

Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

STANDARD AIRCRAFT CHARACTERISTICS

HO4S-2

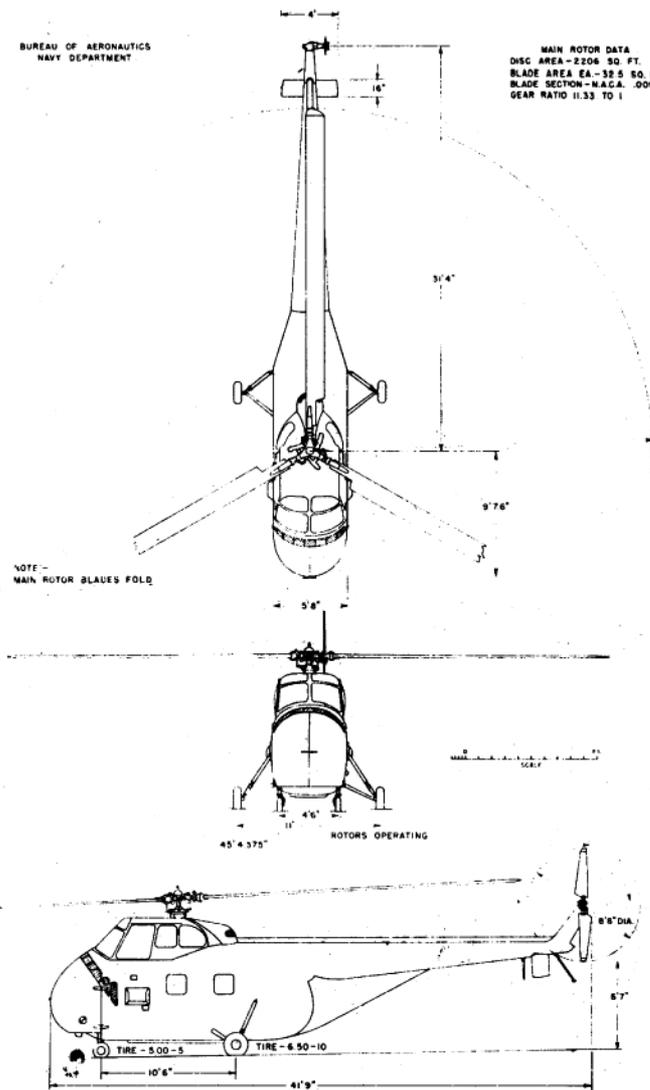
SIKORSKY

1 JULY 1952

HO4S-2

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

MAIN ROTOR DATA
DISC AREA - 2206 SQ. FT.
BLADE AREA EA - 32.5 SQ. FT.
BLADE SECTION - M.A.G.A. .0012
GEAR RATIO 11.33 TO 1



DESCRIPTIVE ARRANGEMENT

Standard Aircraft Characteristics NAVAER 13358 (REV. 1-4-49)

POWER PLANT

NO. & MODEL.....(1) R-1340-57
 MFR.....Pratt and Whitney
 SUPERCH.....1 Stage, 1 Speed
 ROTOR GEAR RATIO.....0.0852
 TAIL ROTOR RATIO.....0.617

RATINGS

	Bhp	Rpm	Alt.
T. O.	600	2,250	S.L. to 6,200'
NORM.	550	2,200	S.L. to 8,000'

SPEC. NO. P&W 1066

ACCOMMODATIONS**OBSERVATION**

Crew.....2

SEARCH AND RESCUE

Crew.....2
 Litters.....6
 Door Size.....48" x 48"
 Hoist Capacity.....400 lbs.

MAX. CARGO LOAD.....2,000 lbs.

MISSION AND DESCRIPTION

The primary mission of the HO4S-2 helicopter is observation. It may also be used for search and rescue.

Design features include engine mounted behind clamshell doors in nose, cabin location directly beneath main rotor, both main and auxiliary rotor blades of all metal construction, anti-coning blade restrainers for shipboard operation and non-scuffing quadricycle type landing gear.

The HO4S-2 differs from the HO4S-1 in having an engine of higher critical altitude. The HO4S-2 also includes structural provisions for the incorporation of the R-1300-3 engine at a later date.

All operational HO4S-1 models have been converted to HO4S-2 helicopters.

DEVELOPMENT

First Flight -- October 1951

Service use to start -- November 1951

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	4,975.....	
BASIC.....	5,151.....	
DESIGN.....	7,100.....	2.67
MAX.T.O.....	8,070.....	2.12
MAX.LAND.....	8,070.....	

All weights are estimated.

FUEL AND OIL

Gals.	No. Tanks	Location
185	1.	Fuselage
FUEL GRADE.....91/98		
FUEL SPEC.....MIL-F-5572		

OIL

CAPACITY (Gals.).....	9.25
GRADE.....	1100/1120
SPEC.....	MIL-O-6082

DIMENSIONS

DISC AREA.....2,206 sq. ft.
 BLADE DIA.....53' - 0"
 BLADE AREA.....98 sq. ft.
 LENGTH*.....41' - 9"
 HEIGHT.....14' - 0"
 TREAD.....11' - 0"
 STABILIZER AREA.....6 sq. ft.

*Blades Folded

ELECTRONICS

VHF.....AN/APN-1
 INTERPHONE.....AN/AIC-4A
 RADIO ALTIMETER.....AN/APN-1
 RANGE RECEIVER.....R-23A/ARC-5
 HOMING RECEIVER.....AN/ARR-2A
 IFF.....AN/APX-6

PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION		(1) OBSERVATION 2 Crew	(2) SEARCH AND RESCUE 2 Crew and 6 Litter Patients		
TAKE-OFF WEIGHT	lb.	6,503	7,276		
Fuel	lb.	1,110	540		
Payload	lb.	--	1,140		
Disc loading	lb./sq.ft.	3.0	3.3		
Vertical rate of climb at S.L.	(A/B) fpm.	230/590	--		
Absolute hovering ceiling	(A/B) ft.	4,900/8,000	--		
Max. rate of climb at S.L.	(A) fpm.	1,280	820		
Service ceiling (100 fpm)	(A) ft.	15,600	12,000		
Speed at S.L.	(A) kn.	96	86		
Max. speed/altitude	(A) kn./ft.	96/S.L.	86/S.L.		
Combat range	n.mi.	360	147		
Average cruising speed	kn.	72	70		
Cruising altitude	ft.	1,500	1,500		
Combat radius	n.mi.	--	--		
Average cruising speed	kn.	--	--		
Maximum endurance	hrs.	6.3	2.5		
Average cruising speed	kn.	50	50		
Cruising altitude		1,500	1,500		

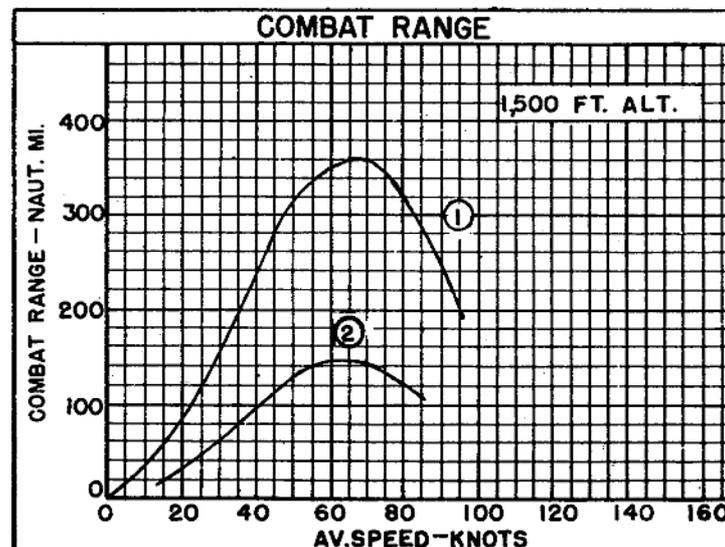
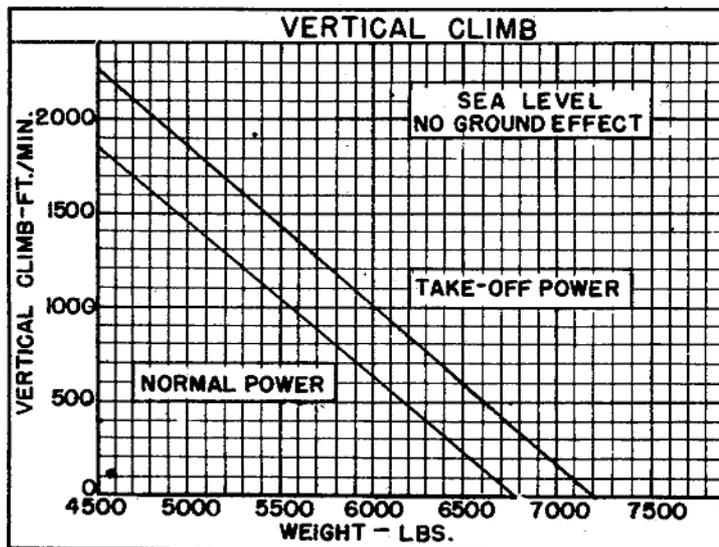
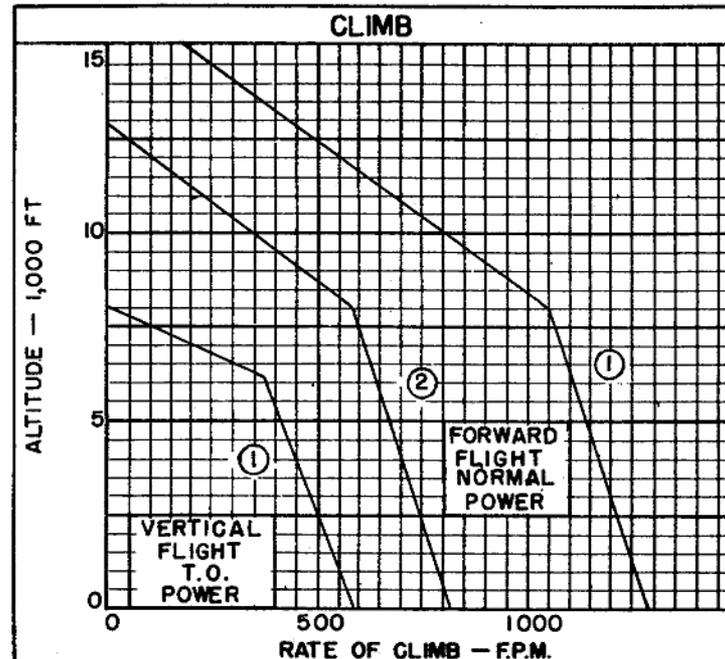
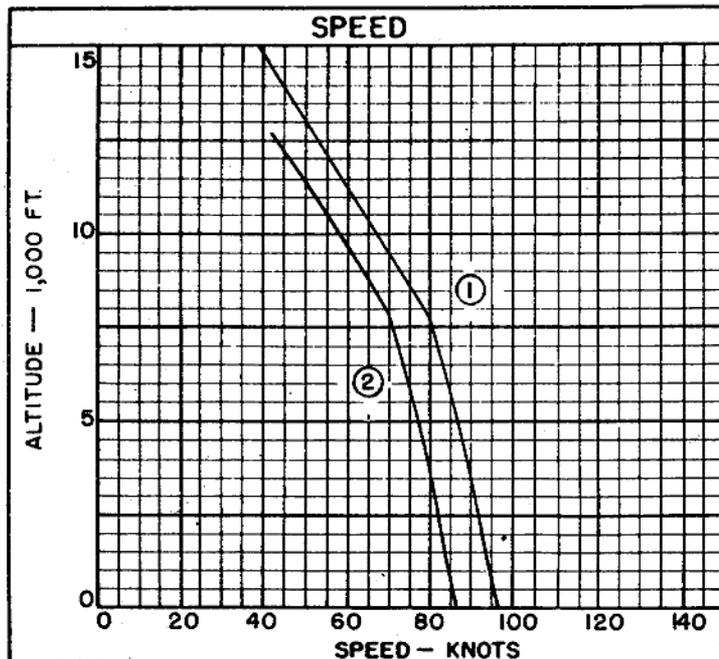
NOTES

- (A) Normal power
(B) Take-off power

Performance is based on flight test of the HO4S-1 and HRS-1 helicopters.

Sea level data do not include ground effect.

Range and endurance are based on engine specification fuel consumption data increased by 5% and allowing fuel for warm-up and take-off (5 minutes at NRP) and a 10% fuel reserve. 2200 Rpm is used at all speeds.



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (REV. 2-50)