



# STANDARD AIRCRAFT CHARACTERISTICS

## R3Y-1

CONSOLIDATED



**POWER PLANT**

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

**RATINGS**

All ratings Static Sea Level

	Shp	Lbs.	Rpm
T. O.	5,060	1,162	14,300
MIL.	5,120	1,013	13,700
FORM.	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./ft<sup>2</sup>  
 RUNNING.....750 lb./ft.  
 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/ARR-6  
 BEACON REC.....AN/ARR-12  
 VISUAL OMNI-RANGE..AN/ARR-14A  
 SEARCH RADAR.....AN/APS-42  
 ALTITUDE-LOW ALT...AN/APH-1  
 ALTITUDE-HIGH ALT...SCR-718C  
 (See NOTES)

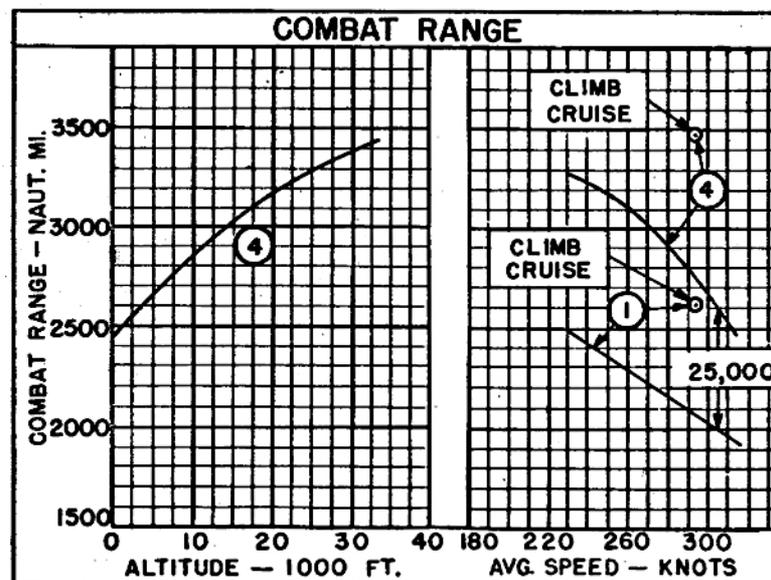
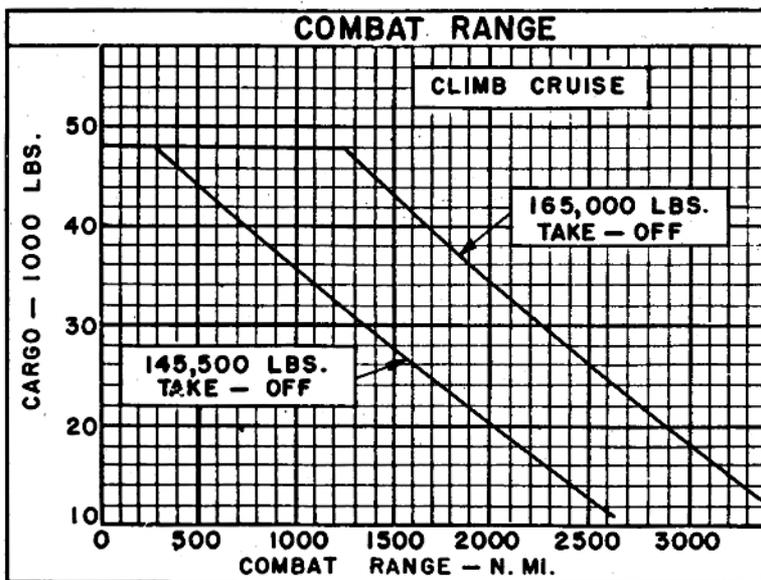
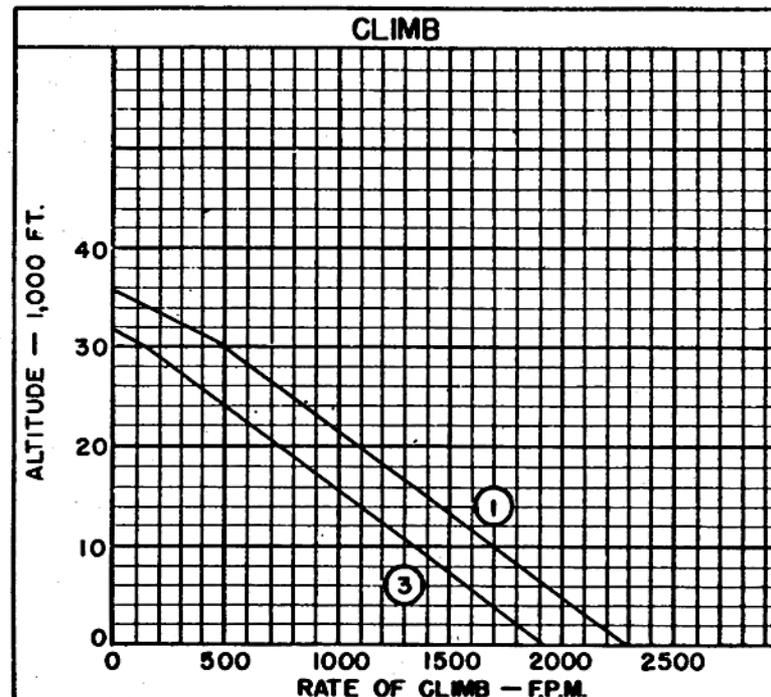
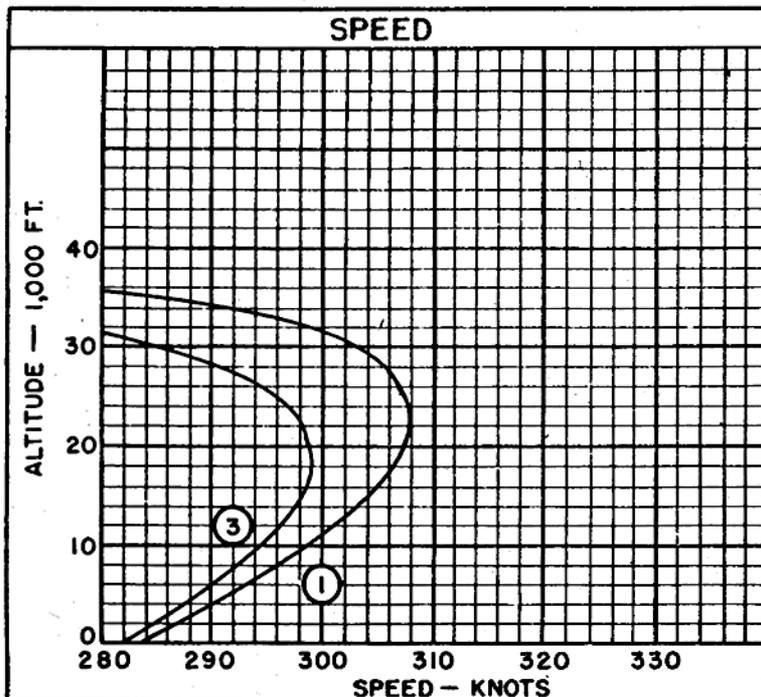
PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION		(1) CARGO	(2) PERSONNEL 80 Passengers	(3) MAX. CARGO	(4) MAX. FUEL
TAKE-OFF WEIGHT	lb.	145,500	145,500	165,000	156,284
Fuel	lb.	50,000	40,164	32,348	66,000
Payload	lb.	10,848	16,800	48,000	6,282
Wing loading	lb./sq.ft.	69.2	69.2	78.5	74.5
Stall speed - 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/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.	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%.



○ LOADING CONDITION COLUMN NUMBER

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

# 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**

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**ELECTRONICS (Continued):**

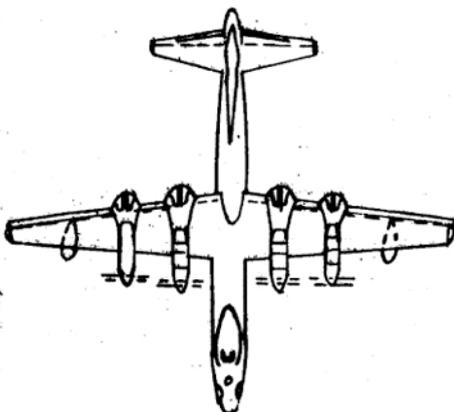
LORAN.....AN/APN-4  
 INTERPHONE.....AN/AIC-5B  
 VISUAL HOMING.....AN/AHN-21  
 (Planned Service Installation)  
 IFF.....AN/APX-6

# CHARACTERISTICS SUMMARY

SEAPLANE TRANSPORT

R3Y-1

CONSOLIDATED



WING AREA 2,100 Sq. Ft.

WING SPAN 145' - 10"

LENGTH 142' - 6"

HEIGHT 51' - 5"

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

## STATUS

First Flight ..... February 1954

Service Use ..... March 1956

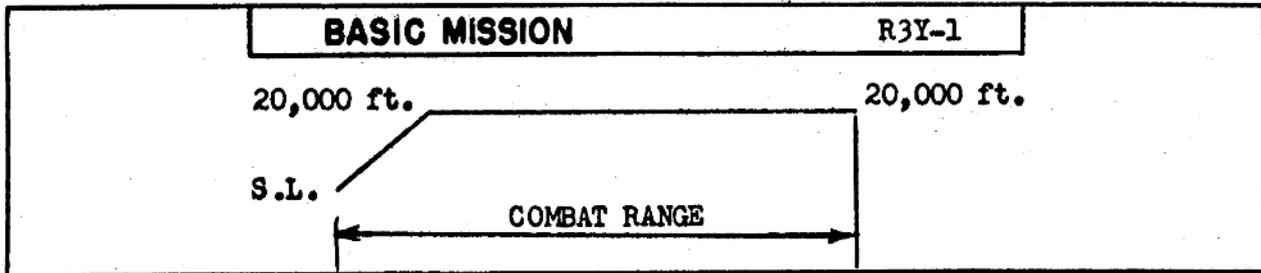
ENGINES			
4 Allison	T40-A-10		
	<u>SHP</u>	<u>LBS</u>	<u>RPM</u>
T.O.	5302	1370	14300
MIL.	5302	1370	14300
NORM.	4544	1306	14350

FEATURES
Crew (on duty) - 5
(off duty) - 2
Pressurized Cabin
Maximum Capacities:
Passengers 80
Litter Patients 72
Attendants 8
Cargo - 48,000 lbs.
12,400 gallons fuel
Transport Version of XP5Y-1

ARMAMENT
NONE

NAVAER 1519 A (REV. 1-49)

# CHARACTERISTICS SUMMARY



PERFORMANCE		
<b>COMBAT RADIUS</b>	<b>COMBAT RANGE</b>	<b>SPEED</b>
-- naut. mi.	2,140 naut. mi.	277 knots at 10,000 ft.
-- knots avg.	243 knots avg.	280 knots at 25,000 ft.
	8.8 hours	268 knots at ft.
		T.O. Weight Maximum Power
<b>CLIMB</b>	<b>CEILING</b>	<b>TAKE OFF</b>
1,500 ft./min.	22,500 ft.	38 Secs - Calm
Sea Level, T. O. wt. Normal Power	100 ft./min., T. O. wt. Normal Power	No Assist
		27 Secs - 25 kt wind
		No Assist
<b>LOAD</b>	<b>WEIGHTS</b>	<b>STALLING SPEED</b>
Fuel 12,400 gal.	Empty 85,551 lbs.	102 knots Power Off
fixed 12,400 drop	Combat -- lbs.	Flaps down, T. O. wt.
*Payload - 14,500 lbs.	Take-off *175,000 lbs.	<b>TIME TO CLIMB</b>
*Maximum with Full fuel	*Max. T. O. Weight	-- ft. in -- min.
		Combat Wt., Max. Power

## NOTES

Performance is based on the Pilots Handbook and Flight Test.  
 Range is based on flight test fuel consumption data.  
 Reason for Reissue: More recent flight test data available.  
 Operation at 175,000 lbs Gross Weight shall take place in sheltered water.