

STANDARD AIRCRAFT CHARACTERISTICS

R3Y-2 "TRADEWIND"

CONVAIR

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

POWER PLANT

NO. & MODEL..... (4) T40-A-10
 MFR..... Allison
 TYPE..... Turbo-Prop
 PROP GEAR RATIO..... 0.0630
 PROP MFR..... AeroProducts
 PROP DES. NO..... AD 8664FN-EI
 NO. BLDS/Dia..... 6/15'

RATINGS

All Ratings Static Sea Level

	SHP	LBS THRUST	RPM
T.O.	5,332	1,296	14,300
MIL.	5,332	1,296	14,300
NORM.	4,444	1,240	14,300

Spec. No. 300-C

ACCOMMODATIONS

CREW (on duty)..... 5
 (off duty)..... 2
 PASSENGERS or TROOPS..... 103
 LITTER PATIENTS..... 92
 ATTENDANTS..... 12

SPACE DIMENSIONS

LENGTH..... 89'-0"
 MAX. WIDTH..... 9'-6"

LIMIT FLOOR LOADS

LOCAL..... 300 lb/ft²
 RUNNING..... 1500 lb/ft

MISSION AND DESCRIPTION

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

The model R3Y-2 airplane is designed for bow loading and is a development of the model R3Y-1 flying boat. It is a high wing, full cant; lever monoplane, having two fixed auxiliary floats and a single tail. The hull is of high length/beam ratio design and incorporates a large moveable nose section for bow loading and a large cargo door on the after port side.

The cargo floor is equipped for cargo tie-down and handling equipment and includes attachment for seats for 103 passengers or troops, or litters for 92 patients and seats for 12 medical attendants. Maximum cargo load is 44,000 pounds.

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

DEVELOPMENT

First Flight..... October 1954
 Service Date..... March 1956

WEIGHTS

LOADINGS	LBS	L.F.
EMPTY.....	86,410#	
BASIC CARGO....	88,245#	
Passenger 93,239		
DESIGN.....	145,000	3.0
*MAX.T.O.	overload 165,000#	2.5
**MAX.LANDING	overload 105,000#	4.4

*Limited by hull strength
 **Sheltered water

FUEL AND OIL

GALS.	NO. TANKS	LOCATION
5,500	2	Right Wing
5,500	2	Left Wing
FUEL GRADE.....		110/130
FUEL SPEC.....		applicable MIL-F-5572

OIL

CAPACITY (GALS)..... 81
 SPEC..... applicable MIL-L-7808

DIMENSIONS

WING
 AREA..... 2100 Sq. ft.
 SPAN..... 145'-11"
 MAC..... 15'- 8"
 HEIGHT *..... 51'- 5"
 LENGTH..... 139'- 8"
 PROP WATER CLEARANCE..... 8'- 9"

*On beaching gear.

ELECTRONICS

VHF..... AN/ARC-1 or 1A
 UHF TRANS REC..... AN/ARC 27A
 HF REC EQUIP AN/ARR-15 or 15A
 COMM TRANS..... AN/ART-13
 LORAN..... AN/APN-70
 RADAR ALTIMETER..... AN/APN-22
 RANGE RECEIVER..... R-23A/ARC-5
 ADF RECEIVER..... 2 AN/ARN-6
 MARKER BEACON..... AN/ARN-12
 VISUAL OMNI - RANGE..... AN/ARN-14A
 LOW FREQ ADF..... SCR-718C
 RADAR..... AN/APS-42
 IFF..... AN/APX-6
 INTERPHONE..... AN/AIC-5B
 AN/ARC-38, AN/ARN-21, AN/APA-89, and
 MK-141/APX-6 will be added when
 available.

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) CARGO	(2) TRANSPORT 103 Passengers			
TAKE-OFF WEIGHT	lb.	145,000	165,000		
Fuel	lb.	50,000	47,974		
Payload	lb.	5,463	21,630		
Wing loading	lb./sq.ft.	69.3	78.6		
Stall speed - power-off	kn.	92	98		
Take-off time in calm (A)	sec.	24	32		
Take-off run at S.L. kn. wind	ft.	--	--		
Take-off to clear 50 ft. - calm	ft.	--	--		
Max. speed/altitude (B)	kn./ft.	299/21,000	292/18,000		
Rate of climb at S.L. (B)	fpm.	2,300	1,900		
Time: S.L. to 20,000 ft. (B)	min.	11.5	15.2		
Time: S.L. to 30,000 ft. (B)	min.	24.6	41.0		
Service ceiling (100 fpm) (B)	ft.	34,500	29,000		
Combat range	n.mi.	2,320	1,840		
Average cruising speed	kn.	290	285		
Cruising altitude(s)	ft.	33,000/40,500	28,000/36,500		
Combat radius	n.mi.	--	--		
Average cruising speed	kn.	--	--		
COMBAT LOADING CONDITION					
COMBAT WEIGHT	lb.				
Engines 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.				
Fuel	lb.	102,300	123,856		
Stall speed - power-off	kn.	6,800	6,830		
Stall speed - with approach power	kn.	77	84.5		

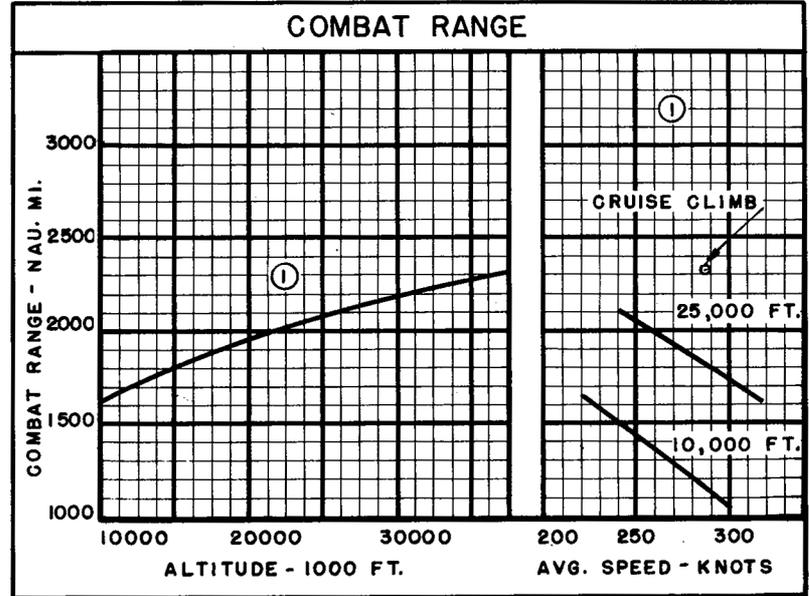
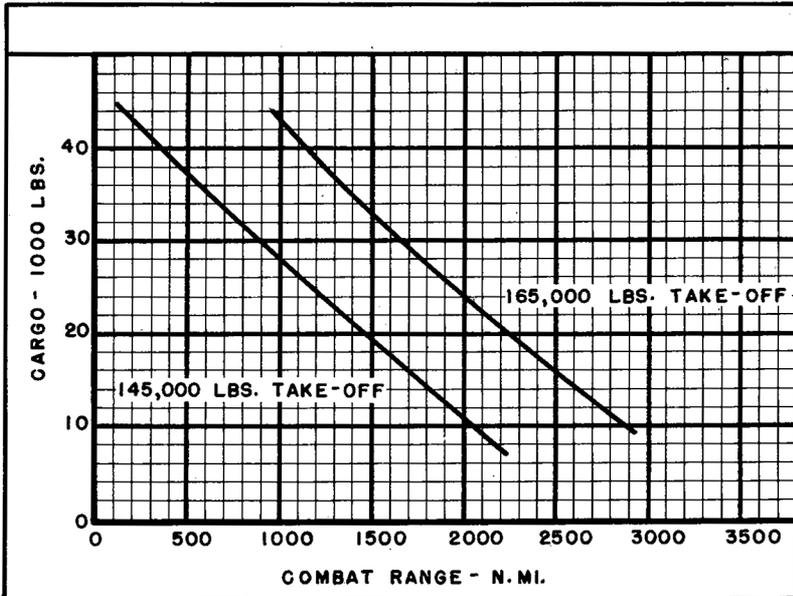
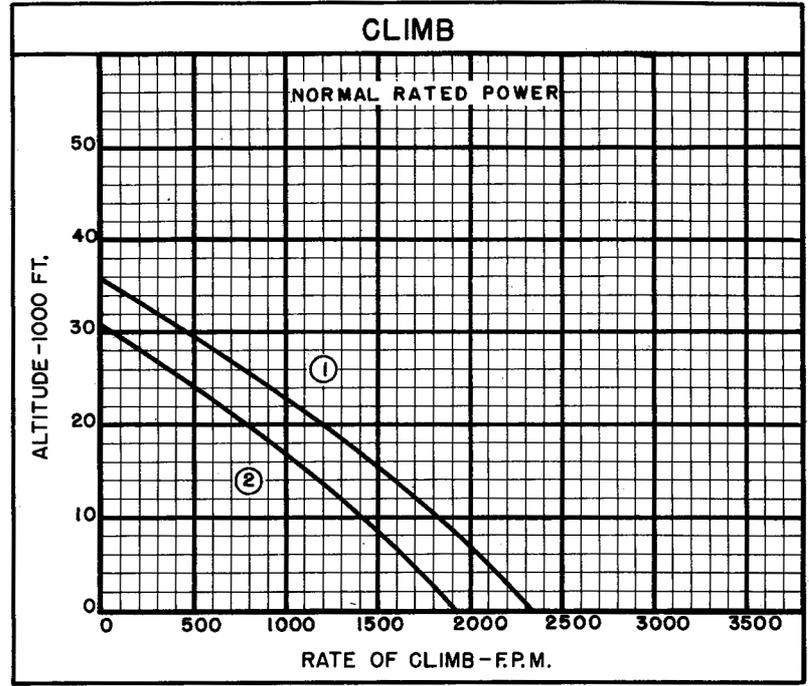
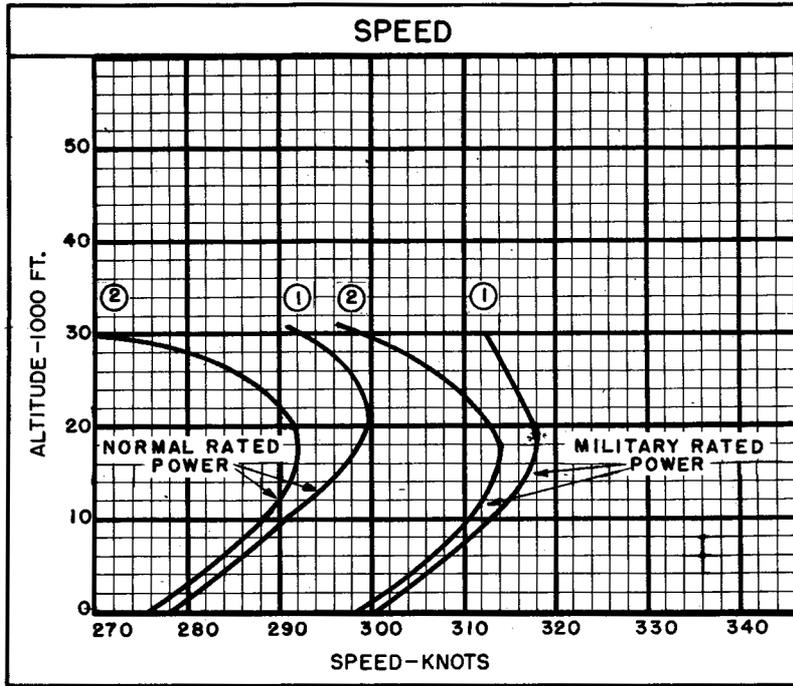
NOTES

(A) Take-off Power.

(B) Normal Power.

PERFORMANCE BASIS: Performance is based on contractor's estimates unsubstantiated by BUAER.

RANGE AND RADIUS are based on engine specification fuel consumption increased by 5%.



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

○ LOADING CONDITION COLUMN NUMBER

NOTES

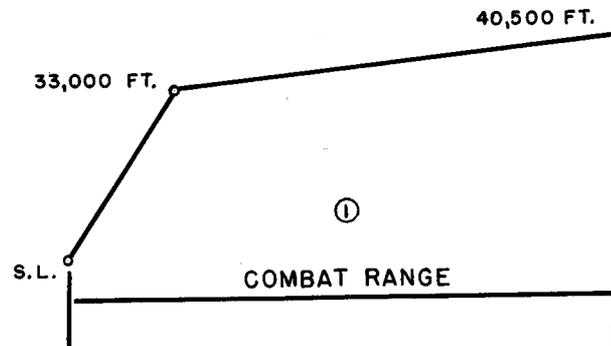
TRANSPORT COMBAT RANGE PROBLEM (GAS TURBINE)

WARM UP, TAKE-OFF, ACCELERATE: 5 Minutes at normal rated power at sea level.

CLIMB: On course to cruise altitude at normal rated power.

CRUISE: At altitudes for maximum range - cruise with optimum number of power units operating.

RESERVE: 30 Minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.



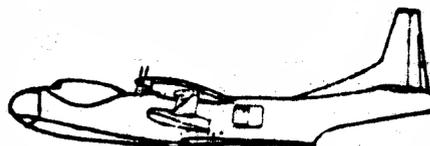
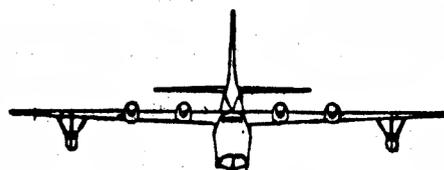
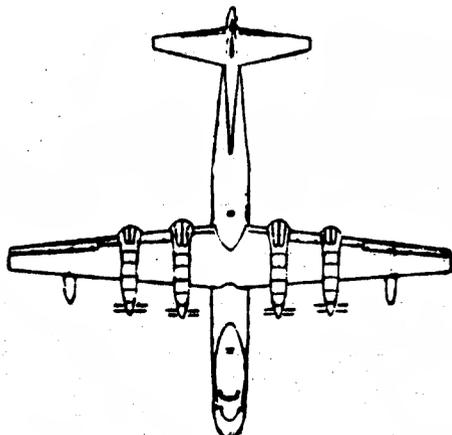
○ LOADING CONDITION COLUMN NUMBER

CHARACTERISTICS SUMMARY

TRANSPORT

R3Y-2

CONVAIR



WING AREA 2,100 Sq. Ft.
WING SPAN 145' - 10"

LENGTH 143' - 11"
HEIGHT 51' - 5"

AVAILABILITY			PROCUREMENT			
NUMBER AVAILABLE			NUMBER DELIVERED IN FISCAL YEARS			
ACTIVE	RESERVE	TOTAL				

STATUS

First FlightOctober 1954
Service.....March 1956

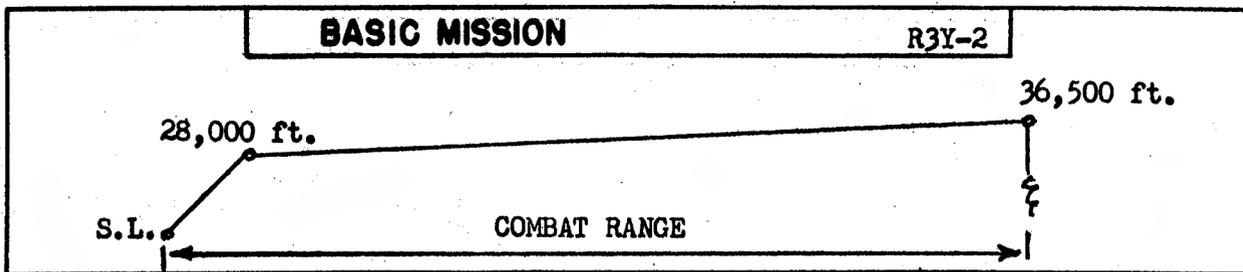
ENGINES			
4 Allison	T40-A-10		
	<u>SHP</u>	<u>LBS</u>	<u>RPM</u>
T.O.	5532	1296	14300
MIL.	5532	1296	13700
NORM.	4444	1240	13700
Spec. No. 300C			

FEATURES
Crew (on duty) 5 (off duty) 2
Pressurized Cabin
Cargo 44,800#
Passengers - 103
92 Litters and 12 Attendants

ARMAMENT
NONE

NAVAER 1519 A (REV. 1-49)

CHARACTERISTICS SUMMARY



PERFORMANCE		
COMBAT RADIUS	COMBAT RANGE	SPEED
735 naut. mi. 285 knots avg. Radius is 40% of range	1,840 naut. mi. 285 hours	299 knots at S.L. ft. 313 knots at 18,000 ft. 298 knots at 30,000 ft. T.O. Weight Military Power
CLIMB	CEILING	TAKE OFF
1,900 ft./min. Sea Level, T. O. wt. Normal Power	29,000 ft. 100 ft./min., T. O. wt. Normal Power	32 Secs. Calm - No Assist
770 ft/min 2,000 ft., T.O. Weight Normal Power	26,500 ft. 300 ft./min., T.O. Weight Normal Power	
LOAD	WEIGHTS	STALLING SPEED
Fuel 8,000 gal. fixed 8,000 drop Max Capacity, 11,000 gal.	Empty 86,410 lbs. Combat lbs. Take-off 165,000 lbs.	98.0 knots Power Off Flaps down, T. O. wt.
		TIME TO CLIMB
		ft. in min. Combat Wt., Max. Power.

NOTES

PERFORMANCE BASIS: Contractor's data unsubstantiated by BUAER.
Range and radius based on engine specification fuel consumption increased by 5%.

NAVAER-1519B (Rev. 10-51)