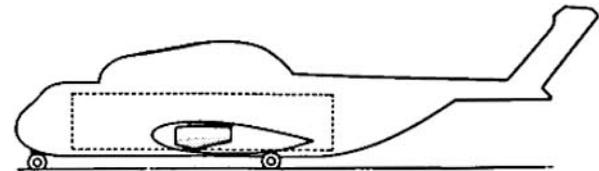
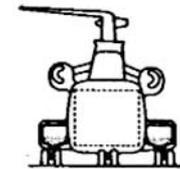
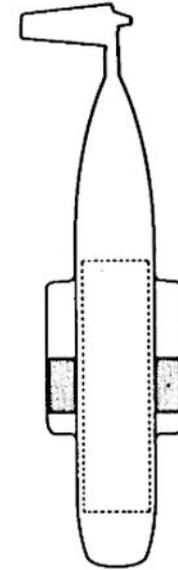
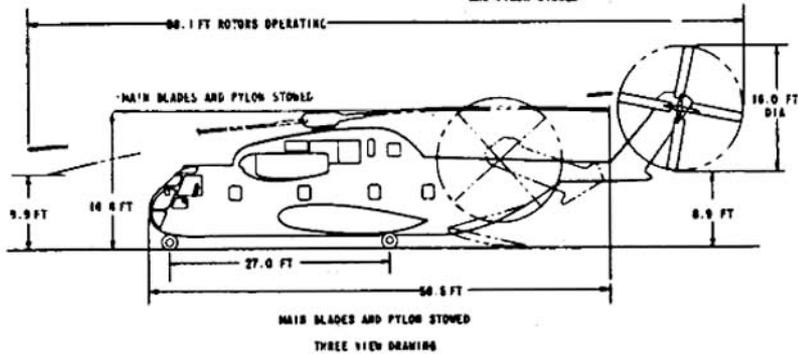
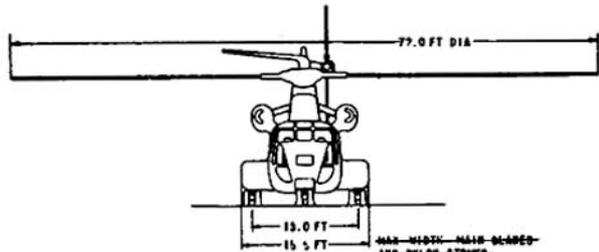
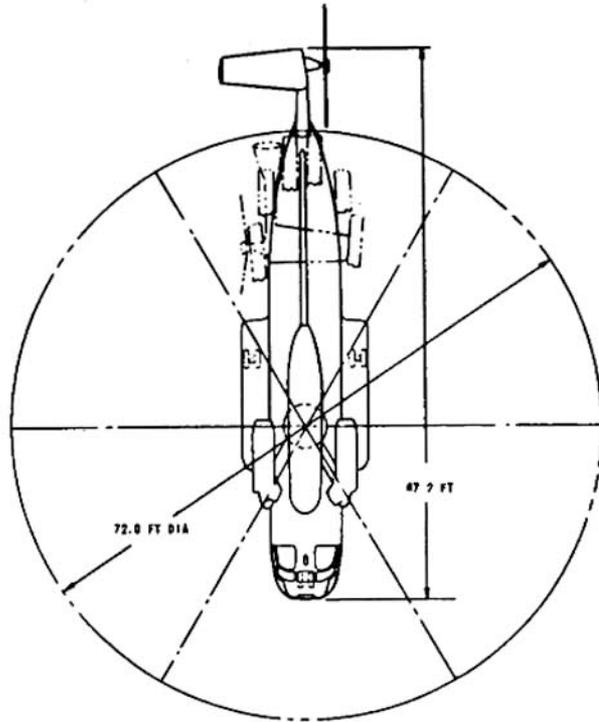




# STANDARD AIRCRAFT CHARACTERISTICS

CH-53A



■ SELF SEALING

SPONSON TANK CAPACITY = 311 GALLONS EACH  
 CLEAR CARGO SPACE DIMENSIONS = 7.5 FT x 6.5 FT x 30.0 FT

POWER PLANT		MISSION AND DESCRIPTION		WEIGHTS																																																																			
NO. & MODEL: ..... (2) T64-GE-6 MANUFACTURER ..... GENERAL ELECTRIC SPEC NO. .... E1057-B (29 APR 63) TYPE ..... AXIAL WEIGHT (DRY) ..... 728 LBS LENGTH ..... 59 IN. DIAMETER ..... 20 IN. ENG/MAIN ROTOR G.R. .... 73.55		THIS HELICOPTER WILL BE EMPLOYED PRIMARILY IN THE MOVEMENT OF CARGO AND EQUIPMENT, AND SECONDARILY IN THE TRANSPORTATION OF TROOPS, IN THE AMPHIBIOUS ASSAULT AND SUBSEQUENT OPERATIONS ASHORE.  IT IS SUITABLE FOR OPERATION FROM LPH-2 AND LPH-4 CLASS CARRIERS AS WELL AS ESTABLISHED AIRFIELDS, ADVANCED BASES AND OTHER AREAS OR SHIPS WITH INDIVIDUAL PLATFORMS OR LIMITED LANDING AND STORAGE FACILITIES AND LIMITED MAINTENANCE AND LOGISTIC SUPPORT. EMERGENCY WATER LANDING AND TAKE-OFF FEATURES ARE INCORPORATED TO LESSEN THE PROBABILITY OF LOSS IN THE EVENT OF EMERGENCY LANDING AT SEA. THE AREAS OF OPERATION CAN RANGE FROM ARTIC TO TROPIC IN ALL WEATHER CONDITIONS.  POWERED BY TWIN TURBINE ENGINES, THIS SINGLE MAIN ROTOR, SINGLE ANTI-TORQUE ROTOR ALL METAL HELICOPTER INCORPORATES A COMPLETELY AUTOMATIC MAIN ROTOR BLADE FOLDING SYSTEM AND A HYDRAULICALLY OPERATED REAR LOADING RAMP DOOR, LARGE ENOUGH TO ACCOMMODATE WHEELED VEHICLES AND STANDARD PALLET LOADS. PRIMARY AND SECONDARY HYDRAULIC SERVO CONTROL SYSTEMS INSURE CONTROLLABILITY IN ALL FLIGHT REGIMES. THE SECONDARY SERVO SYSTEM IS COUPLED WITH AN AUTOMATIC FLIGHT CONTROL SYSTEM TO LESSEN PILOT FATIGUE ON LONG MISSIONS.		<table border="1"> <thead> <tr> <th>LOADING</th> <th>POUNDS</th> <th>L.F.</th> </tr> </thead> <tbody> <tr><td>EMPTY</td><td>21935</td><td>3.0</td></tr> <tr><td>BASIC</td><td>22013</td><td>3.0</td></tr> <tr><td>DESIGN</td><td>34499</td><td>3.0</td></tr> <tr><td>COMBAT</td><td>25000</td><td>3.0</td></tr> <tr><td>TAKE-OFF</td><td>34560</td><td>3.0</td></tr> <tr><td>MAX TAKE-OFF</td><td>39450</td><td>2.6</td></tr> <tr><td>MAX LANDING</td><td>39450</td><td>2.6</td></tr> <tr><td>FERRY</td><td>49500</td><td>2.1</td></tr> </tbody> </table>			LOADING	POUNDS	L.F.	EMPTY	21935	3.0	BASIC	22013	3.0	DESIGN	34499	3.0	COMBAT	25000	3.0	TAKE-OFF	34560	3.0	MAX TAKE-OFF	39450	2.6	MAX LANDING	39450	2.6	FERRY	49500	2.1																																						
LOADING	POUNDS	L.F.																																																																					
EMPTY	21935	3.0																																																																					
BASIC	22013	3.0																																																																					
DESIGN	34499	3.0																																																																					
COMBAT	25000	3.0																																																																					
TAKE-OFF	34560	3.0																																																																					
MAX TAKE-OFF	39450	2.6																																																																					
MAX LANDING	39450	2.6																																																																					
FERRY	49500	2.1																																																																					
<table border="1"> <thead> <tr> <th colspan="4">RATINGS</th> </tr> <tr> <th>S.L. STATIC</th> <th>SHP</th> <th>RPM</th> <th>MIN</th> </tr> </thead> <tbody> <tr><td>*MAXIMUM</td><td>2850</td><td>13,600</td><td>10</td></tr> <tr><td>*MILITARY</td><td>2690</td><td>13,600</td><td>30</td></tr> <tr><td>*NORMAL</td><td>2270</td><td>13,600</td><td>CONT</td></tr> <tr><td>**MAXIMUM</td><td>2425</td><td>13,600</td><td>10</td></tr> <tr><td>**MILITARY</td><td>2235</td><td>13,600</td><td>30</td></tr> <tr><td>**NORMAL</td><td>1835</td><td>13,600</td><td>CONT</td></tr> </tbody> </table> *SEA LEVEL STANDARD DAY **89.6°F SEA LEVEL DAY		RATINGS				S.L. STATIC	SHP	RPM	MIN	*MAXIMUM	2850	13,600	10	*MILITARY	2690	13,600	30	*NORMAL	2270	13,600	CONT	**MAXIMUM	2425	13,600	10	**MILITARY	2235	13,600	30	**NORMAL	1835	13,600	CONT			<table border="1"> <thead> <tr> <th colspan="3">FUEL AND OIL</th> </tr> <tr> <th>LOCATION</th> <th>NO TANKS</th> <th>GAL</th> </tr> </thead> <tbody> <tr><td>RIGHT SPONSON</td><td>1</td><td>311</td></tr> <tr><td>LEFT SPONSON</td><td>1</td><td>311</td></tr> <tr><td colspan="3">SELF-SEALING TYPE FUEL TANKS</td></tr> <tr><td>FUEL SPECIFICATION</td><td colspan="2">MIL-J-5624D</td></tr> <tr><td>GRADE</td><td colspan="2">JP-4, JP-5</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">OIL</th> </tr> <tr> <th>ENGINE COMPT</th> <th></th> <th></th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td>4.1</td></tr> <tr><td colspan="3">OIL SPECIFICATION MIL-L-7808D</td></tr> </tbody> </table>			FUEL AND OIL			LOCATION	NO TANKS	GAL	RIGHT SPONSON	1	311	LEFT SPONSON	1	311	SELF-SEALING TYPE FUEL TANKS			FUEL SPECIFICATION	MIL-J-5624D		GRADE	JP-4, JP-5		OIL			ENGINE COMPT			1		4.1	OIL SPECIFICATION MIL-L-7808D		
RATINGS																																																																							
S.L. STATIC	SHP	RPM	MIN																																																																				
*MAXIMUM	2850	13,600	10																																																																				
*MILITARY	2690	13,600	30																																																																				
*NORMAL	2270	13,600	CONT																																																																				
**MAXIMUM	2425	13,600	10																																																																				
**MILITARY	2235	13,600	30																																																																				
**NORMAL	1835	13,600	CONT																																																																				
FUEL AND OIL																																																																							
LOCATION	NO TANKS	GAL																																																																					
RIGHT SPONSON	1	311																																																																					
LEFT SPONSON	1	311																																																																					
SELF-SEALING TYPE FUEL TANKS																																																																							
FUEL SPECIFICATION	MIL-J-5624D																																																																						
GRADE	JP-4, JP-5																																																																						
OIL																																																																							
ENGINE COMPT																																																																							
1		4.1																																																																					
OIL SPECIFICATION MIL-L-7808D																																																																							
<table border="1"> <thead> <tr> <th colspan="2">ORDNANCE</th> </tr> </thead> <tbody> <tr><td colspan="2">NONE REQUIRED</td></tr> </tbody> </table>		ORDNANCE		NONE REQUIRED				<table border="1"> <thead> <tr> <th colspan="3">ELECTRONICS</th> </tr> </thead> <tbody> <tr><td>AN/ARC-51</td><td colspan="2">UHF RADIO</td></tr> <tr><td>AN/ARC - 44</td><td colspan="2">VHF (FM) RADIO</td></tr> <tr><td>AN/APX-46</td><td colspan="2">RADAR IDENT SET</td></tr> <tr><td>AN/AIC-14</td><td colspan="2">INTERPHONE</td></tr> <tr><td>AN/ARN-59</td><td colspan="2">ADF</td></tr> <tr><td>AN/ARA-25A</td><td colspan="2">DIR. FINDER GROUP</td></tr> <tr><td>AN/APN-117</td><td colspan="2">RAD. ALT.</td></tr> <tr><td>AN/ARC-94</td><td colspan="2">HF/SSB 2-30 MC</td></tr> <tr><td>MA-1</td><td colspan="2">COMPASS SYSTEM</td></tr> <tr><td>AN/ARN-52 (v)</td><td colspan="2">TACAN</td></tr> </tbody> </table>			ELECTRONICS			AN/ARC-51	UHF RADIO		AN/ARC - 44	VHF (FM) RADIO		AN/APX-46	RADAR IDENT SET		AN/AIC-14	INTERPHONE		AN/ARN-59	ADF		AN/ARA-25A	DIR. FINDER GROUP		AN/APN-117	RAD. ALT.		AN/ARC-94	HF/SSB 2-30 MC		MA-1	COMPASS SYSTEM		AN/ARN-52 (v)	TACAN																													
ORDNANCE																																																																							
NONE REQUIRED																																																																							
ELECTRONICS																																																																							
AN/ARC-51	UHF RADIO																																																																						
AN/ARC - 44	VHF (FM) RADIO																																																																						
AN/APX-46	RADAR IDENT SET																																																																						
AN/AIC-14	INTERPHONE																																																																						
AN/ARN-59	ADF																																																																						
AN/ARA-25A	DIR. FINDER GROUP																																																																						
AN/APN-117	RAD. ALT.																																																																						
AN/ARC-94	HF/SSB 2-30 MC																																																																						
MA-1	COMPASS SYSTEM																																																																						
AN/ARN-52 (v)	TACAN																																																																						
<table border="1"> <thead> <tr> <th colspan="2">CARGO</th> </tr> </thead> <tbody> <tr><td>CARGO LOAD</td><td>8000 LB</td></tr> <tr><td>FLOOR LOAD (STATIC)</td><td>300 P.S.F.</td></tr> <tr><td>FLOOR LOAD FACTOR</td><td>3</td></tr> <tr><td>CLEAR SPACE WIDTH</td><td>HEIGHT</td><td>LENGTH</td></tr> <tr><td>DIMENSIONS:</td><td>7'5"</td><td>6'6"</td><td>30'0"</td></tr> <tr><td>CARGO DOOR</td><td>WIDTH</td><td>HEIGHT</td></tr> <tr><td>CLEAR SPACE:</td><td>7'6"</td><td>6'6"</td></tr> </tbody> </table>		CARGO		CARGO LOAD	8000 LB	FLOOR LOAD (STATIC)	300 P.S.F.	FLOOR LOAD FACTOR	3	CLEAR SPACE WIDTH	HEIGHT	LENGTH	DIMENSIONS:	7'5"	6'6"	30'0"	CARGO DOOR	WIDTH	HEIGHT	CLEAR SPACE:	7'6"	6'6"																																																	
CARGO																																																																							
CARGO LOAD	8000 LB																																																																						
FLOOR LOAD (STATIC)	300 P.S.F.																																																																						
FLOOR LOAD FACTOR	3																																																																						
CLEAR SPACE WIDTH	HEIGHT	LENGTH																																																																					
DIMENSIONS:	7'5"	6'6"	30'0"																																																																				
CARGO DOOR	WIDTH	HEIGHT																																																																					
CLEAR SPACE:	7'6"	6'6"																																																																					
<table border="1"> <thead> <tr> <th colspan="2">PERSONNEL</th> </tr> </thead> <tbody> <tr><td>TROOP CAPACITY</td><td>38</td></tr> <tr><td>LITTER CAPACITY</td><td>24</td></tr> </tbody> </table>		PERSONNEL		TROOP CAPACITY	38	LITTER CAPACITY	24	<table border="1"> <thead> <tr> <th colspan="2">DIMENSIONS</th> </tr> </thead> <tbody> <tr><td>MAIN ROTOR DIA.</td><td>72'0"</td></tr> <tr><td>LENGTH (BLADES STOWED)</td><td>56'6"</td></tr> <tr><td>HEIGHT (STATIC)</td><td>16'7"</td></tr> <tr><td>WIDTH (BLADES STOWED)</td><td>15'11"</td></tr> <tr><td>TREAD</td><td>13'0"</td></tr> <tr><td>DISC AREA (MAIN ROTOR)</td><td>4071.5 SQ.FT.</td></tr> <tr><td>BLADE AREA (MAIN ROTOR)</td><td>375.0 SQ.FT.</td></tr> <tr><td>NO. OF BLADES (MAIN ROTOR)</td><td>6</td></tr> </tbody> </table>		DIMENSIONS		MAIN ROTOR DIA.	72'0"	LENGTH (BLADES STOWED)	56'6"	HEIGHT (STATIC)	16'7"	WIDTH (BLADES STOWED)	15'11"	TREAD	13'0"	DISC AREA (MAIN ROTOR)	4071.5 SQ.FT.	BLADE AREA (MAIN ROTOR)	375.0 SQ.FT.	NO. OF BLADES (MAIN ROTOR)	6																																												
PERSONNEL																																																																							
TROOP CAPACITY	38																																																																						
LITTER CAPACITY	24																																																																						
DIMENSIONS																																																																							
MAIN ROTOR DIA.	72'0"																																																																						
LENGTH (BLADES STOWED)	56'6"																																																																						
HEIGHT (STATIC)	16'7"																																																																						
WIDTH (BLADES STOWED)	15'11"																																																																						
TREAD	13'0"																																																																						
DISC AREA (MAIN ROTOR)	4071.5 SQ.FT.																																																																						
BLADE AREA (MAIN ROTOR)	375.0 SQ.FT.																																																																						
NO. OF BLADES (MAIN ROTOR)	6																																																																						

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) Basic Assault	(2) Alternat Assault	(3) Overload Assault	(4) Ferry
TAKE-OFF WEIGHT	LB.	34560	35516	(D) 39450	(F) 49500
FUEL	LB.	3880	3925	4047	25275
PAYLOAD	LB.	8000	8030	12742	--
DISC LOADING	LB./SQ.FT.	8.5	8.7	9.7	12.2
VERTICAL RATE OF CLIMB AT S.L.	FPM.	(A) 1120	(A) 975	(A) 0	(G)
ABSOLUTE HOVERING CEILING	FT.	(A) 6000	(A) 4500	(A) SL	(G)
MAX. RATE OF CLIMB AT S.L.	FPM.	(B) 1725	(B) 1640	(B) 1315	(3) 525
SERVICE CEILING (100 FPM.)	FT.	(B) 15700	(B) 14900	(B) 11500	(B) 3400
SPEED AT S.L.	KN.	(C) 155	(C) 152	(C) 140	(C) 100
MAX. SPEED/ALTITUDE	KN./FT.	(A) 168/SL	(A) 167/SL	(A) 159	(A) 115
COMBAT RANGE	N.MI.	226	225	223	1545
AVERAGE CRUISING SPEED	KN.	136	136	134	125
CRUISING ALTITUDE	FT.	S.L.	S.L.	S.L.	S.L. to 10000
COMBAT RADIUS	N.MI.	100	100	100	--
AVERAGE CRUISING SPEED	KN.	150/150	150/150	143/150	--
Single Engine Rate of Climb (39.6°F SL Day) (95.5% rpm)	fpm.	(A) 120	55	(E)	(3)

## NOTES:

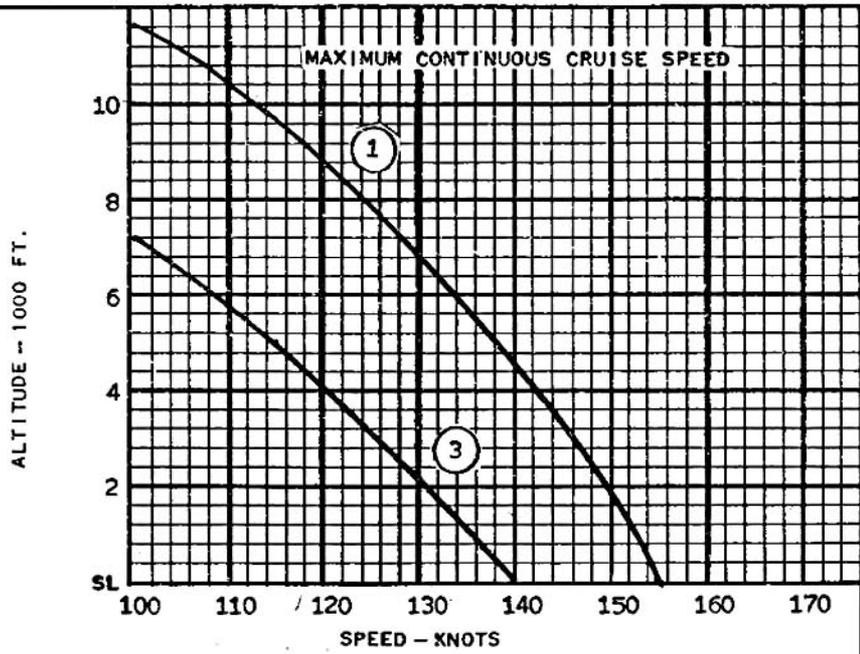
- (A) Military Rated Power
- (B) Normal Rated Power
- (C) Max Continuous Cruise Speed
- (D) Weight for Maximum OGE Hover Take-Off at Military Rated Power, S.L., Standard Day
- (E) Aircraft Cannot Maintain Level Flight at Military Power on one Engine at Weights Greater than 36,400 lb (39.6°F, SL, 95.5% rpm)
- (F) Running Take-Off Required
- (G) Aircraft Cannot Hover at Ferry Mission Take-Off Weight

All Performance is out of Ground Effect

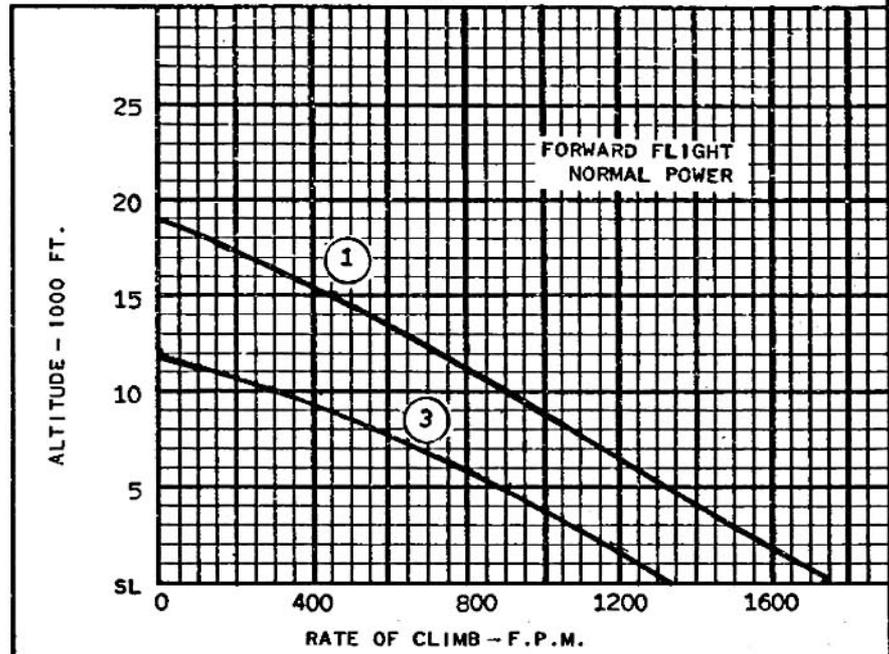
PERFORMANCE BASIS: Estimates

RANGE and RADIUS are Based on Engine Manufacturers Fuel Flows Increased 5%. Per MIL-C-5011A  
Auxiliary Fuel Tanks in Cargo Compartment Required for Ferry Mission

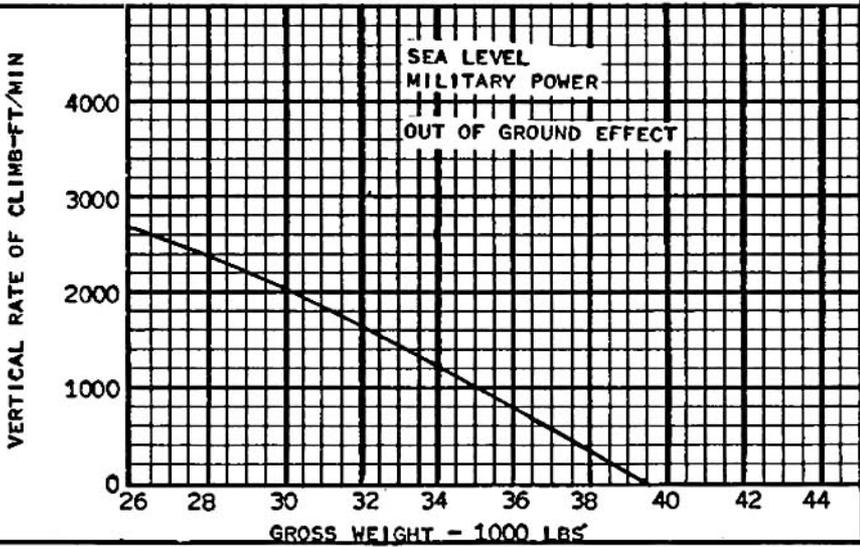
**SPEED**



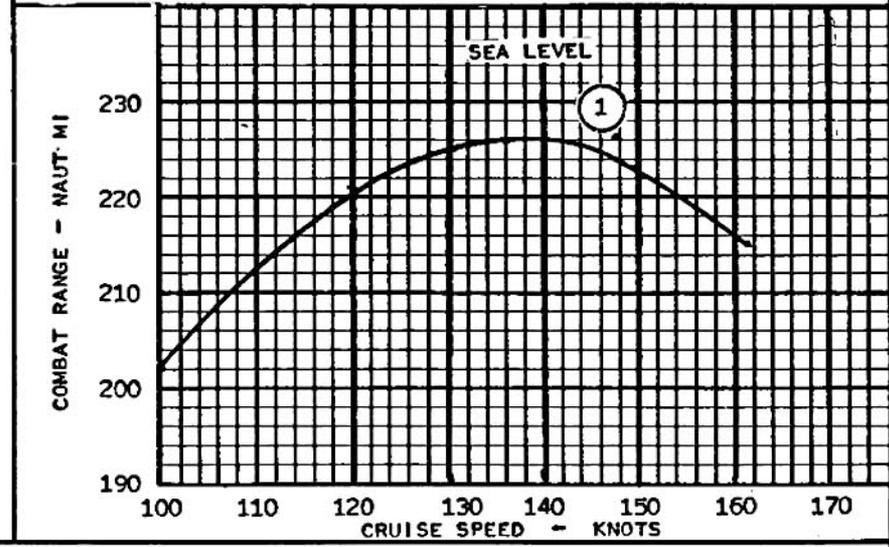
**CLIMB**



**VERTICAL CLIMB**



**COMBAT RANGE**



○ LOADING CONDITION CODE NUMBER

**NOTES**

COMBAT RADIUS MISSIONS:

Basic Assault Mission

Warm up & Take-off: 5 Min at Normal Power  
 Cruise Out: At 150 kn at Sea Level for 100 Naut. Miles  
 Hover over Remote Base at Sea Level for 10 min  
 Land at Remote Base, Discharge 8,000 lbs and Accept 4000 lbs for Return  
 Cruise Back at 150 Kn at Sea Level for 100 Naut. Miles  
 Reserve: 10% of Initial Fuel Load

Alternate Assault Mission

Identical to Basic Assault Mission Except Outgoing Payload is 38 Troops (8930 lbs)  
 (4000 lbs Carried on Return Leg)

Overload Assault Mission

Identical to Basic Assault Mission Except Outgoing Payload is 12,742 lbs  
 (4000 lbs Carried on Return Leg)

COMBAT RANGE MISSIONS:

Warm up & Take-off: 5 Min at Normal Power  
 Cruise at Sea Level at Speed for Best Range  
 Reserve: 10% of Initial Fuel Load

FERRY RANGE MISSION:

Warm up & Take-off: 5 Min at Normal Power  
 Cruise at Speed for Best Range at Altitude for Best Range but not Exceeding  
 10,000 ft Altitude  
 Descend: No Fuel Used, No Distance Gained  
 Reserve: 10% of initial Fuel

# Standard Aircraft Characteristics

## NAVY MODEL CH-53A AIRCRAFT

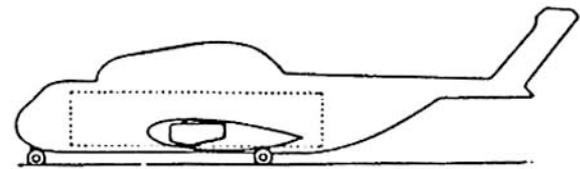
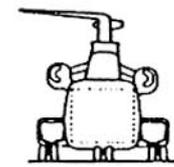
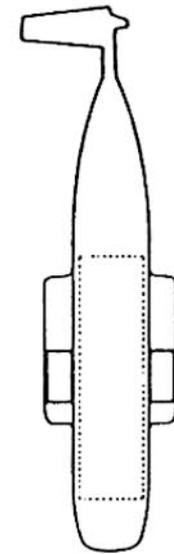
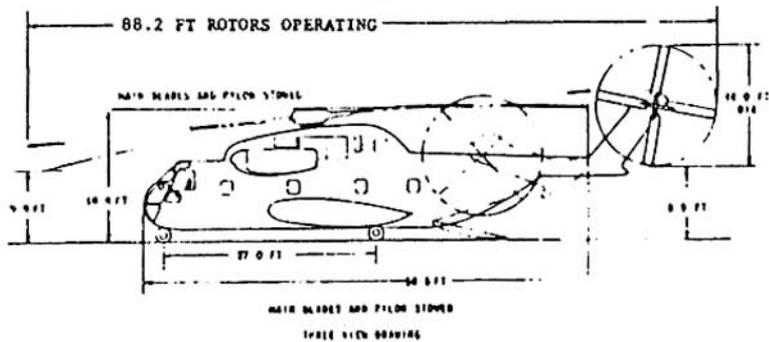
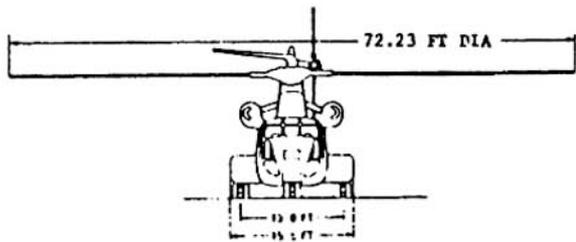
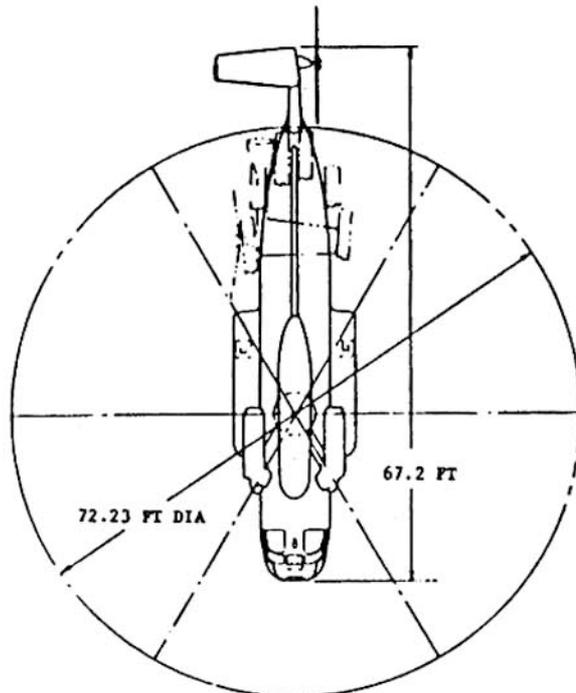
THIS PUBLICATION SUPERSEDES NAVAIR 00-110A-1 DATED  
1 MAY 1955 IN PART AND ALL ADDENDA THERETO

PUBLISHED BY DIRECTION OF THE  
COMMANDER OF THE NAVAL AIR SYSTEMS COMMAND



# STANDARD AIRCRAFT CHARACTERISTICS

**CH-53A**  
**SEA STALLION**  
**SIKORSKY AIRCRAFT**



□ SELF SEALING

SPONSON TANK CAPACITY = 311 GALLONS EACH  
 CLEAR CARGO SPACE DIMENSIONS = 7.5 FT x 6.5 FT x 30.0 FT

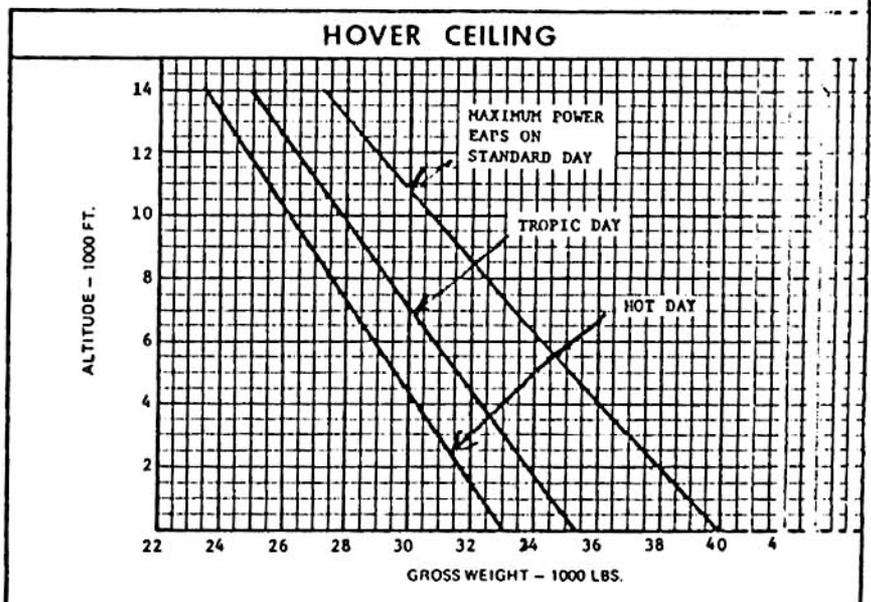
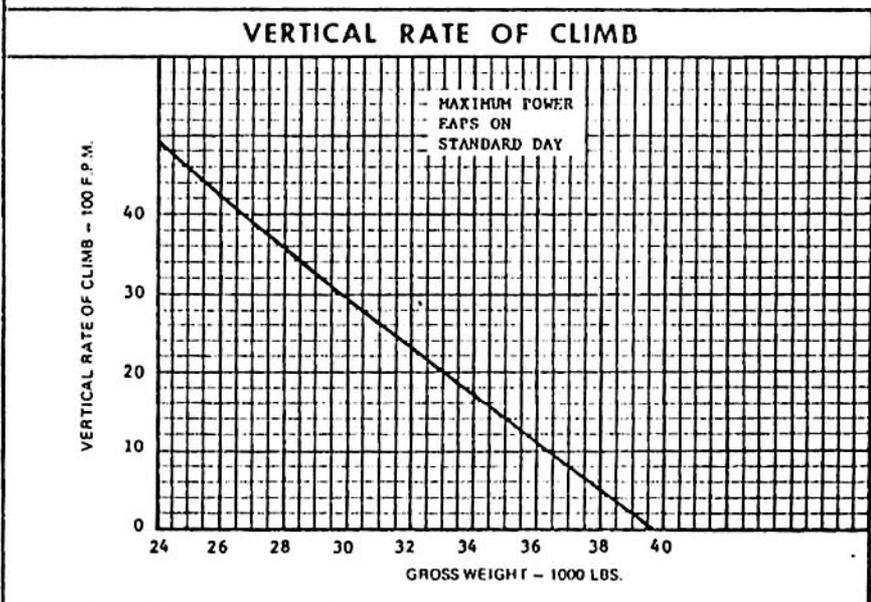
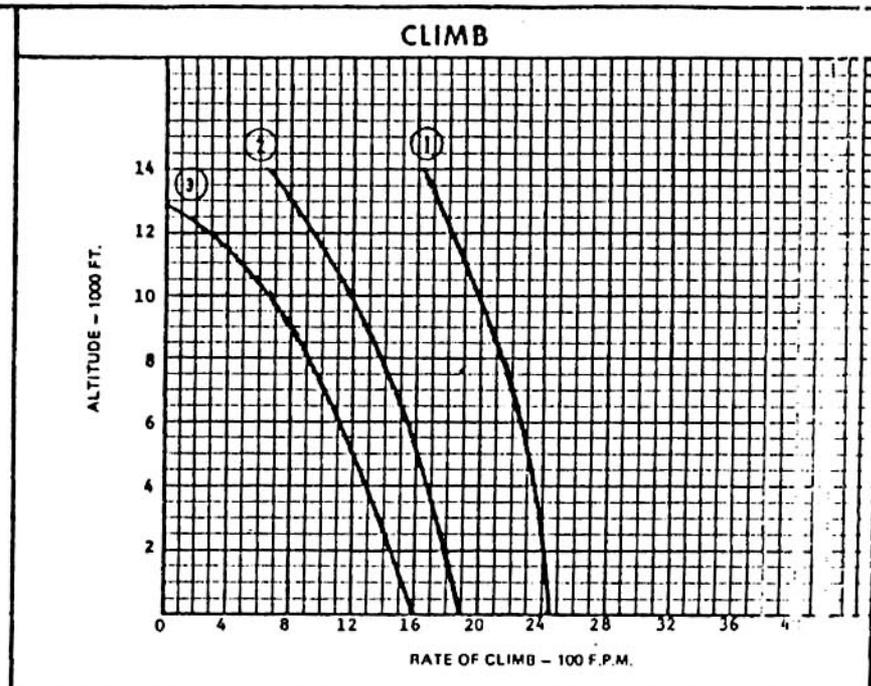
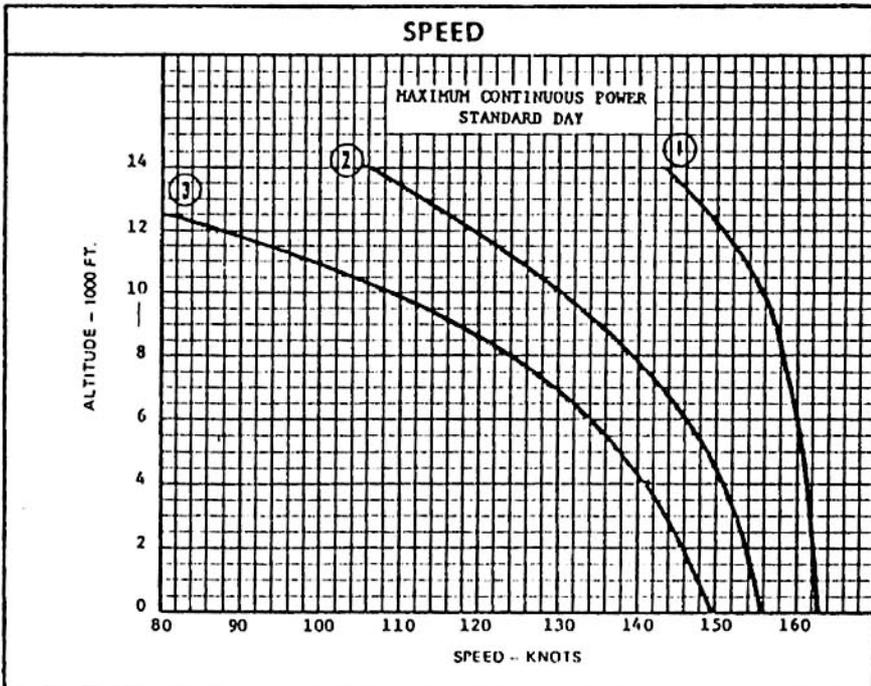
POWER PLANT	MISSION AND DESCRIPTION	WEIGHTS																																								
<p>No. &amp; Model: ..... (2) T64-GE-6B                      Manufacturer ..... General Electric                      Spec No. .... E1180 (31 May 70)                      Type ..... Axial                      Weight (Dry) ..... 723 Lbs                      Length ..... 83.4 In.                      Maximum Height ..... 23.8 In.                      Maximum Width ..... 30.0 In.                      Eng/Main Rotor G.R. .... 73.55</p>	<p>This helicopter will be employed primarily in the movement of cargo and equipment, and secondarily in the transportation of troops, in the amphibious assault and subsequent operations ashore.</p> <p>It is suitable for operation from LPH-2 and LPH-4 class carriers as well as established airfields, advanced bases and other areas or ships with individual platforms or limited landing and storage facilities and limited maintenance and logistic support. Emergency water landing and take-off features are incorporated to lessen the probability of loss in the event of emergency landing at sea. The areas of operation can range from arctic to tropic in all weather conditions.</p>	<table border="1"> <thead> <tr> <th>LOADING</th> <th>POUNDS</th> <th>L.F.</th> </tr> </thead> <tbody> <tr> <td>Empty</td> <td>23726</td> <td>3.0</td> </tr> <tr> <td>Basic</td> <td>23947</td> <td>3.0</td> </tr> <tr> <td>Design</td> <td>34499</td> <td>3.0</td> </tr> <tr> <td>Max Take-Off</td> <td>42000</td> <td>2.4</td> </tr> </tbody> </table>	LOADING	POUNDS	L.F.	Empty	23726	3.0	Basic	23947	3.0	Design	34499	3.0	Max Take-Off	42000	2.4																									
LOADING	POUNDS	L.F.																																								
Empty	23726	3.0																																								
Basic	23947	3.0																																								
Design	34499	3.0																																								
Max Take-Off	42000	2.4																																								
<p><b>RATINGS</b></p> <table border="1"> <thead> <tr> <th>S.L. STATIC</th> <th>SHP</th> <th>RPM</th> <th>MIN</th> </tr> </thead> <tbody> <tr> <td>*Maximum</td> <td>3080</td> <td>13,600</td> <td>10</td> </tr> <tr> <td>*Military</td> <td>2910</td> <td>13,600</td> <td>30</td> </tr> <tr> <td>*Normal</td> <td>2450</td> <td>13,600</td> <td>CONT</td> </tr> </tbody> </table> <p>*Sea Level Standard Day</p> <p><b>TRANSMISSION RATINGS:</b>                      Maximum (10 Min) ..... 6400 hp.                      Continuous ..... 5120 hp.</p>	S.L. STATIC	SHP	RPM	MIN	*Maximum	3080	13,600	10	*Military	2910	13,600	30	*Normal	2450	13,600	CONT	<p>Powered by twin turbine engines, this single main rotor, single anti-torque rotor all metal helicopter incorporates a completely automatic main rotor blade folding system and a hydraulically operated rear loading ramp door, large enough to accommodate wheeled vehicles and standard pallet loads. Primary and secondary hydraulic servo control systems insure controllability in all flight regimes. The secondary servo system is coupled with an automatic flight control system to lessen pilot fatigue on long missions.</p>	<p><b>FUEL AND OIL</b></p> <table border="1"> <thead> <tr> <th>LOCATION</th> <th>NO. TANKS</th> <th>GAL</th> </tr> </thead> <tbody> <tr> <td>Right Sponson</td> <td>1</td> <td>319</td> </tr> <tr> <td>Left Sponson</td> <td>1</td> <td>319</td> </tr> <tr> <td>Self-Sealing Type Fuel Tanks</td> <td></td> <td></td> </tr> <tr> <td>Fuel Specification</td> <td></td> <td>MIL-J-5624D</td> </tr> <tr> <td>Grade</td> <td></td> <td>JP-4, JP-5, JP-8</td> </tr> </tbody> </table> <p><b>OIL</b></p> <table border="1"> <tbody> <tr> <td>Engine Compt</td> <td>1</td> <td>4.1</td> </tr> <tr> <td>Oil Specification</td> <td></td> <td>MIL-L-23699</td> </tr> </tbody> </table>	LOCATION	NO. TANKS	GAL	Right Sponson	1	319	Left Sponson	1	319	Self-Sealing Type Fuel Tanks			Fuel Specification		MIL-J-5624D	Grade		JP-4, JP-5, JP-8	Engine Compt	1	4.1	Oil Specification		MIL-L-23699
S.L. STATIC	SHP	RPM	MIN																																							
*Maximum	3080	13,600	10																																							
*Military	2910	13,600	30																																							
*Normal	2450	13,600	CONT																																							
LOCATION	NO. TANKS	GAL																																								
Right Sponson	1	319																																								
Left Sponson	1	319																																								
Self-Sealing Type Fuel Tanks																																										
Fuel Specification		MIL-J-5624D																																								
Grade		JP-4, JP-5, JP-8																																								
Engine Compt	1	4.1																																								
Oil Specification		MIL-L-23699																																								
<p><b>ELECTRONICS</b></p>	<p><b>DEVELOPMENT</b></p> <p>First Flight ..... May 1964                      First Service Use ..... Sep. 1966</p>	<p><b>ACCOMODATIONS</b></p> <p>Troop Capacity ..... 38                      Litter Capacity ..... 24</p>																																								
<p>AN/ARC-51A UHF Radio                      AN/ARN-52 TACAN Navigation Set                      AN/APX-64 IFF Transponder Set                      AN/ARC-94 Radio Set                      AN/ARN-59 ADP                      AN/ARC-51 or 131 VHF Radio Set                      AN/AIC-14 Interphone System                      AN/APN-154 Radar Beacon Set                      AN/APN-171 Radar Altimeter                      ID-351 or 387/ARN Course Indicator                      ID-633A/U or B/U Bearing                      Distance Heading Indicator                      AN/ABA-25A Direction Finder</p>	<p><b>DIMENSIONS</b></p> <p>Main Rotor Dia. .... 72'3"                      Length (Blades Stowed) ..... 56'6"                      Height (Static) ..... 16'7"                      Width (Blades Stowed) ..... 15'11"                      Tread ..... 13'0"                      Disc Area (Main Rotor) ..... 4098.1 Sq.Ft.                      Blade Area (Main Rotor) ..... 375.0 Sq.Ft.                      No. of Blades (Main Rotor) ..... 6</p>	<p><b>CARGO</b></p> <p>Cargo Load ..... 8000 Lb                      Floor Load (Static) ..... 300 P.S.F.                      Floor Load Factor ..... 3                      Clear Space Width Height Length                      Dimensions: 7'6" 6'6" 30'0"                      Cargo Door Width Height                      Clear Space: 7'6" 6'6"</p>																																								

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	① CLEAN	② BASIC ASSAULT	③ CARGO DELIVERY	④ DUD RETRIEVAL	⑤ FERRY
TAKE-OFF WEIGHT lb.	29006	37006	42000	29006	41617
Fuel internal/external (JP-5) lb./lb.	4338/0	4338/0	4338/0	4336/C	13994 (A)
Payload Out/Back lb.	0	8000/0	12944/0	0/8857 (B)	0
Disc loading lb./sq. ft.	7.08	9.03	10.25	7.08	10.16
Vertical rate of climb at S.L. (C) fpm.	3300	800	-	3300	-
Absolute hovering ceiling (OGE) (C) ft.	12000	2900	-	12000	-
Max. rate of climb at S.L. (D) fpm.	2450	1900	1600	2450	1650
Service ceiling (D) ft.	22500 (Z)	18500 (Z)	12500 (E)	22500 (E)	13000 (E)
Speed at S.L. (F) kn.	163	156	150	163	150
Max speed/altitude (F) kn./ft.	163/0	156/0	150/0	163/0	150/0
O.E.I. Service ceiling (D) ft.	10200	SL	-	10200	-
Min. speed (O.E.I.) (D) kn.	30	56	-	30	-
Max. speed (O.E.I.) (D) kn.	120	104	-	120	-
Combat radius n. mi.	134	101	99	94	-
Mission time hrs.	2.08	1.42	1.43	1.67	-
Average cruising speed kn.	140	160	156	132	-
Cruising altitude ft.	10000	SL	SL	3000	-
Range n. mi.	292	227	215	252	898
Average cruising speed kn.	140	140	138	140	136
Cruising altitude ft.	10000	SL	SL	3000	6000 to 10000
Maximum endurance hrs.	2.75 (C)	2.11	1.96	2.49 (G)	8.38 (G)
Endurance speed kn.	75	75	80	69	85
Endurance altitude ft.	10000	SL	SL	3000	6000 to 10000

## NOTES

- (A) With five internal range extension tanks filled. A sixth tank could be installed but could not be filled due to gross weight limit.  
 (B) 35 Ft<sup>2</sup> external load on return leg.  
 (C) Maximum power  
 (D) Military power  
 (E) Oxygen equipment required above 10,000 Ft.  
 (F) Maximum continuous power.  
 (G) Endurance times do not include climb to altitude.  
 (H) All performance for standard day.  
 (I) All fuel flows increased 5% above engine specification.



○ LOADING CONDITION COLUMN NUMBER

## NOTES

CLEAN

Engine Start & Take-Off:  
5 min. at S.L. MCP.  
Climb to optimum cruise altitude  
at Mil power.  
Cruise out at speed for best range  
at optimum cruise altitude.  
Reserve: 10% of initial fuel or fuel  
for 20 min. at best range speed at  
S.L., whichever is greater.

BASIC ASSAULT

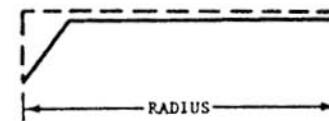
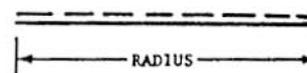
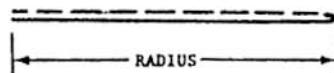
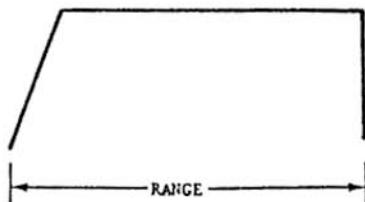
Engine Start & Take-Off:  
5 min. at S.L., MCP.  
Cruise Out: At MCP airspeed  
at S.L. to remote base.  
Land at Remote Base: Discharge  
8000 lbs.  
Engine Start & Take-Off:  
5 min. at S.L., MCP.  
Cruise Back: At MCP airspeed  
at S.L.  
Reserve: 10% of initial fuel  
or fuel for 20 min. at best  
range speed at S.L.,  
whichever is greater.

CARGO DELIVERY

Engine Start & Take-Off:  
5 min. at S.L., MCP.  
Cruise Out: At MCP air-  
speed at S.L. to remote  
base.  
Land At Remote Base:  
Discharge cargo.  
Engine Start & Take-Off:  
5 min. at S.L., MCP.  
Cruise Back: At MCP air-  
speed at S.L.  
Reserve: 10% of initial  
fuel load or fuel for  
20 min. at best range  
speed, whichever is  
greater.

DUD RETRIEVAL

Engine Start & Take-Off:  
5 min. at S.L., MCP.  
Climb: On course to 3000 ft.  
with Mil power.  
Cruise Out: At best range  
speeds to remote base.  
Hover Over Base: Out of ground  
effect, at 3000 ft., for  
10 min. Pick up external  
maximum payload (O.C.E. hover,  
f=35 ft<sup>2</sup>).  
Cruise Back: At best range  
speed 3000 ft.  
Descend: To S.L. (no fuel  
used, no distance gained).  
Reserve: 10% of initial fuel  
load or fuel for 20 min. at  
best range speed, whichever  
is greater.



LOADING CONDITION COLUMN NUMBER

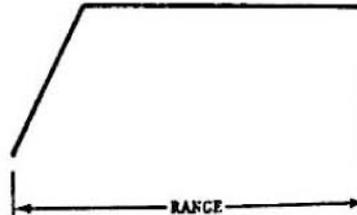
## NOTES

RANGE

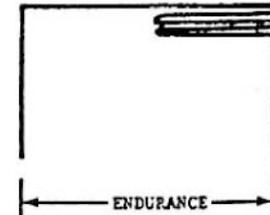
Engine Start & Take-Off:  
 5 min. at S.L., MCP.  
 Climb on course to specified  
 Alt at Mil power.  
 Cruise Out: At specified  
 altitude at best range speed  
 until reserve fuel remains.  
 Descend: To S.L. (no fuel  
 used, no distance gained).  
 Reserve: 10% of initial fuel  
 load or fuel for 20 min. at  
 best range speed, whichever  
 is greater.

FERRY RANGE

Engine Start & Take-Off:  
 5 min at S.L., MCP.  
 Climb: On course to 8000 ft.  
 with Mil power.  
 Cruise Out: At best range speed  
 until reserve fuel remains.  
 Descend: To S.L. (no fuel used,  
 no distance gained).  
 Reserve: 10% of initial fuel  
 load or fuel for 20 min. at  
 best range speed, whichever  
 is greater.

ENDURANCE

Engine Start & Take-Off:  
 5 min at S.L., MCP.  
 Climb to specified  
 loiter altitude at  
 Mil power.  
 Loiter at speed for  
 best endurance at  
 specified altitude.  
 Reserve: 10% of initial  
 fuel or fuel for 20  
 min. at best range  
 speed, whichever is  
 greater.



LOADING CONDITION COLUMN NUMBER