STANDARD AIRCRAFT CHARACTERISTICS
UO-1 AZTEC
PIPER
POWER PLANT

NO. AND MODEL (2) 0-540-A1D5
MANUFACTURER ......... LYCOMING
LENGTH ............... 37.2 IN.
DIAMETER ............. 33.4 IN.
PROP MFR HARTZELL HC-A2X-2
NO. BLADES/DIA. ..... 2/74°
BLADE DESIGN NO. .... 8433810

RATINGS

H. P. RPM ALT.
RATED 250 2575 SL
MAX CONT. 250 2575 SL
75% 188 2400 SL TO 6000
65% 163 2400 SL TO 10000
55% 138 2400 SL TO 15000

MISSION AND DESCRIPTION

UTILITY AND LOGISTICS AIRPLANE

THE UO-1 IS A TWIN-ENGINE AIRPLANE OF
CONVENTIONAL CONSTRUCTION. IT FEATURES SLOTTED
FLAPS, RETRACTABLE TRICYCLE GEAR, AND AN ALL-
MOVABLE HORIZONTAL TAIL SURFACE. IT WILL CARRY
A CREW OF ONE PILOT PLUS THREE PASSENGERS AND
200 POUNDS OF BAGGAGE. IT INCORPORATES ELECTRICAL PROPELLER DE-ICING EQUIPMENT, OXYGEN
EQUIPMENT, HEATED PILOT AND AUTO-PILOT AND A
COMPLETE INSTRUMENT PANEL WITH DUAL COMMUNI-
CATION AND NAVIGATION RADIOS.

WEIGHTS

LOADING LBS. ULT. L/P.
EMPTY .... 3020 ..... 5.7
BASIC ....... ......
DESIGN .... 4800 ..... 5.7
COMBAT ...... ......
MAX. T.O. .... 4800 ..... 4.5
MAX. LANDING 4800 ..... 4.5

ALL WEIGHTS ARE A COMBIN-
ATION OF ACTUAL AND
CALCULATED.

FUEL AND OIL

NO. TANKS GALS LOCATION
1 140 - WING

FUEL GRADE .... 91/96 OCTANE
FUEL SPEC.

OIL

CAPACITY (GALS) ...... 6
GRADE ................. 1100
SPEC ................. MIL-0-6082

DEVELOPMENT

FIRST FLIGHT .............. 16 OCTOBER 1958
ACCEPTED FOR SERVICE USE .... 19 AUGUST 1961

ELECTRONICS

1. VHF COMMUNICATIONS - COLLINS 101
17L-7A TRANSMITTER
51X-28 RECEIVER
2. AUXILIARY VHF TRANSMITTER - ARC
T-20 TRANSMITTER
3. DUAL VHF OMNI - COLLINS
51X-2 CHANNELS
4. 344A-1 INST., CONVERTER
344D-1 OMNI CONVERTER
331H-L COARSE SEL. INDIC.
5. ADF - 21A - ARC
6. MARKER BEACON - 512-2 COLLINS
7. GLIDE SLOPE - 51-3 COLLINS
8. AUDIO AMPLIFIER - CA-2A
FLITE-TRONICS

DIMENSIONS

WING AREA .......... 207 SQ. FT.
SPAN .............. 37' 1 3/4"
MAC ................ 5' 7"
Sweepback (1/4 CHORD) .... 0°
LENGTH ............ 27' 7 5/8"
HEIGHT ............ 10' 3 3/8"
TREAD .............. 11' 4"

ORDNANCE

NONE

15 AUGUST 1961
### PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF LOADING CONDITION</th>
<th>(1) TRANSPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TAK-OFF WEIGHT</strong></td>
<td>lb. 4800</td>
</tr>
<tr>
<td>Fuel internal/external</td>
<td>lb. 840</td>
</tr>
<tr>
<td>(USEABLE)</td>
<td></td>
</tr>
<tr>
<td>Payload (INCLUDING PILOT)</td>
<td>lb. 941</td>
</tr>
<tr>
<td>Wing loading</td>
<td>lb./sq.ft. 23.5</td>
</tr>
<tr>
<td>Stall speed - power-off</td>
<td>km. 64</td>
</tr>
<tr>
<td>Take-off run at S.L. - calms</td>
<td>1000</td>
</tr>
<tr>
<td>Take-off run at S.L. - 25 km. wind</td>
<td>810</td>
</tr>
<tr>
<td>Take-off to clear 50 ft. - calms</td>
<td>1410</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
<td>km./ft. 181/1.4</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>fps. 1620</td>
</tr>
<tr>
<td>Time: S.L. to 7,000 ft.</td>
<td>min. 19.4</td>
</tr>
<tr>
<td>Time: S.L. to 20,000 ft.</td>
<td>min. 56.5</td>
</tr>
<tr>
<td>Service ceiling (100 fps)</td>
<td>ft. 7000</td>
</tr>
<tr>
<td>Combat range</td>
<td>n.a. 10,000</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>km. 117.5</td>
</tr>
<tr>
<td>Cruising altitude(s)</td>
<td>ft. 7000</td>
</tr>
<tr>
<td>Combat radius/radial time</td>
<td>n.a.</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>km.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>COMBAT LOADING CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMBAT WEIGHT</strong></td>
</tr>
<tr>
<td>Engine power</td>
</tr>
<tr>
<td>Fuel</td>
</tr>
<tr>
<td>Combat speed/combat altitude</td>
</tr>
<tr>
<td>Rate of climb/combat altitude</td>
</tr>
<tr>
<td>Combat ceiling (500 fps)</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
</tr>
<tr>
<td>Max. speed at S.L.</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDING WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>lb.</strong></td>
</tr>
<tr>
<td>Fuel</td>
</tr>
<tr>
<td>Stall speed - power-off</td>
</tr>
<tr>
<td>Approach - ground roll/over 50 ft. obstr.</td>
</tr>
</tbody>
</table>

### NOTES

(A) MILITARY RATED THRUST, PERFORMANCE BASIS: CALCULATIONS RANGE AND RADIUS ARE BASED ON ENGINE SPECIFICATION FUEL CONSUMPTION DATA INCREASED BY 5%.
NOTES

RANGE PROBLEM - TRAINER

WARM-UP, TAXI, TAKE-OFF, ACCELERATION: 5 minutes at normal rated thrust at sea level.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE: At long range speed at cruising altitude.

RESERVE: 5% of initial fuel plus fuel required for 20 minutes at speed for maximum endurance at sea level.

7000 Ft.

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RANGE 1009 n.mi.

○ LOADING CONDITION COLUMN NUMBER

15 AUGUST 1961