R44

Robinson R44 Raven II Helicopter

Certified Lithium-ion Aircraft Battery Upgrade
The TB17 Certified Lithium-ion Aircraft Battery features the most sophisticated lithium-ion chemistry available, providing R44 operators with an unmatched advantage of increased power, reduced weight, extended useful life, 2-year maintenance intervals, lower direct operating cost and higher profit potential.

The intelligent battery system’s Nanophosphate® lithium-ion cells provide 3x the energy per kilogram and are rated up to 10,000 cycles, per cell. This results in a battery that is 13.9 pounds (47%) lighter than lead-acid alternatives.

Safety is addressed on multiple levels, including cell chemistry, cell design, containment and the integration of electronic protections. The TB17 is a ‘smart pack’ engineered to protect against overcharge, over-discharge, over-current, short circuit, over-temperature and under-temperature conditions.

Ideal for high utilization and rugged environments, the TB17 starts the aircraft’s engine quickly and offers superior hot and cold weather performance, supplemented by the battery’s internal heaters.

A Supplemental Type Certificate (STC) approves installation of the TB17 on all 28-volt Robinson R44 serial numbers.

### Product Comparison

<table>
<thead>
<tr>
<th>Battery Technology</th>
<th>Voltage Output</th>
<th>Capacity (1C rate)</th>
<th>Weight</th>
<th>Maintenance</th>
<th>Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB17</td>
<td>26.4 VDC</td>
<td>17 amp-hour</td>
<td>15.6 pounds</td>
<td>2 years</td>
<td>8 years (average)</td>
</tr>
<tr>
<td>RG24-15</td>
<td>24 VDC</td>
<td>13.6 amp-hour</td>
<td>29.5 pounds</td>
<td>Annual</td>
<td>2 – 4 years</td>
</tr>
</tbody>
</table>
R44 Certified Lithium-ion Aircraft Battery Upgrade

Operational Value

+ Reduces empty weight and increases useful load
  13.9 pounds less when compared to lead-acid

+ Significantly reduced maintenance
  Capacity check every two years

+ Superior high temperature and cold weather performance
  -40°C to +70°C (-40°F to +158°F)

+ Total value of all cost savings, including maintenance, future replacement and installation cost, fuel, and aircraft appreciation
  Potential to exceed $6,500 over 10 years when compared to lead-acid batteries

+ Environmentally friendly
  No heavy metals and easy disposal
  Reduced carbon emissions

Benefits

+ Significant weight savings
+ 8 year (average) useful life
+ Reduced direct operating costs
  less fuel consumption
  less maintenance
+ Reduced turn times
+ Increased dispatch reliability
+ Increased engine & component life
+ Increased asset value
+ Faster engine starts
+ Increased useful load
  more cargo
  more passengers
  more fuel
+ Increased customer satisfaction
+ Rapid recharge
+ Built-in, automatic heater for quicker dispatch in cold weather
+ Intelligent communication to the cockpit
+ Superior hot and cold weather performance
True Blue Power® lithium-ion batteries are a significant upgrade from heavy, maintenance-intensive lead-acid batteries. This simple modification has clear financial benefits that quickly translate to the bottom line.

**TB17 Technical Specifications**

**CAPACITY**
17 amp-hour

**CHARGE VOLTAGE**
28 VDC nominal

**OUTPUT VOLTAGE**
26.4 VDC nominal

**OPERATING TEMPERATURE**
-40°C to 70°C (-40°F to 158°F)

**WEIGHT**
15.6 pounds

**MAINTENANCE**
Capacity check every two years

**TECHNOLOGY**
Nanophosphate® lithium-ion cell chemistry from A123 Systems, LLC

**PROTECTION**
Overcharge, over-discharge, over-current, short circuit, over- and under-temperature and charge current limiting

**MONITORING**
Resistive temperature devices (RTDs) and discretes

**CASE**
Anodized aluminum, blue

**CERTIFICATION**
FAA TSO certified to C179a
ETSO certified to C179a
RTCA DO-311, DO-160G qualified
UNDOT/IATA qualified
The MD41-1817 is a compact, self-contained Annunciation Control Unit (ACU). The fully-integrated control unit provides annunciation for True Blue Power TB17 battery systems. It combines the necessary battery annunciations and heater control required for proper pilot interface to the battery system.

Lithium-ion technology benefits all 28-volt Robinson R44 serial numbers. Installation kits provide a complete and comprehensive solution for a TB17 certified battery upgrade. Installation flexibility is enhanced by the optional Battery Relocation Kit (shown below).

Highlighted features include long-life LEDs used for all lighting, internally backlit selection switch, daylight readable, deadfront inactive annunciations and automatic dimming. An external dimming adjustment is provided for balancing low-level light conditions.