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NAVAIR 00-110AHD50-2

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DOD DIR 5200.10

Standard Aircraft Characteristics

NAVY MODEL QH-50B AIRCRAFT

(TITLE UNCLASSIFIED)

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

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1 JULY 1967

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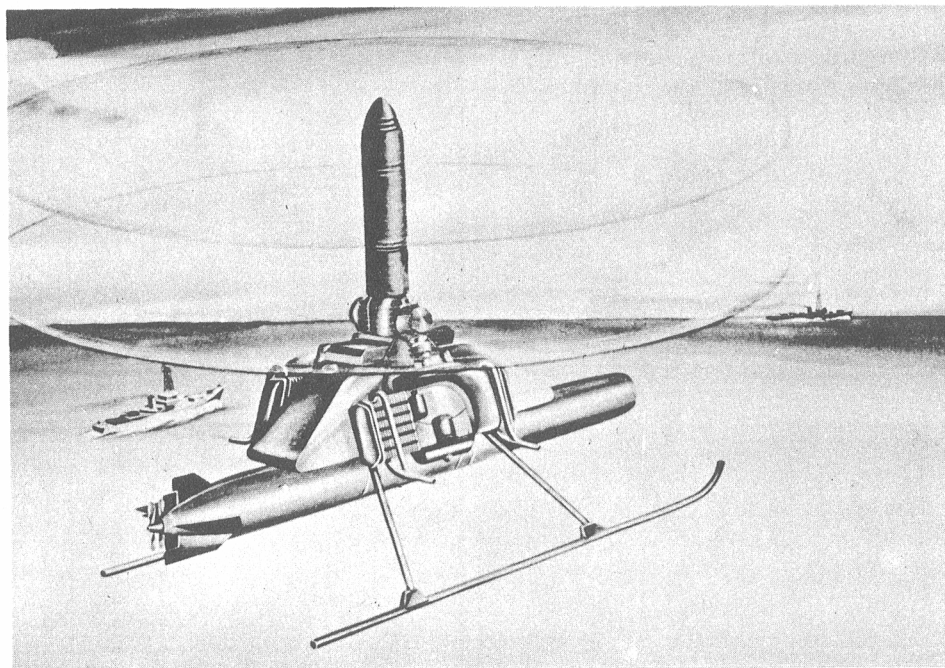
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STANDARD AIRCRAFT CHARACTERISTICS

QH-50B

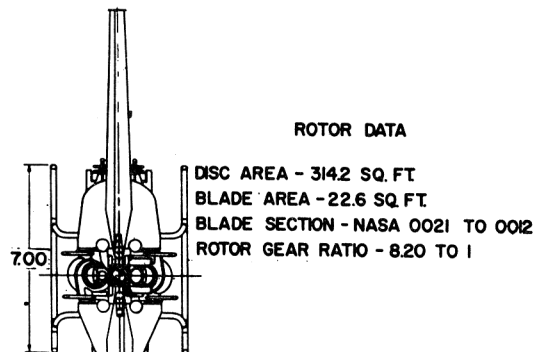
GYRODYNE

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0 5 FT.
SCALE

4.85

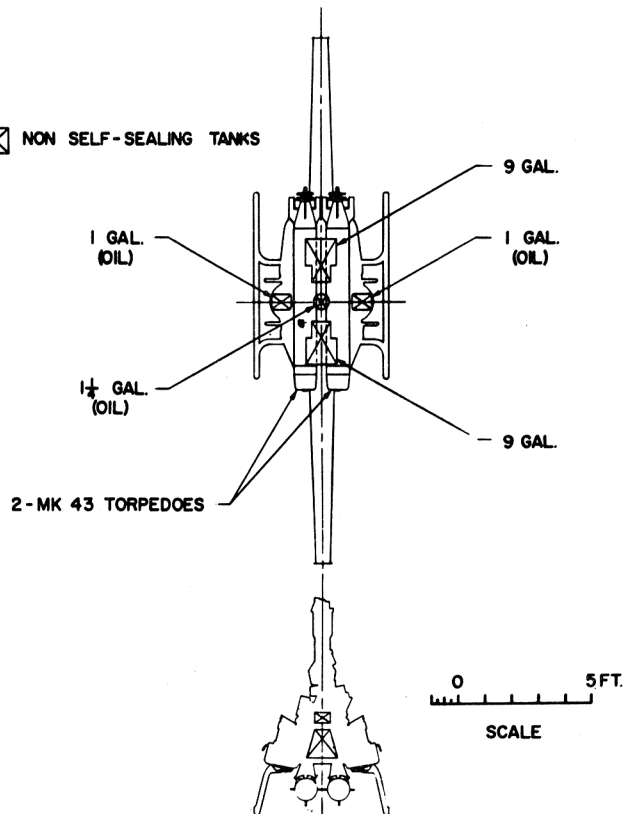
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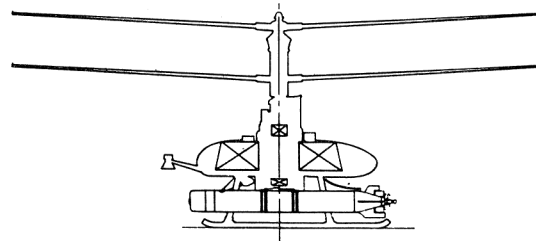
7.70

DESCRIPTIVE ARRANGEMENT

☒ NON SELF-SEALING TANKS



0 5 FT.
SCALE



ARMAMENT & TANKAGE

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POWER PLANT

ENGINE (2) YO-95-4
 MFR Gyrodyne-Porsche
 TYPE 4 cyl., 4 cycle

RATINGS

	BHP	RPM	ALT
T.O.	72	4500	SSL
NORM.	72	4500	SSL

Model Spec. No. 2 of 28 Jan
 1959, revised 5 Aug 1959

ORDNANCE

Torpedoes:

500 lb. 1
 or
 MK 43 2

Max. Load Capacity
 - 530 lbs.

MISSION AND DESCRIPTION

The Model DSN-2 Drone is a remotely controlled ASW Helicopter, designed to carry a 500 lb. weapon (torpedo-type) and be capable of launching this weapon as directed by remote control. An alternate design loading (overload condition) is to carry two MK43 Torpedoes, each weighing 266 lbs.

The drone incorporates two two-bladed coaxial rotors of the semi-rigid (see-saw) type. The blades are of laminated wood construction incorporating taper in planform and thickness and 12° negative twist. Attitude is completely controllable through the rotors by conventional cyclicpitch control; yaw control is achieved by means of rotor blade tip air (drag) brakes.

Two Gyrodyne-Porsche YO-95-4 four cylinder, four cycle reciprocating engines, rated at 72 hp (after cooling) at 4500 rpm at sea level, are incorporated in the DSN-2. Engine cooling is provided by a fan.

Service use of this drone weapons system is not presently contemplated, although it will be used for purposes of testing and checking out the avionics equipment and remote control system to be incorporated in the DSN-3.

DEVELOPMENT

First Flight July 1960

DIMENSIONS

DISC AREA 314.2 sq. ft.
 BLADE AREA 22.6 sq. ft.
 ROTOR DIAMETER 20' - 0"
 LENGTH 20' - 0"
 HEIGHT 8' - 3"
 TREAD 4' - 10"

WEIGHTS

LOADINGS	LBS.
EMPTY	813
NORMAL	1450
OVERLOAD	1500

All weights are estimated

FUEL AND OIL

NO. TANKS	GALE.	LOCATION
2	18	Fuselage
GRADE	96/96	
SPEC	MIL-F-5572B	

OIL

CAPACITY	3.25 gals
GRADE	Symbol 9110/9250
SPEC	MIL-L-9000D

ELECTRONICS

Gyrodyne-Lear automatic stabiliz-
 ation and remote control equipment

(Nomenclature not yet
 available)

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PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) NORMAL 1-500# Tor- pedo	(2) OVERLOAD 2-MK 43			
TAKE-OFF WEIGHT	lb.	1450	1500			
Fuel	lb.	95	95			
Payload	lb.	500	530			
Disc loading	lb./sq.ft.	4.62	4.78			
Vertical rate of climb at S.L. (A)	fpm.	640	420			
Absolute hovering ceiling (A)	ft.	2950	1850			
Max. rate of climb at S.L. (A)	fpm.	1160	1040			
Service ceiling (100 fpm) (A)	ft.	8600	7600			
Speed at S.L. (A)	kn.	76.8	76.0			
Max. speed/altitude (A)	kn./ft.	76.8/S.L.	76.0/S.L.			
Max. range	n.mi.	85.3	--			
Average cruising speed	kn.	65	--			
Cruising altitude	ft.	S.L.	--			
Combat radius	n.mi.	32.0	31.2			
Average cruising speed	kn.	77.5	76.8			
Cruising altitude	ft.	S.L.	S.L.			
Max. endurance	hrs.	--	1.60			
Average cruising speed	kn.	--	42			
Cruising altitude	ft.	--	S.L.			

NOTES

(A) Normal Rated Power (Take-off Power)

PERFORMANCE is based on calculations modified by contractor flight data of the Model XRON-1 Rotorcycle (17' rotor dia.)

COMBAT RADIUS, RANGE, and ENDURANCE are based on engine specific fuel consumption increased 5%.

All performance is out of ground effect.

COMBAT RADIUS MISSION

Warm-up and Take-off: 1 min at NRP at Sea Level
 Cruise out: at Vmax at Sea Level
 Hover: 12 min at Sea Level
 Drop Weapon: No fuel consumed, no distance gained
 Cruise back: at Vmax at Sea Level
 Reserve: 10% of initial fuel load

MAX. RANGE MISSION

Warm-up and Take-off: 1 min at NRP at Sea Level
 Cruise: at speed for best range at Sea Level
 Reserve: 10% of initial fuel load

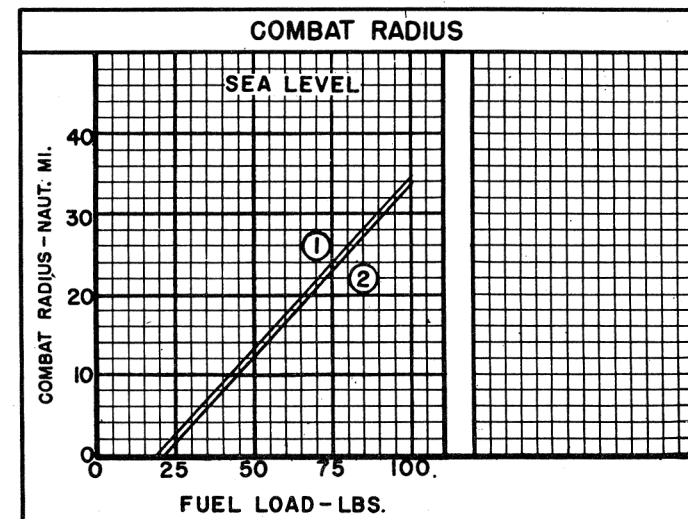
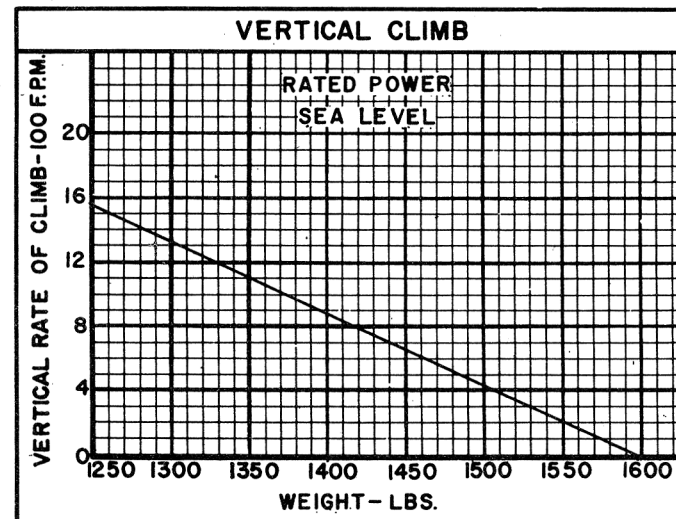
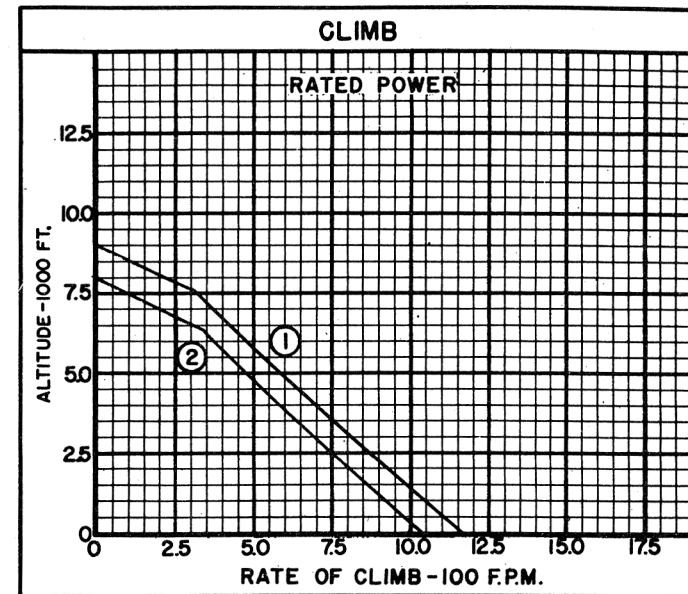
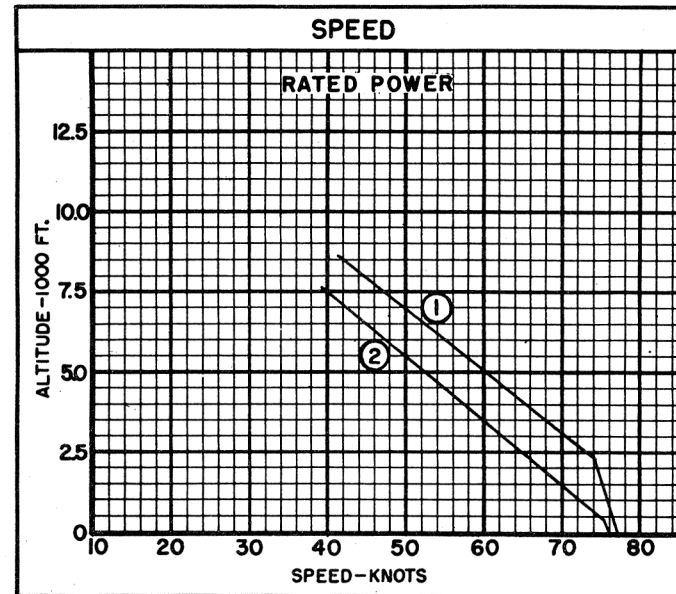
MAX. ENDURANCE MISSION

Warm-up and Take-off: 1 min at NRP at Sea Level
 Cruise: at speed for best endurance at Sea Level
 Reserve: 10% of initial fuel load

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○ LOADING CONDITION COLUMN NUMBER

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