Standard Aircraft Characteristics

NAVY MODEL
UH-1E(540)
AIRCRAFT

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AUGUST 1974
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STANDARD AIRCRAFT CHARACTERISTICS

UH-1E(540)

BELL
POWER PLANT

No. and Model............(1) T53-L-11
Name........................Lycoming
Engine Spec. No..............104.48
Type..........................Free Power Turbine
Red. Gear Ratio..............0.3119
Tail Pipe......................Fixed Area
Augmentation....................None

RATINGS

SPA SHP NET NET RPM MIN
STD
T.O. 1100 124 6610 5
MIL. 1000 115 6610 30
NOR. 900 107 6600 Cont.

MISSION AND DESCRIPTION

The basic mission of the UH-1E(540) is visual observation and target acquisition, reconnaissance and command control. The UH-1E (540) is capable of flight from established airfields, carriers of the LH and CVE class, advanced bases, areas of ships with individual landing platforms of limited landing facilities, and from unprepared fields. It may be handled on carrier elevators without any folding of components.

In addition, the UH-1E(540) may be used for medical evacuation, to transport personnel, special teams or crews, equipment and supplies. By the attachment of appropriate weapons it is possible to deliver point target and area fire.

The gas turbine powered UH-1X(540) is of compact design having a low silhouette. The two-bladed main and tail rotors are of all metal construction. The fuselage is of semi-monocoque construction.

The cabin has large sliding doors, allowing straight-through loading. Litters may be loaded from either side or from both sides simultaneously. The cargo floor is knee high for easy loading. The copilot's controls are easily removed; thus providing accommodations for a passenger in the copilot seat or when the copilot seat is removed, an additional 8.75 square feet of cargo area for a total of 47.2 square feet.

DEVELOPMENT

Fifty-two (52) production articles procured for the Department of the Navy.

Contract Placement Jun 1965 First Delivery Jan 1966
First Flight Dec 1965 Final Delivery Nov 1966

DIMENSIONS

Rotor Diameter 44.0'
Length
Robors Operating 52.9'
Robors Static 52.9'
Fuselage 38.5'
Span (Max. Lateral) 9.0'
Height 14.7'
Tread 8.4'
Rotor Ground Clearance
(Static, Against Stops) 6.9'

WEIGHTS

LOADING Lb. L.T.
Empty 5450
Basic 5610
Design 6600
Combat 7700*
Max. T.O. 9200
Max. Land 9200

*For Basic Mission

FUEL AND OIL

FUEL

LOCATION NO. TANKS GALL.
Fuselage 2 242.0
Fuselage, Ferry 1 350.0
Grade JP-4, JP-5
Specification MIL-D-5624F

OIL

Fuselage 3.8
Specification MIL-L-7808D

ORDNANCE

ACCOMMODATIONS

Crew (Observation).............2
Cabin Size Clearance:
Length (Overall)..............5.0'
Width (Maximum).............7.7'
Height (Maximum).............4.7'
Usable Volume
Cargo Area 140 Cu-ft
Copilot Area 20 Cu-ft
Provision for Troop Seats........5
Provision for Litters...........4
Cargo Hook Capacity 5,000 lb
Limit Floor Loading...................

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# PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF LOADABLE CONDITION</th>
<th>CLEAN</th>
<th>TRANSPORT CARGO</th>
<th>OVERLOAD TRANSPORT CARGO</th>
<th>MEDICAL EVACUATION</th>
<th>JERRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKE-OFF WEIGHT</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
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<td>1842</td>
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<tr>
<td>Payload</td>
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<td>Absolute hovering ceiling (OK)</td>
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<tr>
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<tr>
<td>Max. Speed (O.S.T.)</td>
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<td>km.</td>
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<td>35</td>
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</table>

### NOTES

(1) Military rated power.  
(2) Maximum continuous power.  
(3) Mission time - Time in air (excludes time before start of enroute climb and reserve, unless otherwise specified and noted.)  
Performance Basis:  
(1) J-111 performance at standard day conditions.  
(2) Sample flight test data.  
(3) Engine specification fuel consumption increased by 5%.
<table>
<thead>
<tr>
<th>NOTES</th>
</tr>
</thead>
</table>

### Radius Mission

1. Warm-up and take-off: Fuel allowance of 5 minutes at maximum continuous power at sea level.
2. Cruise out: To remote base at speed for maximum range at sea level.
3. Land and unload payload: Mid-point fuel allowance of 2 minutes at maximum continuous power at sea level.
4. Cruise back: To home base at speed for maximum range at sea level.
5. Landing reserve: Fuel for 30 minutes at speed for maximum range at sea level.

### Range Mission

1. Warm-up and take-off: Fuel allowance of 5 minutes at maximum continuous power at sea level.
2. Cruise out: To remote base at speed for maximum range at sea level.
3. Land and unload payload: Mid-point fuel allowance of 2 minutes at maximum continuous power at sea level.
4. Cruise back: To home base at speed for maximum range at sea level.
5. Landing reserve: Fuel for 30 minutes at speed for maximum range at sea level.

### Loading Condition Column Number

- Clean
- Transport Cargo
- Overload Transport Cargo
- Medical Evaluation
- P锲纽

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