STANDARD AIRCRAFT CHARACTERISTICS

HO4S-2

SIKORSKY

1 JULY 1952
POWER PLANT

NO. & MODEL........1 (1) B-1330-57
NPR...........Pratt and Whitney
SUPERCH........1 Stage, 1 Speed
ROTOR GEAR RATIO....0.0652
TAIL ROTOR RATIO....0.617

RATINGS

Hp  Rpm  Alt.
T. O.  600  2,250  S.L. to 6,200'  5,000'
NORM.  550  2,200  S.L. to 5,000'

SPEC. NO. P&W 1066

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-collision 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 B-1330-3 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

Lb.  L.F.
EMPTY........4,975
BASIC........5,151
DESIGN........5,710
MAX.T.O........8,070
MAX.LAND........8,070

All weights are estimated.

FUEL AND OIL

Gals. No. Tanks Location
165  1  Fuselage

FUEL GRADE...........N-1/95
FUEL SPEC...........MIL-F-5577

CAPACITY (Gals.)...9.25
GRADE...........150/1120
SPEC...........MIL-O-5682

OIL

ELECTRONICS

VHF.............AN/APS-1
INTERPHONES.....AN/AIO-4A
RADAR ALTIMETER...AN/APS-1
RANGE RECEIVER...R-234/ARC-5
HOMING RECEIVER...AN/AHR-2A
IFF.............AN/APX-6

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.

DIMENSIONS

DISC AREA........2,205 sq. ft.
BLADE DIA.............53" - 0"*3
BLADE AREA........98 sq. ft.
LENGTH............34' - 9"
HEIGHT..............14'- 0"
TREAD..............11' - 0"
STABILIZER AREA....1.6 sq. ft.

*Blades Folded

HO4S-2
### PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF LOADING CONDITION</th>
<th>(1) OBSERVATION</th>
<th>(2) SEARCH AND RESCUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Crew</td>
<td>2 Crew and 5 Litter Patients</td>
<td></td>
</tr>
<tr>
<td>TAKE-OFF WEIGHT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel</td>
<td>6,503</td>
<td>7,276</td>
</tr>
<tr>
<td>Payload</td>
<td>1,110</td>
<td>540</td>
</tr>
<tr>
<td>Disc loading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lb./sq.ft.</td>
<td>3.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Vertical rate of climb at S.L. (A/B) fpm.</td>
<td>230/590</td>
<td></td>
</tr>
<tr>
<td>Absolute hovering ceiling (A/B) ft.</td>
<td>4,900/0,030</td>
<td></td>
</tr>
<tr>
<td>Max. rate of climb at S.L. (A) fpm.</td>
<td>1,280</td>
<td>820</td>
</tr>
<tr>
<td>Service ceiling (100 fpm) (A) ft.</td>
<td>15,500</td>
<td>12,000</td>
</tr>
<tr>
<td>Speed at S.L. (A) km./hr.</td>
<td>96</td>
<td>86</td>
</tr>
<tr>
<td>Max. speed/altitude (A) km./hr.</td>
<td>95/S.L.</td>
<td>85/S.L.</td>
</tr>
<tr>
<td>Combat range n.mi.</td>
<td>350</td>
<td>147</td>
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<tr>
<td>Average cruising speed km.</td>
<td>72</td>
<td>70</td>
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<tr>
<td>Cruising altitude ft.</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>Combat radius n.mi.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average cruising speed km.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum endurance hrs.</td>
<td>6.3</td>
<td>2.5</td>
</tr>
<tr>
<td>Average cruising speed km.</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Cruising altitude</td>
<td>1,500</td>
<td>1,500</td>
</tr>
</tbody>
</table>

### 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 fpm is used at all speeds.