STANDARD AIRCRAFT CHARACTERISTICS

UH-2A SEASPRITE

KAMAN

15 MARCH 1963
**POWER PLANT**

No. & Model ... (1) T58-GE-6B
Mfr. .......... GENERAL ELECTRIC
ROTOR GEAR
RATIO 0.047
TAIL ROTOR
RATIO 0.28

**RATINGS**

ESHP @ RPM @ ALT
MIL 1250 19500 S,S,L
NORM 1050 19500 S,S,L

ENGINE SPEC. NO. EC-1025-A

APRIL 1, 1961

**MISSION AND DESCRIPTION**

THE PRIMARY MISSION OF THE UH-2A HELICOPTER IS TO ACCOMPLISH GENERAL UTILITY TASKS, WHICH INCLUDE PLANES GUARD FOR CARRIER AIRCRAFT OPERATIONS, SEARCH AND RESCUE MISSIONS, GUN FIRE OBSERVATION, RECONNAISSANCE, COURIER SERVICE, PERSONNEL TRANSFER FROM SHIP TO SHIP TO SHORE, EVACUATION OF WOUNDED, RADIOLOGICAL RECONNAISSANCE, AERIAL SPRAYING OF INSECTICIDES, EMERGENCY SUPPLY AND RE-SUPPLY, WIRE-LAYING AND TACTICAL AIR CONTROLLER OPERATIONS.

THE UH-2A IS A TURBO-ENGINE POWERED, SINGLE FOUR-BLADED ROTOR HELICOPTER WITH AN ANTI-TORQUE TAIL ROTOR. THE MAIN ROTOR IS CONTROLLED BY AERODYNAMIC SERVO FLAP ACTUATED BY CONVENTIONAL PILOT'S COCKPIT CONTROLS.

**DEVELOPMENT**

FIRST FLIGHT .................. JULY 1959
SERVICE USE (FIP). .......... OCTOBER 1962

**DIMENSIONS**

MAIN ROTOR
DISC AREA .... 1520.5 sq. ft.
BLADE AREA .... 127.0 sq. ft.
NO. OF BLADES .......... 4.0
DIAMETER ........... 44"
LENGTH (BLADES
FOLDED) .......... 39" - 7.5"
HEIGHT (MAX.) ....... 13" - 6.3"
TREAD ............... 10" - 10"
STABILIZER AREA .... 14.5 sq. ft.

**FUEL AND OIL**

GAL. NO. TANKS LOCATION
276 4 FUSELAGE
120 2 (aux) EXTERNAL
FUEL GRADE ........ J-4/J-5
FUEL SPEC ......... MIL-F-5624

**OIL**

ENGINE (GAL.) . 3.1
SPEC: MIL-L-7808
TRANSMISSION (GAL.) 2.0
SPEC: MIL-L-7808

**ACCOMMODATIONS**

PILOT .......................... 1
CO-PILOT ........................ 1
PASSENGERS .................... 4
OR
PILOT .......................... 1
CO-PILOT ........................ 1
ATTENDANT ...................... 1
LITTERS ......................... 2
RESCUE HOIST CAP. .... 600 LB
## PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF LOADING CONDITION</th>
<th>UTILITY 1-PILOT 1-COPILOT</th>
<th>UTILITY OVER-LOAD 1 PILOT 4 PASSENGERS</th>
<th>UTILITY 1-PILOT 1-COPILOT 2-CREWMAN</th>
<th>FERRY 1-PILOT 1-COPILOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKE-OFF WEIGHT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel (JP-5) INT/EXT</td>
<td>1 lb</td>
<td>9637</td>
<td>10000</td>
<td>9037</td>
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<tr>
<td>Payload</td>
<td>1 lb</td>
<td>1878/ -</td>
<td>1878/431</td>
<td>1878 / -</td>
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<tr>
<td>Disc loading</td>
<td>5.8 lb/sq.ft</td>
<td>6.58</td>
<td>5.94</td>
<td>6.30</td>
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<tr>
<td>Vertical rate of climb at S.L. (A)</td>
<td>800</td>
<td>-</td>
<td>515</td>
<td>170</td>
</tr>
<tr>
<td>Absolute hovering ceiling (OGE) (A)</td>
<td>4600</td>
<td>-</td>
<td>2000</td>
<td>700</td>
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<tr>
<td>Max. rate of climb at S.L. (A)</td>
<td>1740</td>
<td>1190</td>
<td>1570</td>
<td>1360</td>
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<tr>
<td>Service ceiling (1000 rpm) (A)</td>
<td>15000 (c)</td>
<td>14300</td>
<td>15000 (c)</td>
<td>15000 (c)</td>
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<tr>
<td>Speed at S.L. (A) / (B)</td>
<td>140/120, 3/ 129/116</td>
<td>139/128</td>
<td>131/119</td>
<td></td>
</tr>
<tr>
<td>Max. speed/altitude (A)</td>
<td>140/SL</td>
<td>129/SL</td>
<td>131/SL</td>
<td></td>
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<tr>
<td>COMBAT RADIUS</td>
<td>167</td>
<td>188</td>
<td>165</td>
<td>-</td>
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<tr>
<td>Average cruising speed</td>
<td>125</td>
<td>125</td>
<td>125</td>
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<tr>
<td>Cruising altitude</td>
<td>SL</td>
<td>SL</td>
<td>SL</td>
<td>-</td>
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<tr>
<td>FERRY RANGE</td>
<td>n.m.</td>
<td>-</td>
<td>465</td>
<td>-</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>n.m.</td>
<td>-</td>
<td>-</td>
<td>119</td>
</tr>
<tr>
<td>CRUISING ALT.</td>
<td>FT</td>
<td>-</td>
<td>-</td>
<td>5L</td>
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<tr>
<td>MAXIMUM ENDURANCE</td>
<td>HRS. 3.8</td>
<td>4.4</td>
<td>3.7</td>
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<tr>
<td>ENDURANCE SPEED</td>
<td>KN. 58</td>
<td>59</td>
<td>58</td>
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<tr>
<td>ENDURANCE ALTITUDE</td>
<td>FT. SL</td>
<td>SL</td>
<td>SL</td>
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<tr>
<td>PLANE GUARD ENDURANCE</td>
<td>HRS. 3.5</td>
<td>4.0</td>
<td>3.4</td>
<td>-</td>
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<td>ENDURANCE SPEED</td>
<td>KN. 30</td>
<td>30</td>
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<td>-</td>
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<tr>
<td>ENDURANCE ALTITUDE</td>
<td>FT. SL</td>
<td>SL</td>
<td>SL</td>
<td>-</td>
</tr>
</tbody>
</table>

(A) Military Rated Power  
(B) Normal Rated Power  
(C) Limit of Present Envelope

### Maximum Endurance

- **Warm-up and Take-off:** 3 mins at sea level at normal rated power.
- **Cruise Out:** At not less than 125 kts at sea level at not more than 95% normal power.
- **Cruise:** At speed for maximum endurance at sea level.
- **Reserve:** 10% initial fuel load.

**Performance Basis:** NATC Flight Test  
Range & Radius Based on Demo Fuel Flows

**Radius**

- **Warm-up and Take-off:** 7 minutes at sea level at normal rated power.
- **Cruise Out:** At not less than 125 kts at sea level at not more than 95% normal power.
- **Hover:** At objective pick up 800 pounds payload (no fuel consumed allowed for at take-off).
- **Cruise Back:** At not less than 125 kts at sea level at not more than 95% normal rated power.
- **Reserve:** 10% initial fuel load.

UH-2A (H-2K-1)  
15 March 1963
NOTES

FERRY RANGE

WARM-UP and TAKE-OFF: 5 mins at normal rated power at sea level.
CRUISE: At speed for maximum range at sea level.
RESERVE: 10% initial fuel load.

PLANE GUARD ENDURANCE

WARM-UP and TAKE-OFF: 3 mins at normal rated power at sea level.
CRUISE: At 30 kts at sea level
RESERVE: 10% initial fuel load.

Mission Time: Exclude Warmup, Take-off and Reserve Loiter Time
Cycle Time: Excludes Warmup and Take-off Time