



STANDARD AIRCRAFT CHARACTERISTICS

HO5S-1

SIKORSKY

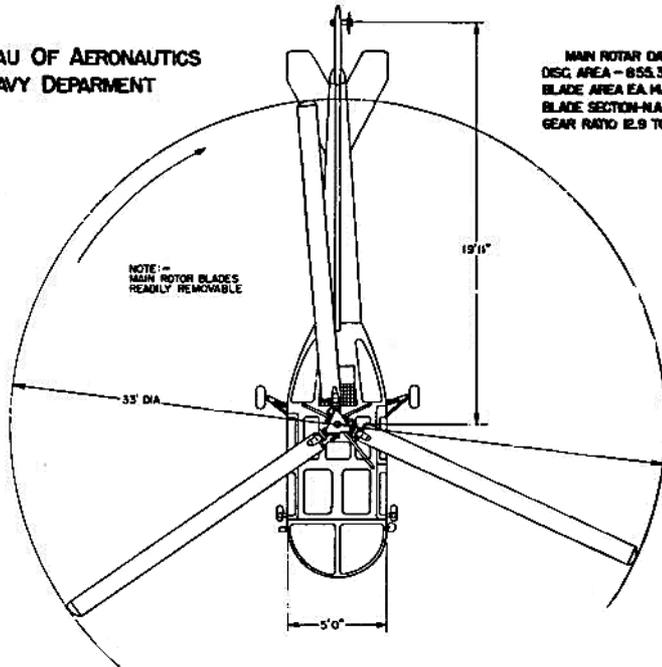
Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

1 MAY 1951

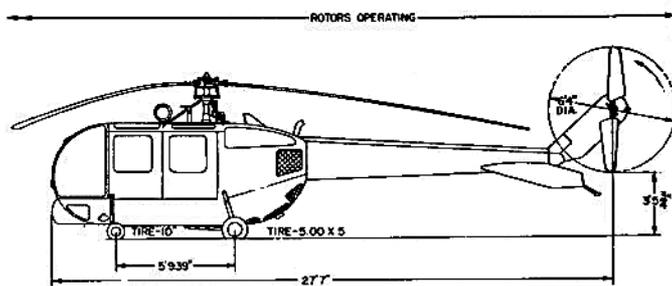
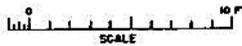
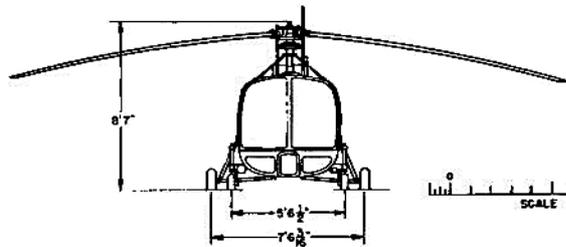
HO5S-1

SERVICE

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



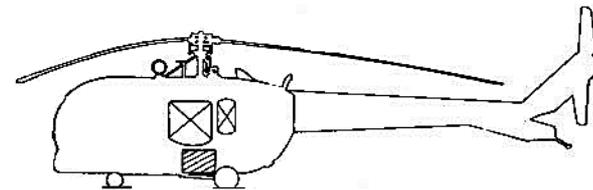
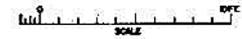
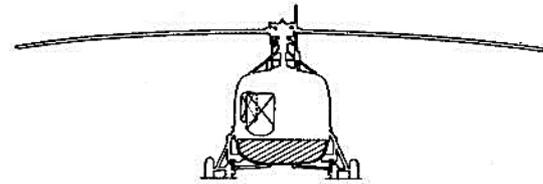
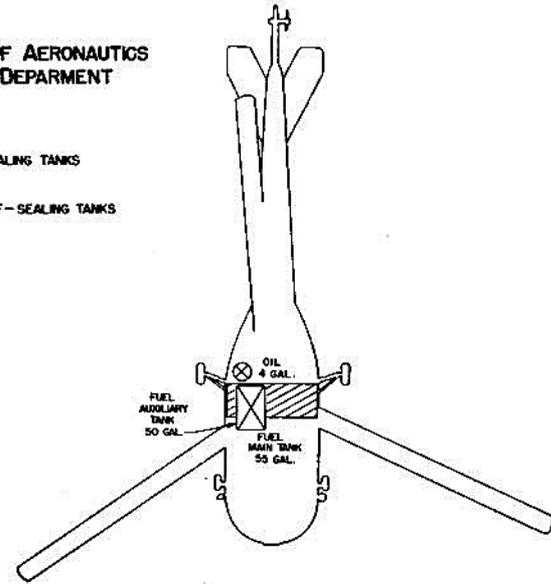
MAIN ROTOR DATA
DISC AREA - 855.3 SQ. FT.
BLADE AREA EA. 148.8 SQ. FT.
BLADE SECTION-NAACA 00M
GEAR RATIO 12.9 TO 1.3



DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

- SELF-SEALING TANKS
- NON SELF-SEALING TANKS



ARMAMENT & TANKS

Standard Aircraft Characteristics NAVAER 13358 (REV. 1-4-9)

MISSION AND DESCRIPTION

The HO5S-1 helicopter will be utilized for observation-liaison purposes. Its missions will include reconnaissance, gunfire adjustment, evacuation of wounded, transport of personnel, and general utility with troop units. For use in evacuating wounded, the co-pilot's seat may be relocated and two litter patients carried internally in addition to the pilot and medical attendant.

The HO5S-1 is the Navy version of the Sikorsky Model S-52-2 and the Air Force YH-18.

Design features include self-sealing fuel and oil tanks, both main and auxiliary rotor blades of all-metal construction, anti-icing blade restrainers for shipboard operation, and non-scuffing quadricycle type landing gear. Provisions are made for FM radio and an external cargo sling of 500 pound capacity.

First flight -- August 1951

Service use to start -- September 1951

DIMENSIONS

DISC AREA.....855 sq. ft.
 BLADE AREA.....43 sq. ft.
 BLADE DIA.....33' - 0"
 LENGTH.....29' - 0"
 HEIGHT.....8' - 8"
 TREAD.....7' - 6"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	2,002.....	
BASIC.....	2,036.....	
DESIGN.....	2,570.....	3.1
MAX.T.O.....	2,769.....	2.88
MAX.LAND.....	2,769.....	

All weights are actual.

FUEL AND OIL

Gals.	No. Tanks	Location
55	1	Fuselage
FUEL GRADE.....115/145		
FUEL SPEC....MIL-F-5572		

OIL

CAPACITY (Gals.).....3
 GRADE.....1100
 SPEC.....MIL-O-6082

ELECTRONICS

VHF TRANSMITTER...T-23/ARC-5
 MHF TRANSMITTER...T-19/ARC-5
 MHF RECEIVER.....R-26/ARC-5
 VHF RECEIVER.....R-19
 RANGE REC. & LOOP.....R-11A

Provisions only for
 FM RADIO.....SCR-619

POWER PLANT

NO. & MODEL.....(1) O-425-1
 MFR.....Aircooled Motors
 ROTOR GEAR RATIO.....0.100
 TAIL ROTOR RATIO.....0.143

RATINGS

Bhp @ Rpm @ Alt.

T. O.	245	3,275	S. L.
NORMAL	245	3,275	S. L.

SPEC. NO. 13707

ACCOMMODATIONS

CREW.....2
 PASSENGERS.....3
 LITTERS.....2



PERFORMANCE SUMMARY

LOADING CONDITION		(1) OBSERVATION		
		1 Pilot		
		1 Observer		
TAKE-OFF WEIGHT	lbs.	2,661		
Fuel	lbs.	222		
Pay Load	lbs.	190		
Engine Power	bhp/rpm.	245/3,275		
Disc Loading	lbs./sq.ft.	3.1		
Power Loading	(A) lbs./bhp.	10.9		
Maximum Speed-S.L.	(B) kn.	94		
Maximum Speed/Alt.	(B) kn./ft.	94/S.L.		
Rate of Climb-S.L.	(B) ft./min.	1,110		
Speed for Rate of Climb-S.L. (B)	kn.	45		
Time-to-Climb 5,000 ft.	(B) min.	5.6		
Time-to-Climb 10,000 ft.	(B) min.	16.4		
Service Ceiling	(B) ft.	12,400		
Vertical Rate of Climb-S.L.(B/C)	ft./min.	250/250		
Abs. Hover Ceil. No Grd. Effect (B/C)	ft.	2,100/2,100		
Abs. Hover Ceil. In Grd. Effect (B/C)	ft.	4,100/4,100		
Combat Range/Vav 1,500 ft.	n.mi./kn.	165/78		
Max. Endur./Vav 1,500 ft.	hr./kn.	2.5/46		

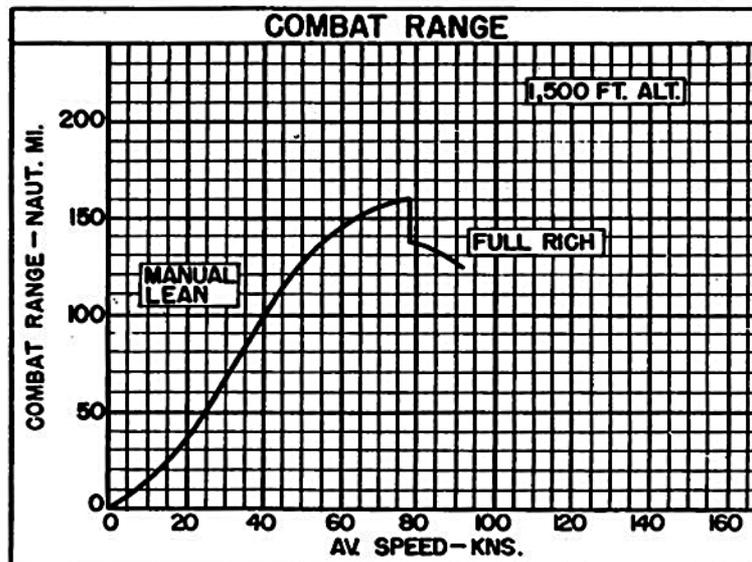
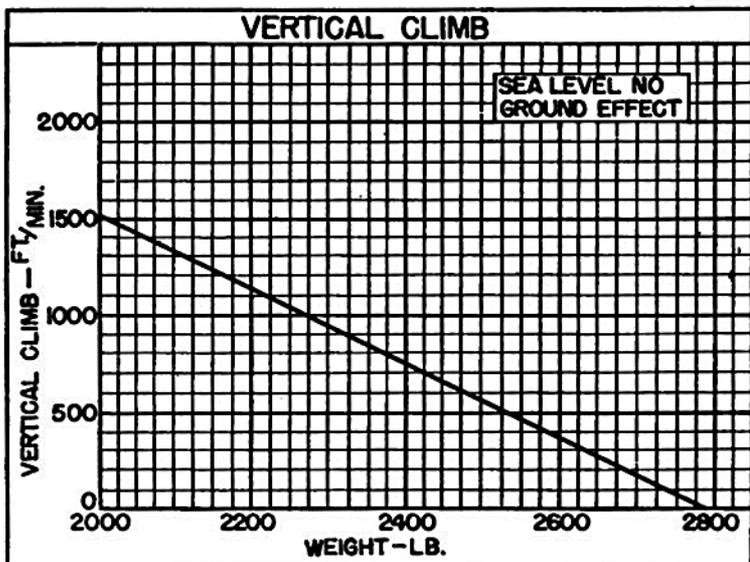
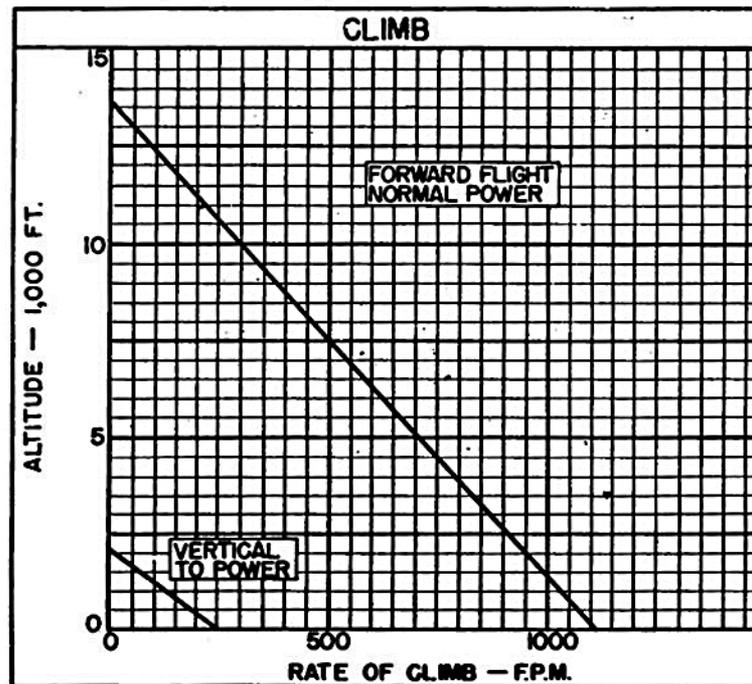
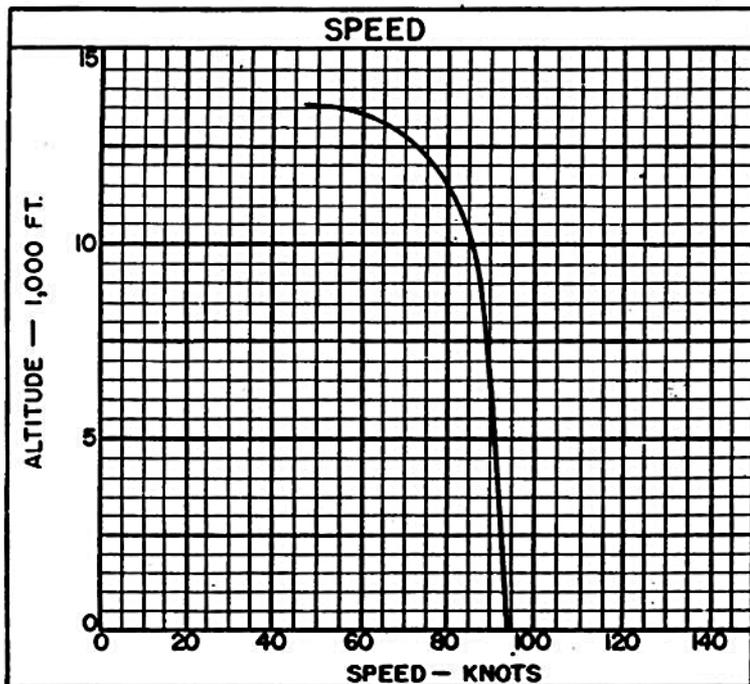
NOTES

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

Performance is based on flight test of the S-52 and YH-18 helicopters.

Performance in ground effect is based on the assumption that the rotor disc is one radius above the ground.

Combat range and maximum endurance are based on engine specification fuel consumption data increased by 5% and allowing fuel for warm-up and take-off (5 min. at NRP) and a 10% fuel reserve. 3,000 RPM is used at all speeds.



Standard Aircraft Characteristics MAYAER 1335E (REV. 2-60)

○ LOADING CONDITION COLUMN NUMBER

1 MAY 1951

H05S-1