

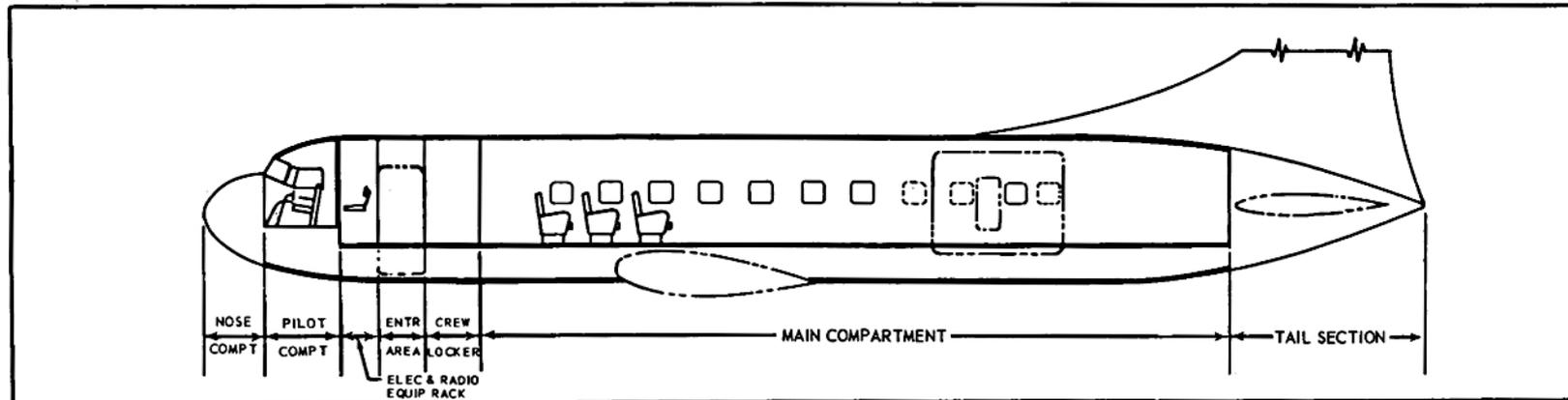
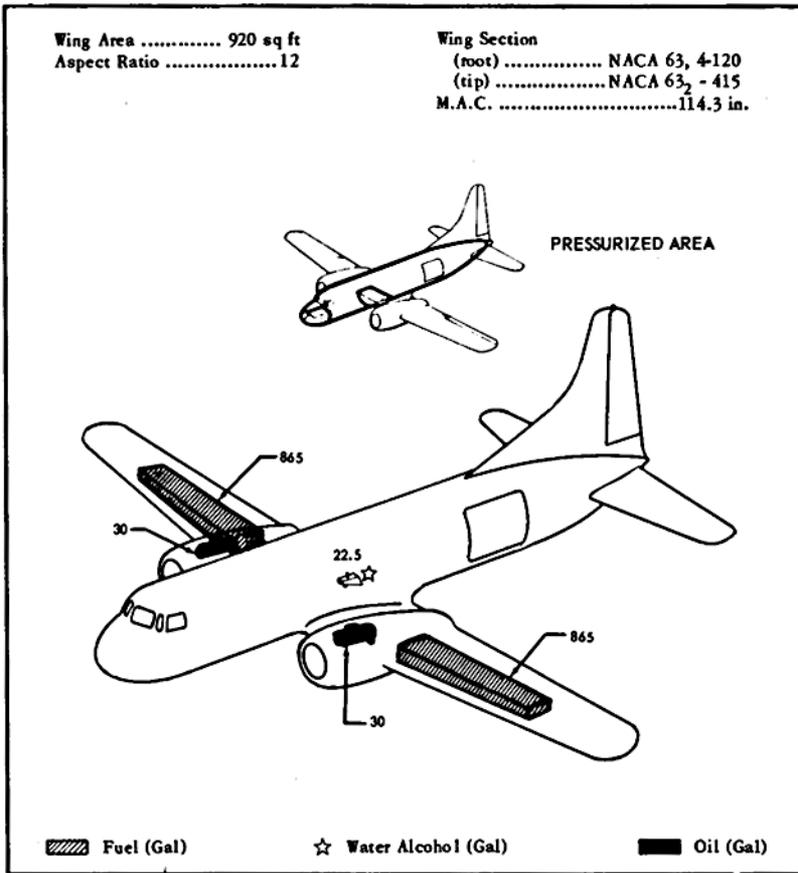
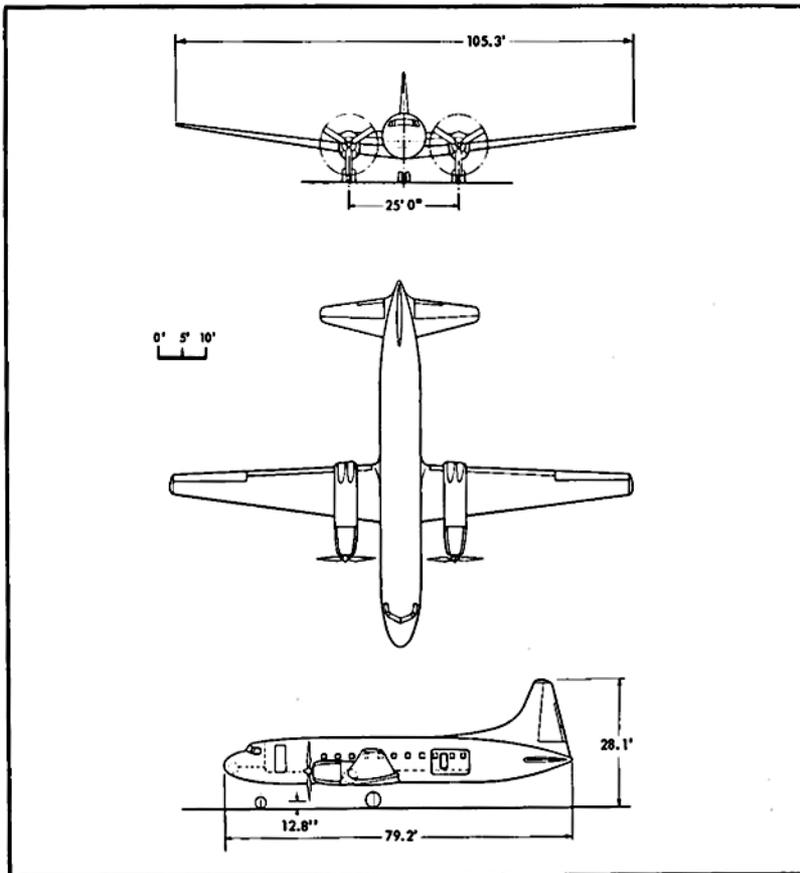


# STANDARD AIRCRAFT CHARACTERISTICS

## R4Y-2

CONVAIR

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



Standard Aircraft Characteristics NAVAIR 1335B (Rev. 1-55)

## POWER PLANT

NO. & MODEL ..... (2)R-2800-52W(MOD)  
 MFR ..... Pratt & Whitney  
 SUPERCHARGER ..... 1 Stage, 2 Speed  
 RED. GEAR RATIO ..... 0.45:1  
 AUGMENTATION ..... Water/Alcohol  
 PROP. MFR ..... Ham. Std.  
 BLADE DES. NO. .... 6895-B-8  
 NO. BLDS./DIA. .... 3/13' 6"

## RATINGS

	BHP	RPM	ALT	MIN
T.O.	*2500	2800	2500'	5
	2200	2800	4500'	5
NORM.	1900	2600	7000'	CONT.
	1700	2600	14,500'	CONT.

\* Wet

Spec. No. N-8145A

## MISSION AND DESCRIPTION

The primary mission of this aircraft is the transport of cargo, passengers and litter patients.

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

## Differences over R4Y-1:

- Less noise - exhaust mufflers
- Externally - addition of wing flap seal
- Rear service door
- Differential cowl flap actuation

## WEIGHTS

LOADINGS	LBS.	L.F.
EMPTY .....	31,400	.....
BASIC .....	33,100	.....
DESIGN .....	48,800	3.32
COMBAT .....	-	.....
MAX. T.O. (Field) ..	53,200	.....
MAX. LDG. (Field) ..	50,670	.....

All weights are actual

## CARGO

## INSIDE CLEARANCE

LENGTH (OVERALL) ..... 48' - 2"  
 WIDTH (MAX.) (FLOOR LEVEL) .. 7' - 10"  
 HEIGHT (MAX.) ..... 6' - 4"

## MAIN CARGO DOOR

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

## LIMIT FLOOR LOAD

OVERALL ..... 300 lb./sq. ft.

## PERSONNEL

44 Passenger Seats

or

4 Passenger Seats with 21 Litters

## DEVELOPMENT

First Flight ..... December 1957

Service Use ..... December 1957

## FUEL AND OIL

NO. TANKS	GALS.	LOCATION
2	1730	Wing

FUEL GRADE ..... 115/145  
 FUEL SPEC (applicable) .. MIL-F-5572

## OIL

CAPACITY (Gals.) ..... 60  
 GRADE ..... 1100  
 SPEC (applicable) ..... MIL-L-6082

## DIMENSIONS

WING  
 AREA ..... 920 sq. ft.  
 SPAN ..... 105' - 4"  
 MAC ..... 9' - 6"  
 SWEEPBACK (LE) ..... 7° - 0"  
 LENGTH ..... 79' - 2"  
 HEIGHT ..... 28' - 2"  
 TREAD ..... 25' - 0"  
 PROP GRD. CLEARANCE ..... 13"

## 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) (CPE Ant) .... AN/ARC-27A  
 RADAR IFF ..... AN/APX-6  
 RADAR ALTIMETER ..... AN/APN-22  
 CODER GROUP (except video  
 coder) AN/APA-89

## PERFORMANCE SUMMARY

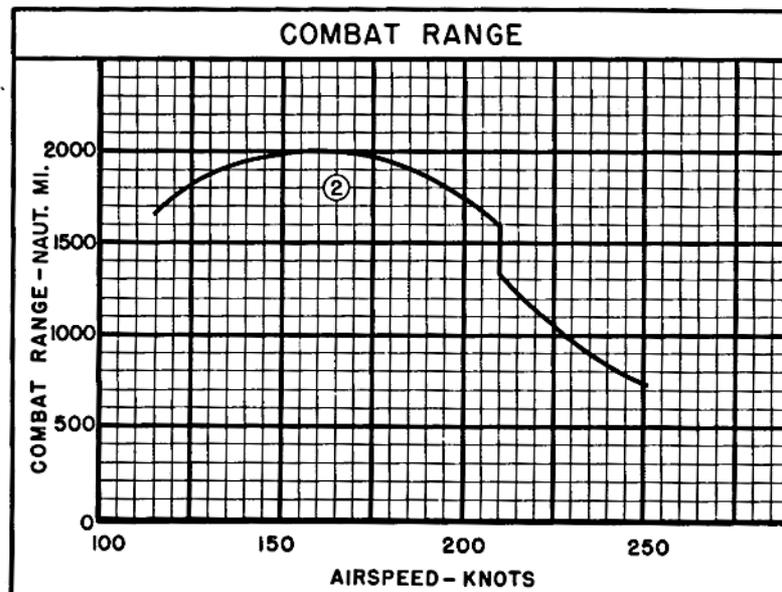
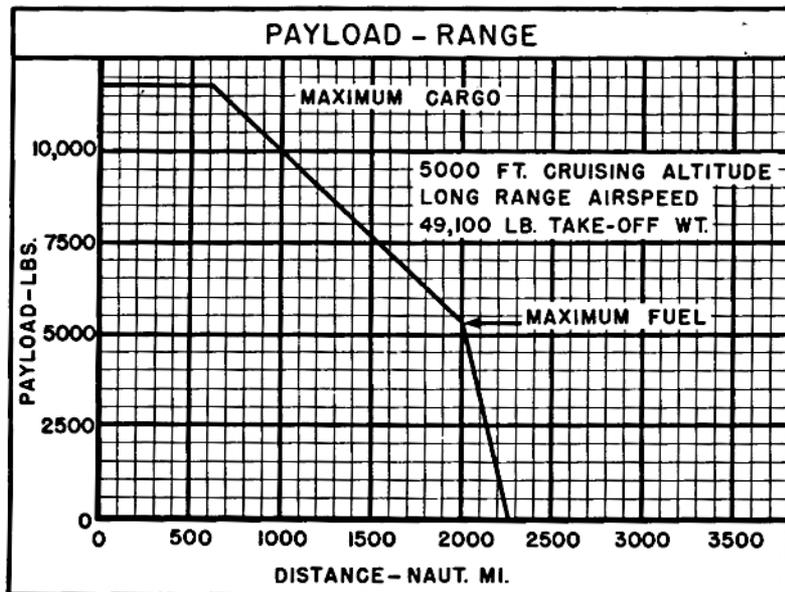
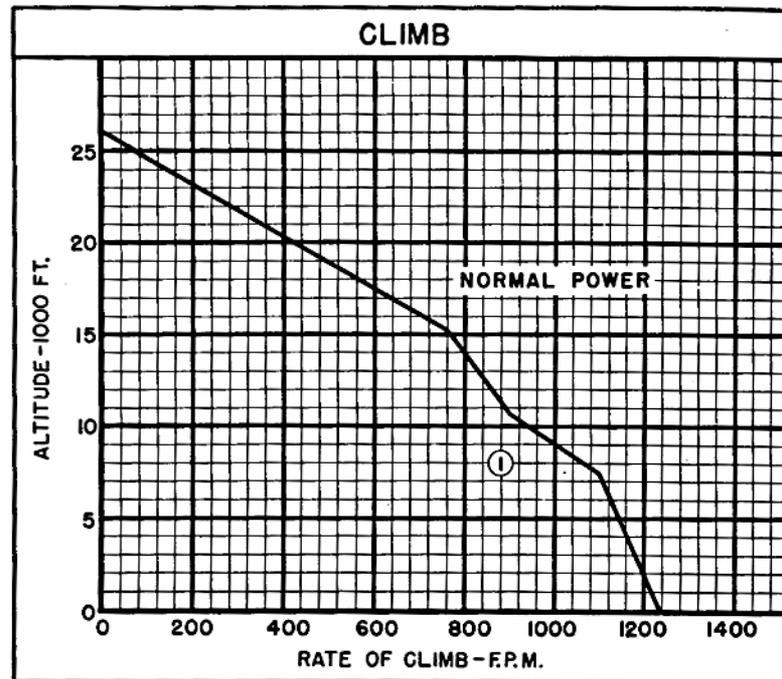
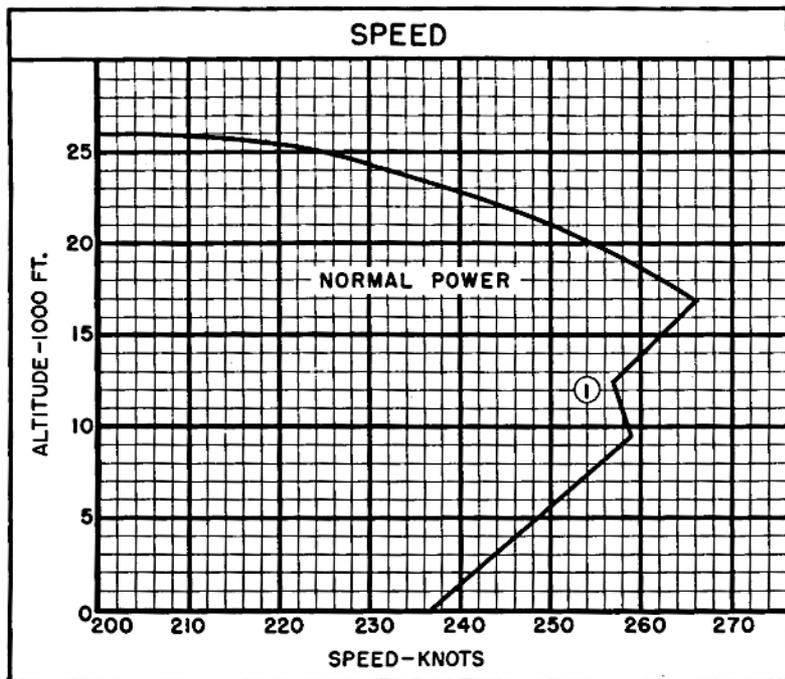
TAKE-OFF LOADING CONDITION		(1) BASIC MISSION MAXIMUM CARGO	(2) BASIC MISSION MAXIMUM FUEL	(3) PERSONNEL TRANSPORT	(4) EVACUATION TRANSPORT	(5) FERRY MISSION
TAKE-OFF WEIGHT	lb.	49,100	49,100	49,100	45,300	43,720
Fuel	lb.	4,128	10,380	7,121	10,380	10,380
Fayload	outbound/inbound lb.	11,855/0	5,380/0	7,480/0	510/4,080	0
Wing loading	lb./sq.ft.	53.4	53.4	53.4	49.5	47.5
Stall speed - power-off	kn.	76			74	73
Take-off run at S.L. - calm (A)	ft.	2700			2300	2100
Take-off run at S.L. kn. wind	ft.	--	--	--	--	--
Take-off to clear 50 ft. - calm (A)	ft.	3780			3220	2940
Max. speed/altitude (B)	kn./ft.	266/17,000			268/17,000	270/17,000
Rate of climb at S.L. (B)	fpm.	1240			1400	1500
Time: S.L. to 10,000 ft. (B)	min.	9.0			8.5	7.5
Time: S.L. to 20,000 ft. (B)	min.	24.0			20.5	18.5
Service ceiling (100 fpm) (B)	ft.	24,800			26,300	27,200
Combat range	n.mi.	600	2000	1250	2000	2280
Average cruising speed	kn.	160	166	168	166	158
Cruising altitude(s)	ft.	5000	5000	5000	5000	5000
Combat radius	n.mi.	270	995	605	950	--
Average cruising speed	kn.	160	163	166	163	--
Mission Time	hr.	3.5	12.2	7.3	12.3	
<b>COMBAT LOADING CONDITION</b>						
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.	45,553	39,528	42,660	39,528	34,093
Fuel	lb.	561	808	681	808	753
Stall speed - power-off/with approach power	kn./kn.	74/87.5	72/85.5	73/86.5	72/85.5	69/82.5
Distance - ground run/over 50' obstacle	ft./ft.	2480/4465	2120/3820	2310/4160	2120/3820	1810/3260

## NOTES

- (A) TAKE-OFF POWER (WET)  
(B) NORMAL POWER

PERFORMANCE BASIS: Contractor's flight test data.  
RANGE and RADIUS are based on engine specification fuel consumption increased 5%.

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



○ LOADING CONDITION COLUMN NUMBER

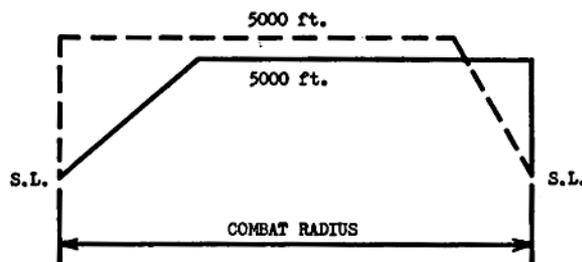
# NOTES

## TRANSPORT COMBAT RANGE PROBLEM (Reciprocating)

WARM-UP, TAKE-OFF, ACCELERATE: 10 minutes at normal rated power at sea level.  
 CLIMB: On course to cruise altitude of 5000 feet at normal rated power.  
 CRUISE: At speeds for long range at 5000 feet.  
 RESERVE: 30 minutes at speed for long range at sea level plus 5% of the initial fuel.

## TRANSPORT COMBAT RADIUS PROBLEM (Reciprocating)

WARM-UP, TAKE-OFF, ACCELERATE: 10 minutes at normal rated power at sea level.  
 CLIMB: On course to cruise altitude of 5000 feet at normal rated power.  
 CRUISE: At speeds for long range at 5000 feet to destination.  
 LAND: At destination and unload entire cargo (NO REFUELING).  
 WARM-UP, TAKE-OFF, ACCELERATE: 10 minutes at normal rated power at sea level.  
 CLIMB: On course to cruise altitude of 5000 feet at normal rated power.  
 CRUISE: To home base at speeds for long range at 5000 feet.  
 RESERVE: 30 minutes at speed for long range at sea level plus 5% of the initial fuel load.



Performance with one engine inoperative, landing gear retracted, flaps up, propeller feathered, is:

Gross Weight.....lbs.	49,100
S.L. Rate of Climb, Take-off Power.....ft./min.	300
Service Ceiling, Maximum Continuous Power...ft.	7800

○ LOADING CONDITION COLUMN NUMBER