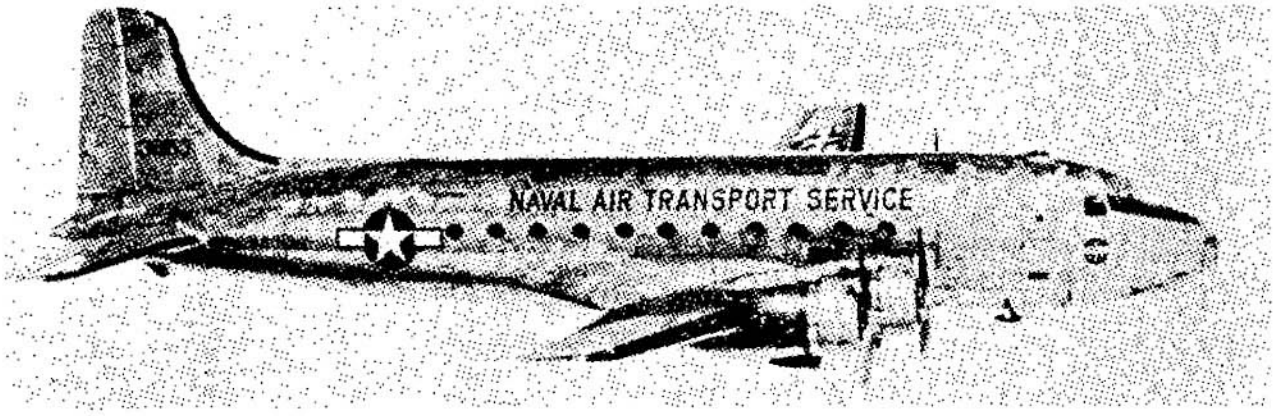
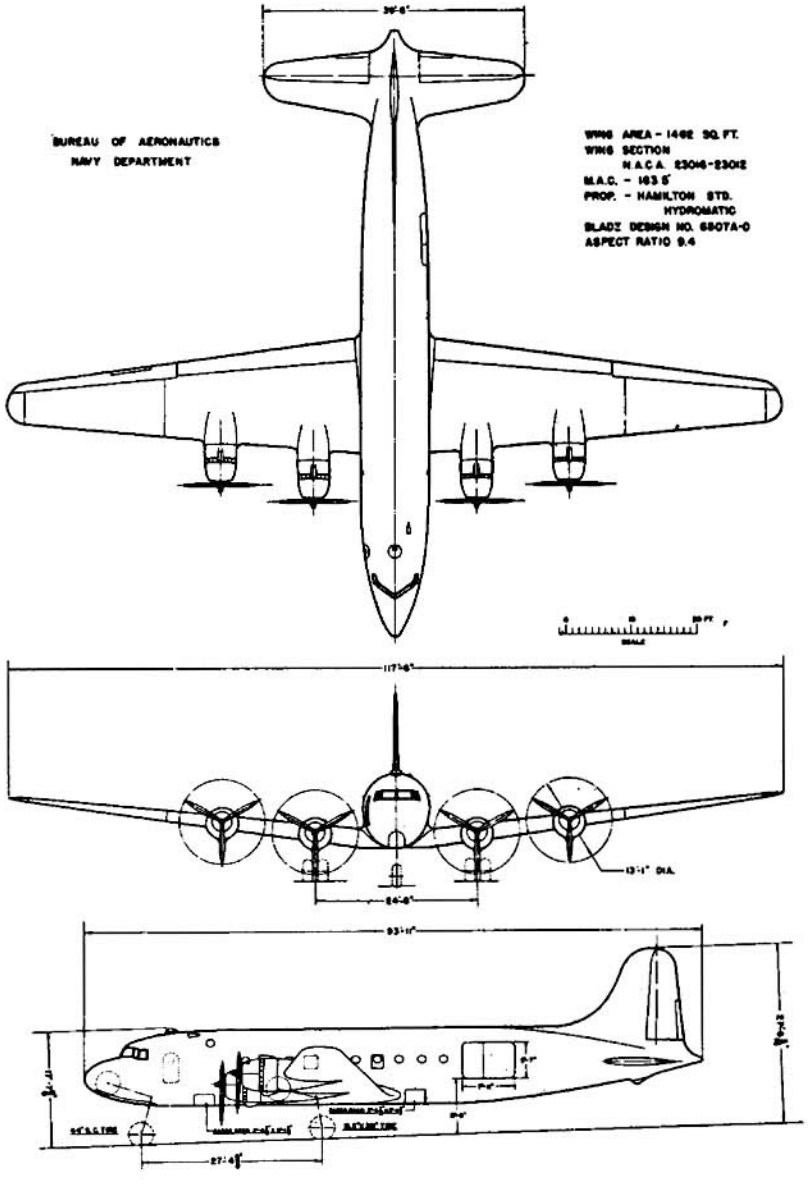


STANDARD AIRCRAFT CHARACTERISTICS

C-54Q SKYMASTER



DESCRIPTIVE ARRANGEMENT

POWER PLANT

NO. & MODEL.....(4) R-2000-9
MFR.....Pratt & Whitney
SUPERCH.....1 Stage, 2 Speed
RED. GEAR RATIO.....2:1
PROP. MFR.....Ham. Std.
PROP. DES. NO.....6507A-0
NO. BLD./DIA.....3/13' -1"

RATINGS

	BHP	RPM	ALT.
T.O.	1,450	2,700	S.L.
NORM.	1,100	2,550	S.L. to 7,500'
	1,000	2,550	10,000' to 17,000'

SPEC. NO. A-9021-B

ACCOMMODATIONS

Crew.....6
Troop Seats.....50
Litters.....36
Max.Floor Load..200 lbs/sq.ft.
Boom Hoist Cap.....2,000 lbs.
Cargo Door
  Height.....67"
  Width.....95"

Max. Pay Load.....29,000 lbs.

MISSION AND DESCRIPTION

The Douglas "Skymaster" R5D-3 troop and cargo transport is the same as the Air Force C54-D.

It is of conventional structure, with a 3 spar center section and single spar wing. It is fitted with slotted flaps and tricycle landing gear. Power plants are demountable and interchangeable. Deicer shoes may be fitted to wing, fin and stabilizer. The glider tow fittings have been removed from Navy planes.

The design of the R5D-3 stems from the commercial DC-4 design.

DEVELOPMENT

Service use.....1945

DIMENSIONS

WING
  AREA.....1,462 sq.ft.
  SPAN.....117' -6"
  M.A.C.....13' -7"
LENGTH.....93' -11"
HEIGHT.....27' -6"
TREAD.....24' -8"
PROP.GRD.CLEARANCE....3' -0"

WEIGHTS

LOADINGS	LBS	L.F.
EMPTY	40,310	
BASIC	41,272	
DESIGN	62,000	2.5
MAX.T.O.	73,000	
MAX. LDG.	66,000	

L.F. varies from 2.33 to 2.6 depending on the amount of fuel in the wings. See flight handbook.
All weights are actual.

FUEL AND OIL

No.Tanks	Tot.Gals.	Location
6	2,820	Wing
2	900	Fuselage

FUEL GRADE.....100/133
FUEL SPEC....MIL-F-5572

OIL

CAPACITY(Gals).....138
GRADE.....1100
SPEC.....MIL-L-6082

ELECTRONICS

LF & MHF COMMAND....SCR-274-N
VHF COMMAND.....AN/ARC-1
LIAISON.....(2) AN/ART-13
IFF.....AN/APX-6
COMPASS.....SCR-269-G and AN/ARN-7
MARKER BEACON.....AN/ARN-8
ALTIMETER.....SCR-718-A and AN/APN-1
LORAN.....AN/APN-4

(Cont'd on NOTES page)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		CARGO FULL FUEL				
TAKE-OFF WEIGHT	lb.	73,000				
Fuel	lb.	22,320				
Payload	lb.	9,408				
Wing loading	lb./sq.ft.	49.9				
Stall speed - power-off	kn.	79.5				
Take-off run at S.L. - calm (B)	ft.	2,700				
Take-off run at S.L. 25 kn. wind (B)	ft.	1,400				
Take-off to clear 50 ft. - calm (B)	ft.	4,650				
Max. speed/altitude (A)	kn./ft.	243/18,300				
Rate of climb at S.L. (A)	fpm	830				
Time: S.L. to 10,000 ft. (A)	min.	14.6				
Time: S.L. to 20,000 ft. (A)	min.	39.1				
Service ceiling (100 fpm)	ft.	22,700				
Combat range	n.mi.	2,740				
Average cruising speed	kn.	174				
Cruising altitude(s)	ft.	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.					
Fuel	lb.					
Stall speed - power-off	kn.					
Stall speed - with approach power	kn.					

NOTES

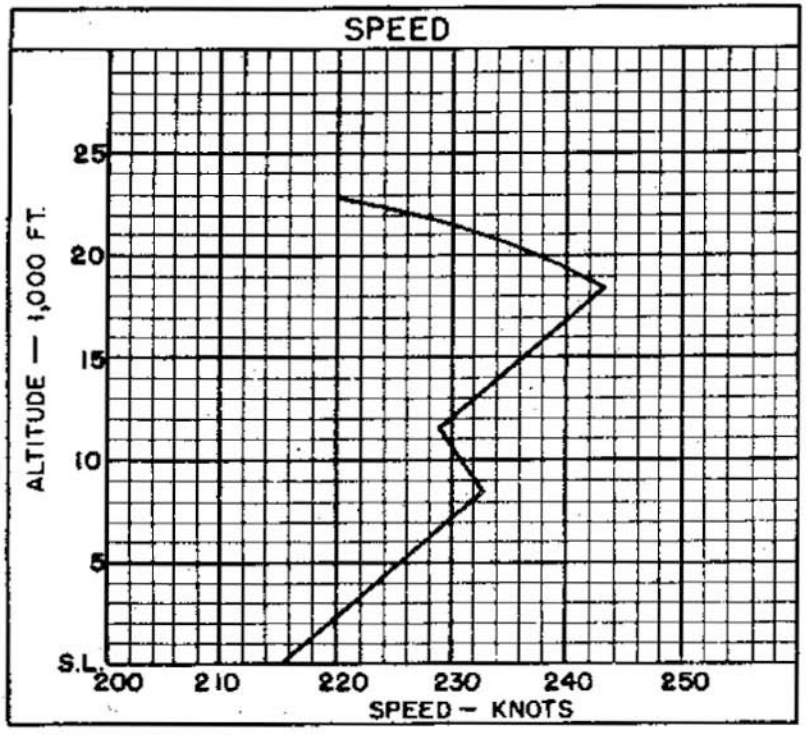
(A) Normal Rated Power

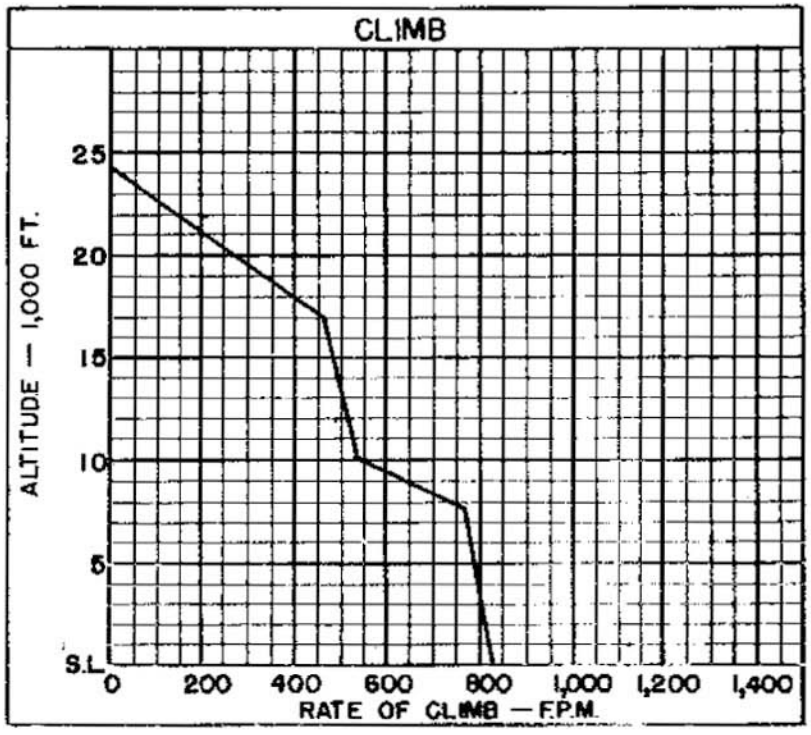
(B) Take-Off Power

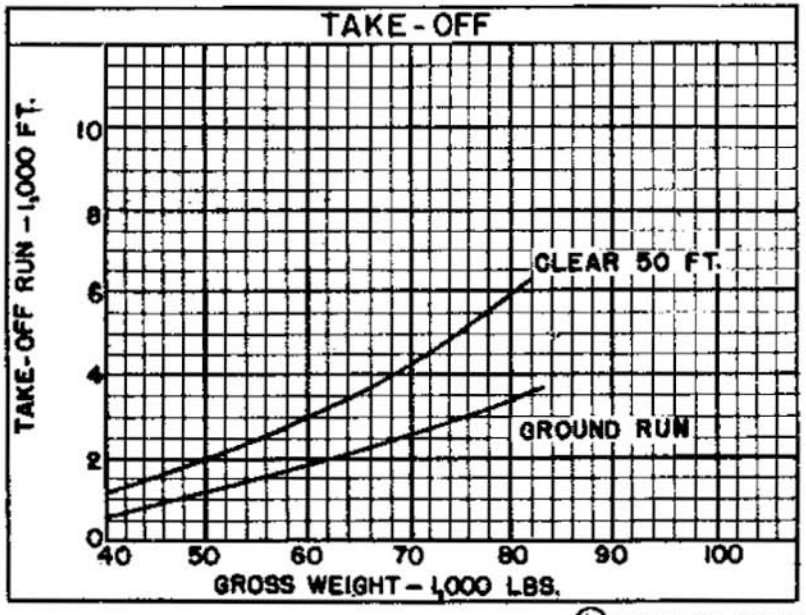
Performance Basis: Flight Test of R5D-3 airplane.

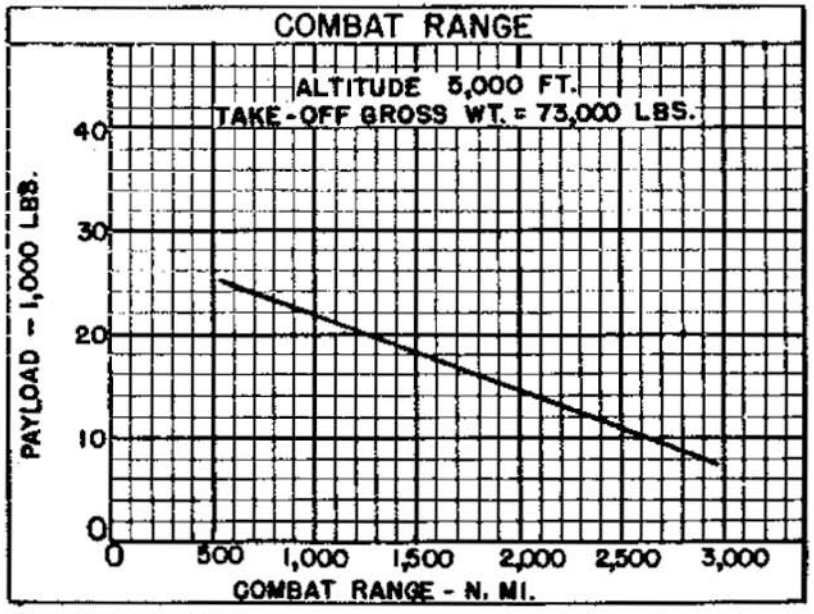
Range and radius are based on engine specification fuel consumption data increased by 5%.

Performance includes the effect of deicer boots. Removal of deicer boots increases Vmax & ACA by 4.5 knots.









LOADING CONDITION COLUMN NUMBER

NOTES

Performance with one engine inoperative, flaps and landing gear retracted and propeller feathered is estimated to be:

Gross Weight.....Lbs.	73,000
Rate of Climb - S.L., T.O. Power...Ft/Min.	620
Service Ceiling - Normal Power.....Ft.	15,400

COMBAT RANGE

WARM-UP, TAKE-OFF, ACCELERATION: 10 minutes at normal rated power.
CLIMB: On course to 5,000 feet at normal rated power.
CRUISE: At speed for long range at 5,000 feet.
RESERVE: 30 minutes at speed for long range plus 5% of initial fuel load.

COMBAT RANGE = CLIMB + CRUISE

ELECTRONICS (CONT'D)

GLIDE SLOPE REC.....AN/ARN-18
LOCALIZER.....(2) AN/ARN-14
LF COMM. REC.....(2) BC-348
NAV RADAR.....AN/APS-42
UHF COMMAND.....AN/ARC-27