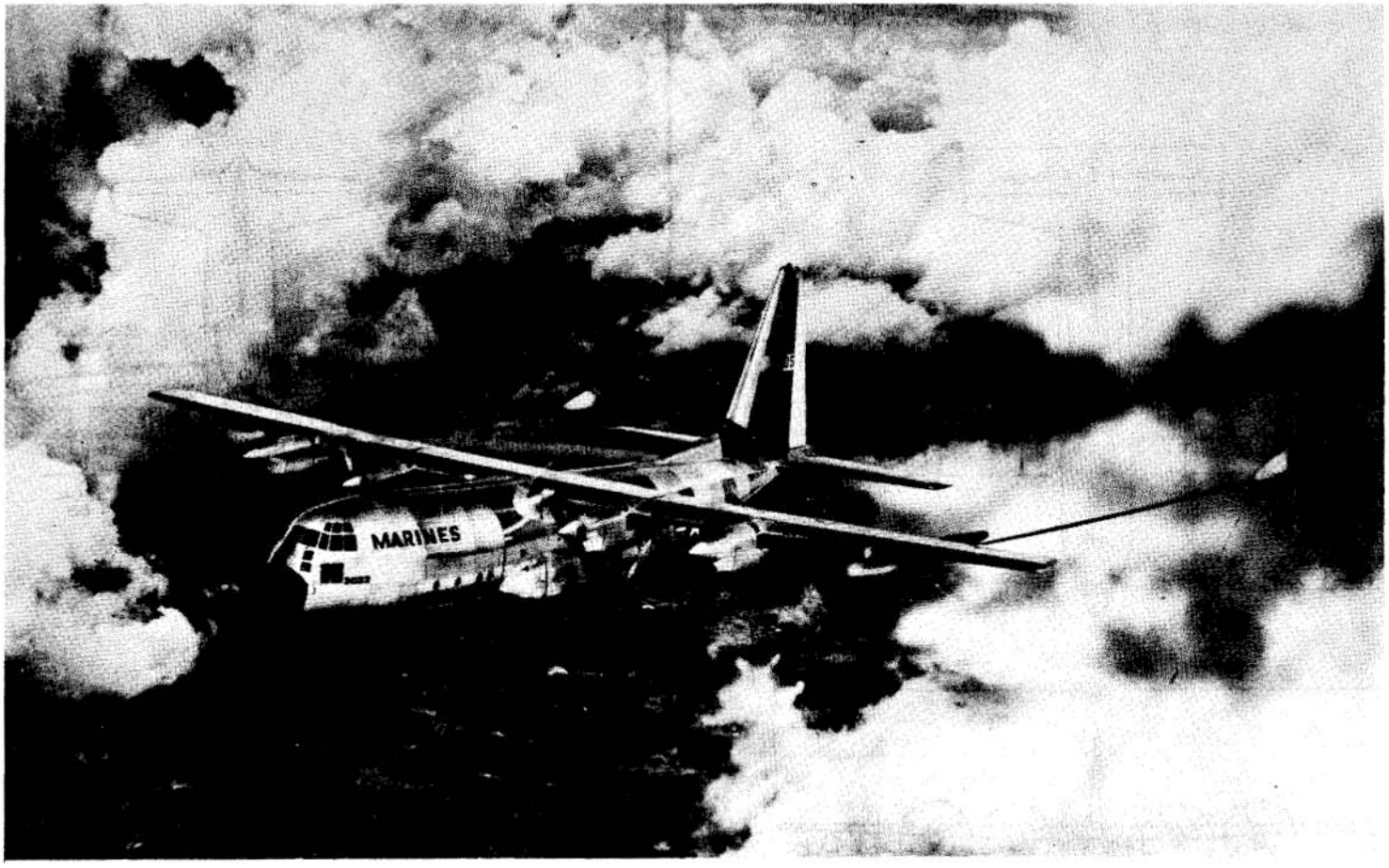
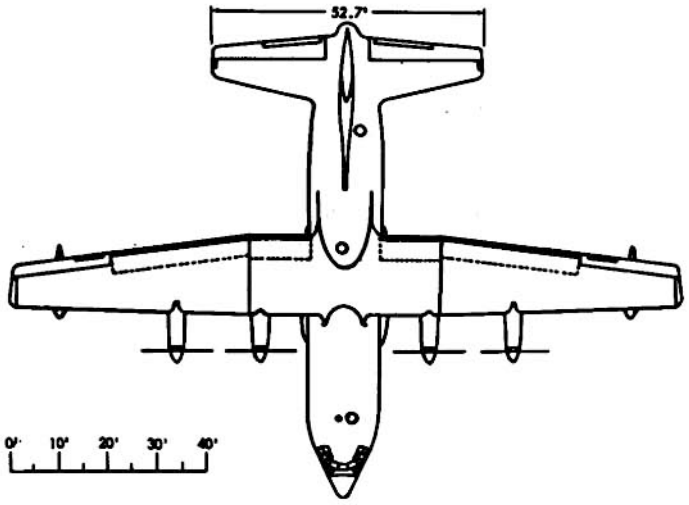


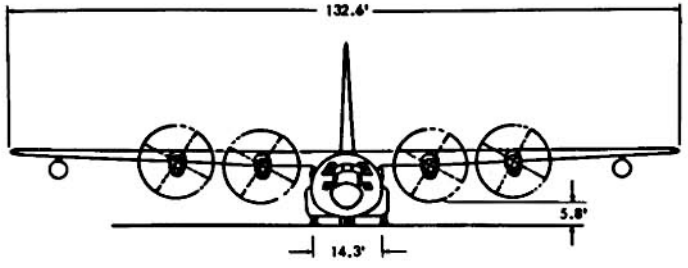
STANDARD AIRCRAFT CHARACTERISTICS

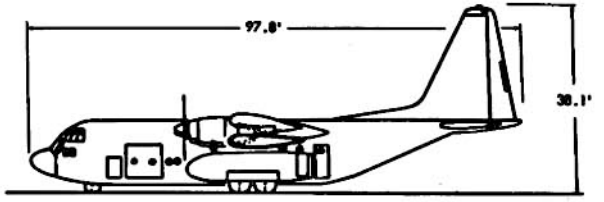
GV-I

LOCKHEED

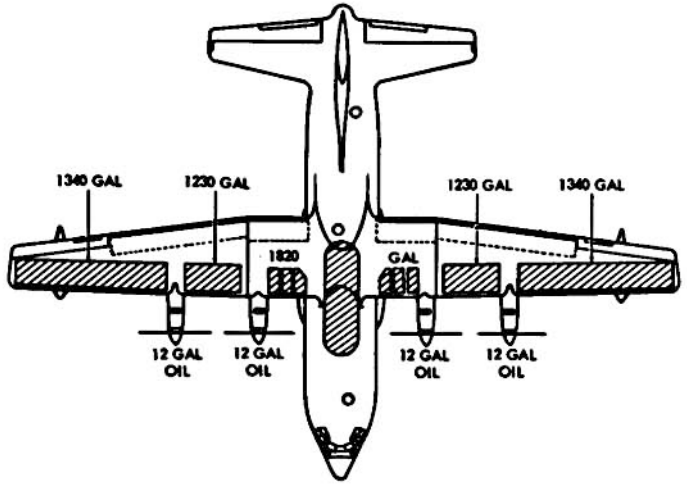
WING SECTION
(ROOT).....NACA64A318
(TIP)..... NACA64A412

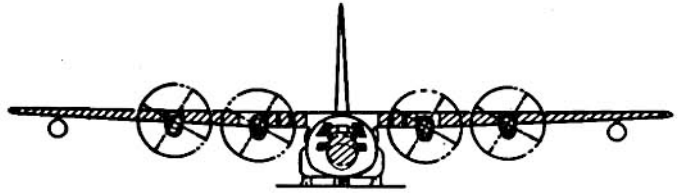


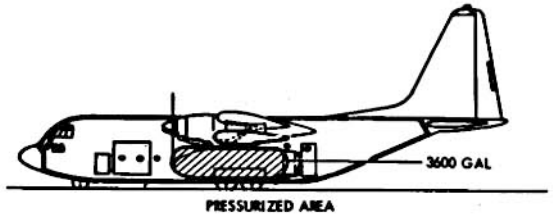




DESCRIPTIVE ARRANGEMENT - MODEL GV-1







ARMAMENT AND TANKAGE - MODEL GV-1

POWER PLANT

NO. & MODEL .....(4)T56-A-7
MFR. ..... ALLISON
SPECIFICATION 377E
PROP. MFR. ..... HAM.STD.
NO. BLDS/DIA .. 4/13 FT 6 IN.
PROP DES. A119C-2

RATINGS

	EQUIV SHP	EXHAUST THRUST	RPM
T.O.	4050	740	13,820
MIL.	4050	740	13,820
NORM.	3730	718	13,820

ATO

NO. & MODEL ...(8)15KS-1000
MFR. ..... AEROJET
THRUST ..... 1000 LBS/UNIT
DURATION ..... 15 SECS.

ELECTRONICS

UHF COMMAND 2 ..... AN/ARC-52
VHF COMMAND ..... BENDIX
LIAISON 2 ..... AN/ARC-38
LIAISON AN/ARR-41
INTERPHONE AN/AIC-14
RADAR SET AN/APN-59
RADAR SET AN/APA-89
RADAR SET AN/APN-70
GLIDE PATH AN/ARN-18
RADIO COMPASS 2 ..... AN/ARN-6
COMPASS MA-1
OMNIDIRECT RANGE 2..AN/ARN-14E
MARKER BEACON AN/ARN-32
ALTIMETER AN/APN-22
RADAR ALTIMETER SCR-718F
DIRECTION FINDER ... AN/ARA-25
DOPPLER DRIFT..... AN/APA-52
RADIO SET (TACAN).. AN/ARN-21A

MISSION AND DESCRIPTION

THE PRIMARY MISSIONS OF THE GV-1 AIRPLANE ARE THE AERIAL REFUELING OF FIGHTER AND ATTACK AIRCRAFT AND TRANSPORTING OF MATERIAL AND PERSONNEL. (ATTACK TRANSPORT)

THE NORMAL CREW CONSISTS OF PILOT, COPILOT, FLIGHT ENGINEER, NAVIGATOR, RADIO OPERATOR AND TWO REEL OPERATORS.

FEATURES INCLUDE INTEGRAL RAMP AND CARGO DOOR, CREW AND CARGO COMPARTMENT PRESSURIZATION, GROUND AND IN-FLIGHT AIR CONDITIONING, THERMAL DE-ICING SYSTEM FOR WING AND EMPENNAGE LEADING EDGE, E-4 AUTOPILOT, TWO DETACHABLE PODS AND PYLONS WITH AN IN-FLIGHT REFUELING SYSTEM DIRECT FROM FUSELAGE TANK TO THE PODS, A TRANSFER SYSTEM (WING TANK TO FUSELAGE TANK), A FUEL JETTISONING SYSTEM, A GROUND DEFUELING SYSTEM, AND SINGLE POINT REFUELING.

DEVELOPMENT

FIRST FLIGHT ..... JANUARY 1960
SERVICE USE ..... MARCH 1961

DIMENSIONS

WING
AREA ..... 1746 SQ.FT.
SPAN ..... 132' - 7"
M.A.C. ..... 13' - 8"

LENGTH ..... 97' - 10"
HEIGHT ..... 38' - 1"
TREAD ..... 14' - 4"
PROP GRD CLEARANCE. 5'- 10"

WEIGHTS

LOADINGS	LBS.	L.F.
EMPTY	66495	
BASIC	72192(c)	
DESIGN	135000	3.0
COMBAT	82800	
MAX.T.O.	135000	3.0
MAX.LDG.	135000	3.0

(c) CALCULATED

FUEL AND OIL

LOCATION	NO TANKS	GAL
WING(INBOARD)	2	2460
WING(OUTBOARD)	2	2680
WING(CENTER)	2	1860
FUSELAGE	1	3600
	TOTAL	10560

FUEL GRADE JP-4
FUEL SPEC. MIL-F-5624C

OIL

NACELLES 4 48 TOT.
SPECIFICATION MIL-7808C

ORDNANCE

NONE

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) INFLIGHT REFUELING	(3) TRANSPORT (D) (MAX. CARGO)	(5) TRANSPORT (D) (MAX. FUEL)	(7) TRANSPORT (D) (PERSONNEL)	(9) TRANSPORT (D) (EVACUATION)
TAKE-OFF WEIGHT	lb.	135,000	135,000	135,000	135,000	134,520
Fuel (JP-4)	lb./lb.	61,426	30,246	45,240	43,044	45,240
Payload	lb.	46038(C)	35,000	20,069	20,700	18,900
Wing loading	lb./sq.ft.	77.4	77.4	77.4	77.4	77.1
Stall speed - power-off	km.	98	98	98	98	98
Take-off run at S.L. - calm (A)	ft.	3000	3000	3000	3000	3000
Take-off run at S.L. km. wind	ft.	2200	2200	2200	2200	2200
Take-off to clear 50 ft. - calm (A)	ft.	4320	4320	4320	4320	4320
Max. speed/altitude (B)	km./ft.	311/11,000	318/12,500	318/12,500	318/12,500	318/12,500
Rate of climb at S.L. (B)	fpm.	1970	2100	2100	2100	2100
Time: S.L. to 10,000ft. (B)	min.	7	6	6	6	6
Time: S.L. to 25,000ft. (B)	min.	29	28	28	28	28
Service ceiling (100 fpm) (B)	ft.	28,000	28,500	28,500	28,500	28,500
Combat range /MISSION TIME	n.mi.	4520/16,60	1920/6,70	3160/11,10	3000/10,5	3190/11,2
Average cruising speed	km.	278	295	294	290	289
Cruising altitude(s) INITIAL/FINAL	ft.	25,200/37,700	26,100/31,500	26,100/35,000	26,100/34,400	26,300/35,000
Combat radius/Mission time	n.mi.	300/3,5	1040/7,9	1660/12,4	1560/11,6	1630/12,00(E)
Average cruising speed	km.	270	276	277	277	280
CRUISING ALTITUDE(S) INITIAL/FINAL	FT/FT.	25,200/37,700	26,700/40,400	26,100/40,200	26,100/39,900	30,400/35,300
COMBAT LOADING CONDITION		(2) 60% MISSION FUEL	(4) 60% MISSION FUEL	(6) 60% MISSION FUEL	(8) 60% MISSION FUEL	(10) 60% MISSION FUEL
COMBAT WEIGHT	lb.	128,883	122,902	116,904	117,782	116,424
Engine power		MILITARY	MILITARY	MILITARY	NORMAL	MILITARY
Fuel	lb.	10,677	18,148	27,144	25,826	27,144
Combat speed/combat altitude	km./ft.	312/25,000	321/25,000	324/25,000	324/25,000	324/25,000
Rate of climb/combat altitude	fpm/ft.	560/25,000	620/25,000	800/25,000	770/25,000	800/25,000
Combat ceiling (500 fpm)	ft.	25,700	27,000	29,500	29,300	29,500
Rate of climb at S.L.	fpm.	2350	2570	2700	2680	2710
Max. speed at S.L.	km.	310	314	316	316	316
Max. speed/altitude	km./ft.	321/15,000	327/18,000	328/23,000	328/23,000	328/23,000
LANDING WEIGHT	lb.	76232	73116	73863	75258	93627
Fuel	lb.	2680	3365	4112	4002	4237
Stall speed - power-off/appr. power	km./km.	74/65	72/64	72/64	73/65	81/72
Distance - ground roll/over 50 ft. obst.	ft./ft.	1850/2010	1840/2560	1850/2500	1850/2600	1850/2800

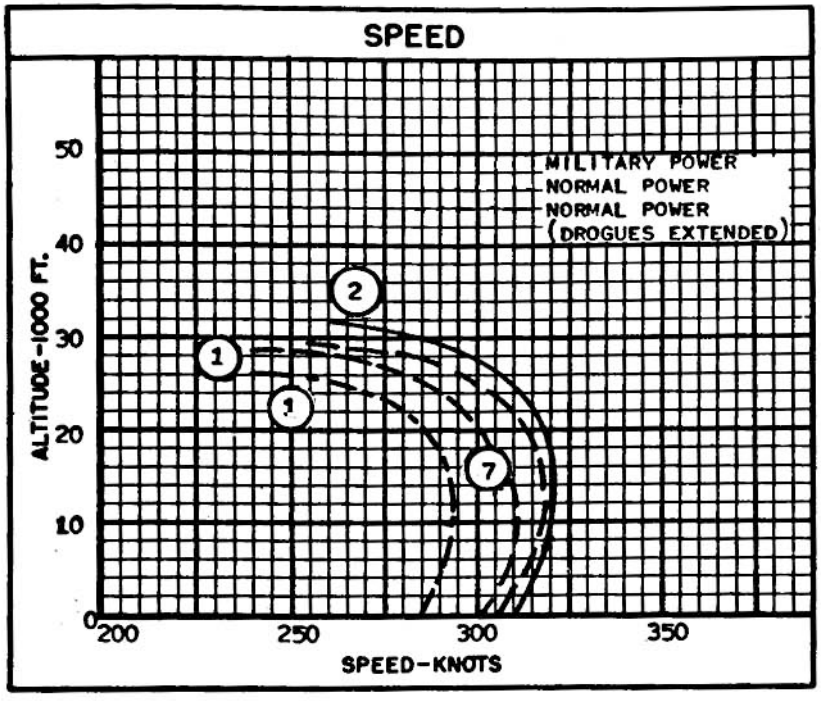
NOTES

PERFORMANCE BASIS: CALCULATIONS
RANGE AND/OR RADIUS: BASED ON ENGINE SPECIFICATION FUEL CONSUMPTION DATA INCREASED 5%.

(A) TAKE-OFF
(B) NORMAL POWER
(C) FUEL AVAILABLE FOR TRANSFER
(D) INFLIGHT REFUELING EQUIPMENT REMOVED
(E) TAKE-OFF WEIGHT FOR RADIUS MISSION IS 115,620 POUNDS. (NO CARGO OUTBOUND)

GAVER-1350 (Rev. 1-61)

SPEED



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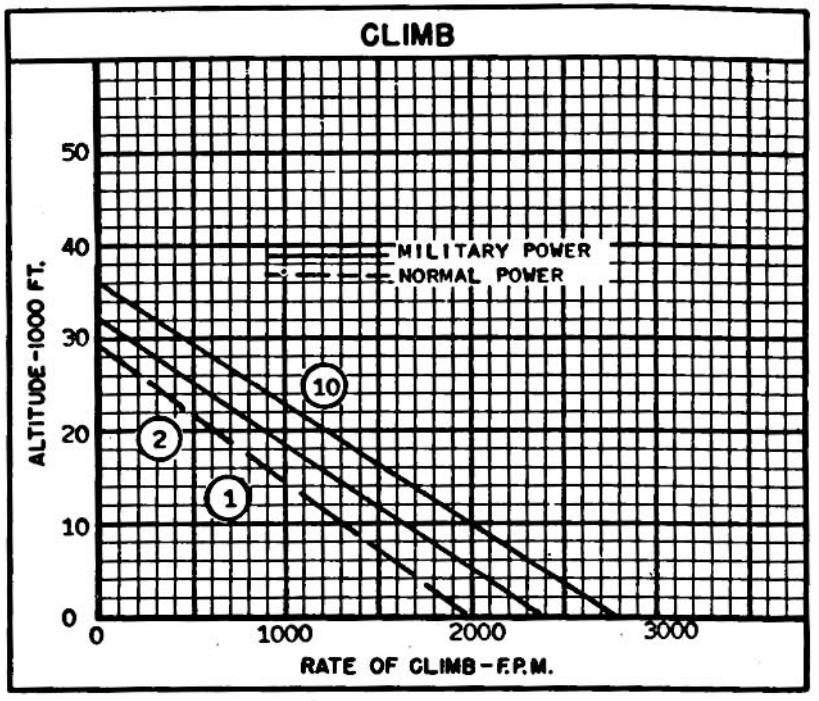
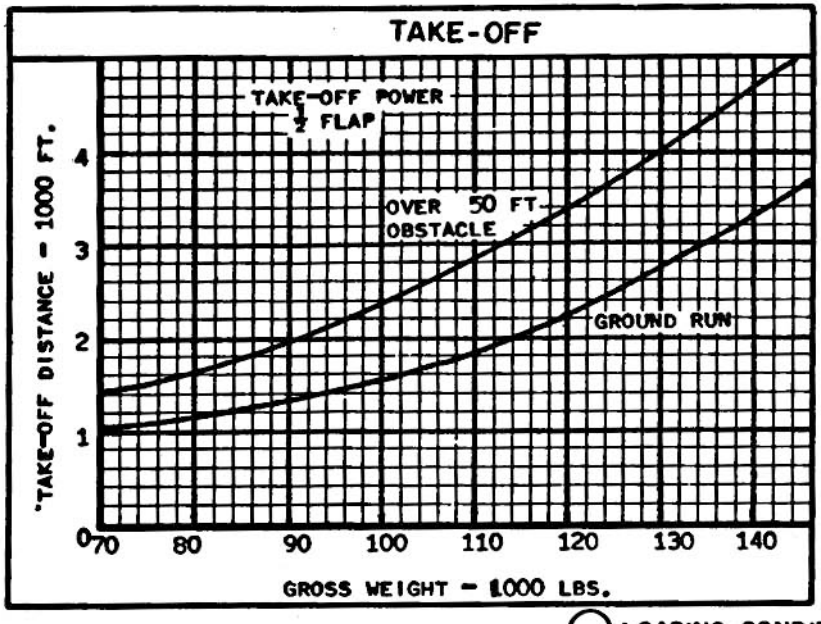
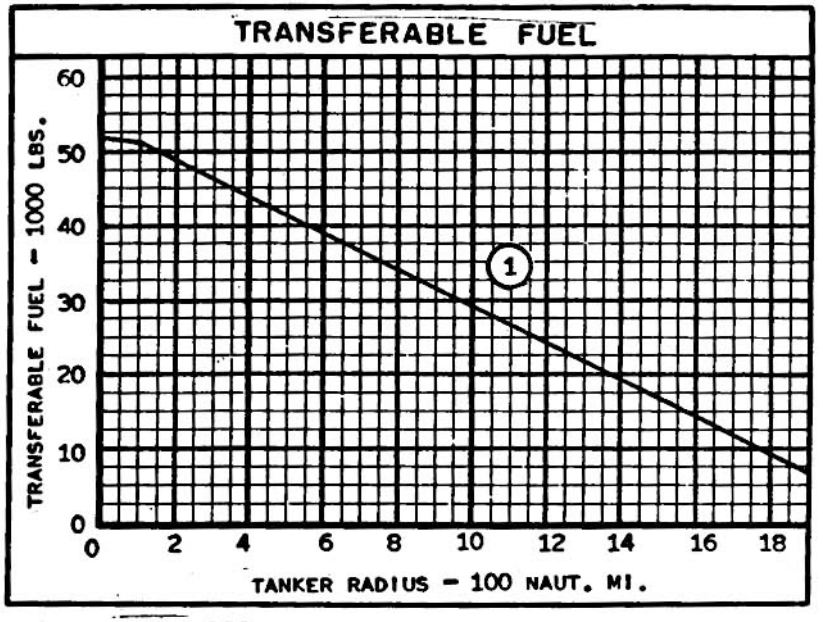


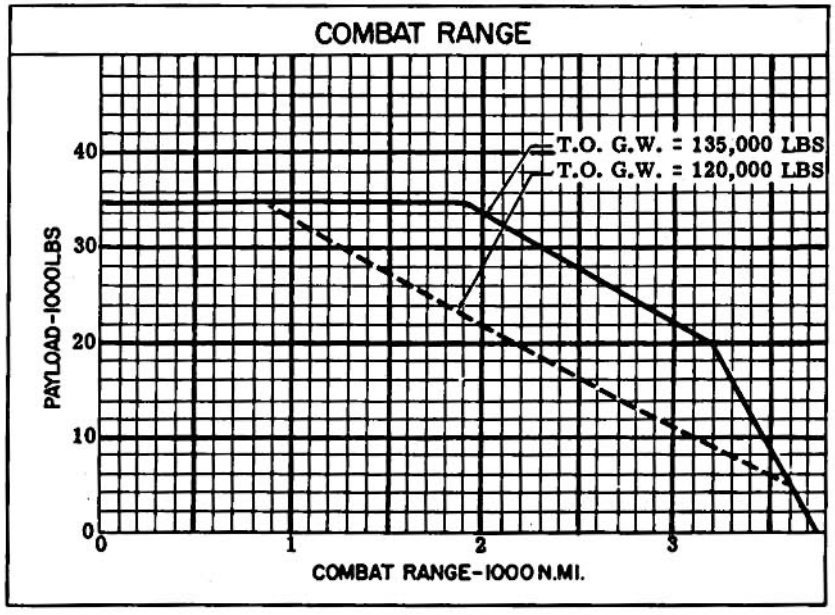
TAKE-OFF

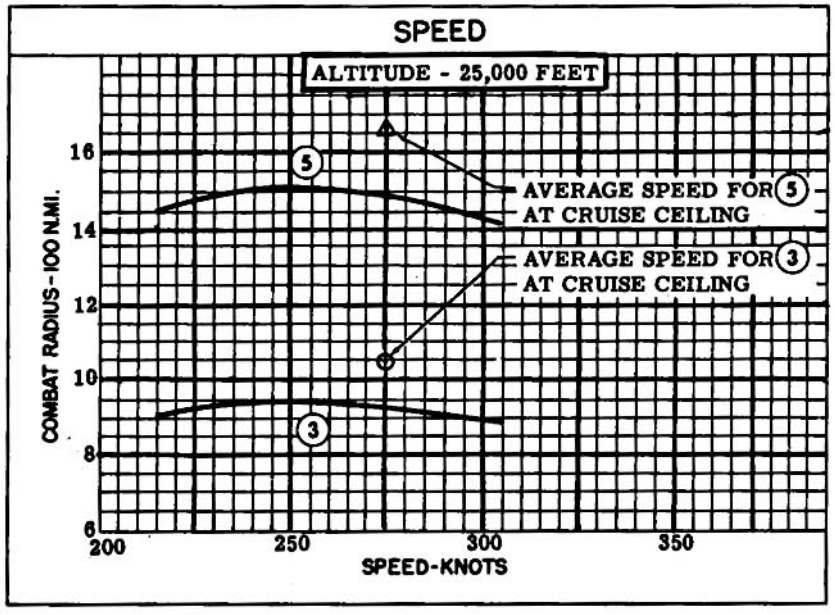


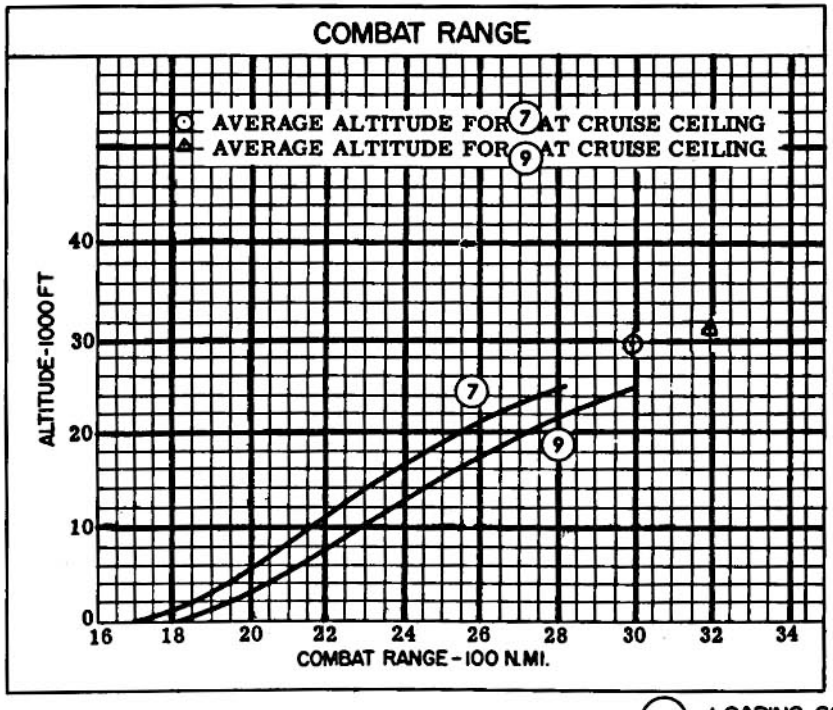
TRANSFERABLE FUEL

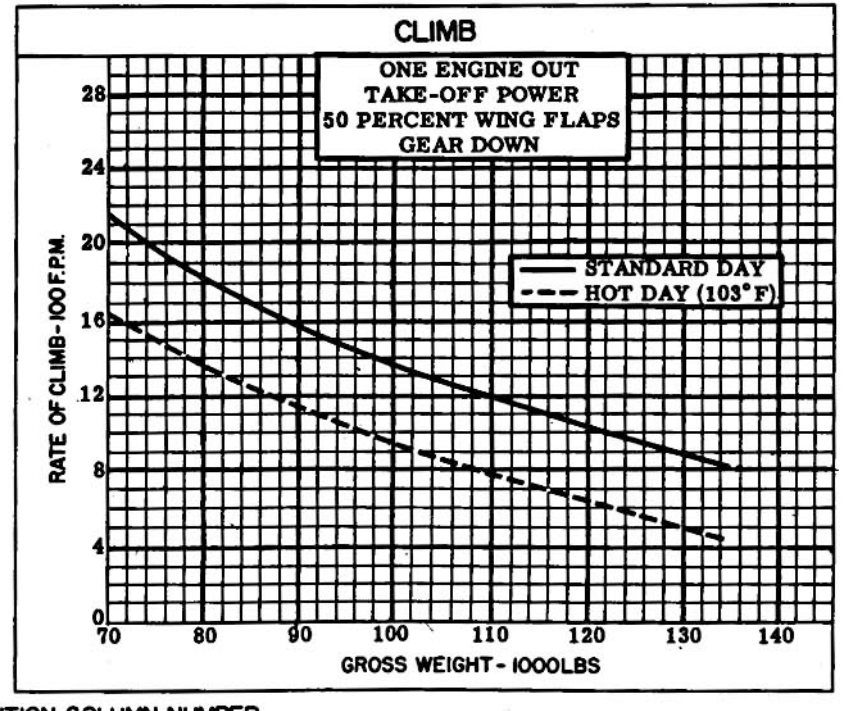


◯ LOADING CONDITION COLUMN NUMBER









(○) LOADING CONDITION COLUMN NUMBER

NOTES

INFLIGHT REFUELING RADIUS MISSION

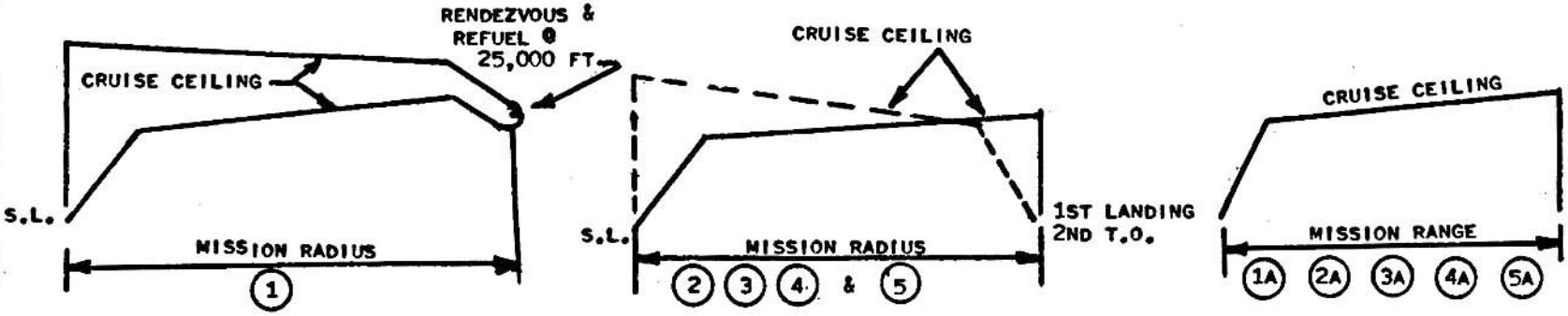
WARM-UP, TAKE-OFF, ACCELERATE: 5 MINUTES AT NORMAL POWER AT SEA LEVEL
CLIMB: ON COURSE TO CRUISE CEILING AT NORMAL POWER
CRUISE: AT CRUISE CEILING AT SPEEDS FOR MAXIMUM RANGE
RENDEZVOUS & REFUEL: AT 25,000 FOR ONE HOUR AT SPEEDS FOR MAXIMUM RANGE
CLIMB: ON COURSE TO CRUISE CEILING AT NORMAL POWER
CRUISE: AT CRUISE CEILING AT SPEED: FOR MAXIMUM RANGE
RESERVE: 30 MINUTES AT SEA LEVEL AT SPEEDS FOR MAXIMUM ENDURANCE PLUS 5% OF TOTAL FUEL LOAD

TRANSPORT RADIUS MISSION

WARM-UP, TAKE-OFF, ACCELERATE: 5 MINUTES AT NORMAL POWER AT SEA LEVEL
CLIMB: ON COURSE TO CRUISE CEILING AT NORMAL POWER
CRUISE: AT CRUISE CEILING AT SPEEDS FOR MAXIMUM RANGE
1ST LANDING: UNLOAD CARGO OR LOAD EVACUATION PERSONNEL
WARM-UP, TAKE-OFF, ACCELERATE: WITHOUT REFUELING; 5 MINUTES AT NORMAL POWER AT SEA LEVEL
CLIMB: ON COURSE TO CRUISE CEILING AT NORMAL POWER
CRUISE: AT CRUISE CEILING AT SPEEDS FOR MAXIMUM RANGE
RESERVE: 30 MINUTES AT SEA LEVEL AT SPEEDS FOR MAXIMUM ENDURANCE PLUS 5% OF INITIAL FUEL

RANGE MISSIONS

WARM-UP, TAKE-OFF, ACCELERATE: 5 MINUTES AT NORMAL POWER AT SEA LEVEL
CLIMB: ON COURSE TO CRUISE CEILING AT NORMAL POWER
CRUISE: AT CRUISE CEILING AT SPEEDS FOR MAXIMUM RANGE UNTIL ONLY RESERVE FUEL REMAINS, THEN LAND
RESERVE: 30 MINUTES AT SEA LEVEL AT SPEED: FOR MAXIMUM ENDURANCE PLUS 5% OF INITIAL FUEL



PERFORMANCE WITH ONE ENGINE INOPERATIVE, LANDING GEAR RETRACTED, FLAPS UP, PROPELLER FEATHERED, TRANSPORT CONFIGURATION IS:

GROSS WEIGHT	LBS.	135,000
S.L. RATE OF CLIMB, MILITARY POWER	FT/MIN.	1350
SERVICE CEILING, MILITARY POWER	FT.	22,500

(1) LOADING CONDITION COLUMN NUMBER