European Aviation Safety Agency

EASA

TYPE-CERTIFICATE

DATA SHEET

EASA.A.372

R 3000 series

Type Certificate Holder:

C.E.A.P.R.

1 route de Troyes
21121 DAROIS
FRANCE

Manufacturer:

Avions ROBIN

1 route de Troyes
21121 DAROIS
FRANCE

For variants:

R 3000/140
R 3000/120
R 3000/100
R 3000/120 D
R 3000/160
R 3000/160 S
R 3000/180

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</tbody>
</table>
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SECTION A: R 3000/140

A.I. General

1. a) Type: R3000/140
   b) Variant: Not applicable

2. Airworthiness Category: Normal and Utility Category

3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE

4. Manufacturer: Avions ROBIN
   1 route de Troyes
   21121 DAROIS
   FRANCE.

5. (Reserved)

6. DGAC Type Certification Date: 13 October 1983

7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003

8. The EASA type Certificates replaces DGAC-France Type Certificate no 172

A.II. Certification Basis

1. Reference Date for determining the applicable requirements: January 12, 1978

2. (Reserved)

3. (Reserved)

4. Certification Basis: FAR part 23

5. Airworthiness Requirements: FAR part 23 as amended by amendment 23-1 through 1-23 dated 12 January 1978

6. Requirements elected to comply: None

7. EASA Special Conditions: None

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None


A.III. Technical Characteristics and Operational Limitations

1. (Reserved)

2. Description: Single-engine, four-seat, low-wing airplane, all-metal construction, fixed tricycle landing gear, T-tail.

3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system “Safe Flight” n°164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:
Span ................... 9.81 m (32.18 ft)
Height ................. 2.66 m (8.72 ft)
Length ................. 7.51 m (24.64 ft)
Wing Area .......... 14.47 m² (155.75 foot²)

5. Engines:
Lycoming O-320-D2A
The EASA type certification standard includes that of FAA TC E-274, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:
Maximum Continuous power: 2700 rpm (119 kW, 160 HP)

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>74DM S5-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
</tbody>
</table>

Remarks: (*) No acceptable diameter reduction for repair.

The EASA type certification standard includes that of FAA TC P-886, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:
7.1 Fuel:
91/96 or 100/130 octane minimum aviation grade gasoline.
Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:
Refer to latest revision of Service Instruction Lycoming No. 1014.

<table>
<thead>
<tr>
<th>Air temperature</th>
<th>Ashless dispersant (AD) grades</th>
<th>Mineral grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperature</td>
<td>SAE15W50 or SAE20W50</td>
<td>SAE60</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE60</td>
<td>SAE60</td>
</tr>
<tr>
<td>Above 65°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (O°C à +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C à +30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>

7.3 Coolant:
Not Applicable

8. Fluid capacities:
8.1 Fuel:

<table>
<thead>
<tr>
<th>Two wing tanks (liters)</th>
<th>Optional Two wing tanks (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>160</td>
<td>158</td>
</tr>
<tr>
<td>200</td>
<td>198</td>
</tr>
</tbody>
</table>

8.2 Oil:
Total capacity.......................... 8 U.S. quarts (7.6 liters)
Usable........................................ 6 U.S. quarts (5.7 liters)
9. Air speeds:

\[
egin{align*}
V_{NE} & = 318 \text{ km/h (171 knots IAS)} \\
V_{NO} & = 252 \text{ km/h (136 knots IAS)} \\
V_{A} & = 216 \text{ km/h (116 knots IAS)} \\
V_{FE} & = 175 \text{ km/h (94 knots IAS)} \\
V_{C} & = 252 \text{ km/h (136 knots IAS)} \\
V_{D} & = 358 \text{ km/h (193 knots IAS)}
\end{align*}
\]

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.

11. Operational Capability: Refer to approved aircraft flight manual.

12. Maximum Masses:

- Normal Category
  - Take-off and Landing: 1050 kg (2314 lb.)

- Utility Category
  - Take-off and Landing: 1000 kg (2205 lb.)

13. Centre of Gravity Range:

- Normal Category
  - Forward limit (18% ref.): 0.290 m aft of datum at 825 kg
  - Intermediate limit (25% ref.): 0.403 m aft of datum at 1050 kg
  - Aft limit (34% ref.): 0.548 m aft of datum at 1050 kg

- Utility Category
  - Forward limit (18% ref.): 0.290 m aft of datum at 825 kg
  - Intermediate limit (25% ref.): 0.403 m aft of datum at 1000 kg
  - Aft limit (34% ref.): 0.548 m aft of datum at 1000 kg

14. Datum:

- Wing leading edge at rib n°6.
- Cord length at reference section: 1.612 m (5.28 ft).

15. Load factor (n) at maximum weight:

- Normal Category:
  - Flaps Up: + 3.8
  - Flaps Down: + 2

- Utility Category:
  - Flaps Up: + 4.4
  - Flaps Down: + 2

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot)

Maximum baggage compartment 40 kg (88 lb) at +1.93m aft of datum.

20. Wheels and Tires
Main gear track...........................................2.63 m (8.36 ft)
Wheel tire size
  rear: ...................................380 x 150
  front: ..................................355x135
Tire pressure............................refer to following table
Oleo strut pressure....................refer to following table

<table>
<thead>
<tr>
<th></th>
<th>Front gear</th>
<th>Main gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire</td>
<td>2 bar</td>
<td>9 bar</td>
</tr>
<tr>
<td>Oleo strut</td>
<td>6 bar</td>
<td>2.3 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator:...............................................up 25° ± 2°
          down 10° ± 2°
Ailerons:...............................................up 12° ± 2°
          down 15° ± 2°
Rudder:..................................................25° ± 3°
Elevator tab:
  Flaps up
    Trim neutral position: 0° ................... ±3°
    Trim full down position: -12° ............ ±3° (up)
    Trim full up position: +37° ............ ±3° (down)
  Flaps down (30°)
    Trim neutral position: +16° ................ ±3°
    Trim full down position: -9° ............. ±3° (up)
    Trim full up position: +40° ............. ±3° (down)
Wing Flaps:..............................................0° ±2°
          30° ±3°

22. Reserved

A.IV. Operating and Service Instructions
Airplane Flight Manual........Refer to latest amendment of service letter n°6
Airplane Maintenance Manual Refer to latest amendment of service letter n°6

A.V. Note:
1. The certificated empty weight and the corresponding center of gravity location must include unusable fuel and undrainable oil of the engine.
SECTION B:  R 3000/120

B.I. General

1.  a) Type: R3000/120  
    b) Variant: Not applicable

2.  Airworthiness Category: Normal Category

3.  Type Certificate Holder: C.E.A.P.R.  
    1 route de Troyes  
    21121 DAROIS  
    FRANCE

4.  Manufacturer: Avions ROBIN  
    1 route de Troyes  
    21121 DAROIS  
    FRANCE.

5.  (Reserved)

6.  DGAC Type Certification Date: 13 October 1983

7.  EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003

8.  The EASA type Certificates replaces DGAC-France Type Certificate no 172

B.II. Certification Basis

1.  Reference Date for determining the applicable requirements: January 12, 1978

2.  (Reserved)

3.  (Reserved)

4.  Certification Basis: FAR part 23

5.  Airworthiness Requirements: FAR part 23 as amended by amendment 23-1 through 1-23 dated 12 January 1978

6.  Requirements elected to comply: None

7.  EASA Special Conditions: None

8.  EASA Exemptions: None

9.  EASA Equivalent Safety Findings: None


B.III. Technical Characteristic and Operational Limitations

1.  (Reserved)

2.  Description: Single-engine, four-seat, low-wing airplane, all-metal construction, fixed tricycle landing gear, T-tail.

3.  Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system “Safe Flight” n°164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:

Span ................... 9.81 m (32.18 ft)
Height .................. 2.66 m (8.72 ft)
Length .................. 7.51 m (24.64 ft)
Wing Area ........... 14.47 m² (155.75 foot²)

5. Engines:

Lycoming O-235-N2A or Lycoming O-235-L2A

The EASA type certification standard includes that of FAA TC E-223, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous power: 2800 rpm (88 kW, 116 HP)

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>72CK S6-0-52</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2400 rpm</td>
</tr>
</tbody>
</table>

Remarks: (*) No acceptable diameter reduction for repair.

The EASA type certification standard includes that of FAA TC P-904, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

100 or 100LL octane minimum aviation grade gasoline

Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

<table>
<thead>
<tr>
<th>Air temperature</th>
<th>Ashless dispersant (AD) grades</th>
<th>Mineral grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperature</td>
<td>SAE15W50 or SAE20W50</td>
<td>-----</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE60</td>
<td>SAE60</td>
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<tr>
<td>Above 60°F (+15°C)</td>
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</tr>
<tr>
<td>30°F to 90°F (O°C à +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C à +30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
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<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
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7.3 Coolant:

Not Applicable

8. Fluid capacities:

8.1 Fuel:

<table>
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<tr>
<th>Two wing tanks (liters)</th>
<th>Optional Two wing tanks (liters)</th>
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</thead>
<tbody>
<tr>
<td>Total Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>120</td>
<td>118</td>
</tr>
</tbody>
</table>

8.2 Oil:

Total capacity......................................... 6 U.S. quarts (5.7 liters)
Usable.................................................... 4 U.S. quarts (3.8 liters)
9. Air speeds:

\[V_{NE} \quad 277 \text{ km/h (149 knots IAS)}\]
\[V_{NO} \quad 220 \text{ km/h (118 knots IAS)}\]
\[V_{A} \quad 216 \text{ km/h (116 knots IAS)}\]
\[V_{FE} \quad 175 \text{ km/h (94 knots IAS)}\]
\[V_{C} \quad 220 \text{ km/h (118 knots IAS)}\]
\[V_{D} \quad 308 \text{ km/h (166 knots IAS)}\]

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.

11. Operational Capability: Refer to approved aircraft flight manual.


13. Centre of Gravity Range:

![Center of Gravity Range Diagram]

**Normal Category**
- Forward limit (20% ref.): 0.322 m aft of datum at 825 kg
- Intermediate limit (25% ref.): 0.403 m aft of datum at 900 kg
- Intermediate limit (28.6% ref.): 0.461 m aft of datum at 900 kg
- Aft limit (30% ref.): 0.484 m aft of datum at 814 kg


15. Load factor (n) at maximum weight: **Normal Category:**

<table>
<thead>
<tr>
<th>Flaps Down</th>
<th>Flaps Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.52</td>
<td>+ 3.8</td>
</tr>
<tr>
<td>+ 2</td>
<td>- 0</td>
</tr>
</tbody>
</table>

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot)


19. Baggage / Cargo Compartment Maximum baggage compartment 40 kg (88 lb) at +1.93m aft of datum.
20. Wheels and Tires

Main gear track ........................................... 2.63 m (8.36 ft)
Wheel tire size
   rear: ........................................... 380 x 150
   front: ........................................... 355 x 135
Tire pressure ............................................ refer to following table
Oleo strut pressure .................................... refer to following table

<table>
<thead>
<tr>
<th>Front gear</th>
<th>Main gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire</td>
<td>Oleo strut</td>
</tr>
<tr>
<td>2 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator: .................................................. up 25° ± 2°
   down 10° ± 2°
Ailerons: ................................................ up 12° ± 2°
   down 15° ± 2°
Rudder: ................................................... 25° ± 3°

Elevator tab:
Flaps up
   Trim neutral position: 0° ± 3°
   Trim full down position: -12° ± 3° (up)
   Trim full up position: +37° ± 3° (down)
Flaps down (30°)
   Trim neutral position: +16° ± 3°
   Trim full down position: -9° ± 3° (up)
   Trim full up position: +40° ± 3° (down)

Wing Flaps: ................................................. 0° ± 2°
   30° ± 3°

22. Reserved

B.IV. Operating and Service Instructions

Airplane Flight Manual ........ Refer to latest amendment of service letter n°6
Airplane Maintenance Manual Refer to latest amendment of service letter n°6

B.V. Note:

2. The certificated empty weight and the corresponding center of gravity location must include unusable fuel and undrainable oil of the engine.

3. This model is identical to the R3000/140 except the Lycoming O235 N2A or L2A engine.
SECTION C: R 3000/100

C.I. General

1. a) Type: R 3000/100
   b) Variant: Not applicable
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Avions ROBIN
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification Date: 13 October 1983
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no 172

C.II. Certification Basis

1. Reference Date for determining the applicable requirements: January 12, 1978
2. (Reserved)
3. (Reserved)
4. Certification Basis: FAR part 23
5. Airworthiness Requirements: FAR part 23 as amended by amendment 23-1 through 1-23 dated 12 January 1978
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

C.III. Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, all-metal construction, fixed tricycle landing gear, T-tail.
3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system “Safe Flight” n°164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:

Span ................... 9.81 m (32.18 ft)
Height ................... 2.66 m (8.72 ft)
Length ................... 7.51 m (24.64 ft)
Wing Area ........... 14.47 m² (155.75 foot²)

5. Engines:

Lycoming O-235-N2A or Lycoming O-235-L2A

The EASA type certification standard includes that of FAA TC E-223, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous Power: 2800 rpm (88 kW, 116 HP)

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
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<th>Number of blades</th>
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<td>72CK S6-0-52</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2400 rpm</td>
</tr>
</tbody>
</table>

Remarks: (*) No acceptable diameter reduction for repair.

7. Fluids:

7.1 Fuel: 100 or 100LL octane minimum aviation grade gasoline

Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

<table>
<thead>
<tr>
<th>Air temperature</th>
<th>Ashless dispersant (AD) grades</th>
<th>Mineral grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperature</td>
<td>SAE15W50 or SAE20W50</td>
<td>-----</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE60</td>
<td>SAE60</td>
</tr>
<tr>
<td>Above 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (O°C à +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C à +30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>

7.3 Coolant: Not Applicable

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Two wing tanks (liters)</th>
<th>Optional Two wing tanks (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>120</td>
<td>118</td>
</tr>
</tbody>
</table>

8.2 Oil:

Total capacity........................... 6 U.S. quarts (5.7 liters)
Usable................................. 4 U.S. quarts (3.8 liters)
9. Air speeds:

\[ V_{NE} \] .................. 277 km/h (149 knots IAS)
\[ V_{NO} \] .................. 220 km/h (118 knots IAS)
\[ V_{A} \] .................. 216 km/h (116 knots IAS)
\[ V_{FE} \] .................. 175 km/h (94 knots IAS)
\[ V_{C} \] .................. 220 km/h (118 knots IAS)
\[ V_{D} \] .................. 308 km/h (166 knots IAS)

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.

11. Operational Capability: Refer to approved aircraft flight manual.


13. Centre of Gravity Range:

![Weight and balance envelope diagram]

Normal Category
Forward limit (20 % ref.): 0.322 m aft of datum at 825 kg
Intermediate limit (25 % ref.): 0.403 m aft of datum at 890 kg
Intermediate limit (28.6 % ref.): 0.461 m aft of datum at 890 kg
Aft limit (30 % ref.): 0.484 m aft of datum at 804 kg

Cord length at reference section: 1.612 m (5.28ft).

15. Load factor (n) at maximum weight: Normal Category:

Flaps Up  + 3.8
- 1.52

Flaps Down + 2
- 0

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot)


19. Baggage / Cargo Compartment Maximum baggage compartment 40 kg (88 lb) at +1.93m aft of datum.
20. Wheels and Tires

Main gear track ................................................. 2.63 m (8.36 ft)
Wheel tire size rear: ............................................. 380 x 150
  front: ......................................................... 355x135
Tire pressure ......................................................... refer to following table
Oleo strut pressure .................................................. refer to following table

<table>
<thead>
<tr>
<th></th>
<th>Front gear</th>
<th>Main gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire Oleo strut</td>
<td>2 bar 6 bar</td>
<td>2.3 bar 9 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator: ............................................................. up 25° ± 2°
  down 10° ± 2°
Ailerons: ............................................................. up 12° ± 2°
  down 15° ± 2°
Rudder: ............................................................... 25° ± 3°

Elevator tab:
  Flaps up
    Trim neutral position: 0° ± 3°
    Trim full down position: -12° ± 3° (up)
    Trim full up position: +37° ± 3° (down)
  Flaps down (30°)
    Trim neutral position: +16° ± 3°
    Trim full down position: -9° ± 3° (up)
    Trim full up position: +40° ± 3° (down)

Wing Flaps: ............................................................. 0° ± 3°
  30° ± 3°

22. Reserved

C.IV. Operating and Service Instructions

Airplane Flight Manual ........ Refer to latest amendment of service letter n°6
Airplane Maintenance Manual Refer to latest amendment of service letter n°6

C.V. Note:

1. The certificated empty weight and the corresponding center of gravity location must include unusable fuel and undrainable oil of the engine.
2. This model is identical to R3000/120 except cabin layout, wheel spat and maximum weight.
SECTION D: R 3000/120 D

D.I. General

1. a) Type: R 3000/120 D
   b) Variant: Not applicable
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Avions ROBIN
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification Date: 13 October 1983
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no 172

D.II. Certification Basis

1. Reference Date for determining the applicable requirements: January 12, 1978
2. (Reserved)
3. (Reserved)
4. Certification Basis: FAR part 23
5. Airworthiness Requirements: FAR part 23 as amended by amendment 23-1 through 1-23 dated 12 January 1978
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

D.III. Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, all-metal construction, fixed tricycle landing gear, T-tail.
3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system “Safe Flight” n°164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:

Span ................... 9.81 m (32.18 ft)
Height ................. 2.66 m (8.72 ft)
Length .................. 7.51 m (24.64 ft)
Wing Area .......... 14.47 m² (155.75 foot²)

5. Engines:

Lycoming O-235-N2A or Lycoming O-235-L2A

The EASA type certification standard includes that of FAA TC E-223, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous power: 2600 rpm (83 kW, 112 HP)

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>72CK S6-0-52</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2400 rpm</td>
</tr>
</tbody>
</table>

Remarks: (*) No acceptable diameter reduction for repair.

7. Fluids:

7.1 Fuel:

100 or 100LL octane minimum aviation grade gasoline
Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

<table>
<thead>
<tr>
<th>Air temperature</th>
<th>Ashless dispersant (AD) grades</th>
<th>Mineral grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperature</td>
<td>SAE15W50 or SAE20W50</td>
<td>-----</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE60</td>
<td>SAE60</td>
</tr>
<tr>
<td>Above 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (O°C à +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C à +30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>

7.3 Coolant:

Not Applicable

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Two wing tanks (liters)</th>
<th>Optional Two wing tanks (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>120</td>
<td>118</td>
</tr>
</tbody>
</table>

8.2 Oil:

Total capacity: 6 U.S. quarts (5.7 liters)
Usable: 4 U.S. quarts (3.8 liters)
9. Air speeds:

\[ V_{NE} \]: 277 km/h (149 knots IAS)
\[ V_{NO} \]: 220 km/h (118 knots IAS)
\[ V_{A} \]: 216 km/h (116 knots IAS)
\[ V_{FE} \]: 175 km/h (94 knots IAS)
\[ V_{C} \]: 220 km/h (118 knots IAS)
\[ V_{D} \]: 308 km/h (166 knots IAS)

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.
11. Operational Capability: Refer to approved aircraft flight manual.
12. Maximum Mass:
   - Take-off & landing: 900 kg (1984 lb)
13. Centre of Gravity Range:

14. Datum:
   - Wing leading edge at rib n°6.
   - Cord length at reference section: 1.612 m (5.28ft).

15. Load factor (n) at maximum weight:
   - **Normal Category:**
     - Flaps Up: +3.8
     - Flaps Down: +2
   - Aft limit (30 % ref.): 0.484 m aft of datum at 814 kg

16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot)
19. Baggage / Cargo Compartment:
   - Maximum baggage compartment 40 kg (88 lb) at +1.93m aft of datum.
20. Wheels and Tires

Main gear track ........................................... 2.63 m (8.36 ft)
Wheel tire size rear: ...................................... 380 x 150
  front: .............................................. 355x135
Tire pressure ................................................... refer to following table
Oleo strut pressure ........................................... refer to following table

<table>
<thead>
<tr>
<th>Front gear</th>
<th>Main gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire</td>
<td>Oleo strut</td>
</tr>
<tr>
<td>2 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator: ...................................................... up 25° ± 2°
  down 10° ± 2°
Ailerons: .................................................... up 12° ± 2°
  down 15° ± 2°
Rudder: ........................................................ 25° ± 3°
Elevator tab:
  Flaps up
    Trim neutral position: 0° ................. ±3°
    Trim full down position: -12° .............. ±3° (up)
    Trim full up position: +37° ............. ±3° (down)
  Flaps down (30°)
    Trim neutral position: +16° .................... ±3°
    Trim full down position: -9° ............... ±3° (up)
    Trim full up position: +40° .............. ±3° (down)
Wing Flaps: .................................................... 0° ±2°
           .................................................. 30° ±3°

22. Reserved

D.IV. Operating and Service Instructions

Airplane Flight Manual .......... Refer to latest amendment of service letter n°6
Airplane Maintenance Manual Refer to latest amendment of service letter n°6

D.V. Note:

1. The certificated empty weight and the corresponding center of gravity location must include unusable fuel and undrainable oil of the engine.

2. This model is identical to the R3000/120 except the maximum continuous power limited to 2600 rpm. The origin of this limit is not the applicable airworthiness regulation.
SECTION E: R 3000/160

E.I. General

1. a) Type: R 3000/160
   b) Variant: Not applicable

2. Airworthiness Category: Normal and Utility Category

3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE

4. Manufacturer: Avions ROBIN
   1 route de Troyes
   21121 DAROIS
   FRANCE.

5. (Reserved)

6. DGAC Type Certification Date: 13 October 1983

7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003

8. The EASA type Certificates replaces DGAC-France Type Certificate no 172

E.II. Certification Basis

1. Reference Date for determining the applicable requirements: January 12, 1978

2. (Reserved)

3. (Reserved)

4. Certification Basis: FAR part 23

5. Airworthiness Requirements: FAR part 23 as amended by amendment 23-1 through 1-23 dated 12 January 1978

6. Requirements elected to comply: None

7. EASA Special Conditions: None

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None


E.III. Technical Characteristics and Operational Limitations

1. (Reserved)

2. Description: Single-engine, four-seat, low-wing airplane, all-metal construction, fixed tricycle landing gear, T-tail.

3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system “Safe Flight” n°164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:

Span ................... 9.81 m  (32.18 ft)
Height ................... 2.66 m  (8.72 ft)
Length ................... 7.51 m  (24.64 ft)
Wing Area ........... 14.47 m²  (155.75 foot²)

5. Engines:

Lycoming O-360-A3A

The EASA type certification standard includes that of FAA TC E-286, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous Power: 2600 rpm (119 kW, 160 HP)

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>76EM8 S5-0-64</td>
<td>1.93 m (*)</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
</tbody>
</table>

Remarks: (*) No acceptable diameter reduction for repair.

The EASA type certification standard includes that of FAA TC E-286, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

100 or 100LL octane minimum aviation grade gasoline

Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

<table>
<thead>
<tr>
<th>Air temperature</th>
<th>Ashless dispersant (AD) grades</th>
<th>Mineral grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperature</td>
<td>SAE15W50 or SAE20W50</td>
<td>-----</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE60</td>
<td>SAE60</td>
</tr>
<tr>
<td>Above 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (0°C à +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C à +30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>

7.3 Coolant:

Not Applicable

8. Fluid capacities:

8.1 Fuel:

Two structural wing tanks

Total capacity: ........................................ 228 liters
Usable quantity: ..................................... 226 liters

8.2 Oil:

Total capacity: ........................................ 8 U.S. quarts (7.6 liters)
Usable: .................................................. 8 U.S. quarts (5.7 liters)
9. Air speeds:

- $V_{NE} = 318 \text{ km/h (171 knots IAS)}$
- $V_{NO} = 252 \text{ km/h (136 knots IAS)}$
- $V_{A} = 216 \text{ km/h (116 knots IAS)}$
- $V_{FE} = 175 \text{ km/h (94 knots IAS)}$
- $V_{C} = 252 \text{ km/h (136 knots IAS)}$
- $V_{D} = 358 \text{ km/h (193 knots IAS)}$

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.

11. Operational Capability: Refer to approved aircraft flight manual.

12. Maximum Masses:

- **Normal Category**
  - Take-off and landing: 1150 kg (2535 lb)

- **Utility Category**
  - Take-off and landing: 1000 kg (2205 lb)

13. Centre of Gravity Range:

![Weight and balance envelope diagram]

**Normal Category**
- Forward limit (18 % ref.): 0.290 m aft of datum at 825 kg
- Intermediate limit (25 % ref.): 0.403 m aft of datum at 1150 kg
- Aft limit (34 % ref.): 0.548 m aft of datum at 1150 kg

**Utility Category**
- Forward limit (18 % ref.): 0.290 m aft of datum at 825 kg
- Intermediate limit (25 % ref.): 0.403 m aft of datum at 1000 kg
- Aft limit (34 % ref.): 0.548 m aft of datum at 1000 kg


Cord length at reference section: 1.612 m (5.28ft).

15. Load factor (n) at maximum weight:

- **Normal Category**
  - Flaps Up: + 3.8
  - Flaps Down: + 2

- **Utility Category**
  - Flaps Up: + 4.4
  - Flaps Down: + 2

16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot)


19. Baggage / Cargo Compartment: Maximum baggage compartment 40 kg (88 lb) at +1.93m aft of datum.

20. Wheels and Tires:
   - Main gear track: 2.63 m (8.63 ft)
   - Wheel tire size:
     - Rear: 380 x 150
     - Front: 355 x 135
   - Tire pressure: Refer to following table
   - Oleo strut pressure: Refer to following table

<table>
<thead>
<tr>
<th></th>
<th>Front gear</th>
<th>Main gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire</td>
<td>Oleo strut</td>
<td>Tire</td>
</tr>
<tr>
<td>2 bar</td>
<td>6 bar</td>
<td>2.3 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

   - Elevator: up 25° ± 2°
     - down 10° ± 2°
   - Ailerons: up 12° ± 2°
     - down 15° ± 2°
   - Rudder: 25° ± 3°
   - Elevator tab:
     - Flaps up
       - Trim neutral position: 0° ± 3°
       - Trim full down position: -12° ± 3° (up)
       - Trim full up position: +37° ± 3° (down)
     - Flaps down (30°)
       - Trim neutral position: +16° ± 3°
       - Trim full down position: -9° ± 3° (up)
       - Trim full up position: +40° ± 3° (down)
   - Wing Flaps: 0° ± 2°
     - 30° ± 3°

22. Reserved

**E.IV. Operating and Service Instructions**

Airplane Flight Manual: Refer to latest amendment of service letter n°6
Airplane Maintenance Manual: Refer to latest amendment of service letter n°6

**E.V. Note:**

1. The certificated empty weight and the corresponding center of gravity location must include unusable fuel and undrainable oil of the engine.

2. This model is identical to the R3000/140 except the Lycoming O360-A3A engine.
SECTION F: R 3000/160 S

F.I. General

1. a) Type: R 3000/160 S
   b) Variant: Not applicable

2. Airworthiness Category: Normal and Utility Category

3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE

4. Manufacturer: Avions ROBIN
   1 route de Troyes
   21121 DAROIS
   FRANCE.

5. (Reserved)

6. DGAC Type Certification Date: 13 October 1983

7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003

8. The EASA type Certificates replaces DGAC-France Type Certificate no 172

F.II. Certification Basis

1. Reference Date for determining the applicable requirements: January 12, 1978

2. (Reserved)

3. (Reserved)

4. Certification Basis: FAR part 23

5. Airworthiness Requirements: FAR part 23 as amended by amendment 23-1 through 1-23 dated 12 January 1978

6. Requirements elected to comply: None

7. EASA Special Conditions: None

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None


F.III. Technical Characteristics and Operational Limitations

1. (Reserved)

2. Description: Single-engine, four-seat, low-wing airplane, all-metal construction, fixed tricycle landing gear, T-tail.

3. Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system “Safe Flight” n°164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:

Span ................... 9.81 m (32.18 ft)
Height ................... 2.66 m (8.72 ft)
Length ................... 7.51 m (24.64 ft)
Wing Area ........... 14.47 m² (155.75 foot²)

5. Engines:

Lycoming O-360-A3A

The EASA type certification standard includes that of FAA TC E-286, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous power: 2530 rpm

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Ø</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>76EM8 S5-0-64</td>
<td>1.93 m (*)</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
</tbody>
</table>

Remarks: (*) No acceptable diameter reduction for repair.

The EASA type certification standard includes that of FAA TC P4EA, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

100 or 100LL octane minimum aviation grade gasoline

Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycoming No. 1014.

<table>
<thead>
<tr>
<th>Air temperature</th>
<th>Ashless dispersant (AD) grades</th>
<th>Mineral grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperature</td>
<td>SAE15W50 or SAE20W50</td>
<td>----</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE60</td>
<td>SAE60</td>
</tr>
<tr>
<td>Above 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (0°C à +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
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<tr>
<td>0°F to 90°F (-15°C à +30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>

7.3 Coolant:

Not Applicable

8. Fluid capacities:

8.1 Fuel:

Two structural wing tanks

Total capacity: 228 liters

Usable quantity: 226 liters

8.2 Oil:

Total capacity: 8 U.S. quarts (7.6 liters)

Usable: 8 U.S. quarts (5.7 liters)
9. Air speeds:

\[
\begin{align*}
V_{NE} & : 318 \text{ km/h (171 knots IAS)} \\
V_{NO} & : 252 \text{ km/h (136 knots IAS)} \\
V_A & : 216 \text{ km/h (116 knots IAS)} \\
V_{FE} & : 175 \text{ km/h (94 knots IAS)} \\
V_C & : 252 \text{ km/h (136 knots IAS)} \\
V_D & : 358 \text{ km/h (193 knots IAS)}
\end{align*}
\]

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.

11. Operational Capability: Refer to approved aircraft flight manual.

12. Maximum Masses:

**Normal Category**
- Take-off and landing: 1150 kg (2535 lb.)

**Utility Category**
- Take-off and landing: 1000 kg (2205 lb.)

13. Centre of Gravity Range:

**Normal Category**
- Forward limit (18% ref.): 0.290 m aft of datum at 825 kg
- Intermediate limit (25% ref.): 0.403 m aft of datum at 1150 kg
- Aft limit (34% ref.): 0.548 m aft of datum at 1150 kg

**Utility Category**
- Forward limit (18% ref.): 0.290 m aft of datum at 825 kg
- Intermediate limit (25% ref.): 0.403 m aft of datum at 1000 kg
- Aft limit (34% ref.): 0.548 m aft of datum at 1000 kg

14. Datum:
- Wing leading edge at rib n°6.

15. Load factor (n) at maximum weight:

**Normal Category**
- Flaps Up: +3.8
- Flaps Down: +2
  - 1.52
  - 0

**Utility Category**
- Flaps Up: +4.4
  - 1.76
- Flaps Down: +2
  - 0

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot)

19. Baggage / Cargo Compartment: Maximum baggage compartment 40 kg (88 lb) at +1.93m aft of datum.

20. Wheels and Tires:
Main gear track: 2.63 m (8.36 ft)
Wheel tire size:
  rear: 380 x 150
  front: 355 x 135
Tire pressure: refer to following table
Oleo strut pressure: refer to following table

<table>
<thead>
<tr>
<th>Front gear</th>
<th>Main gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire</td>
<td>Oleo strut</td>
</tr>
<tr>
<td>2 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:
Elevator: up 25° ± 2°
  down 10° ± 2°
Ailerons: up 12° ± 2°
  down 15° ± 2°
Rudder: 25° ± 3°
Elevator tab:
  Flaps up
    Trim neutral position: 0° ± 3°
    Trim full down position: -12° ± 3° (up)
    Trim full up position: +37° ± 3° (down)
  Flaps down (30°)
    Trim neutral position: +16° ± 3°
    Trim full down position: -9° ± 3° (up)
    Trim full up position: +40° ± 3° (down)
Wing Flaps: 0° ± 2°
  30° ± 3°

22. Reserved

F.IV. Operating and Service Instructions

Airplane Flight Manual: Refer to latest amendment of service letter n°6
Airplane Maintenance Manual: Refer to latest amendment of service letter n°6

F.V. Note:
1. The certificated empty weight and the corresponding center of gravity location must include unusable fuel and undrainable oil of the engine.
2. This model is identical to the R3000/160 except the maximum continuous power limited to 2530 rpm. The origin of this limit is not the applicable airworthiness regulation.
SECTION G:  R 3000/180

G.I.  General

1.  a) Type:  R 3000/180
    b) Variant:  Not applicable
2.  Airworthiness Category:  Normal and Utility Category
3.  Type Certificate Holder:  C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4.  Manufacturer:  Avions ROBIN
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5.  (Reserved)
6.  DGAC Type Certification Date:  13 October 1983
7.  EASA Type Certification Date:  Transferred by Commission Regulation (EC) No. 1702/2003
8.  The EASA type Certificates replaces DGAC-France Type Certificate no 172

G.II.  Certification Basis

1.  Reference Date for determining the applicable requirements:  January 12, 1978
2.  (Reserved)
3.  (Reserved)
4.  Certification Basis:  FAR part 23
5.  Airworthiness Requirements:  FAR part 23 as amended by amendment 23-1 through 1-23 dated 12 January 1978
6.  Requirements elected to comply:  None
7.  EASA Special Conditions:  None
8.  EASA Exemptions:  None
9.  EASA Equivalent Safety Findings:  None

G.III.  Technical Characteristics and Operational Limitations

1.  (Reserved)
2.  Description:  Single-engine, four-seat, low-wing airplane, all-metal construction, fixed tricycle landing gear, T-tail.
3.  Equipment:  The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Stall warning system “Safe Flight” n°164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:
- Span ................... 9.81 m (32.18 ft)
- Height ................. 2.66 m (8.72 ft)
- Length ................. 7.51 m (24.64 ft)
- Wing Area ......... 14.47 m² (155.75 foot²)

5. Engines:
Lycoming O-360-A3A

The EASA type certification standard includes that of FAA TC E-286, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:
- Maximum Continuous power: ........................ 2700 rpm

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>76EM8 S5-0-64</td>
<td>1.93 m (*)</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
</tbody>
</table>

Remarks: (*) No acceptable diameter reduction for repair.

The EASA type certification standard includes that of FAA TC P4EA, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:
- 100 or 100LL octane minimum aviation grade gasoline
Refer to latest revision of Service Instruction Lycoming No. 1070.

7.2 Engine Oil:
Refer to latest revision of Service Instruction Lycoming No. 1014.

<table>
<thead>
<tr>
<th>Air temperature</th>
<th>Ashless dispersant (AD) grades</th>
<th>Mineral grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperature</td>
<td>SAE15W50 or SAE20W50</td>
<td>----</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE60</td>
<td>SAE60</td>
</tr>
<tr>
<td>Above 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (O°C à +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C à +30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>

7.3 Coolant:
- Not Applicable

8. Fluid capacities:

8.1 Fuel:
- Two structural wing tanks
  - Total capacity: ........................................... 228 liters
  - Usable quantity: ............................... 226 liters

8.2 Oil:
- Total capacity: ............................... 8 U.S. quarts (7.6 liters)
- Usable: ........................................... 6 U.S. quarts (5.7 liters)
9. Air speeds:

\[
\begin{align*}
V_{\text{NE}} & \quad 318 \text{ km/h (171 knots IAS)} \\
V_{\text{NO}} & \quad 252 \text{ km/h (136 knots IAS)} \\
V_{\text{A}} & \quad 216 \text{ km/h (116 knots IAS)} \\
V_{\text{FE}} & \quad 175 \text{ km/h (94 knots IAS)} \\
V_{\text{C}} & \quad 252 \text{ km/h (136 knots IAS)} \\
V_{\text{D}} & \quad 358 \text{ km/h (193 knots IAS)}
\end{align*}
\]

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.
11. Operational Capability: Refer to approved aircraft flight manual.
12. Maximum Masses:

<table>
<thead>
<tr>
<th>Category</th>
<th>Take-off and landing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Category</td>
<td>1150 kg (2535 lb.)</td>
</tr>
<tr>
<td>Utility Category</td>
<td>1000 kg (2205 lb.)</td>
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13. Centre of Gravity Range:

![Weight and balance envelope diagram]

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Cord length at reference section: 1.612 m (5.28ft).

15. Load factor (n) at maximum weight:

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   Flaps down (30°)
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22. Reserved

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ADMINISTRATIVE SECTION

I. Acronyms

II. Type Certificate Holder Record

Société Avions Pierre Robin
Société Avions Robin
ROBIN Aviation
APEX Aircraft

III. Change Record

<table>
<thead>
<tr>
<th>Issue 1</th>
<th>10 May 2013</th>
<th>Initial issue on transfer of this Type Certificate to CEAPR</th>
</tr>
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<tr>
<td></td>
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