



|                             |                                                         |                                                          |
|-----------------------------|---------------------------------------------------------|----------------------------------------------------------|
|                             | Gas Generator<br><u>Speed</u><br>49,638 rpm<br>(103.7%) | Measured Gas<br><u>Temperature</u><br>782°C<br>(1,440°F) |
| Maximum Continuous          | Mast Torque<br><u>Meter</u><br>(100%)<br>13,205 ft. lb  | Main Rotor<br><u>Mast Speed</u><br>348 rpm<br>(100%)     |
|                             | Gas Generator<br><u>Speed</u><br>49,159 rpm<br>(102.7%) | Measured Gas<br><u>Temperature</u><br>763°C<br>(1,405°F) |
| One Engine Inoperative:     |                                                         |                                                          |
| 2½ Min. Power               | Engine Torque<br><u>Meter</u><br>(100%)<br>383 ft. lb   | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%)      |
|                             | Gas Generator<br><u>Speed</u><br>50,548 rpm<br>(105.6%) | Measured Gas<br><u>Temperature</u><br>832°C<br>(1,530°F) |
| 30 Min. Power               | Engine Torque<br><u>Meter</u><br>(96%)<br>369 ft. lb    | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%)      |
|                             | Gas Generator<br><u>Speed</u><br>50,169 rpm<br>(104.8%) | Measured Gas<br><u>Temperature</u><br>796°C<br>(1,464°F) |
| Maximum Continuous<br>Power | Engine Torque<br><u>Meter</u><br>(87%)<br>335 ft. lb    | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%)      |
|                             | Gas Generator<br><u>Speed</u><br>49,159 rpm<br>(102.7%) | Measured Gas<br><u>Temperature</u><br>763°C<br>(1,405°F) |

Takeoff and maximum continuous mast torque limits correspond to 875 shp at 348 rpm (9,545 rpm Power Turbine Speed) at the mast but not more than 539 shp from each engine.

Values of torque, gas generator speed and measured gas temperature correspond to eligible engine operating limits and exceed the standard day, sea level rating.

|                                 |                                                                                                                                                              |                                                                                  |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Rotor Speed Limits              | <u>Power Off</u>                                                                                                                                             | <u>Power On</u>                                                                  |
|                                 | Maximum 364 rpm.<br>(Tach reading 104%)                                                                                                                      | Maximum 348 rpm<br>(Tach reading 100%)                                           |
|                                 | Minimum 313 rpm.<br>(Tach reading 90%)<br>For Weights more than<br>2722 kg. (6000 lb.)                                                                       | Minimum 338 rpm<br>(Tach reading 97%)                                            |
|                                 | Maximum 296 rpm.<br>(Tach reading 85%)<br>For Weights less than<br>2722 kg. (6000 lb.)                                                                       |                                                                                  |
| Transmission Torque Limits      | Mast torque = 17897 Nm (13,205 ft. lbs.) at 348 rpm.                                                                                                         |                                                                                  |
| Airspeed Limits<br>(IAS)        | V <sub>NE</sub> (Never exceed) 150 knots Sea level to 3,000 feet density altitude (Hd). Decrease V <sub>NE</sub> 3 knots per 1,000 feet Hd above 3,000 feet. |                                                                                  |
|                                 |                                                                                                                                                              | <u>Knots</u>                                                                     |
|                                 | V <sub>NE</sub> (power off)                                                                                                                                  | 80                                                                               |
|                                 | V <sub>LO</sub> (Landing Gear Operation)                                                                                                                     | 120                                                                              |
|                                 | Maximum sideward/rearward flight                                                                                                                             | 30                                                                               |
|                                 | Maximum Taxi Ground Speed                                                                                                                                    | 35                                                                               |
| Center of Gravity (C.G.) Range  | See FAA-approved Rotorcraft Flight Manual                                                                                                                    |                                                                                  |
| Empty Weight C.G. Range         | See Maintenance Manual                                                                                                                                       |                                                                                  |
| Datum                           | Station 0 (datum is located 241.3 cm (95 inches) forward of the fuselage nose or 230.38 cm (90.7 inches) forward of the radome nose).                        |                                                                                  |
| Leveling Means                  | Plumb line from right inside top of baggage compartment.                                                                                                     |                                                                                  |
| Maximum Weights<br>(See NOTE 1) | <u>kg</u>                                                                                                                                                    | <u>lb</u>                                                                        |
|                                 | Internal 3561                                                                                                                                                | 7850                                                                             |
|                                 | External 3674                                                                                                                                                | 8100                                                                             |
| Minimum Crew                    | 1 pilot (right seat)<br>1 pilot                                                                                                                              | VFR operations<br>IFR operations when modified in accordance with BHT-222-FMS-17 |
| Number of Seats                 | 10 (includes pilot)                                                                                                                                          |                                                                                  |
| Maximum Baggage                 | 226.8 kg (500 lbs)                                                                                                                                           |                                                                                  |

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
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| Fuel Capacity                  | S/N 47006 to 47023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <u>Litres</u>                                                | <u>Imp. Gals</u> | <u>U.S. Gals</u> |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
|                                | Usable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 670.7                                                        | 147.6            | 177.2            |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
|                                | Unusable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 33.3                                                         | 7.3              | 8.8              |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
|                                | S/N 47006 to 47023 when modified per Technical Bulletin 222-80-1, and S/N 47024 to 47089                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
|                                | 709.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 156.2                                                        | 187.5            |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
|                                | 8.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.9                                                          | 2.3              |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| Oil Capacity                   | Usable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3.78                                                         | 0.83             | 1.0              |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
|                                | Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 14.1                                                         | 3.1              | 3.7              |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| Maximum Operating Altitude     | 20,000 feet pressure altitude<br>10,500 feet density altitude for takeoff, landing, and in-ground-effect maneuvers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| Rotor Blade & Control Movement | For rigging information, refer to the appropriate Model 222 Series Maintenance Manual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| Manufacturer's Serial Numbers  | S/N 47006 to 47089                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| Import Requirements            | See NOTE 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| Certification Basis            | <p>FAR part 29 dated February 1, 1965, (Transport Category A &amp; B) Amdt 29-1 through 29-9, Amdt 29-11. FAR 29.997 of Amdt 29-10 and FAR 29.927 (b) (2) of Amdt 29.17. Special conditions No. 29-87-SW-7. Ditching FAR 29.801 of Amdt 29-12. External cargo FAR 29.25(c) and 29.865 of Amdt 29-12. FAR 29.1557.c and FAR 29.1555.c of Amdt 29-12. Height velocity requirements of Amdt. 29-12, Section 29.1, 29.79 29.1517 and 29.1587. IFR requirements dated August 12, 1976. FAA issued Exemption No. 2789. FAR 29.811 (h)(l). Exemption No. 4395 FAR 29.855 (a) and portions of 29.855 (d).</p> <p>Equivalent Safety Findings:</p> <table border="0"> <tr> <td style="width: 5%;">1.</td> <td style="width: 75%;">Power Turbine Common Control</td> <td style="width: 20%;">FAR 29.903 (b)</td> </tr> <tr> <td>2.</td> <td>Fuel Pressure Switch</td> <td>FAR 29.1305(b)(2)</td> </tr> <tr> <td>3.</td> <td>Fireproof Oil System</td> <td>FAR 29.1189</td> </tr> <tr> <td>4.</td> <td>Crash Resistant Fuel Cell</td> <td>FAR 29.963(b) &amp; 29.965</td> </tr> <tr> <td>5.</td> <td>Crew Door Switch</td> <td>FAR 29.783(e)</td> </tr> <tr> <td>6.</td> <td>Unsafe Rotor and Engine Out Warning Indicator</td> <td>FAR 29.33(b),<br/>29.1357(e) &amp; Special Flight Condition No. 2</td> </tr> <tr> <td>7.</td> <td>Aft Window Exit Size</td> <td>FAR 29.807 (a)(4)</td> </tr> <tr> <td>8.</td> <td>Main Door Window Exit Size for Ditching</td> <td>FAR 29.807(d)(1)</td> </tr> <tr> <td>9.</td> <td>Hoist Manual Release</td> <td>FAR 29.865(b)(2)</td> </tr> <tr> <td>10.</td> <td>Baggage Compartment Liner</td> <td>FAR 29.855(a)</td> </tr> <tr> <td>11.</td> <td>Main Gear Drop Test for 3561 kg (7850 lbs) GW</td> <td>FAR 29.725, 29.727</td> </tr> </table> |                                                              |                  | 1.               | Power Turbine Common Control | FAR 29.903 (b) | 2. | Fuel Pressure Switch | FAR 29.1305(b)(2) | 3. | Fireproof Oil System | FAR 29.1189 | 4. | Crash Resistant Fuel Cell | FAR 29.963(b) & 29.965 | 5. | Crew Door Switch | FAR 29.783(e) | 6. | Unsafe Rotor and Engine Out Warning Indicator | FAR 29.33(b),<br>29.1357(e) & Special Flight Condition No. 2 | 7. | Aft Window Exit Size | FAR 29.807 (a)(4) | 8. | Main Door Window Exit Size for Ditching | FAR 29.807(d)(1) | 9. | Hoist Manual Release | FAR 29.865(b)(2) | 10. | Baggage Compartment Liner | FAR 29.855(a) | 11. | Main Gear Drop Test for 3561 kg (7850 lbs) GW | FAR 29.725, 29.727 |
| 1.                             | Power Turbine Common Control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FAR 29.903 (b)                                               |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 2.                             | Fuel Pressure Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | FAR 29.1305(b)(2)                                            |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 3.                             | Fireproof Oil System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | FAR 29.1189                                                  |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 4.                             | Crash Resistant Fuel Cell                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | FAR 29.963(b) & 29.965                                       |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 5.                             | Crew Door Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | FAR 29.783(e)                                                |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 6.                             | Unsafe Rotor and Engine Out Warning Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | FAR 29.33(b),<br>29.1357(e) & Special Flight Condition No. 2 |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 7.                             | Aft Window Exit Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | FAR 29.807 (a)(4)                                            |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 8.                             | Main Door Window Exit Size for Ditching                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FAR 29.807(d)(1)                                             |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 9.                             | Hoist Manual Release                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | FAR 29.865(b)(2)                                             |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 10.                            | Baggage Compartment Liner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | FAR 29.855(a)                                                |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| 11.                            | Main Gear Drop Test for 3561 kg (7850 lbs) GW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | FAR 29.725, 29.727                                           |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |
| Production Basis               | Model 222 helicopters, Serial Numbers 47006 to 47089 were manufactured by Bell Helicopter Textron, Fort Worth, Texas under FAA Type Certificate H9SW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                              |                  |                  |                              |                |    |                      |                   |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                              |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                                               |                    |

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the helicopter for certification. In addition, the following items of equipment are required.

- (1) Batteries: Marathon 206-075-742-105  
EPI 18137 (222-375-049-101), or GE 43B010RB03,  
SAFT 1756.
- (2) Passenger shoulder harness.
- (3) Canadian Kit, Modification 222-899-021 for Canadian Registered helicopters only.

Service Information FAA-approved Rotorcraft Flight Manual BHT-222-FM-1 S/N 47006 to 47080 and BHT-222-FM-2 S/N 47081 to 47089 February 28, 1992, or later FAA-approved revision.

**MODEL 222B AND MODEL 222U (TRANSPORT CATEGORY A AND B), APPROVED 19 SEPTEMBER 1983**

(DATA IS PERTINENT TO BOTH MODELS EXCEPT AS INDICATED)

Engines 2 Avco Lycoming LTS 101 750C-1

| Fuel       | SPECIFICATION |               |               |
|------------|---------------|---------------|---------------|
|            | <u>TYPE</u>   | <u>CANADA</u> | <u>USA</u>    |
| Kerosene   | JET A         | CGSB 3.23     | ASTM D-1655   |
|            | JET A-1       | CGSB 3.23     | ASTM D-1655   |
|            | JP-8          | 3-GP-23       | MIL-DTL-83133 |
| Wide Cut   | JET B         | CGSB 3.22     | ASTM D-6615   |
|            | JP-4          | CGSB 3.22     | MIL-DTL-5624  |
| High Flash | JP-5          | 3-GP-24       | MIL-DTL-5624  |

See FAA-approved Rotorcraft Flight Manual for temperature limitations.

Fuel Additives: See NOTE 4.

Engine Limits (See NOTE 5) All Engines Operating:

|                     |                                                         |                                                          |
|---------------------|---------------------------------------------------------|----------------------------------------------------------|
| Takeoff<br>(5 Min.) | Mast Torque<br><u>Meter</u><br>(100%)<br>13,960 ft. lb  | Main Rotor<br><u>Mast Speed</u><br>348 rpm.<br>(100%)    |
|                     | Gas Generator<br><u>Speed</u><br>49,830 rpm<br>(104.1%) | Measured Gas<br><u>Temperature</u><br>786°C<br>(1,447°F) |

|                                                 |                                                         |                                                          |
|-------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|
| Maximum Continuous                              | Mast Torque<br><u>Meter</u><br>(94.6%)<br>13,960 ft. lb | Main Rotor<br><u>Mast Speed</u><br>348 rpm<br>(100%)     |
|                                                 | Gas Generator<br><u>Speed</u><br>49,255 rpm<br>(102.9%) | Measured Gas<br><u>Temperature</u><br>765°C<br>(1,410°F) |
| One Engine Inoperative:                         |                                                         |                                                          |
| 2½ Min. Power                                   | Engine Torque<br><u>Meter</u><br>(100%)<br>404 ft. lb   | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%)      |
|                                                 | Gas Generator<br><u>Speed</u><br>50,787 rpm<br>(106.1%) | Measured Gas<br><u>Temperature</u><br>822°C<br>(1,512°F) |
| 30 Min. Power                                   | Engine Torque<br><u>Meter</u><br>(97.3%)<br>393 ft. lb  | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%)      |
|                                                 | Gas Generator<br><u>Speed</u><br>50,165 rpm<br>(104.8%) | Measured Gas<br><u>Temperature</u><br>800°C<br>(1,472°F) |
| Maximum Continuous Power                        | Engine Torque<br><u>Meter</u><br>(86.4%)<br>349 ft. lb  | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%)      |
|                                                 | Gas Generator<br><u>Speed</u><br>49,255 rpm<br>(102.9%) | Measured Gas<br><u>Temperature</u><br>765°C<br>(1,410°F) |
| Measured Gas Temperature (MGT) Transient Limits |                                                         |                                                          |
|                                                 | Start:                                                  | 900°C                                                    |
|                                                 | 12 second Transient:                                    | 832°C                                                    |
| Rotor Speed Limits                              | <u>Power Off</u>                                        | <u>RPM</u> %                                             |
|                                                 | Min. Transient                                          | 285      82                                              |
|                                                 | Min. (Less than 2722 kg (6000 lb))                      | 296      85                                              |
|                                                 | Min. (2722 kg (6000 lb) or over)                        | 313      90                                              |
|                                                 | Maximum                                                 | 362      104                                             |
|                                                 | Max. Transient                                          | 372      107                                             |
|                                                 | <u>Power On</u>                                         |                                                          |
|                                                 | Min. Transient                                          | 313      90                                              |
|                                                 | Min. Continuous                                         | 338      97                                              |

|                                  |                                                                                                                                                                                                                              |               |                 |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|
|                                  | Max. Continuous                                                                                                                                                                                                              | 348           | 100             |
|                                  | Max. Transient                                                                                                                                                                                                               | 357           | 102.5           |
|                                  | Max. Overspeed (Mast Torque 50% or lower-5 minute limit)                                                                                                                                                                     | 358           | 103             |
| Transmission Torque Limits       | 13,960 ft.-lbs. at 348 rpm                                                                                                                                                                                                   |               |                 |
| Airspeed Limits (IAS)            | The following limits pertain to models 222B and 222U:<br>V <sub>NE</sub> (Never exceed) 150 knots, sea level to 3000 ft. Hd. Decrease V <sub>NE</sub> for ambient conditions in accordance with airspeed limitation placard. |               |                 |
|                                  |                                                                                                                                                                                                                              |               | <u>Knots</u>    |
|                                  | V <sub>NE</sub> power off                                                                                                                                                                                                    |               | 80              |
|                                  | V <sub>NE</sub> single engine                                                                                                                                                                                                |               | 100             |
|                                  | Maximum sideward and rearward flight                                                                                                                                                                                         |               | 30              |
|                                  | The following limits pertain to model 222B only:                                                                                                                                                                             |               |                 |
|                                  | V <sub>LE</sub> (Landing gear extended)                                                                                                                                                                                      |               | 140             |
|                                  | V <sub>LO</sub> (Landing gear operation)                                                                                                                                                                                     |               | 120             |
|                                  | Maximum Taxi Ground Speed                                                                                                                                                                                                    |               | 35              |
| Center of Gravity (C.G.) Range   | See FAA-approved Rotorcraft Flight Manual                                                                                                                                                                                    |               |                 |
| Empty Weight C.G. Range          | See Maintenance Manual.                                                                                                                                                                                                      |               |                 |
| Datum                            | Station 0 (datum is located 241.3 cm (95 inches) forward of the fuselage nose or 230.38 cm (90.7 inches) forward of the radome nose).                                                                                        |               |                 |
| Leveling Means                   | Plumb line from right inside top of baggage compartment.                                                                                                                                                                     |               |                 |
| Maximum Weights (See NOTE 1)     |                                                                                                                                                                                                                              | <u>kg</u>     | <u>lbs</u>      |
|                                  | Internal                                                                                                                                                                                                                     | 3742          | 8250            |
|                                  | External                                                                                                                                                                                                                     | 3810          | 8400            |
| Minimum Crew                     | 1 pilot (right seat)                                                                                                                                                                                                         |               |                 |
| Number of Seats                  | 10 (includes pilot)                                                                                                                                                                                                          |               |                 |
| Maximum Baggage                  | 226.8 kg (500 lbs)                                                                                                                                                                                                           |               |                 |
| Fuel Capacity                    | Model 222B                                                                                                                                                                                                                   | <u>Litres</u> | <u>U.S. gal</u> |
|                                  | Usable                                                                                                                                                                                                                       | 709.8         | 187.5           |
|                                  | Model 222U                                                                                                                                                                                                                   |               |                 |
|                                  | Usable                                                                                                                                                                                                                       | 935.4         | 247.1           |
| Engine Oil Capacity (per engine) | Usable                                                                                                                                                                                                                       | <u>Litres</u> | <u>U.S. gal</u> |
|                                  |                                                                                                                                                                                                                              | 14.1          | 3.7             |
| Maximum Operating Altitude       | 20,000 feet pressure altitude for VFR operations<br>15,000 feet pressure altitude for IFR operations<br>14,000 feet density altitude for takeoff, landing, and in-ground-effect maneuvers                                    |               |                 |

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                           |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------|----|----------------------|-----------------------------------------------------------------------------------------------------------|----|----------------------|-------------|----|---------------------------|------------------------|----|------------------|---------------|----|-----------------------------------------------|-----------------------------------------------------------------------|----|----------------------|-------------------|----|-----------------------------------------|------------------|----|----------------------|------------------|-----|---------------------------|---------------|-----|------------------------|--------------------------------------------------------|-----|---------------------|--------------------------|-----|------------------------|------------------------------------------|
| Rotor Blade & Control Movement | For rigging information, refer to the appropriate Model 222 Series Maintenance Manual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                           |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| Manufacturer's Serial Numbers  | Model 222B Serial Number 47131 to 47156<br>Model 222U Serial Number 47501 to 47574                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                           |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| Import Requirements            | See NOTE 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                           |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| Certification Basis            | <p><u>Model 222B &amp; Model 222U</u>: FAR Part 29 dated February 1, 1965, (Transport Category A &amp; B) Amdt 29-1 through 29-9. Amdt 29-11. FAR 29.997 of Amdt 29-10 and FAR 29.927(b)(2) of Amdt 29-17. Ditching FAR 29.801 of Amdt 29-12. External cargo FAR 29.25(c) and 29.865 of Amdt 29-12. FAR 29.1557(c) and FAR 29.1555(c) of Amdt 29-12. Height velocity requirements of Amdt. 29-21, Section 29.1, 29.79, 29.1517 and 29.1587. IFR requirements dated December 15, 1978. FAA issued Exemption No. 2789. FAR 29.811(h)(1) and Exemption No. 4395. FAR 29.855(a) and portions of 29.855(d).</p> <p>Equivalent Safety Findings:</p> <table border="0"> <tr> <td style="vertical-align: top;">1.</td> <td>Power Turbine Common Control</td> <td>FAR 29.903 (b)</td> </tr> <tr> <td style="vertical-align: top;">2.</td> <td>Fuel Pressure Switch</td> <td>FAR 29.1305(b)(2)</td> </tr> <tr> <td style="vertical-align: top;">3.</td> <td>Fireproof Oil System</td> <td>FAR 29.1189</td> </tr> <tr> <td style="vertical-align: top;">4.</td> <td>Crash Resistant Fuel Cell</td> <td>FAR 29.963(b) &amp; 29.965</td> </tr> <tr> <td style="vertical-align: top;">5.</td> <td>Crew Door Switch</td> <td>FAR 29.783(e)</td> </tr> <tr> <td style="vertical-align: top;">6.</td> <td>Unsafe Rotor and Engine Out Warning Indicator</td> <td>FAR 29.33(b), 29.1309(d), 29.1357(e) &amp; Special Flight Condition No. 2</td> </tr> <tr> <td style="vertical-align: top;">7.</td> <td>Aft Window Exit Size</td> <td>FAR 29.807 (a)(4)</td> </tr> <tr> <td style="vertical-align: top;">8.</td> <td>Main Door Window Exit Size for Ditching</td> <td>FAR 29.807(d)(1)</td> </tr> <tr> <td style="vertical-align: top;">9.</td> <td>Hoist Manual Release</td> <td>FAR 29.865(b)(2)</td> </tr> <tr> <td style="vertical-align: top;">10.</td> <td>Baggage Compartment Liner</td> <td>FAR 29.855(a)</td> </tr> <tr> <td style="vertical-align: top;">11.</td> <td>Landing Gear Drop Test</td> <td>FAR 29.307(b)(5), 29.723, 29.725 &amp; 29.727 (Model 222U)</td> </tr> <tr> <td style="vertical-align: top;">12.</td> <td>Limitations Placard</td> <td>FAR 29.1559 (Model 222U)</td> </tr> <tr> <td style="vertical-align: top;">13.</td> <td>IFR Dihedral Stability</td> <td>IFR Criteria Paragraph 4(a) (Model 222U)</td> </tr> </table> | 1.                                                                                                        | Power Turbine Common Control | FAR 29.903 (b)                                               | 2. | Fuel Pressure Switch | FAR 29.1305(b)(2)                                                                                         | 3. | Fireproof Oil System | FAR 29.1189 | 4. | Crash Resistant Fuel Cell | FAR 29.963(b) & 29.965 | 5. | Crew Door Switch | FAR 29.783(e) | 6. | Unsafe Rotor and Engine Out Warning Indicator | FAR 29.33(b), 29.1309(d), 29.1357(e) & Special Flight Condition No. 2 | 7. | Aft Window Exit Size | FAR 29.807 (a)(4) | 8. | Main Door Window Exit Size for Ditching | FAR 29.807(d)(1) | 9. | Hoist Manual Release | FAR 29.865(b)(2) | 10. | Baggage Compartment Liner | FAR 29.855(a) | 11. | Landing Gear Drop Test | FAR 29.307(b)(5), 29.723, 29.725 & 29.727 (Model 222U) | 12. | Limitations Placard | FAR 29.1559 (Model 222U) | 13. | IFR Dihedral Stability | IFR Criteria Paragraph 4(a) (Model 222U) |
| 1.                             | Power Turbine Common Control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | FAR 29.903 (b)                                                                                            |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 2.                             | Fuel Pressure Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FAR 29.1305(b)(2)                                                                                         |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 3.                             | Fireproof Oil System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FAR 29.1189                                                                                               |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 4.                             | Crash Resistant Fuel Cell                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FAR 29.963(b) & 29.965                                                                                    |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 5.                             | Crew Door Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FAR 29.783(e)                                                                                             |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 6.                             | Unsafe Rotor and Engine Out Warning Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | FAR 29.33(b), 29.1309(d), 29.1357(e) & Special Flight Condition No. 2                                     |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 7.                             | Aft Window Exit Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FAR 29.807 (a)(4)                                                                                         |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 8.                             | Main Door Window Exit Size for Ditching                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | FAR 29.807(d)(1)                                                                                          |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 9.                             | Hoist Manual Release                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FAR 29.865(b)(2)                                                                                          |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 10.                            | Baggage Compartment Liner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FAR 29.855(a)                                                                                             |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 11.                            | Landing Gear Drop Test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | FAR 29.307(b)(5), 29.723, 29.725 & 29.727 (Model 222U)                                                    |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 12.                            | Limitations Placard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | FAR 29.1559 (Model 222U)                                                                                  |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 13.                            | IFR Dihedral Stability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IFR Criteria Paragraph 4(a) (Model 222U)                                                                  |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| Production Basis               | Model 222B helicopters, serial numbers 47131 to 47156, and Model 222U helicopters, serial numbers 47501 to 47574 were manufactured by Bell Helicopter Textron, Fort Worth, Texas under FAA Type Certificate H9SW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                           |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| Equipment                      | <p>The basic required equipment as prescribed in the applicable Airworthiness requirements (see Certification Basis) must be installed in the aircraft. In addition the following equipment is required:</p> <table border="0"> <tr> <td style="vertical-align: top;">1)</td> <td>Batteries:</td> <td>Model 222B: GE 43B010RB03.<br/>Model 222U: Marathon 30703-001</td> </tr> <tr> <td style="vertical-align: top;">2)</td> <td>Airspeed indicator:</td> <td>Model 222B: S/N 47131 and Sub: P/N 222-375-027-107.<br/>Model 222U: S/N 47501 and Sub: P/N 222-375-027-107</td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1)                                                                                                        | Batteries:                   | Model 222B: GE 43B010RB03.<br>Model 222U: Marathon 30703-001 | 2) | Airspeed indicator:  | Model 222B: S/N 47131 and Sub: P/N 222-375-027-107.<br>Model 222U: S/N 47501 and Sub: P/N 222-375-027-107 |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 1)                             | Batteries:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Model 222B: GE 43B010RB03.<br>Model 222U: Marathon 30703-001                                              |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| 2)                             | Airspeed indicator:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Model 222B: S/N 47131 and Sub: P/N 222-375-027-107.<br>Model 222U: S/N 47501 and Sub: P/N 222-375-027-107 |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |
| Service Information            | FAA-approved Rotorcraft Flight Manual BHT-222B-FM-1 and BHT-222U-FM-1, 28 February 1992, or later FAA-approved revision.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                           |                              |                                                              |    |                      |                                                                                                           |    |                      |             |    |                           |                        |    |                  |               |    |                                               |                                                                       |    |                      |                   |    |                                         |                  |    |                      |                  |     |                           |               |     |                        |                                                        |     |                     |                          |     |                        |                                          |

**MODEL 230 (TRANSPORT CATEGORY A AND B), APPROVED MARCH 12, 1992**

Engines 2 Allison 250C30G/2

Fuel

| <u>TYPE</u> | <u>SPECIFICATION</u> |               |
|-------------|----------------------|---------------|
|             | <u>CANADA</u>        | <u>USA</u>    |
| Kerosene    |                      |               |
| JET A       | CGSB 3.23            | ASTM D-1655   |
| JET A-1     | CGSB 3.23            | ASTM D-1655   |
| JP-8        | 3-GP-23              | MIL-DTL-83133 |
| Wide Cut    |                      |               |
| JET B       | CGSB 3.22            | ASTM D-6615   |
| JP-4        | CGSB 3.22            | MIL-DTL-5624  |
| High Flash  |                      |               |
| JP-5        | 3-GP-24              | MIL-DTL-5624  |

See FAA-approved Rotorcraft Flight Manual for temperature limitations.

Fuel Additives: See NOTE 7.

Engine Limits  
(See NOTE 5)

All Engines Operating:

|                      |                                                  |                                                      |
|----------------------|--------------------------------------------------|------------------------------------------------------|
| Take off<br>(5 Min.) | Mast Torque<br><u>Meter</u><br>(100%)<br>925 SHP | Main Rotor<br><u>Mast Speed</u><br>348 rpm<br>(100%) |
|----------------------|--------------------------------------------------|------------------------------------------------------|

|  |                                                       |                                                            |
|--|-------------------------------------------------------|------------------------------------------------------------|
|  | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>767.8°C<br>(1,414°F) |
|--|-------------------------------------------------------|------------------------------------------------------------|

|                    |                                                   |                                                      |
|--------------------|---------------------------------------------------|------------------------------------------------------|
| Maximum Continuous | Mast Torque<br><u>Meter</u><br>(94.6%)<br>875 SHP | Main Rotor<br><u>Mast Speed</u><br>348 rpm<br>(100%) |
|--------------------|---------------------------------------------------|------------------------------------------------------|

|  |                                                       |                                                            |
|--|-------------------------------------------------------|------------------------------------------------------------|
|  | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>715.6°C<br>(1,320°F) |
|--|-------------------------------------------------------|------------------------------------------------------------|

One Engine Inoperative:

|               |                                                    |                                                     |
|---------------|----------------------------------------------------|-----------------------------------------------------|
| 2½ Min. Power | Engine Torque<br><u>Meter</u><br>(100%)<br>734 SHP | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%) |
|---------------|----------------------------------------------------|-----------------------------------------------------|

|  |                                                       |                                                            |
|--|-------------------------------------------------------|------------------------------------------------------------|
|  | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>825.6°C<br>(1,518°F) |
|--|-------------------------------------------------------|------------------------------------------------------------|

|                                |                                                                                                                                                                     |                                                       |                                                            |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|
|                                | 30 Min. Power                                                                                                                                                       | Engine Torque<br><u>Meter</u><br>(97.3%)<br>714 SHP   | Output Shaft<br><u>Speed</u><br>9,545 rpm<br>(100%)        |
|                                |                                                                                                                                                                     | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>797.8°C<br>(1,468°F) |
|                                | Maximum Continuous                                                                                                                                                  | Engine Torque<br><u>Power</u><br>(86.4%)<br>676 SHP   | Output Shaft<br><u>Meter Speed</u><br>9,545 rpm<br>(100%)  |
|                                |                                                                                                                                                                     | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>767.8°C<br>(1,414°F) |
| Rotor Speed Limits             | <u>Power Off</u>                                                                                                                                                    | <u>RPM</u>                                            | <u>%</u>                                                   |
|                                | Min. Transient                                                                                                                                                      | 285                                                   | 82                                                         |
|                                | Min. (Less than 2722 kg (6000 lb))                                                                                                                                  | 296                                                   | 85                                                         |
|                                | Min. (2722 kg (6000 lb) or over)                                                                                                                                    | 313                                                   | 90                                                         |
|                                | Maximum                                                                                                                                                             | 362                                                   | 104                                                        |
|                                | Max. Transient                                                                                                                                                      | 372                                                   | 107                                                        |
|                                | <u>Power On</u>                                                                                                                                                     |                                                       |                                                            |
|                                | Min. Transient                                                                                                                                                      | 313                                                   | 90                                                         |
|                                | Min. Continuous                                                                                                                                                     | 338                                                   | 97                                                         |
|                                | Max. Continuous                                                                                                                                                     | 348                                                   | 101                                                        |
| Transmission Torque Limits     | 925 SHP at 348 rpm                                                                                                                                                  |                                                       |                                                            |
| Airspeed Limits (IAS)          | V <sub>NE</sub> (Never exceed) 150 knots, sea level to 3000 ft. Hd. Decrease V <sub>NE</sub> for ambient conditions in accordance with airspeed limitation placard. |                                                       |                                                            |
|                                |                                                                                                                                                                     |                                                       | <u>Knots</u>                                               |
|                                | V <sub>NE</sub> power off                                                                                                                                           |                                                       | 80                                                         |
|                                | V <sub>NE</sub> single engine                                                                                                                                       |                                                       | 100                                                        |
|                                | Maximum sideward and rearward flight                                                                                                                                |                                                       | 30                                                         |
| Center of Gravity (C.G.) Range | See FAA-approved Rotorcraft Flight Manual                                                                                                                           |                                                       |                                                            |
| Empty Weight C.G. Range        | See Maintenance Manual.                                                                                                                                             |                                                       |                                                            |
| Datum                          | Station 0 (datum is located 241.3 cm (95 inches) forward of the fuselage nose or 230.38 cm (90.7 inches) forward of the radome nose).                               |                                                       |                                                            |
| Leveling Means                 | Plumb line from right inside top of baggage compartment.                                                                                                            |                                                       |                                                            |
| Maximum Weight (See NOTE 1)    |                                                                                                                                                                     | <u>kg</u>                                             | <u>lb</u>                                                  |
|                                | Internal                                                                                                                                                            | 3810                                                  | 8400                                                       |
|                                | External                                                                                                                                                            | 3810                                                  | 8400                                                       |

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                            |                  |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------|
| Minimum Crew                          | 1 pilot (right seat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                            |                  |
| Number of Seats                       | 10 (includes pilot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                            |                  |
| Maximum Baggage                       | 226.8 kg (500 lbs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                            |                  |
| Fuel Capacity                         | Wheel LG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <u>Litres</u>                                              | <u>U.S. Gals</u> |
|                                       | usable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 709.8                                                      | 187.5            |
|                                       | Skid LG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                            |                  |
|                                       | usable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 935.4                                                      | 247.1            |
| Engine Oil Tank Capacity (Per Engine) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>Litres</u>                                              | <u>U.S. gal</u>  |
|                                       | Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.1                                                        | 1.61             |
|                                       | Usable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.9                                                        | 0.50             |
| Maximum Operating Altitude            | 20,000 feet pressure altitude for VFR operations<br>15,000 feet pressure altitude for IFR operations<br>14,000 feet density altitude for takeoff, landing, and in-ground-effect maneuvers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                            |                  |
| Rotor Blade & Control Movement        | For rigging information, refer to the Model 230 Maintenance Manual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                            |                  |
| Serial Numbers Eligible               | Serial number 23001 and subsequent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                            |                  |
| Import Requirements                   | See NOTE 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                            |                  |
| Certification Basis                   | FAR Part 29 dated February 1, 1965, (Transport Category A & B) amendment 29-1 through 29-9 plus the following:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                            |                  |
|                                       | Amendment 29-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 29.997                                                     |                  |
|                                       | Amendment 29-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 29.1401                                                    |                  |
|                                       | Amendment 29-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 29.25 (c), 29.801, 29.865,<br>29.1555 (c) and 29.1557 (c). |                  |
|                                       | Amendment 29-17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 29.927 (b) (2)                                             |                  |
|                                       | IFR requirements dated December 15, 1978                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                            |                  |
|                                       | FAA exemption no. 2789, FAR 29.811 (h) (l) and FAA exemption no. 4395, FAR 29.855 (a) and portions of 29.855 (d). FAA Exemptions 2789 and 4395 pertained to the model 222 series helicopters; however, these exemptions have been found to be applicable to the model 230.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                            |                  |
|                                       | The following selected additional sections of FAR 29 up to and including amendment 29-26:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                            |                  |
|                                       | Amendment 29-26:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                            |                  |
|                                       | 29.1, 29.21, 29.25, 29.27, 29.29, 29.31, 29.33, 29.45, 29.51, 29.53, 29.59, 29.63, 29.65, 29.67, 29.71, 29.73, 29.75, 29.77, 29.79, 29.141, 29.143, 29.151, 29.161, 29.171, 29.173, 29.175, 29.231, 29.235, 29.251, 29.301, 29.303, 29.305, 29.309, 29.321, 29.337, 29.339, 29.341, 29.351, 29.361, except (a) (4), 29.411, 29.471, 29.473, 29.475, 29.477, 29.479, 29.481, 29.483, 29.485, 29.493, 29.501, 29.547, 29.549, 29.561, 29.563, 29.571, 29.601, 29.603, 29.607, 29.609, 29.611, 29.613, 29.619, 29.621, 29.623, 29.625, 29.629, 29.683, 29.723, 29.725, 29.727, 29.731, 29.735, 29.771, 29.773, 29.775, 29.785, 29.831, 29.861, 29.863, 29.873, 29.901, 29.903, 29.907, 29.908, 29.917, 29.931, 29.939, 29.951, 29.955, 29.961, 29.993, |                                                            |                  |

29.995, 29.997, 29.1011, 29.1013, 29.1015, 29.1017, 29.1019, 29.1021, 29.1023, 29.1027, 29.1041, 29.1043, 29.1045, 29.1047, 29.1049, 29.1091, 29.1093, 29.1103, 29.1105, 29.1121, 29.1123, 29.1141, 29.1143, 29.1145, 29.1163, 29.1165, 29.1181, 29.1183, 29.1185, 29.1187, 29.1189, 29.1191, 29.1193, 29.1194, 29.1195, 29.1197, 29.1199, 29.1201, 29.1203, 29.1301, 29.1303, 29.1305, 29.1307, 29.1321, 29.1322, 29.1327, 29.1331, 29.1333, 29.1337, 29.1359, 29.1363, 29.1381, 29.1401, 29.1431, 29.1461, 29.1501, 29.1503, 29.1505, 29.1517, 29.1519, 29.1521, 29.1527, 29.1541, 29.1543, 29.1549, 29.1551, 29.1555, 29.1557, 29.1559, 29.1581, 29.1583, 29.1585, 29.1587.

Appendix B.

The Noise Standards of FAR Part 36 and ICAO Annex 16, Chapter 8, Rev. 17 November 1988, published in 2nd Edition of 1988 Vol. 1.

Equivalent Safety Findings:

- |     |       |                                                                                                                |                                                |
|-----|-------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| 1.  | 92/01 | Engines: Category A<br>Engine Isolation                                                                        | FAR 29.903(b)                                  |
| 2.  | 92/02 | Powerplants Instruments                                                                                        | FAR 29.1305(b)(2)                              |
| 3.  | 92/03 | Fuel Tanks                                                                                                     | FAR 29.963(b) &<br>29.965                      |
| 4.  | 92/04 | Doors                                                                                                          | FAR 29.783(e)                                  |
| 5.  | 92/05 | Emergency Exit Marking                                                                                         | FAR 29.811(d)                                  |
| 6.  | 92/06 | Passenger Emergency Exits                                                                                      | FAR 29.807(d)(1)                               |
| 7.  | 92/07 | External Load Attaching Means                                                                                  | FAR 29.865(b)(2)                               |
| 8.  | 92/08 | Landing Gear, Limit Drop<br>Test and Reserve Energy<br>Absorption Drop Test                                    | FAR 29.725 & 29.727                            |
| 9.  | 92/09 | Proof of Structure,<br>Landing Gear Limit<br>Drop Test & Reserve<br>Energy Absorption<br>Drop Test             | FAR 29.307(b),<br>29.723,<br>29.725,<br>29.727 |
| 10. | 92/10 | Airworthiness Criteria<br>for Helicopter -<br>Instrument Flight -<br>Static Lateral -<br>Directional Stability | FAR 29<br>Appendix B, V                        |
| 11. | 92/11 | Cargo and Baggage<br>Compartments                                                                              | FAR 29.855(a)                                  |

Production Basis                      None. For import requirements see NOTE 6

Equipment                                The basic required equipment as prescribed in the applicable Airworthiness requirements (see Certification Basis) must be installed in the aircraft.

Service Information                    FAA-approved Rotorcraft Flight Manual BHT-230-FM-1, dated 12 March 1992 or later FAA-approved revision

**IV. MODEL 430 (TRANSPORT CATEGORY B), APPROVED FEBRUARY 23, 1996 AND (TRANSPORT CATEGORY A), APPROVED FEBRUARY 19, 1999**

Engines 2 Allison 250-C40B with Chandler Evans EMC-35A (FADEC) fuel control system  
(See NOTE 8)

Fuel

| <u>TYPE</u> | <u>SPECIFICATION</u> |               |
|-------------|----------------------|---------------|
|             | <u>CANADA</u>        | <u>USA</u>    |
| Kerosene    |                      |               |
| JET A       | CGSB 3.23            | ASTM D-1655   |
| JET A-1     | CGSB 3.23            | ASTM D-1655   |
| JP-8        | 3-GP-23              | MIL-DTL-83133 |
| Wide Cut    |                      |               |
| JET B       | CGSB 3.22            | ASTM D-6615   |
| JP-4        | CGSB 3.22            | MIL-DTL-5624  |
| High Flash  |                      |               |
| JP-5        | 3-GP-24              | MIL-DTL-5624  |

Emergency fuel: MIL-G-5572, all grade, maximum of six hours operation per O/H period

Fuel Additives: See NOTE 7.

Engine Limits

All Engines Operating:

|                      |                                                       |                                                            |
|----------------------|-------------------------------------------------------|------------------------------------------------------------|
| Take off<br>(5 Min.) | Mast Torque<br><u>Meter</u><br>(100%)<br>1045 SHP     | Main Rotor<br><u>Mast Speed</u><br>365 rpm<br>(105%)       |
|                      | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>779.4°C<br>(1,435°F) |
| Maximum Continuous   | Mast Torque<br><u>Meter</u><br>(94.6%)<br>875 SHP     | Main Rotor<br><u>Mast Speed</u><br>348 rpm<br>(100%)       |
|                      | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>726.7°C<br>(1,340°F) |

One Engine Inoperative:

|              |                                                      |                                                     |
|--------------|------------------------------------------------------|-----------------------------------------------------|
| 2 Min. Power | Engine Torque<br><u>Meter</u><br>(105.3%)<br>811 SHP | Output Shaft<br><u>Speed</u><br>9,598 rpm<br>(100%) |
|--------------|------------------------------------------------------|-----------------------------------------------------|

|                            |                                                                                                                                           |                                                       |                                                            |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|
|                            |                                                                                                                                           | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>827.2°C<br>(1,521°F) |
|                            | 30 Sec. Power                                                                                                                             | Engine Torque<br><u>Meter</u><br>(109.6%)<br>844 SHP  | Output Shaft<br><u>Speed</u><br>9,598 rpm<br>(100%)        |
|                            |                                                                                                                                           | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>871.1°C<br>(1,600°F) |
|                            | 30 Min. Power                                                                                                                             | Engine Torque<br><u>Meter</u><br>(92.8%)<br>715 SHP   | Output Shaft<br><u>Speed</u><br>9,598 rpm<br>(100%)        |
|                            |                                                                                                                                           | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>797.8°C<br>(1,468°F) |
|                            | Maximum Continuous                                                                                                                        | Engine Torque<br><u>Power</u><br>(92.8%)<br>715 SHP   | Output Shaft<br><u>Meter Speed</u><br>9,598 rpm<br>(100%)  |
|                            |                                                                                                                                           | Gas Generator<br><u>Speed</u><br>53,550 rpm<br>(105%) | Measured Gas<br><u>Temperature</u><br>779.4°C<br>(1,435°F) |
| Rotor Speed Limits         | <u>Power Off</u>                                                                                                                          | <u>%</u>                                              |                                                            |
|                            | Minimum Transient                                                                                                                         | 86                                                    |                                                            |
|                            | Transient Operation                                                                                                                       | 86 to 90                                              |                                                            |
|                            | Continuous Operation                                                                                                                      | 91 to 105                                             |                                                            |
|                            | Maximum Transient                                                                                                                         | 106                                                   |                                                            |
|                            | <u>Power On</u>                                                                                                                           |                                                       |                                                            |
|                            | Minimum Transient                                                                                                                         | 90                                                    |                                                            |
|                            | Maximum Continuous                                                                                                                        | 100                                                   |                                                            |
|                            | Maximum Ground Operation                                                                                                                  | 102                                                   |                                                            |
|                            | Conditional Operating Range                                                                                                               | 105                                                   |                                                            |
|                            | -(During Take off and Landing)                                                                                                            |                                                       |                                                            |
|                            | Maximum Transient                                                                                                                         | 106                                                   |                                                            |
| Transmission Torque Limits | 1045 SHP at 348 rpm                                                                                                                       |                                                       |                                                            |
| Airspeed Limits (IAS)      | V <sub>NE</sub> (Never exceed) 150 knots. Decrease V <sub>NE</sub> for ambient conditions in accordance with airspeed limitation placard. |                                                       |                                                            |
|                            |                                                                                                                                           | <u>Knots</u>                                          |                                                            |
|                            | V <sub>NE</sub> power off                                                                                                                 | 80                                                    |                                                            |
|                            | V <sub>NE</sub> single engine                                                                                                             | 100                                                   |                                                            |

|                                       |                                                                                                                                                                                                                    |                |                  |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|
|                                       | Maximum sideward and rearward flight                                                                                                                                                                               | 35             |                  |
| Center of Gravity (C.G.) Range        | See FAA-approved Rotorcraft Flight Manual                                                                                                                                                                          |                |                  |
| Empty Weight C.G. Range               | See Maintenance Manual                                                                                                                                                                                             |                |                  |
| Datum                                 | Station 0 (datum is located 241.3 cm (95 inches) forward of the fuselage nose or 230.38 cm (90.7 inches) forward of the radome nose).                                                                              |                |                  |
| Leveling Means                        | Plumb line from right inside top of baggage compartment.                                                                                                                                                           |                |                  |
| Maximum Weight (See NOTE 1)           |                                                                                                                                                                                                                    | <u>kg</u>      | <u>lb</u>        |
|                                       | Internal                                                                                                                                                                                                           | 4082           | 9000             |
|                                       | External                                                                                                                                                                                                           | 4218           | 9300             |
| Minimum Crew                          | 1 pilot (right seat)                                                                                                                                                                                               | VFR operations |                  |
|                                       | 2 pilots                                                                                                                                                                                                           | IFR operations |                  |
| Number of Seats                       | 10 (includes pilot(s))                                                                                                                                                                                             |                |                  |
| Maximum Baggage                       | 226.8 kg (500 lbs)                                                                                                                                                                                                 |                |                  |
| Fuel Capacity                         | <u>Wheel LG</u>                                                                                                                                                                                                    | <u>Litres</u>  | <u>U.S. Gals</u> |
|                                       | usable                                                                                                                                                                                                             | 709.8          | 187.5            |
|                                       | <u>Skid LG</u>                                                                                                                                                                                                     |                |                  |
|                                       | usable                                                                                                                                                                                                             | 935.4          | 247.1            |
| Engine Oil Tank Capacity (Per Engine) |                                                                                                                                                                                                                    | <u>Litres</u>  | <u>U.S. gal</u>  |
|                                       | Total                                                                                                                                                                                                              | 6.1            | 1.61             |
|                                       | Useable                                                                                                                                                                                                            | 1.9            | 0.50             |
| Maximum Operating Altitude            | 20,000 feet pressure altitude VFR operations<br>15,000 feet pressure altitude for IFR operations<br>14,000 feet density altitude for takeoff, landing, and in-ground-effect maneuvers                              |                |                  |
| Rotor Blade & Control Movement        | For rigging information, refer to the Model 430 Maintenance Manual.                                                                                                                                                |                |                  |
| Serial Numbers Eligible               | Serial number 49001 and subsequent                                                                                                                                                                                 |                |                  |
| Import Requirements                   | See NOTE 6                                                                                                                                                                                                         |                |                  |
| Certification Basis                   | a) FAR Part 29 dated February 1, 1965, (Transport Category A & B) amendment 29-1 through 29-32 and 34 except for:                                                                                                  |                |                  |
|                                       | The following paragraphs of FAR Part 29 at amendment 29-9:                                                                                                                                                         |                |                  |
|                                       | 29.497, 29.519, 29.521, 29.561, (a), (b) and (d), 29.671, 29.729, 29.783, 29.805, 29.807, 29.811, 29.853, 29.855, 29.865, 29.963, 29.967, 29.969, 29.971, 29.975, 29.977, 29.979, 29.991, 29.999, 29.1001, 29.1309 |                |                  |
|                                       | The following paragraphs of FAR Part 29 at amendment 29-12:<br>29.787 and 29.865;                                                                                                                                  |                |                  |

The following paragraph of FAR Part 29 at amendment 29-13:  
29.927;

The following paragraph of FAR Part 29 at amendment 29-24:

29.1309 applicable to new systems introduced as model 430 design changes (FADEC, IDS, AFCS and EFIS) from the 230; and

The following paragraph of FAR Part 29 at amendment 29-26:  
29.563 and 29.785

b) FAR Part 36 dated June 1, 1974 amendments 36-1 through 36-18 (Canadian Airworthiness Manual Chapter 516 Change 2 dated November 1, 1991 - Noise Requirements).

c) Additional compliance with FAR Part 29 at amendment 29-12 is shown for paragraph 29.801 Ditching, when the required safety equipment and ditching equipment is installed.

d) Transport Canada Special Conditions:

1. SCA93-2 High Intensity Radiated Fields (HIRF) , dated January 4,1993
2. SCA93-3 Lightning Protection, dated January 4,1993
3. SCA94-08 Software Aspects of Certification, dated March 18, 1994

e) Findings of Equivalent Safety:

|                             |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------|
| FAR 29.963(b) and 965       | Crash Resistant Fuel Cell                                                                                 |
| FAR 29.783(e)               | Crew Door Switch                                                                                          |
| FAR 29.811(d)               | Size of Emergency Exit Signs                                                                              |
| FAR 29.807(d)(1)            | Passenger Emergency Exits (Main Door Exit Size for Ditching)                                              |
| FAR 29.865(b)(2)            | External Load Attaching Means (Hoist Manual Release)                                                      |
| FAR 29.855(a)               | Baggage and Cargo Compartment                                                                             |
| FAR 29.307(b), 723,.725,727 | Proof of Structure, Landing Gear Limit Drop Test and Reserve Energy Absorption Drop Test (Skid Gear Only) |

f) FAA exemption no. 2789, FAR 29.811 (h) (l) and FAA exemption no. 4395, FAR 29.855 (a) and portions of 29.855 (d). FAA Exemptions 2789 and 4395 pertained to the model 222 series helicopters; however, these exemptions have been found to be applicable to the model 430.

|                     |                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Production Basis    | None. For import requirements see NOTE 6                                                                                                             |
| Equipment           | The basic required equipment as prescribed in the applicable Airworthiness requirements (see Certification Basis) must be installed in the aircraft. |
| Service Information | FAA-approved Rotorcraft Flight Manual BHT-430-FM-1, dated February 23, 1996 or later FAA-approved revision.                                          |

**DATA PERTINENT TO ALL MODELS EXCEPT AS INDICATED**

The original Bell Model 222 was approved by Transport Canada under ATA H88, dated May 24, 1983, on the Basis of FAA TC H9SW. The original Bell Models 222B and 222U were approved by Transport Canada under ATA H88 dated September 19, 1983 on the basis of FAA TC H9SW.

Effective February 28, 1992, design responsibility for all Models 222, 222B, and 222U helicopters was transferred from Bell Helicopter Textron, Fort Worth, Texas, and FAA to Bell Helicopter Textron Canada, Mirabel, Quebec, and Transport Canada.

The following FAA Airworthiness Directives apply at the time of design transfer:

|     |          |             |          |
|-----|----------|-------------|----------|
| 222 | 82-16-06 | 222B        | 83-02-51 |
|     | 87-13-01 |             | 89-25-04 |
|     | 87-19-01 |             |          |
|     | 82-09-53 | 222B & 222U | 85-14-11 |
|     | 83-02-51 |             | 87-13-01 |
|     | 83-09-03 |             | 87-15-06 |
|     | 84-12-02 |             | 87-15-07 |
|     | 85-14-11 |             | 88-02-03 |
|     | 87-15-07 |             | 89-17-05 |
|     | 88-02-03 |             |          |
|     | 89-17-05 |             |          |
|     | 89-25-04 |             |          |

**NOTES**

NOTE 1

Current weight and balance report including list of equipment included in the approved empty weight and loading instructions when necessary must be provided for each helicopter at the time of original certification.

NOTE 2

For a complete listing of required placards, see the applicable FAA-approved Rotorcraft Flight Manual

NOTE 3

The retirement times of certain parts and inspection requirements are listed in Airworthiness Limitations, Chapter 4 of the Model 222, or Model 222B, or Model 222U, or Model 230, and Model 430 Maintenance Manual (as appropriate). These values of retirement of service lives and inspection cannot be increased without the approval of Canadian DOT.

The retirement times of critical parts are listed in the following table. These imitations may not be changed without FAA engineering approval.

MODEL 222/222B (Refer to FAA-approved Chapter 4 of the Maintenance Manual, BHT-222/222B-MM-1, for airworthiness lives of components applicable to 222/222B)

MODEL 222U (Refer to FAA-approved Chapter 4 of the Maintenance Manual, BHT-222U-MM-1, for airworthiness lives of components applicable to 222U)

MODEL 230 (Refer to FAA-approved Chapter 4 of the Maintenance Manual, BHT-230-MM-1, for airworthiness lives of components applicable to 230)

MODEL 430 (Refer to FAA-approved Chapter 4 of the Maintenance Manual, BHT-430-MM-1, for airworthiness lives of components applicable to 430)

Bell Helicopter Textron Service Bulletins are approved by Transport Canada and include a statement to that effect. Such approval may be approved by FAA.

Any changes to the type design of this helicopter by means of a amended type certificate

(TC), supplemental type certificate (STC), or amended STC, requiring instructions for continued airworthiness (ICA's) must be submitted thru the project aircraft certification office (ACO) for review and acceptance by the Fort Worth -Aircraft Evaluation Group (FTW-AEG) Flight Standards District Office (FSDO) prior to the aircraft delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later as prescribed by Title 14 CFR 21.50. Type design changes by means of a field approval that require ICA's must have those ICA's reviewed by the field approving FSDO.

NOTE 4 For all operations below -29°C (-20°F) ambient temperature, all JET A, JET A-1 and JET B fuels used in Model 222, Model 222B and Model 222U helicopters must contain Phillips PFA-55MB or MIL-L-27686 anti-icing additive in concentrations of not less than 0.035% nor more than 0.15% by volume. Blending this additive into the fuel and checking its concentration must be conducted in the manner prescribed by the Rotorcraft Flight Manual.

NOTE 5 Avco Lycoming engines used in the Model 222 must incorporate a shim in the fuel control. Fuel Controls with the shim are identified by P/N 4-301-098-05. Engines used in the production configuration (S/N 47006 to 47089) must use this shim or use selectively fitted governor reset spring in accordance with Avco Lycoming Service Bulletin LTS101C-73-0015.

NOTE 6 To be considered eligible for operation in the United States, each Aircraft manufactured under this Type Certificate must have a U. S. Airworthiness Certificate that may be issued on the basis of the Canadian Department of Transport Certificate of Airworthiness for Export signed by the Minister of Transport containing the following statement

"The rotorcraft covered by this certificate has been examined, tested, and found to comply with the type design approved under Type Certificate H9SW and to be in condition for safe operation".

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is 21.183(c) or 21.185(c).

The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.21 exported from countries other than the country of manufacture (e.g., third party country) is FAR Sections 21.183(d) or 21.185(b).

NOTE 7 For all operations below +5°C (23°F) ambient temperature, all JET A, JET A-1 and JET B fuels used in Model 230 and 430 helicopters must contain Phillips PFA-55MB or MIL-L-27686 anti-icing additive in concentration of not less than 0.035% nor more than 0.15% by volume. Blending this additive into the fuel and checking its concentration must be conducted in the manner prescribed by the Rotorcraft Flight Manual.

NOTE 8 The model 430 helicopter employs electronic engine controls, commonly named Full Authority Digital Engine Controls (FADEC) and is recognized to be more susceptible to Electromagnetic Interference (EMI) than rotorcraft that have only manual (non-electronic) controls. (EMI may be the result of radiated or conducted interference.) For this reason modifications that add or change systems that have the potential for EMI, must either be qualified to an FAA acceptable standard or tested at the time of installation for interference to the FADEC. This type of testing must employ the particular FADEC's diagnostic techniques and external diagnostic techniques. The test procedure must be FAA approved.