

STANDARD AIRCRAFT CHARACTERISTICS

C-121K CONSTELLATION

POWER PLANT

NO. & MODEL... (4) YT34-P-12A
 MFR.....Pratt & Whitney
 RED. GEAR RATIO.....0.0909
 PROP. MFR.....Ham. Std.
 PROP. DES. NO.....A3470-1
 NO. BL./DIA.....3/15"

RATINGS

STATIC SEA LEVEL RATINGS
 EXHAUST
 SEP + THRUST + RPM

T.O.	5,005	1,360	11,000
MIL.	4,850	1,275	10,750
NORM.	4,210	1,165	10,500
Spec. No. N-3526			

ACCOMMODATIONS

Crew.....5
 Passengers.....106
 Litter Patients.....73

Cargo Space....5,679 cu. ft.
 Floor Loading: 300 lbs/cu.ft.
 Cargo Door Clear Area.....
 ...108 in. by 74 in.

Max. Pay Load: 39,150 lbs.

MISSION AND DESCRIPTION

The R7V-2 is a high-speed, long range over-water cargo, personnel and passenger transport.

It is a development of the Lockheed Super Constellation and is a turbo-propeller version of the R7V-1.

The configuration features removable out-board nacelle fuel tanks, wing tip tanks and electric anti-icing provisions for engine air intakes. Additional features are fowler flaps, pressurized fuselage and boost system for the control surfaces.

DEVELOPMENT

First Flight.....December 1953

DIMENSIONS

WING
 AREA.....1,615 sq. ft.
 SPAN.....117' - 0"
 M.A.C.....14' - 8"
 LENGTH.....115' - 10"
 HEIGHT.....25' - 6"
 TREAD.....28' - 0"
 PROP. GHD. CLEAR....4' - 5"

WEIGHTS

LOADINGS	LBS.	L.F.
EMPTY.....	71,125.....
BASIC.....	72,410.....
DESIGN.....	150,000.....	2.5
MAX. TO.....	169,800.....	2.2
MAX. LAND.....	125,000.....

All weights are estimated.

FUEL AND OIL

GALS.	NO. TANKS	LOCATION
5,820	6	Wing
730	1	Fuselage
1,200	2	Wing tip
1,000	2	Outb'd nac.
FUEL GRADE.....JP-4		
SPEC. NO.....MIL-F-5624A		

OIL

CAPACITY (Gals.).....	40
GRADE.....	1100
SPEC.....	MIL-L-6082A

ELECTRONICS

1 I.F.F.....AN/APX-6
 1 Trans.....AN/ART-13
 2 M.F. Receiver....AN/ARB-15A
 1 L.F. Receiver....R23A/ARC-5
 2 ADF Receiver.....AN/ARN-6
 1 VHF Trans-Rec....AN/ARC-1A
 1 VHF Trans-Rec....AN/ARC-27
 1 Marker Beacon....AN/ARN-12
 1 Glide Slope Rec...AN/ARN-18
 1 Low Alt. Altimeter..AN/APX-1
 1 Loran Receiver....AN/APX-4
 Continued on NOTE page.

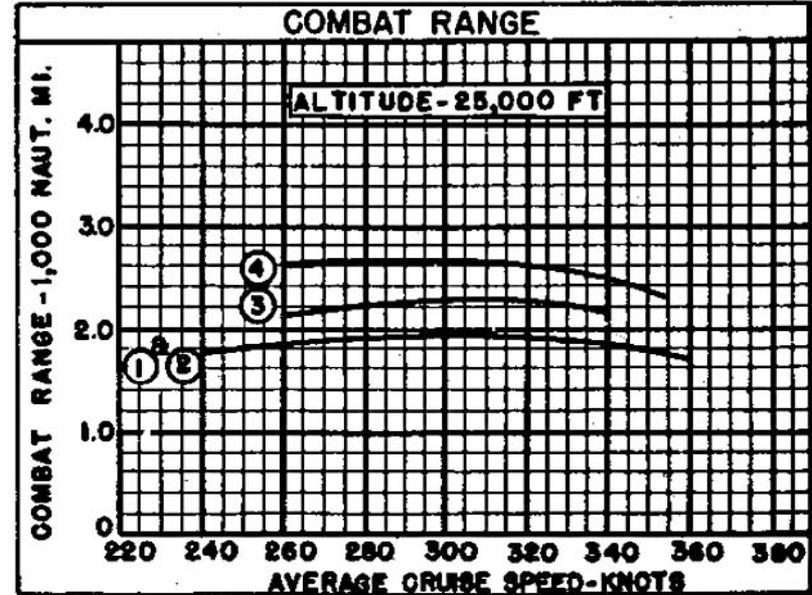
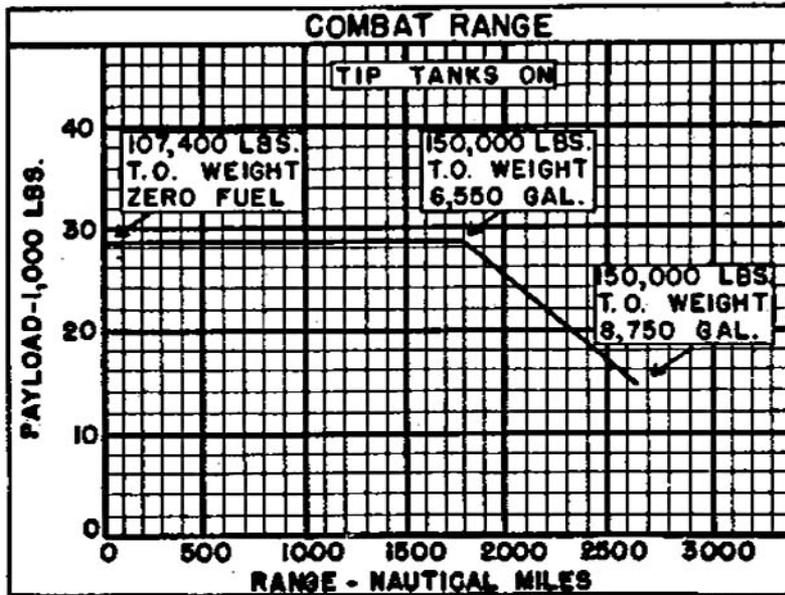
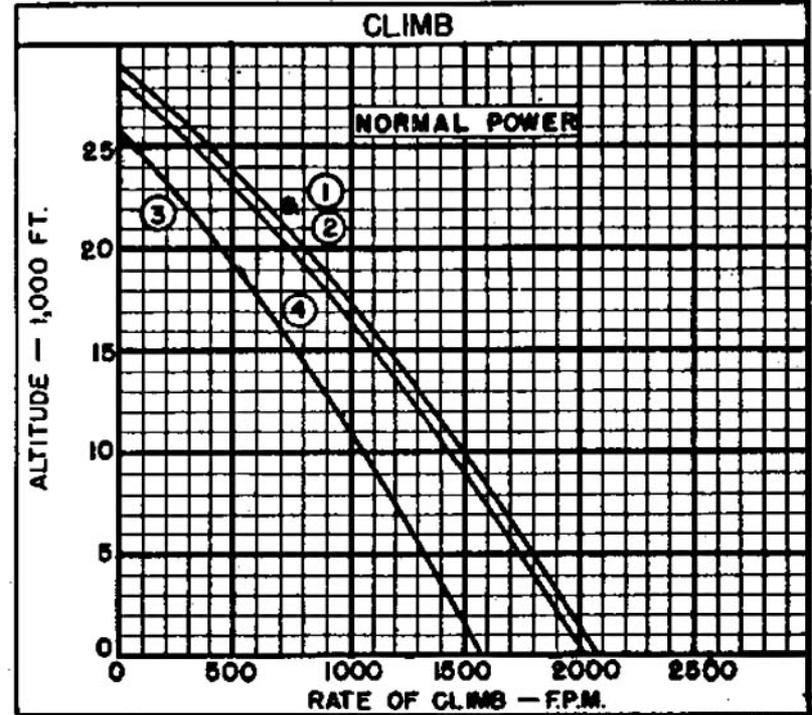
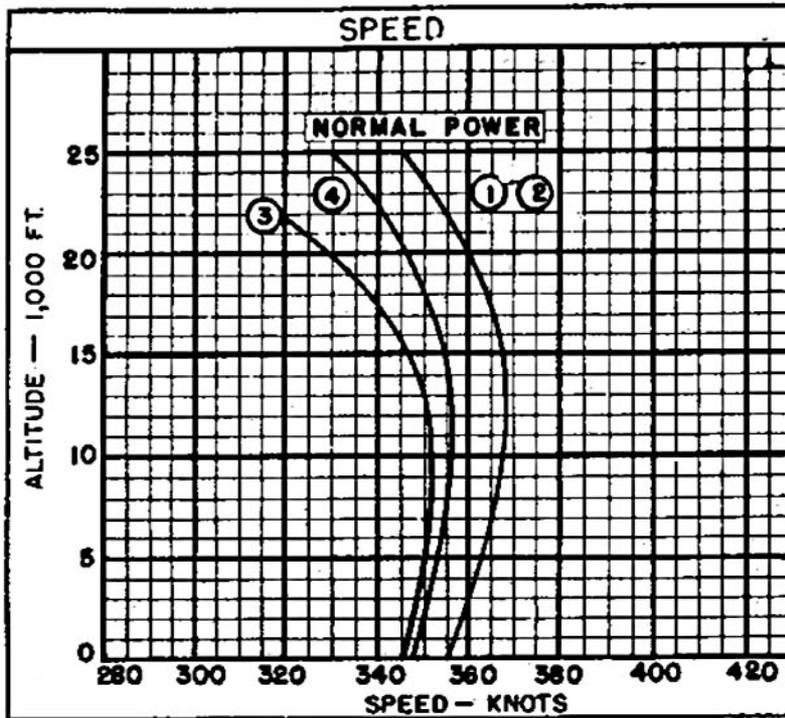
PERFORMANCE SUMMARY						
TAKE-OFF LOADING CONDITION		(1) PERSONNEL TRANSPORT Clean	(2) CARGO Clean	(3) OVERLOAD CARGO	(4) FERRY	
TAKE-OFF WEIGHT	lb.	149,575	149,575	167,875	150,000	
Fuel (JP-4)	lb.	42,575	42,575	49,075/7,800	49,075/7,800	
Payload	lb.	31,396	36,360	39,150	14,589	
Wing loading	lb./sq.ft.	92.9	92.9	105	93.2	
Stall speed - power-off	kn.	102	102	108.5	102.2	
Take-off run at S.L. - calm	ft.	2,100	2,100	2,940	2,110	
Take-off run at S.L. kn. wind	ft.	--	--	--	--	
Take-off to clear 50 ft. - calm	ft.	3,360	3,360	4,610	3,360	
Max. speed/altitude (A)	kn./ft.	368/13,000	368/13,000	352/10,000	357/12,000	
Rate of climb at S.L. (A)	fpm	2,080	2,080	1,580	2,040	
Time: S.L. to 20,000 ft. (A)	min.	14.1	14.1	20.4	14.7	
Time: S.L. to 25,000 ft. (A)	min.	22.3	22.3	41.5	23.8	
Service ceiling (100 fpm) (A)	ft.	28,200	28,200	24,800	27,400	
Combat range	n.mi.	1,920	1,920	2,245	2,635	
Average cruising speed	kn.	315	315	320	310	
Cruising altitude(s)	ft.	25,000	25,000	25,000	25,000	
Combat radius	n.mi.	--	--	--	--	
Average cruising speed	kn.	--	--	--	--	
Mission time	hr.	6.5	6.5	7.7	8.9	
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.	113,563	113,563	117,402	99,353	
Fuel	lb.	5,563	5,563	6,402	6,228	
Stall speed - power-off	kn.	88.2	88.2	90.2	82.6	
Stall speed - with approach power	kn.	80.6	80.6	81.4	75.0	

NOTES

(A) Normal Rated Power

Performance basis: Calculations

Range and radius are based on engine specification fuel consumption data increased by 5%.



○ LOADING CONDITION COLUMN NUMBER

NOTES

COMBAT RANGE PROBLEM (Turbo-Propeller)

WARM-UP, TAXI, ACCELERATION: 5 minutes at normal rated power at sea level.

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

CRUISE: At speed for long range at cruise altitude.

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

COMBAT RANGE = CLIMB + CRUISE

ELECTRONICS (Cont'd)

1 ICS.....AN/AIC-5B
 1 VOR Receiver..AN/ARN-14A
 1 Navig. Radar...AN/APS-42
 1 Crystal Calib. Freq.
 Indicator.....LM-Series
 1 Volt-ohm Milliammeter
 Weston.....663
 1 Press Kit.....MK-59/AP
 Planned Service Installation:
 1 AN/ARN 21
 1 AN/APA-89
 1 SCB-718C