Rotorcraft VFR
Part 91 Operations

Pilot Certification & Operating Rules

Presented to: Aircraft Electronics Association
By: Jim Viola
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Pilot Requirements

• There are differences between a commercial fixed wing certificate and a commercial rotorcraft certificate
  – Rotorcraft does not require an instrument rating
  – No separate multi-engine rotorcraft rating exists

Flight Instructor Requirements

• There are differences between a commercial fixed wing certificate and a commercial rotorcraft certificate
  – Rotorcraft Flight Instructor also does not require an instrument rating
FAR §61.133 Commercial Privileges

• There are differences between a commercial fixed wing rating and a commercial rotorcraft rating
  – Rotorcraft is not limited by distance (50NM) or time of day (night).
FAR §91.119 Minimum Safe Altitude

- There are differences between a fixed wing aircraft and a rotorcraft
  - Rotorcraft is not limited by a minimum fixed altitude, it is limited by hazards to persons and/or property on the surface
FAR §91.151 Fuel Reserve

• There are differences between a fixed wing aircraft and a rotorcraft
  – Minimum 20 minute fuel reserve in VFR day or night conditions (fixed wing is 30 minutes day, 45 minutes night)
Rotorcraft operations are unique in that they are typically off airport, low altitude and off designated airways
FAR §91.155 VFR Weather Minimums

• There are differences between a fixed wing aircraft and a rotorcraft
  – Class G airspace rotorcraft can operate clear of clouds at speeds that allow avoidance of other aircraft or obstructions

<table>
<thead>
<tr>
<th>AIRSPACE</th>
<th>VISIBILITY</th>
<th>CLOUD CLEARANCE</th>
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<tbody>
<tr>
<td>CLASS B</td>
<td>3 s.m.</td>
<td>Clear of Clouds</td>
</tr>
<tr>
<td>CLASS C &amp; CLASS D</td>
<td>3 s.m.</td>
<td>1,000’ Above 500’ Below</td>
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<td></td>
<td></td>
<td>2,000’ Horizontal</td>
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<tr>
<td>CLASS E</td>
<td>3 s.m.</td>
<td>1,000’ Above 500’ Below</td>
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<tr>
<td></td>
<td></td>
<td>2,000’ Horizontal</td>
</tr>
<tr>
<td>Less than 10,000’ MSL</td>
<td>5 s.m.</td>
<td>1,000’ Above 1,000’ Below</td>
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<td></td>
<td></td>
<td>1 s.m. Horizontal</td>
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<tr>
<td>At or above 10,000’ MSL</td>
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<tr>
<td>CLASS G</td>
<td>DAY: 1 s.m.</td>
<td>Clear of Clouds</td>
</tr>
<tr>
<td>At or below 1,200’ AGL &amp; below 10,000’ MSI</td>
<td>DAY: 1 s.m.</td>
<td>1,000’ Above 500’ Below</td>
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<td>2,000’ Horizontal</td>
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<tr>
<td>Above 1,200’ AGL &amp; above 10,000’ MSL</td>
<td>NIGHT: 3 s.m.</td>
<td>1,000’ Above 500’ Below</td>
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<td>2,000’ Horizontal</td>
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FAR §91.157 Special VFR

- There are differences between a fixed wing aircraft and a rotorcraft
  - Rotorcraft have no minimum requirements other than clear of clouds and compliance with ATC instructions
FAR §91.161 SFRAs (ex. DC airspace)

• There are differences between a fixed wing aircraft and a rotorcraft
  – Requires pilot to have specific knowledge of location as to avoid restricted areas
FAR §91.205 Required VFR Equipment

- There are NO differences between a fixed wing aircraft and a rotorcraft
  - Airspeed Indicator
  - Altimeter
  - Magnetic Direction Indicator
  - Tachometer (for each engine)
  - Oil Pressure Gauge (for each engine)
  - Temperature Gauge (for each liquid cooled engine)
  - Oil Temperature Gauge (for each air cooled engine)
  - Manifold Pressure Gauge (for each altitude engine)
  - Fuel Gauge (indicating quantity of fuel in each tank)
  - Night flights require position lights and anti-collision light system
FAR §91.207 Emergency Locators

• There are differences between a fixed wing aircraft and a rotorcraft
  – Not required in a rotorcraft by regulation at the present time

FAR §91.215 Transponder

• There are NO differences between a fixed wing aircraft and a rotorcraft
  – However, rotorcraft typically operate in areas where they would not be required to have one
The traditional means of navigation are evolving

- More dependency on GPS
- Less dependency on ground based nav-aids
- More dependency on electronic charting tools and moving maps
- Less dependency on paper charts

This paradigm shift enhances the pilot’s ability to maintain situational awareness outside of the aircraft (heads-up!)
Navigation & Equipment Use

Ground based nav-aids are being decommissioned
- Elimination of LORAN
- Phase out of NDBs
- No new VORs (removal of some VOR-T stations)
- Typical low altitude flights don’t receive ground based signals

FAR §91.225 Automated Dependent Surveillance - Broadcast

Requirement to install ADS-B hardware by year 2020
Navigation & Equipment Use
How to enhance rotorcraft safety

• Introduce pilots to evolving technologies earlier in training
• Increase use of electronic navigation equipment as improvements improve the operation of the aircraft and the pilot
• Pilots familiar with this equipment will aid in their transition into IFR based flight and more complex aircraft operating in more congested areas