

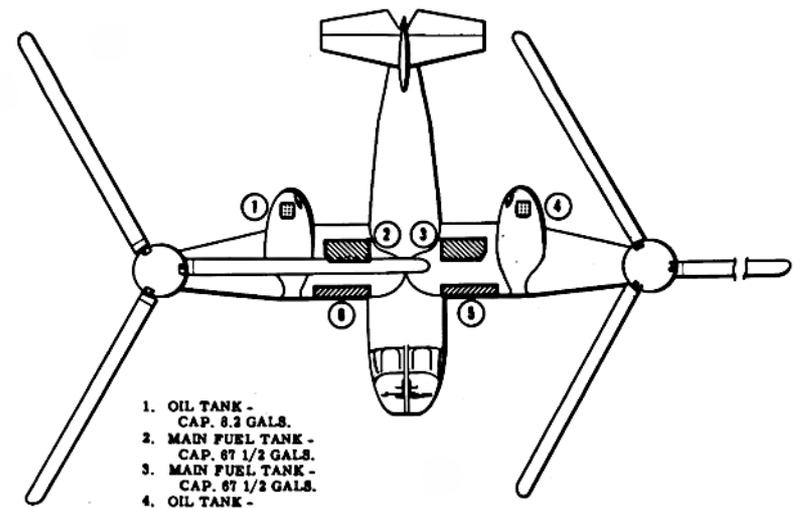
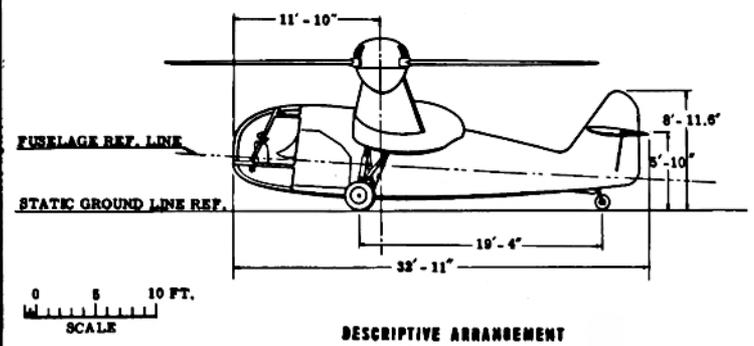
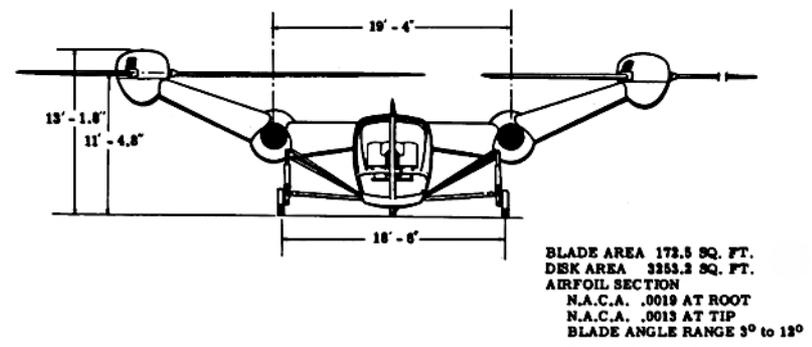
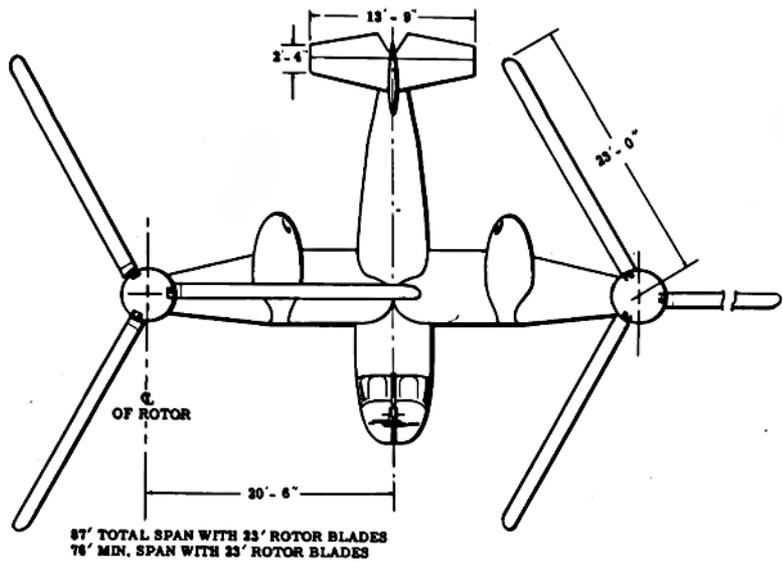


STANDARD AIRCRAFT CHARACTERISTICS

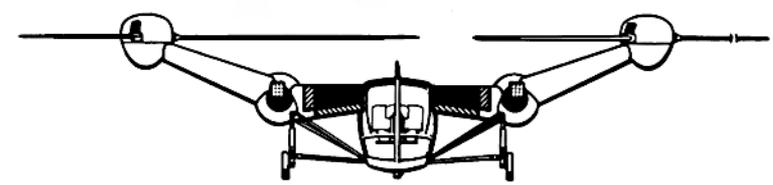
XHJD-1

MCDONNELL

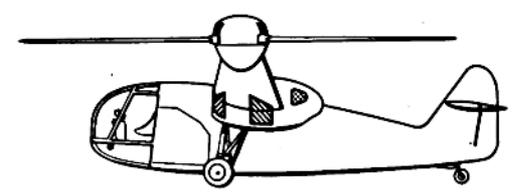
EXPERIMENTAL



1. OIL TANK - CAP. 8.3 GALS.
2. MAIN FUEL TANK - CAP. 87 1/2 GALS.
3. MAIN FUEL TANK - CAP. 87 1/2 GALS.
4. OIL TANK - CAP. 8.3 GALS.
5. RESERVE FUEL TANK CAP. 30 GALS.
6. RESERVE FUEL TANK - CAP. 30 GALS.



- OIL TANK
- FUEL TANK



TANKAGE INSTALLATION



MISSION AND DESCRIPTION

The XHJD-1 was designed and built as a flying laboratory to serve as a means of confirming theoretical analyses for various changes of helicopter rotor parameters.

The helicopter is designed in such a way that most of the parameters affecting performance can be varied, such as varying rotor diameter and changing direction of rotor rotation.

Extensive instrumentation is incorporated for measuring blade bending moments and for studying blade motion and rotor vibrations.

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	7,386.....	
BASIC.....	7,468.....	
DESIGN.....	11,000.....	3.0
MAX.T.O.....	11,000.....	3.0
MAX.LAND....	11,000.....	

All weights are actual.

POWER PLANT

NO. & MODEL..(1) R-985-AN-14B
 MFR.....P. & W.
 SUPERCHG.....1 stage, 1 speed
 ROTOR GEAR RATIO.....0.1231

RATINGS

Bhp @ Rpm @ Alt.

T.O. 450 2,300 S.L.

NORMAL 400 2,200 5,000'

SPEC. NO. AN-2035
 (Rev. 3)

FUEL AND OIL

Gals.	No. Tanks	Location
135	2	Pylon, Aft.
60	2	Pylon, Fwd.

FUEL GRADE.....91/98
 FUEL SPEC.....AN/F-48

OIL

CAPACITY (Gals.).....16
 GRADE.....1120
 SPEC.....AN-O-8

ORDNANCE

NONE

DIMENSIONS

DISC. AREA.....3253.2 sq. ft.
 BLADE AREA.....172.5 sq. ft.
 BLADE DIA.....46'-0"
 LENGTH.....32'-11"
 HEIGHT.....13'-1.8"
 TREAD.....18'-6"

ELECTRONICS

VHF TRANS. & REC.....AN/ARC-1



PERFORMANCE SUMMARY			
LOADING CONDITION		(1) UTILITY	
TAKE-OFF WEIGHT	LBS.	11,000	
FUEL	LBS.	1,170	
PAY LOAD	LBS.	1,842	
ENGINE POWER (Normal Rated)	BHP/RPM	400/2,200	
DISC LOADING (A)	LBS/SQFT.	3.4	
POWER LOADING (A)	LBS/BHP.	13.8	
MAXIMUM SPEED-SEA LEVEL (B)	KN.	84	
MAXIMUM SPEED/ALT. (B)	KN/FT.	92/5,000	
RATE OF CLIMB-SEA LEVEL (B)	FT/MIN.	1,000	
BEST RATE OF CLIMB SPEED-SEA LEVEL	KN.	45	
TIME TO 5,000FT. (B)	MIN.	5.7	
TIME TO 10,000FT. (B)	MIN.	20.0	
SERVICE CEILING (B)	FT.	10,000	
VERTICAL RATE OF CLIMB (B)/(C)	S.L.FT/MIN.	—/30	
ABSOLUTE HOVERING CEILING (B)/(C)	FT.	—/50	
COMBAT RANGE/V.A.V. 1,500 FT	N.M./KN.	217/65	
MAXIMUM ENDURANCE/V.A.V. 1,500FT.	HR/KN.	4.0/45	

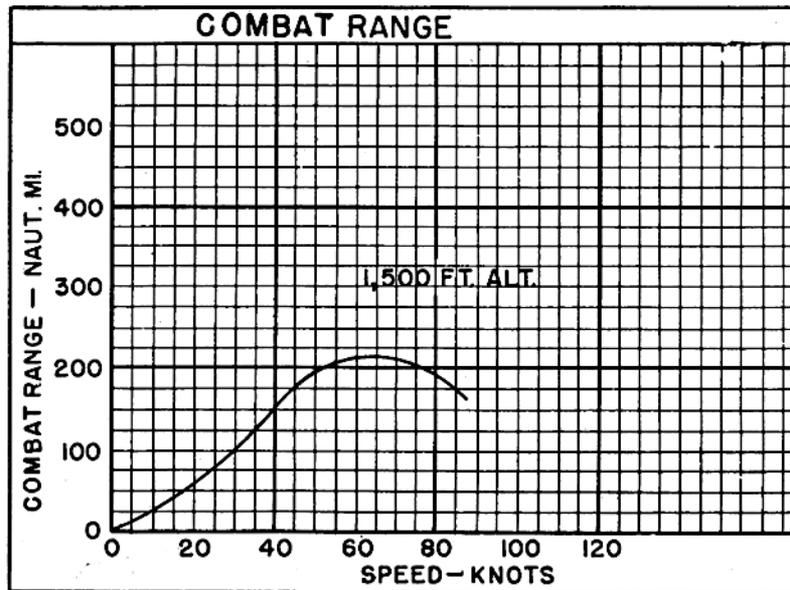
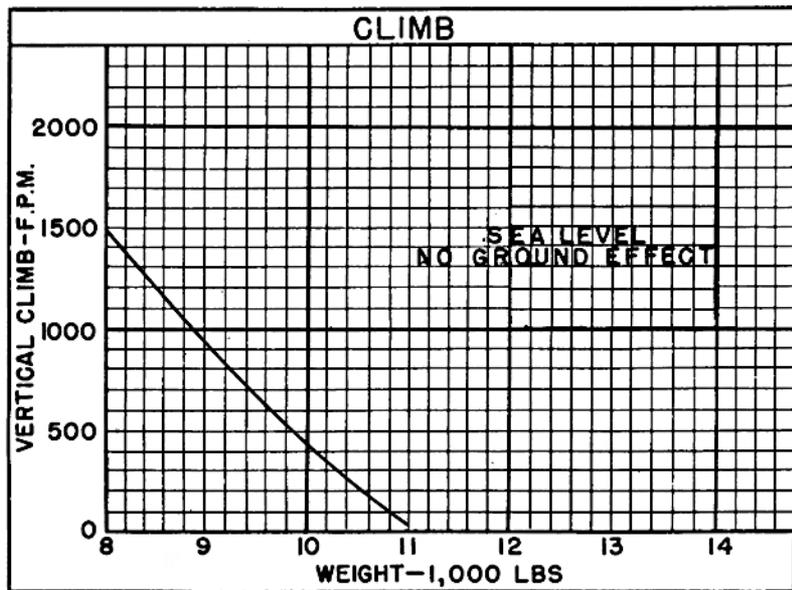
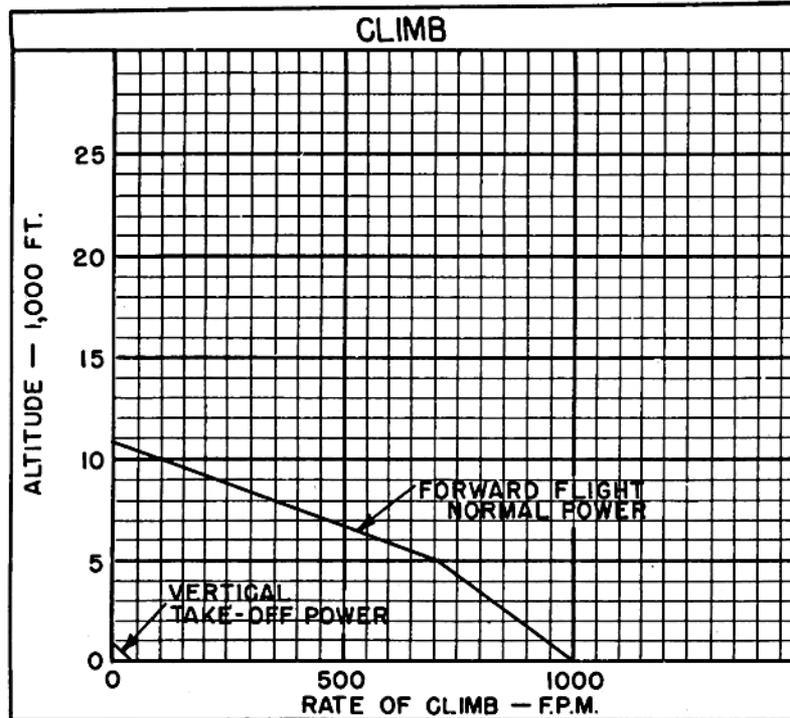
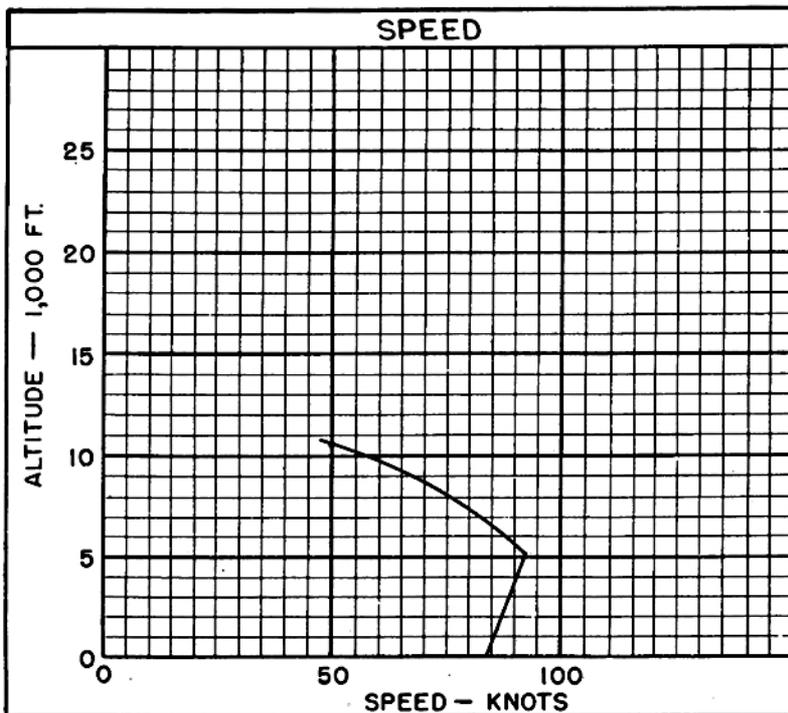
NOTES

- (A) BHP at Maximum Critical Altitude
 (B) Normal BHP
 (C) Take-off Power

Performance is based on flight test of XHJD-1 helicopter.

 Combat range and endurance are based on engine specification fuel consumption data increased by 5% and allowing a 10% fuel reserve.

Sea level data do not include ground effect.



○ LOADING CONDITION COLUMN NUMBER