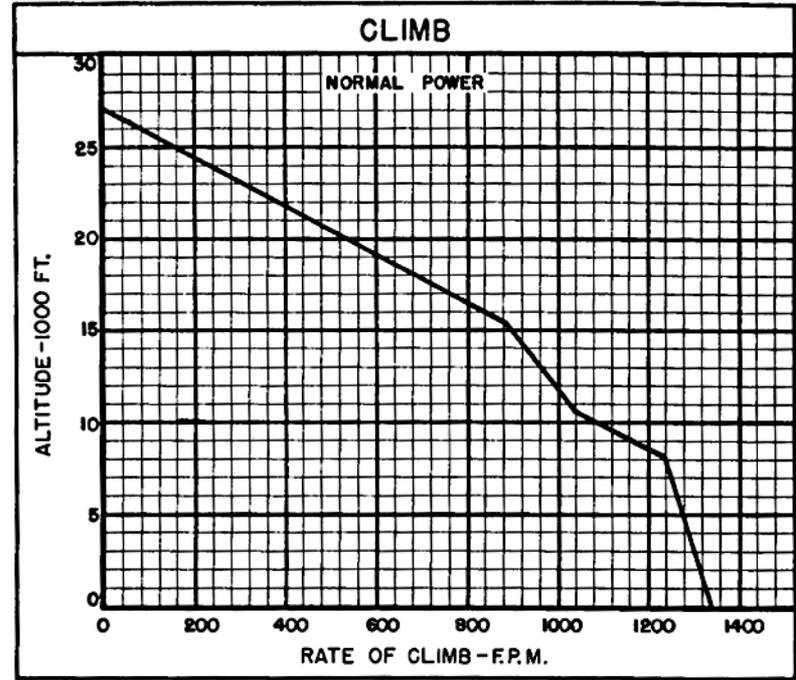
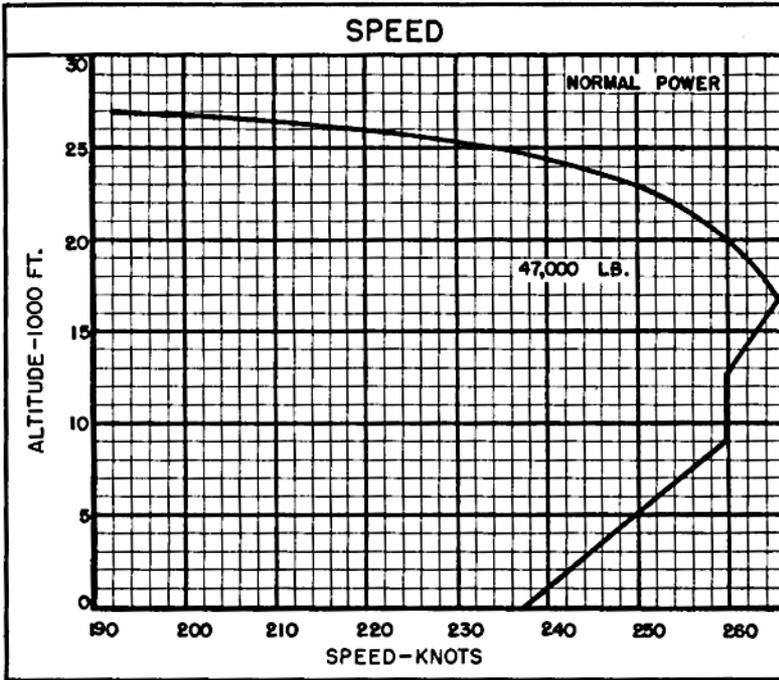
NOTES

(A) Take-off power (wet).

(B) Normal Power.

(C) Detailed description of range missions on NOTE PAGE.

Performance Basis: Estimated data and flight test data not substantiated by BuAer
Performance is based on powers shown on NOTE PAGE,
"GENERAL DATA".



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

NOTES

FORMULA: RANGE MISSIONS 1 THRU 4

Warm-up, take-off, climb on course to cruising altitude of 5,000 ft. at normal power, cruise out at long range speeds until only reserve fuel remains. Range free fuel allowances are 10 minutes of normal power for warm-up and take-off, plus fuel for 30 minutes at speeds for long range at sea level and 5% of initial fuel reserve.

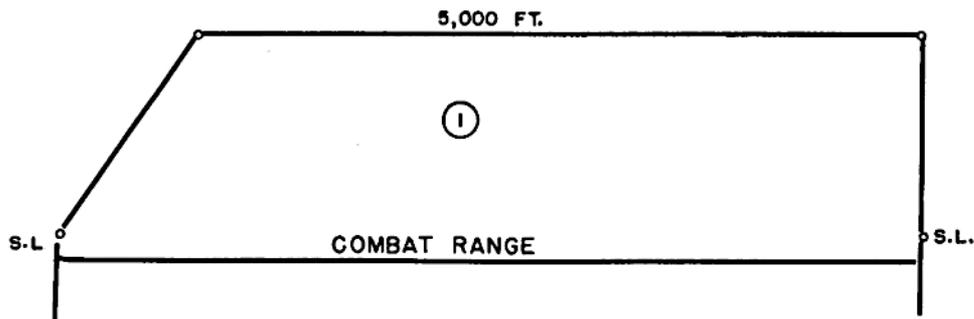
GENERAL DATA:

Power values used in performance calculations are as follows:

(2) R-2800-52W (Mod)

	BHP	RPM	CLIMB CRIT. ALT. *	LEVEL FLIGHT CRIT. ALT. *	MIN.
T.O.: Lo	+3,500	2,800			5
Lo	2,200	2,800			5
NORM.: Lo	1,900	2,600	7,700	9,000	Cont.
Hi	1,700	2,600	15,300	16,500	Cont.

+ wet
* variable with speed



○ LOADING CONDITION COLUMN NUMBER

POWER PLANT

NO. & MODEL.....(2) R-2800-52N(Mod)
 MFR.....Pratt & Whitney
 ENGINE SPEC. NO.....M-8145-A
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 RED GEAR RATIO.....4.50:1
 AUGMENTATION.....Water/Alcohol
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 PROP. TYPE.....Hydro F.F., Rev'r
 BLADE DESIGN NO.....6895E-8
 NO. BLADE.....3
 PROP. DIA.....13' 6"

RATINGS

	BHP	RPM	ALT.	MIN.
T.O.	*2500	2800	2500	5
	2200	2800	4500'	5
NORM.	1900	2600	7000'	Cont.
	1700	2600	14500'	Cont.

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DESIGN.....	47,000	3.42
COMBAT.....	38,669	
MAX. T.O.....	47,000	
DESIGN LANDING.....	46,500	

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GRADE.....115/145
 SPECIFICATION....MIL-F-5572

OIL

NACELLE (GALS.)60
 GRADE.....1100
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CARGO

INSIDE CLEARANCE

LENGTH (OVERALL).....48' 2.4"
 WIDTH (MAX)(FLOOR LEVEL).....7' 9.6"
 HEIGHT (MAX).....6' 4.3"

MAIN CARGO DOOR

HEIGHT (MAX).....6' 0"
 WIDTH (MAX).....10' 0"
 HEIGHT ABOVE GROUND.....7' 11.7"

LIMIT FLOOR LOAD

OVERALL.....300 lb/sq ft

PERSONNEL

44 passenger seats or 4 passenger seats with 21 litters.

DIMENSIONS

WING
 SPAN.....105'-4"
 AREA.....920 sq.ft.
 INCIDENCE (ROOT).....4° 0'
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PERFORMANCE SUMMARY

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Payload lb.	4,171	12,746	7,480	4,080	
Wing loading lb./sq.ft.	51.1	51.1	51.1	51.1	
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Max. speed/altitude 17,000 (B) kn./ft.	267	267	267	267	
Rate of climb at S.L. (B) fpm.	1,330	1,330	1,330	1,330	
Time: S.L. to 10,000 ft. (B) min.	8.7	8.7	8.7	8.7	
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Service ceiling (100 fpm) (B) ft.	25,500	25,500	25,500	25,500	
Combat range (C) n.mi.	2,100	174	1,029	1,929	
Average cruising speed kn.	163.3	168.8	166.8	164	
Cruising altitude(s) ft.	5,000	5,000	5,000	5,000	
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.					
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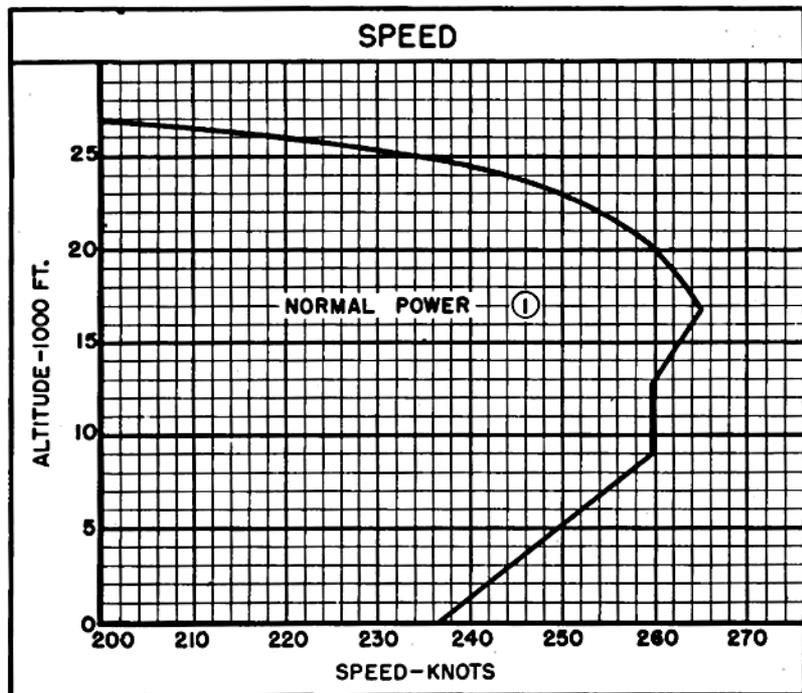
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(B) Normal Power.

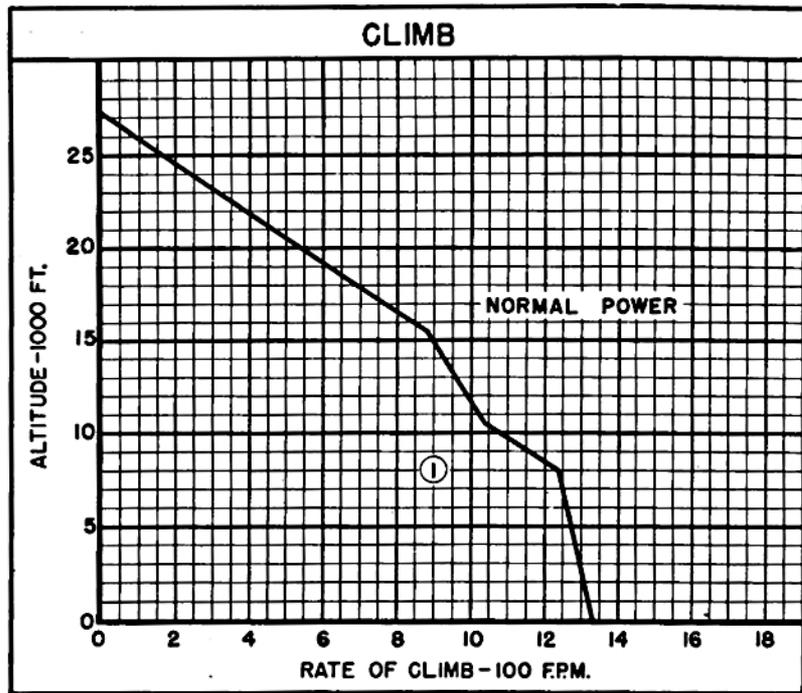
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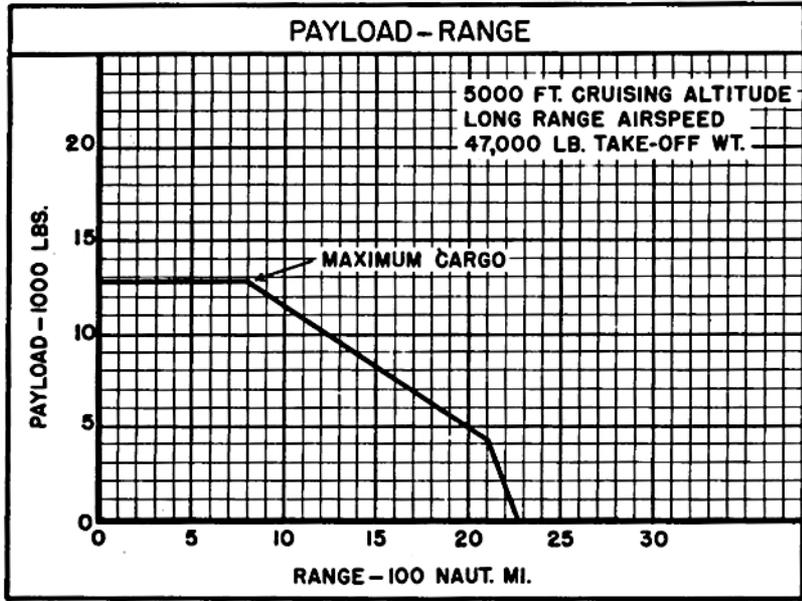
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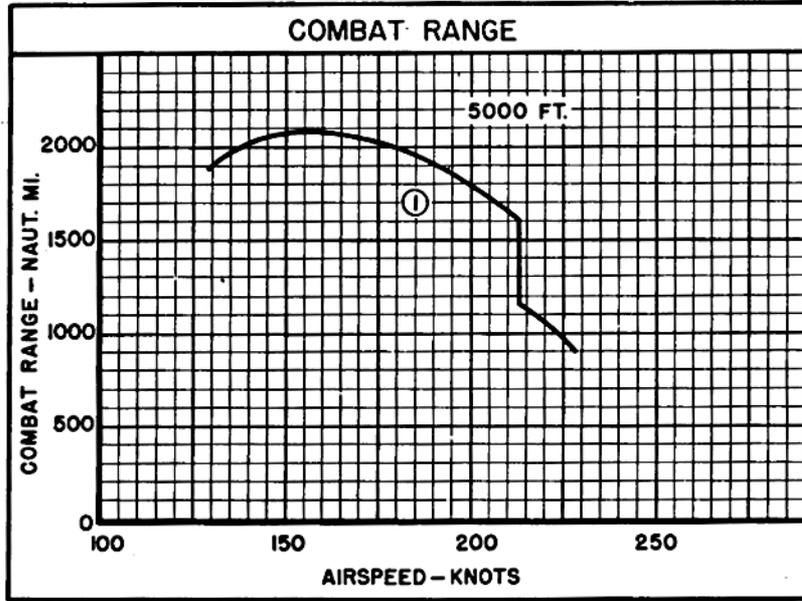
CLIMB



PAYLOAD - RANGE



COMBAT RANGE



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

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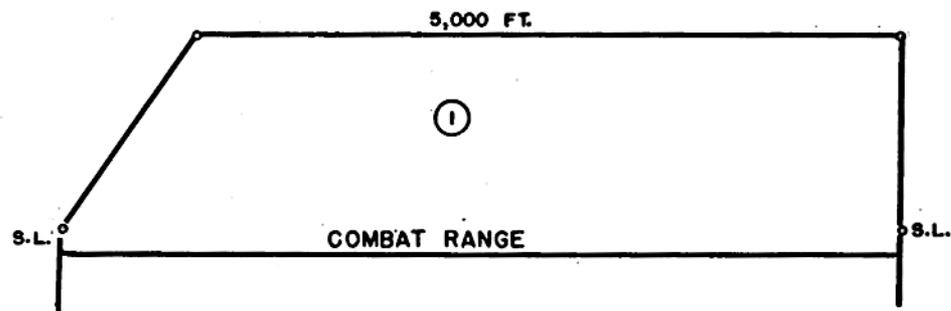
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+ wet

* variable with speed



○ LOADING CONDITION COLUMN NUMBER