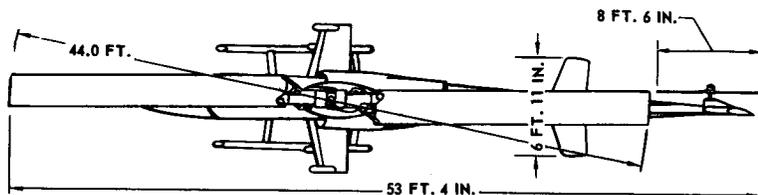
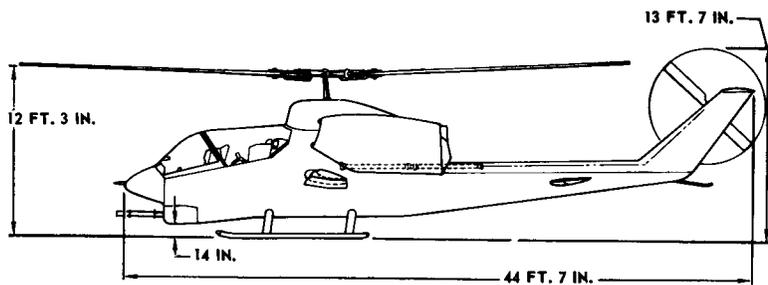
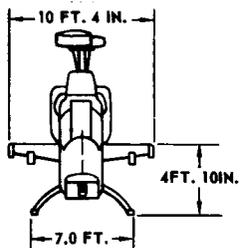




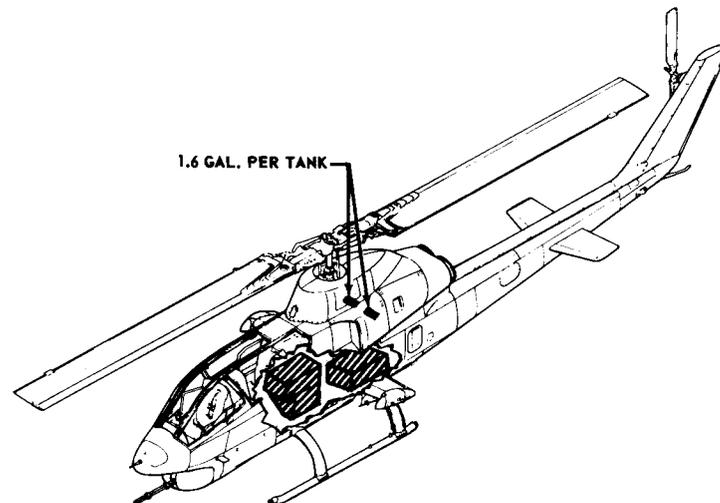
STANDARD AIRCRAFT CHARACTERISTICS

AH-1J
HUEY TWIN COBRA, BELL
UACL T400-CP-400 ENGINE



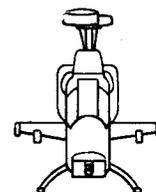
DESCRIPTIVE ARRANGEMENT

Disc Area	1520.0 Sq. Ft.	Airfoil Section Designation	9.33% Sym
Blade Area	99.0 Sq. Ft.	and Thickness	Section Special
Engine/Rotor			
Gear Ratio	20.4:1	Chord (Root to Tip)	27.0 In.



FUEL (GAL)

OIL (GAL)



CONFIGURATION

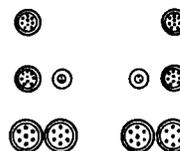
ARMAMENT

CLEAN: 20MM NOSE TURRET WITH CLEAN WING

BASIC: 20MM NOSE TURRET
TWO UNFAIRED LAU 68 ROCKET PODS OUTBOARD

MEDIUM: 20MM NOSE TURRET
TWO UNFAIRED LAU 68 ROCKET PODS OUTBOARD
TWO SUU-11A MINIGUN PODS INBOARD

HEAVY: 20MM NOSE TURRET
TWO UNFAIRED LAU-61A ROCKET PODS OUTBOARD
TWO UNFAIRED LAU-61A ROCKET PODS INBOARD



ARMAMENT AND TANKAGE

POWER PLANT	MISSION AND DESCRIPTION	WEIGHTS																																																																					
<p>No. & Model(1) T400-CP-400' Manufacturer.....United Aircraft of Canada (Pratt and Whitney) Engine Spec. No.....712C Type.....Twin Section Free Power Turbine with Reduction Gearbox Gear Reduction Ratios Main Rotor.....20.383:1 Tail Rotor.....3.974:1</p> <p>RATINGS</p> <table border="0"> <tr> <td></td> <td>SHP</td> <td>RPM</td> <td>ALT</td> </tr> <tr> <td>Intermediate</td> <td>1800*</td> <td>6600</td> <td>SL</td> </tr> <tr> <td>Maximum Continuous</td> <td>1530**</td> <td>6600</td> <td>SL</td> </tr> <tr> <td colspan="4">Single Power Section</td> </tr> <tr> <td>Intermediate</td> <td>900</td> <td>6600</td> <td>SL</td> </tr> <tr> <td>Maximum Continuous</td> <td>765</td> <td>6600</td> <td>SL</td> </tr> <tr> <td colspan="4">Transmission Limits</td> </tr> <tr> <td colspan="4">*1290 SHP</td> </tr> <tr> <td colspan="4">**1174 SHP</td> </tr> </table>		SHP	RPM	ALT	Intermediate	1800*	6600	SL	Maximum Continuous	1530**	6600	SL	Single Power Section				Intermediate	900	6600	SL	Maximum Continuous	765	6600	SL	Transmission Limits				*1290 SHP				**1174 SHP				<p>The primary mission of this aircraft is that of an armed tactical helicopter capable of delivering weapons fire, low-altitude high-speed flight, search and target acquisition, reconnaissance by fire, multiple weapons fire support, and troop helicopter support. The aircraft is capable of performing this mission from prepared or unprepared areas and operation from ships at sea.</p> <p>The gas turbine powered Huey Twin Cobra is of compact design, featuring tandem seating to give both pilot and gunner nearly unlimited visibility. Both crew stations have flight control and fire control systems permitting flexibility in division of functions under all normal and emergency situations.</p> <p>The twin engine installation improves both hot day and altitude performance and enhances overall reliability. A mission designed fuselage coupled with 540 "door hinge" rotor system gives a low vibration level plus increased maneuverability and speed. Four wing stores stations and integral chin turret provide a high degree of armament versatility with the capability of quickly changing a wide combination of weapons to match the desired mission. Many UH-1 parts which have been combat proven assure reliability and maintainability.</p>	<table border="0"> <tr> <td>Loading</td> <td>Lb</td> <td>LF</td> </tr> <tr> <td>Empty</td> <td>6503</td> <td></td> </tr> <tr> <td>Basic</td> <td>6702</td> <td></td> </tr> <tr> <td>Design</td> <td>6600</td> <td>3.5</td> </tr> <tr> <td>Combat</td> <td></td> <td></td> </tr> <tr> <td> Clean</td> <td>8202</td> <td>2.8</td> </tr> <tr> <td> Basic</td> <td>9272</td> <td>2.5</td> </tr> <tr> <td> Medium</td> <td>9534</td> <td>2.4</td> </tr> <tr> <td> Heavy</td> <td>9821</td> <td>2.4</td> </tr> <tr> <td>Maximum Takeoff</td> <td>10000</td> <td>2.3</td> </tr> <tr> <td>Maximum Landing</td> <td>10000</td> <td></td> </tr> </table>	Loading	Lb	LF	Empty	6503		Basic	6702		Design	6600	3.5	Combat			Clean	8202	2.8	Basic	9272	2.5	Medium	9534	2.4	Heavy	9821	2.4	Maximum Takeoff	10000	2.3	Maximum Landing	10000	
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<p>UHF Command Set.....AN/ARC-51AX FM Tactical Set.....AN/ARC-131 Intercom.....AN/AIC-18 TACAN Nav Sys.....AN/ARN-52(V) UHF Direction Finder.....AN/ARA-50 Gyrosyn Compass.....AN/ASN-75 Direction Finder Set.....AN/ARN-83 Radar Altimeter.....AN/APN-171(V) IFF Transponder Set.....AN/APX-72 Radar Beacon.....AN/APN-154(V) Two Juliet 28 Controls.....C-8057 Two Mounts.....Barry Controls 21078-1</p> <p><u>PROVISIONS FOR</u></p> <p>Two Voice Security Units.....Juliet 28 Transponder Test Set.....TS-1843()/APX Mounting.....MT-3513/APX Computer, MK XII.....KIT-1A/TSEC Mounting.....MT-()/U</p>	<p>DEVELOPMENT</p> <table border="0"> <tr> <td>Contract Placement</td> <td>May 29, 1968</td> </tr> <tr> <td>First Flight AH-1J</td> <td>November 1969</td> </tr> <tr> <td>BIS</td> <td>November 1970</td> </tr> <tr> <td>First Delivery</td> <td>January 1971</td> </tr> <tr> <td>Final Delivery</td> <td>In Production</td> </tr> </table>	Contract Placement	May 29, 1968	First Flight AH-1J	November 1969	BIS	November 1970	First Delivery	January 1971	Final Delivery	In Production	<p>FUEL</p> <table border="0"> <tr> <td>Location</td> <td>No. Tanks</td> <td>Gals.</td> </tr> <tr> <td>Fuselage</td> <td>2</td> <td>270</td> </tr> <tr> <td>Grade</td> <td></td> <td>JP-4 JP-5</td> </tr> <tr> <td>Specification</td> <td></td> <td>MIL-J-5624</td> </tr> </table> <p>OIL</p> <table border="0"> <tr> <td>Engine</td> <td>2</td> <td>3.2</td> </tr> <tr> <td>Specification</td> <td></td> <td>MIL-L-7808</td> </tr> </table>	Location	No. Tanks	Gals.	Fuselage	2	270	Grade		JP-4 JP-5	Specification		MIL-J-5624	Engine	2	3.2	Specification		MIL-L-7808																																									
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		<p>Basic, Medium, or Heavy combat</p> <table border="0"> <tr> <td>Pilot.....</td> <td>1</td> </tr> <tr> <td>Gunner.....</td> <td>1</td> </tr> </table> <p>Clean Mission</p> <table border="0"> <tr> <td>Pilot.....</td> <td>1</td> </tr> <tr> <td>Copilot.....</td> <td>1</td> </tr> </table>	Pilot.....	1	Gunner.....	1	Pilot.....	1	Copilot.....	1																																																													
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PERFORMANCE SUMMARY

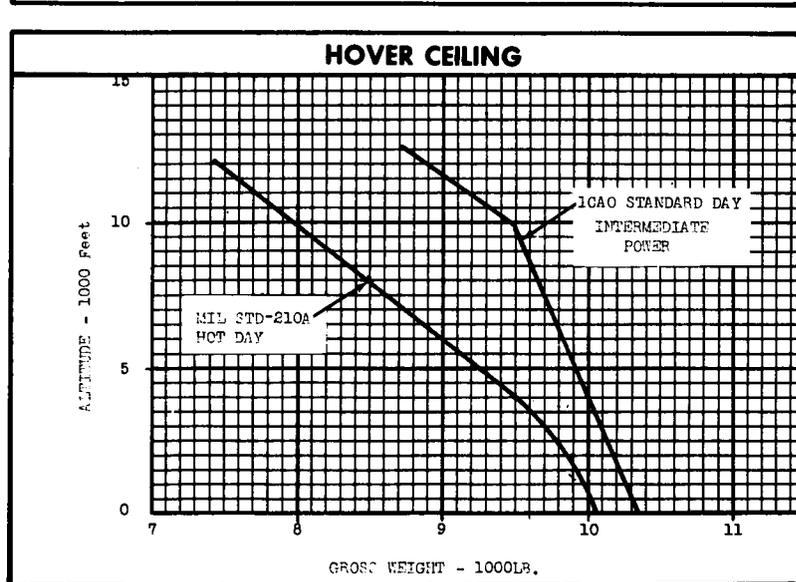
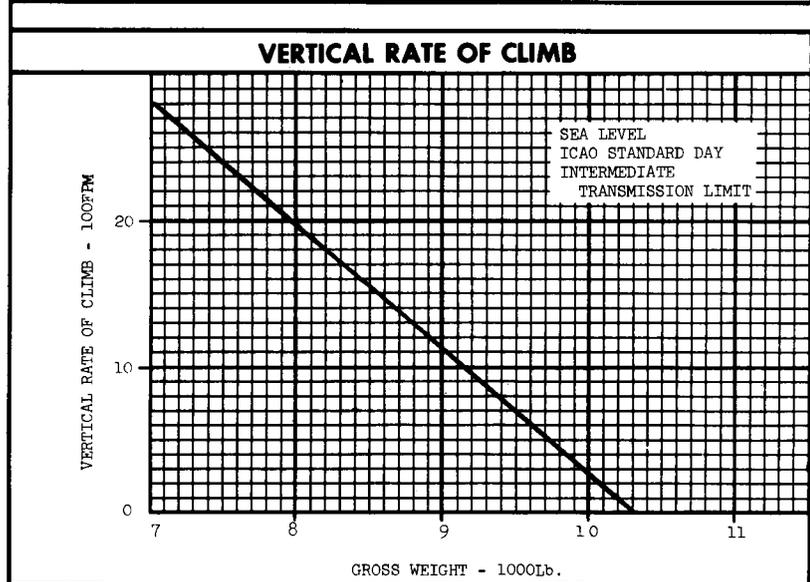
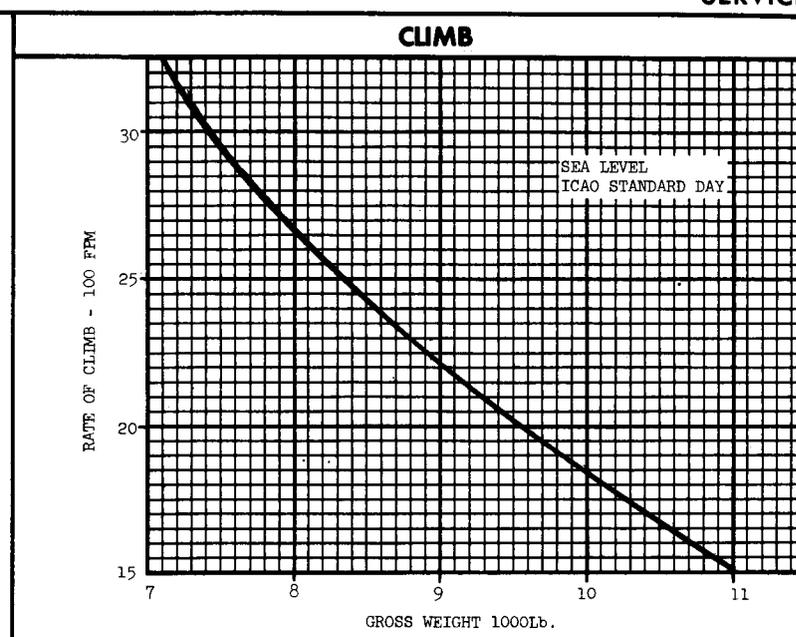
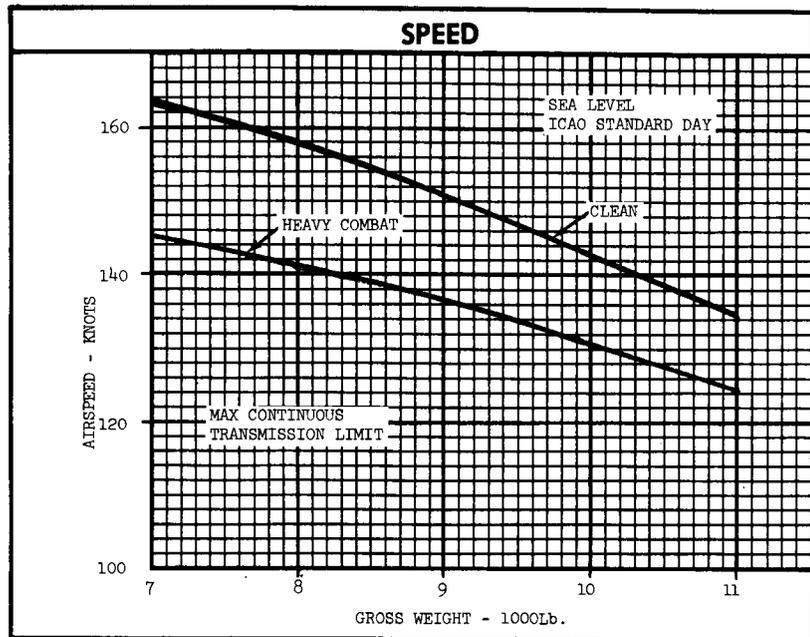
TAKE-OFF LOADING CONDITION	① CLEAN	② BASIC COMBAT	③ MEDIUM COMBAT	④ HEAVY COMBAT		
TAKE-OFF WEIGHT lb.	8976	10000	10000	10000		
Fuel internal (JP-5) lb.	1836	1819	1164	446		
Payload (A) lb.	0	1041	1696	2414		
Disc loading lb./sq.ft.	5.90	6.58	6.58	6.58		
Vertical rate of climb at S.L. (B) fpm.	1160	285	285	285		
Absolute Hover Ceiling ft.	10,000 (D)	4200	4200	4200		
Max. rate of climb at S.L. (B) fpm.	2230	1820	1814	1776		
Service Ceiling ft.	10000 (D)	10000 (D)	10000 (D)	10000 (D)		
Speed at S.L. (C) kn.	151	141	139	131		
Max. speed/altitude (C)kn./ft.	153/3000	142/2000	140/2000	133/2000		
O.E.I. Service ceiling ft.	10000 (D)	10000 (D)	10000 (D)	10000 (D)		
Min. Speed (O.E.I.) kn.	30	35	35	35		
Max. Speed (O.E.I.) kn.	128	116	115	108		
Combat radius n.mi.	-	134	72	7		
Mission time (E) hrs.	-	1.87	1.08	.19		
Average cruising speed kn.	-	150	142	132		
Cruising altitude ft.	-	SL	SL	SL		
Range n.mi.	288	257	134	2		
Average cruising speed kn.	134	132	131	120		
Cruising altitude ft.	SL	SL	SL	SL		
Max. endurance hrs.	2.8	2.55	1.32	.02		
Endurance speed kn.	71	71	70	69		
Endurance altitude ft.	SL	SL	SL	SL		

NOTES

- (A) Includes Ammo
 (B) Take-off Transmission rating of 1290 HP
 (C) Maximum Continuous Transmission rating of 1134 HP
 (D) Limited by oxygen requirement
 (E) Mission Time - Time in air (excludes time before start of enroute climb and reserve, unless otherwise specified and noted.)

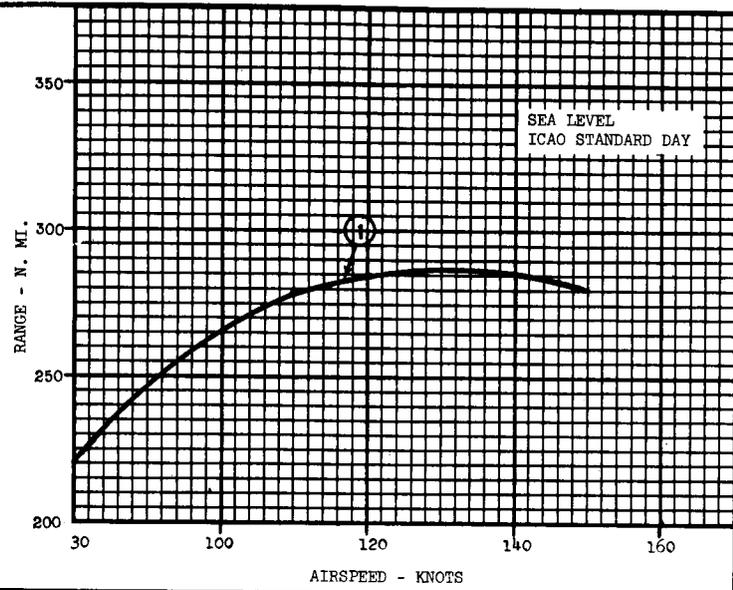
Performance Basis:

- (1) All performance at Standard day conditions.
 (2) Aerodynamic flight test data.
 (3) Engine specification fuel consumption increased 5%
 (4) 20 MM nose turret on all configurations.

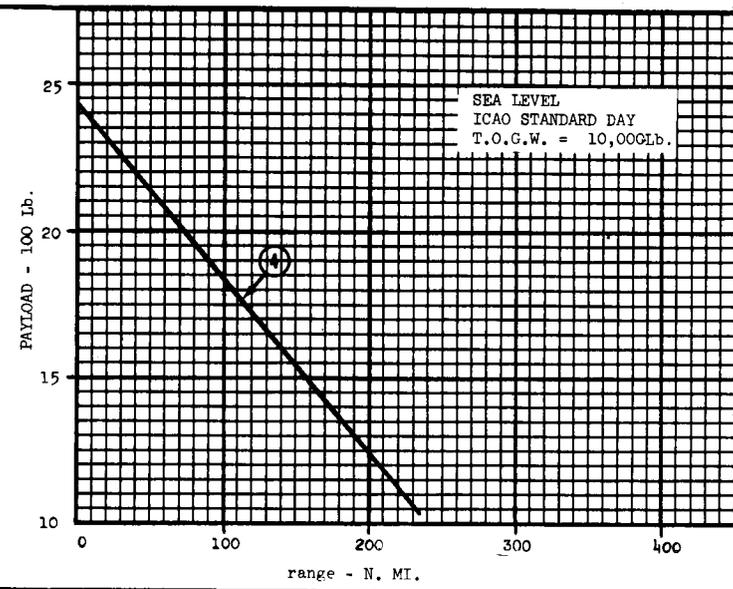


○ LOADING CONDITION COLUMN NUMBER

COMBAT RANGE



PAYLOAD-RANGE



○ LOADING CONDITION COLUMN NUMBER

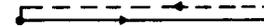
NOTES

RANGE MISSION



1. Warm-up and take-off: Fuel allowance of 5 minutes at maximum continuous power at sea level.
2. Cruise out: To remote base at speed for maximum range at sea level.
3. Landing reserve: Fuel for 30 minutes at speed for maximum range at sea level.

ATTACK MISSION



1. Warm-up and take-off: Fuel allowance of 5 minutes at maximum continuous power at sea level.
2. Dash out: To target at maximum continuous power at sea level.
3. Combat: 5 minutes at intermediate power at sea level at V_{max} .
4. Expended all ordnance.
5. Dash back: To home base at maximum continuous power at sea level.
6. Landing reserve: Fuel for 20 minutes at speed for maximum range at sea level.



LOADING CONDITION COLUMN NUMBER