## TYPE-CERTIFICATE DATA SHEET

NO. EASA.A.367

for

DR 200, DR 300 AND DR 400 SERIES

Type Certificate Holder

c.e.a.p.r.

1 route de TROYES
21121, DAROIS
FRANCE

For models:

<table>
<thead>
<tr>
<th>Model</th>
<th>Model</th>
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<th>Model</th>
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<td>Section S:</td>
<td>DR 300/180 R</td>
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<td>DR 300/140</td>
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<td>DR 300/120</td>
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<td>DR 400/160</td>
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<td>DR 400/180</td>
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<td>Section AA:</td>
<td>DR 400/180 R</td>
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<td>Section BB:</td>
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<td>Section EE:</td>
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<td>Section FF:</td>
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<td>Section II:</td>
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<td>Section KK:</td>
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<td>Section MM:</td>
<td>DR 400/200 R</td>
<td>160</td>
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<td>Section NN:</td>
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<tr>
<td>Section OO:</td>
<td>DR400/200 I</td>
<td>168</td>
</tr>
<tr>
<td>Section PP: Common Notes</td>
<td>172</td>
<td></td>
</tr>
</tbody>
</table>
Section A: DR 200

A.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 200
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Centre Est Aéronautique
   Boîte Postale 40
   21 DIJON
   FRANCE
   Avions P. Robin
   21121 FONTAINE LES DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: April 06, 1965
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 34.

A.II Certification Basis

1. Reference Date for determining the applicable requirements: 30 October 1964
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None.

A.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.
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 must be installed.
4. Dimensions: Span............8.72 m  (28.61 ft)
               Height..........1.83 m    (6.00 ft)
               Length.........6.68 m     (21.92 ft)
               Wing Area.......14.15 m²  (152.31 ft²)

5. Engines: POTEZ 4 E 20 B

5.1 Engine Limits: Maximum Continuous Power: 2750 rpm (105 HP, 77 kW)

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>Légère</td>
<td>2102 RA (pitch - 0,5)</td>
<td>1.80 m</td>
<td>2</td>
<td>2400 rpm</td>
</tr>
<tr>
<td>Ratier</td>
<td>FH-110R (pitch 62.5°)</td>
<td>1.75 m</td>
<td>2</td>
<td>2400 rpm</td>
</tr>
</tbody>
</table>

7. Fluids:

7.1 Fuel: 100 octane minimum aviation gasoline grade.
7.2 Engine Oil: below 0°C (30°F): SAE 30 (AERO 65) above 0°C (30°F): SAE 40 (AERO 80)

8. Fluid capacities:

8.1 Fuel: Wing tanks: 2 x 40 liters
          Main fuel tank capacity: 55 liters
          Usable the last 5 liters are only usable during level flight

8.2 Oil: Oil sump capacity: 4.5 liters (4.8 U.S. quarts)

9. Air speeds:

| V_{NE} | 275 km/h (148.5 knots IAS) |
| V_{NO} | 240 km/h (130 knots IAS)   |
| V_{A}  | 178 km/h (92 knots IAS)    |
| V_{FE} | 150 km/h (81 knots IAS)    |
| V_{C}  | 240 km/h (130 knots IAS)   |

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

Take-Off: 850 kg (1874 lb)
Landing: 850 kg (1874 lb)

13. Centre of Gravity Range:

Forward limit (18.1 % ref.): 0.31 m aft of datum
Aft limit (32.1 % ref.): 0.55 m aft of datum

14. Datum: Leading edge of the rectangular part of the wing.
           Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:

Flaps retracted positive n ..........+ 3.8
Flaps retracted negative n ..........- 1.52

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.42 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.42 ±0.05 m and 2 at 1.16m aft of datum.

19. Baggage/cargo compartment

Maximum baggage compartment 20 kg at 1.85m aft of datum, within weight and balance limits.
20. Wheels and Tires

- Main gear track: 2.59 m (8.5ft)
- Wheel tire size:
  - main gear wheel: 380 x 150
  - tail wheel: 6 x 2
- Tire pressure: 1.8 kg/cm²

21. Control surface movements:

- Elevator:
  - up: 9.5° ± 0.5°
  - down: 12° ± 0.5°
- Ailerons:
  - up: 12° ± 0.5°
  - down: 12° ± 0.5°
- Rudder L & R:
  - 25° (+0°; -3°) before differential braking
  - right: 18°
  - left: 15°
- Elevator trim tab (manual):
  - Elevator nose down
    - Tab down position: 4° ± 1°
    - Tab up position: 30° ± 1°
  - Elevator nose up
    - Tab down position: -11° ± 1°
    - Tab up position: -16° ± 1°
- Wing Flaps:
  - 1st notch: 20° ± 3°
  - 2nd notch: 45° ± 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
- Airplane Major Inspection Schedule: Refer to latest amendment of service letter n°6

A.V Note:
Section B: DR 220

B.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 220
2. Airworthiness Category: Normal Category and Utility Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DARIOIS
   FRANCE
4. Manufacturer: Centre Est Aéronautique
   Boîte Postale 38
   21 DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: June 24, 1966
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 40.

B.II Certification Basis

1. Reference Date for determining the applicable requirements: 15 November 1965
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment May 1st 1965
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

B.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.
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 must be installed.
4. Dimensions:

Span...............8.72 m (28.6 ft)
Height...............1.90 m (6.2 ft)
Length...............6.80 m (22.3 ft)
Wing Area........13.60 m² (146.4 ft²)

5. Engines:

Continental (or Rolls Royce) O-200A

The EASA type certification standard includes that of FAA TC E-252, 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: 2750 rpm (100 HP, 74.5 kW)

6. Propellers:

<table>
<thead>
<tr>
<th>Make</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>Légère</td>
<td>2102 RA (pitch – 0.5)</td>
<td>1.80 m</td>
<td>2</td>
<td>2350 rpm</td>
</tr>
<tr>
<td>Légère</td>
<td>2102 RA (pitch - 0°)</td>
<td>1.80 m</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
<tr>
<td>Mac Cauley</td>
<td>1B90ECM7250</td>
<td>1.83 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>Jodel Evra</td>
<td>D11-28-7C</td>
<td>1.76 m</td>
<td>2</td>
<td>2250 rpm</td>
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<tr>
<td>Ratier</td>
<td>FH-110R (pitch-3)</td>
<td>1.74 m</td>
<td>2</td>
<td>2300 rpm</td>
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<td>Ratier</td>
<td>FH110 (cal-3)</td>
<td>1.85 m</td>
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<td>2300 rpm</td>
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7. Fluids:

7.1 Fuel:

80/87 octane, minimum aviation grade gasoline.

7.2 Engine Oil:

<table>
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<tr>
<th>Temperature</th>
<th>Aviation grade</th>
<th>SAE grade</th>
<th>Multi-viscosity</th>
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<td>below 40°F (5°C)</td>
<td>65</td>
<td>30</td>
<td>10W-30 / 15W-50 / 20W-50</td>
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<tr>
<td>above 40°F (5°C)</td>
<td>80</td>
<td>50</td>
<td>15W-50 / 20W-50 / 20W-60</td>
</tr>
</tbody>
</table>

8. Fluid capacities:

8.1 Fuel:

Main fuel tank capacity:......................... 110 liters
Usable the last 5 liters are only usable during level flight
Supplemental fuel tank capacity:....................... 50 liters

8.2 Oil:

Oil sump capacity............................. 5.7 liters (6 U.S. quarts)

9. Air speeds:

\[ V_{NE} \] .........................270 km/h (146 knots IAS)
\[ V_{NO} \] ............................210 km/h (113 knots IAS)
\[ V_A \] .............................170 km/h (92 knots IAS)
\[ V_{FE} \] ............................150 km/h (81 knots IAS)
\[ V_C \] .............................210 km/h (113 knots IAS)

10. Maximum Operating Altitude:

Refer to approved aircraft flight manual.

11. Operational Capability:

Refer to approved aircraft flight manual.

.. In Normal Category, all aerobatic maneuvers, including spins, are forbidden.
12. Maximum Masses:

<table>
<thead>
<tr>
<th>Category</th>
<th>Take-Off (kg)</th>
<th>Landing (kg)</th>
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<tr>
<td>Utility</td>
<td>T/O &amp; Ldg.</td>
<td>700</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

**Normal category**
- Forward limit (19.9% ref.): 0.34 m aft of datum at 550 kg
- Intermediate limit (24.5% ref.): 0.42 m aft of datum at 780 kg
- Aft limit (33.9% ref.): 0.58 m aft of datum at 780 kg

**Utility categories**
- Forward limit (19.9% ref.): 0.34 m aft of datum at 550 kg
- Intermediate limit (22.8% ref.): 0.39 m aft of datum at 700 kg
- Aft limit (26.9% ref.): 0.46 m aft of datum at 700 kg

![Weight and balance envelope](image)

14. Datum:

Leading edge of the rectangular part of the wing.
Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:

**Normal Category:**
- Flaps up: + 3.8
- Flaps up: - 1.52
- Flaps down: + 2

**Utility Category:**
- Flaps up: + 4.4
- Flaps up: - 1.76
- Flaps down: + 2

16. Leveling Means:

Horizontal reference upper fuselage spar.

17. Minimum Flight Crew:

1 (pilot) at 1 at 0.43 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.43 ±0.05 m and 2 (maximum 90kg) at 1.22m aft of datum

The rear seats can be used only if seat belts are provided and if weight and balance are respected.

Rear seats must not be used in utility category.

19. Wheels and Tires

- Main gear track: 2.59 m (ft)
- Wheel tire size: main gear wheel: 380 x 150
- Tail wheel: 6 x 2
- Tire pressure: 1.6 kg/cm²
20. Control surface movements:

   Elevator: up..................... 9°30’ (+0°; -0°30’)
             down.................... 12° (+0°; -0°30’)

   Ailerons: up..................... 12° (+0°; -0°30’)
             down.................... 12° (+0°; -0°30’)
             neutral: trailing edge aligned on flaps

   Rudder L & R: ........................................ 28° (0°; +2°)
                 before differential braking ...... 15° (0°; +2°)

   Elevator anti tab:
       Elevator up
         Tab down position: ...................... 28°
         Tab up position: ........................ 6°30’

       Elevator down
         Tab down position: ........................ 12°30’
         Tab up position: ......................... 16°30’

   Wing Flaps: 1st notch.................... 20° ± 2°
                2nd notch....................... 60° ± 2°

21. (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
   Airplane Major Inspection Schedule................... Refer to latest amendment of service letter n°6

B.V Note:

(Reserved)
Section C: DR 220 A

C.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 220 A
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: Centre Est Aéronautique
   Boîte Postale 38
   21 DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: January 4, 1967
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 40.

C.II Certification Basis

1. Reference Date for determining the applicable requirements: 15 November 1965
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment May 1st 1965
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

C.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.
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 must be installed.
4. Dimensions:

- Span: 8.72 m (28.6 ft)
- Height: 1.90 m (6.2 ft)
- Length: 6.80 m (22.3 ft)
- Wing Area: 13.60 m² (146.4 ft²)

5. Engines:

Continental (or Rolls Royce) O-200A

The EASA type certification standard includes that of FAA TC E-252, 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: 2750 rpm (100 HP, 74.5 kW)

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<td>D11-28-7C</td>
<td>1.76</td>
<td>2</td>
<td>2250 rpm</td>
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<tr>
<td>Légère</td>
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<td>1.80</td>
<td>2</td>
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<tr>
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<td>FH110 (cal - 3)</td>
<td>1.85</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
</tbody>
</table>

7. Fluids:

7.1 Fuel:

80/87 octane, minimum aviation grade gasoline.

7.2 Engine Oil:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Aviation grade</th>
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<td>below 40°F (5°C)</td>
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<td>80</td>
<td>50</td>
<td>15W-50 / 20W-50 / 20W-60</td>
</tr>
</tbody>
</table>

8. Fluid capacities:

8.1 Fuel:

Main fuel tank capacity: 110 liters

Usable: the last 5 liters are only usable during level flight

Supplemental fuel tank capacity: 50 liters

8.2 Oil:

Oil sump capacity: 5.7 liters (6 U.S. quarts)

9. Air speeds:

- $V_{NE}$: 290 km/h (157 knots IAS)
- $V_{NO}$: 216 km/h (117 knots IAS)
- $V_{A}$: 190 km/h (103 knots IAS)
- $V_{FE}$: 150 km/h (81 knots IAS)
- $V_{C}$: 216 km/h (117 knots IAS)

10. Maximum Operating Altitude:

Refer to approved aircraft flight manual.

11. Operational Capability:

Refer to approved aircraft flight manual.

.. In Normal Category, all aerobatic maneuvers, including spins, are forbidden.
12. Maximum Masses:
   Normal Category
   Take-Off: ............................ 780 kg
   Landing: ................................ 780 kg
   Utility category
   T/O & Ldg: ............................ 780 kg

13. Centre of Gravity Range:
   Normal category
   Forward limit (18.1 % ref.): 0.31 m aft of datum at 500 kg
   Intermediate limit (25.7 % ref.): 0.44 m aft of datum at 780 kg
   Aft limit (33.9 % ref.): 0.58 m aft of datum at 780 kg
   Utility categories
   Forward limit (18.1 % ref.): 0.31 m aft of datum at 500 kg
   Intermediate limit (25.7 % ref.): 0.44 m aft of datum at 780 kg
   Aft limit (29.8 % ref.): 0.51 m aft of datum at 780 kg

14. Datum:
   Leading edge of the rectangular part of the wing.
   Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:
   Normal Category:
   Flaps up: + 3.8
   Flaps up: - 1.52
   Flaps down: + 2

   Utility Category:
   Flaps up: + 4.4
   Flaps up: - 1.76
   Flaps down: + 2

16. Leveling Means:
   Horizontal reference upper fuselage spar

17. Minimum Flight Crew:
   1 (pilot) at 0.43 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:
   1 at 0.43 ±0.05 m and 2 (maximum 110kg) at 1.22m aft of datum
   The rear seats can be used only if seat belts are provided and if weight and balance are respected.
   Rear seats must not be used in utility category.

19. Wheels and Tires
   Main gear track: ................................ 2.59 m (ft)
   Wheel tire size
   main gear wheel: 380 x 150
   tail wheel: ............................ 6 x 2
   Tire pressure: ................................ 1.6 kg/cm²
20. Control surface movements:

Elevator:
- up: 9°30 (0°; +0°; -0°30')
- down: 12° (+0°; -0°30')

Ailerons:
- up: 12° (+0°; -0°30')
- down: 12° (+0°; -0°30')
  - neutral: trailing edge aligned on flaps

Rudder L & R:
- 28° (0°; +2°)
  - before differential braking: 15° (0°; +2°)

Elevator anti tab:
- Elevator up
  - Tab down position: 28°
  - Tab up position: 6°30
- Elevator down
  - Tab down position: 12°30
  - Tab up position: 16°30

Wing Flaps:
- 1st notch: 20° ± 2°
- 2nd notch: 60° ± 2°

21. (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

Airplane Major Inspection Schedule
Refer to latest amendment of service letter n°6

C.V Note:

1. This model is identical to DR220 except wing structure and landing gear.
Section D:  DR 220 B

D.I  General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 220 B
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: Centre Est Aéronautique
   Boîte Postale 38
   21 DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: July 20, 1968
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces ....................... DGAC-France Type Certificate no. 40.

D.II  Certification Basis

1. Reference Date for determining the applicable requirements: 15 November 1965
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment May 1st 1965
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

D.III  Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.
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 must be installed.
4. Dimensions:

Span...............8.72 m (28.6 ft)
Height...............1.90 m (6.2 ft)
Length...............6.80 m (22.3 ft)
Wing Area...........13.60 m² (146.4 ft²)

5. Engines:

Continental (or Rolls Royce) O-200A

The EASA type certification standard includes that of FAA TC E-252, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards conforming 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: 2750 rpm (100 hp, 74.5 kW)

6. Propellers:

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Légère</td>
<td>2102 RA (pitch - 0,5)</td>
<td>1.80 m</td>
<td>2 2350 rpm</td>
</tr>
<tr>
<td>Légère</td>
<td>2102 RA (pitch - 0°)</td>
<td>1.80 m</td>
<td>2 2300 rpm</td>
</tr>
<tr>
<td>Mac Cauley</td>
<td>1B90ECM7250</td>
<td>1.83 m</td>
<td>2 2250 rpm</td>
</tr>
<tr>
<td>Jodel Etra</td>
<td>D11-28-7C</td>
<td>1.76 m</td>
<td>2 2250 rpm</td>
</tr>
<tr>
<td>Ratier</td>
<td>FH110R (pitch-3)</td>
<td>1.74 m</td>
<td>2 2300 rpm</td>
</tr>
<tr>
<td>Ratier</td>
<td>FH110 (cal-3)</td>
<td>1.85 m</td>
<td>2 2300 rpm</td>
</tr>
</tbody>
</table>

7. Fluids:

7.1 Fuel:

80/87 octane, minimum aviation grade gasoline.

7.2 Engine Oil:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Aviation grade</th>
<th>SAE grade</th>
<th>Multi-viscosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>below 40°F (5°C)</td>
<td>65</td>
<td>30</td>
<td>10W-30 / 15W-50 / 20W-50</td>
</tr>
<tr>
<td>above 40°F (5°C)</td>
<td>80</td>
<td>50</td>
<td>15W-50 / 20W-50 / 20W-60</td>
</tr>
</tbody>
</table>

8. Fluid capacities:

8.1 Fuel:

Main fuel tank capacity: ...................... 110 liters
Usable the last 5 liters are only usable during level flight
Supplemental fuel tank capacity: ...................... 50 liters

8.2 Oil:

Oil sump capacity: ...................... 5.7 liters (6 U.S. quarts)

9. Air speeds:

\[ V_{NE} \] ...................... 270 km/h (146 knots IAS)
\[ V_{NO} \] ...................... 210 km/h (113 knots IAS)
\[ V_{A} \] ...................... 170 km/h (92 knots IAS)
\[ V_{FE} \] ...................... 150 km/h (81 knots IAS)
\[ V_{C} \] ...................... 210 km/h (113 knots IAS)

10. Maximum Operating Altitude:

Refer to approved aircraft flight manual.

11. Operational Capability:

Refer to approved aircraft flight manual.

.. In Normal Category, all aerobatic maneuvers, including spins, are forbidden.
12. Maximum Masses:  
Normal Category  
- Take-Off: 780 kg  
- Landing: 741 kg  
Utility category  
- T/O & Ldg: 700 kg  

13. Centre of Gravity Range:  
Normal category  
- Forward limit (19.9 % ref.): 0.34 m aft of datum at 550 kg  
- Intermediate limit (25.6 % ref.): 0.42 m aft of datum at 780 kg  
- Aft limit (33.9 % ref.): 0.58 m aft of datum at 780 kg  
Utility categories  
- Forward limit (19.9 % ref.): 0.34 m aft of datum at 550 kg  
- Intermediate limit (22.8 % ref.): 0.39 m aft of datum at 700 kg  
- Aft limit (26.9 % ref.): 0.46 m aft of datum at 700 kg  

14. Datum:  
Leading edge of the rectangular part of the wing.  
Chord length at reference section: 1.71 m.  

15. Load factor (n) at maximum weight: Normal Category:  
- Flaps up: +3.8  
- Flaps up: -1.52  
- Flaps down: +2  
Utility Category:  
- Flaps up: +4.4  
- Flaps up: -1.76  
- Flaps down: +2  

16. Leveling Means:  
Horizontal reference upper fuselage spar  
17. Minimum Flight Crew:  
1 (pilot) at 0.43 ±0.05 m aft of datum  
18. Maximum Passenger Seating Capacity:  
1 at 0.43 ±0.05 m and 2 (maximum 90kg) at 1.22m aft of datum  
The rear seats can be used only if seat belts are provided and if weight and balance are respected.  
Rear seats must not be used in utility category.  
19. Wheels and Tires  
Main gear track: 2.59 m (ft)  
Wheel tire size:  
- main gear wheel: 380 x 150  
- tail wheel: 6 x 2  
Tire pressure: 1.6 kg/cm²
20. Control surface movements:

Elevator:
- up: 9°30 (+0°; -0°30°)
- down: 12° (+0°; -0°30°)

Ailerons:
- up: 12° (+0°; -0°30°)
- down: 12° (+0°; -0°30°)

Neutral: trailing edge aligned on flaps

Rudder L & R:
- up: 28° (0°; +2°)
- down: 15° (0°; +2°)

Elevator anti tab:
- Elevator up
  - Tab down position: 28°
  - Tab up position: 6°30
- Elevator down
  - Tab down position: 12°30
  - Tab up position: 16°30

Wing Flaps:
- 1st notch: 20° ± 2°
- 2nd notch: 60° ± 2°

21. (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
Airplane Major Inspection Schedule Refer to latest amendment of service letter n°6

D.V Note:

1. This model is identical to DR220 except leading edge profile of trapezoidal wing part.
Section E: DR 220 AB

E.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 220 AB
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: Centre Est Aéronautique
   Boîte Postale 38
   21 DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: July 20, 1968
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 40.

E.II Certification Basis

1. Reference Date for determining the applicable requirements: 15 November 1965
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment May 1st 1965
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

E.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.
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 must be installed.
4. Dimensions:

Span..................8.72 m (28.6 ft)
Height................1.90 m (6.2 ft)
Length...............6.80 m (22.3 ft)
Wing Area...........13.60 m² (146.4 ft²)

5. Engines:

Continental (or Rolls Royce) O-200A

The EASA type certification standard includes that of FAA TC E-252, 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: 2750 rpm – 100 HP (74.5 kW)

6. Propellers:

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Légère</td>
<td>2102 RA (pitch - 0°)</td>
<td>1.80 m</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
<tr>
<td>Mac Cauley</td>
<td>1B90ECM7250</td>
<td>1.83 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>Jodel Eva</td>
<td>D11-28-7C</td>
<td>1.76 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>Ratier</td>
<td>FH-110R (pitch-3)</td>
<td>1.74 m</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
<tr>
<td>Ratier</td>
<td>FH110 (cal-3)</td>
<td>1.85 m</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
</tbody>
</table>

7. Fluids:

7.1 Fuel:

80/87 octane, minimum aviation grade gasoline.

7.2 Engine Oil:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Aviation grade</th>
<th>SAE grade</th>
<th>Multi-viscosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>below 40°F (5°C)</td>
<td>65</td>
<td>30</td>
<td>10W-30 / 15W-50 / 20W-50</td>
</tr>
<tr>
<td>above 40°F (5°C)</td>
<td>80</td>
<td>50</td>
<td>15W-50 / 20W-50 / 20W-60</td>
</tr>
</tbody>
</table>

8. Fluid capacities:

8.1 Fuel:

Main fuel tank capacity: 110 liters
Usable the last 5 liters are only usable during level flight
Supplemental fuel tank capacity: 50 liters

8.2 Oil:

Oil sump capacity: 5.7 liters (6 U.S. quarts)

9. Air speeds:

\[ V_{NE} = 290 \text{ km/h (157 knots IAS)} \]
\[ V_{NO} = 216 \text{ km/h (117 knots IAS)} \]
\[ V_{A} = 190 \text{ km/h (103 knots IAS)} \]
\[ V_{FE} = 150 \text{ km/h (81 knots IAS)} \]
\[ V_{C} = 216 \text{ km/h (117 knots IAS)} \]

10. Maximum Operating Altitude:

Refer to approved aircraft flight manual.

11. Operational Capability:

In Normal Category, all aerobatic maneuvers, including spins, are forbidden.

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12. Maximum Masses:

<table>
<thead>
<tr>
<th>Category</th>
<th>Take-Off</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>780 kg</td>
<td>780 kg</td>
</tr>
<tr>
<td>Utility</td>
<td>T/O &amp; Ldg</td>
<td>780 kg</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

<table>
<thead>
<tr>
<th>Category</th>
<th>Forward limit</th>
<th>Intermediate limit</th>
<th>Aft limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>0.31 m</td>
<td>0.44 m</td>
<td>0.58 m</td>
</tr>
<tr>
<td>Utility</td>
<td>0.31 m</td>
<td>0.44 m</td>
<td>0.51 m</td>
</tr>
</tbody>
</table>

14. Datum:

Leading edge of the rectangular part of the wing. 
Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:

<table>
<thead>
<tr>
<th>Category</th>
<th>Flaps up</th>
<th>Flaps down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>+ 3.8</td>
<td>+ 2</td>
</tr>
<tr>
<td>Utility</td>
<td>+ 4.4</td>
<td>+ 2</td>
</tr>
</tbody>
</table>

16. Leveling Means:

Horizontal reference upper fuselage spar

17. Minimum Flight Crew:
1 (pilot) at 0.43 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.43 ±0.05 m and 2 (maximum 110kg) at 1.22 m aft of datum

The rear seats can be used only if seat belts are provided and weight and balance are respected.

Rear seats must not be used in utility category.

19. Wheels and Tires:

<table>
<thead>
<tr>
<th>Component</th>
<th>Size</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main gear track</td>
<td>380 x 150</td>
<td>2.59 m (ft)</td>
</tr>
<tr>
<td>Tail wheel</td>
<td>6 x 2</td>
<td>1.6 kg/cm²</td>
</tr>
</tbody>
</table>

---

TCDS No: EASA.A.367

DR 200, DR 300 and DR 400 series

DR 220 AB

Date: 07 December 2018

Max. Masses:

- Normal Category: Take-Off: 780 kg, Landing: 780 kg
- Utility Category: Take-Off & Landing: 780 kg

Centre of Gravity Range:

- Normal Category:
  - Forward limit (18.1% ref.): 0.31 m aft of datum at 500 kg
  - Intermediate limit (25.7% ref.): 0.44 m aft of datum at 780 kg
  - Aft limit (33.9% ref.): 0.58 m aft of datum at 780 kg

- Utility Category:
  - Forward limit (18.1% ref.): 0.31 m aft of datum at 500 kg
  - Intermediate limit (25.7% ref.): 0.44 m aft of datum at 780 kg
  - Aft limit (29.8% ref.): 0.51 m aft of datum at 780 kg

Datum: Leading edge of the rectangular part of the wing. Chord length at reference section: 1.71 m.

Load factor (n) at maximum weight:

- Normal Category:
  - Flaps up: +3.8
  - Flaps up: -1.52
  - Flaps down: +2

- Utility Category:
  - Flaps up: +4.4
  - Flaps up: -1.76
  - Flaps down: +2

Leveling Means: Horizontal reference upper fuselage spar

Minimum Flight Crew: 1 (pilot) at 0.43 ±0.05 m aft of datum

Maximum Passenger Seating Capacity:

1 at 0.43 ±0.05 m and 2 (maximum 110kg) at 1.22 m aft of datum

Rear seats can be used only if seat belts are provided and weight and balance are respected.

Rear seats must not be used in utility category.

Wheels and Tires:

Main gear track: 380 x 150
Tail wheel: 6 x 2
Tire pressure: 1.6 kg/cm²
20. Control surface movements:

Elevator:
- up.................. 9°30 (+0°; -0°30')
- down............. 12° (+0°; -0°30')

Ailerons:
- up.................. 12° (+0°; -0°30')
- down............. 12° (+0°; -0°30')
  neutral: trailing edge aligned on flaps

Rudder L & R: ........................................... 28° (0°; +2°)
  before differential braking ....... 15° (0°; +2°)

Elevator anti tab:
- Elevator up
  Tab down position: .................... 28°
  Tab up position: .................... 6°30
- Elevator down
  Tab down position: .................... 12°30
  Tab up position: .................... 16°30

Wing Flaps:
- 1st notch.................. 20° ± 2°
- 2nd notch.................. 60° ± 2°

21. (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
Airplane Major Inspection Schedule........ Refer to latest amendment of service letter n°6

E.V Note:

1. This model is identical to DR220A except leading edge profile of trapezoidal wing part.
Section F: DR 221

F.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 221
2. Airworthiness Category: Normal Category and Utility Category
3. Type Certificate Holder: C.E.A.P.R.  
   1 route de Troyes  
   21121 DAROIS  
   FRANCE
4. Manufacturer: Centre Est Aéronautique  
   Boîte Postale 38  
   21 DIJON  
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: April 25, 1967
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 40.

F.II Certification Basis

1. Reference Date for determining the applicable requirements: 24 march 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment May 1st 1965
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

F.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.
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 must be installed.
4. Dimensions:  
   Span.................8.72 m (28.6 ft)  
   Height...............1.90 m (6.2 ft)  
   Length.............6.80 m (22.3 ft)
5. Engines: Lycoming O-235-C2A
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:
Takeoff (max 5 minutes): 2800 rpm – 115 HP (85 kW)
Maximum Continuous power: 2600 rpm – 108 HP (79.5 kW)

6. Propellers:

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Diameter</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac Cauley</td>
<td>1A105BCM7056</td>
<td>1.78 m</td>
<td>2</td>
<td>2400 rpm (Note 1)</td>
</tr>
<tr>
<td>Jodel Evra</td>
<td>88-75-34-F</td>
<td>1.76 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
</tbody>
</table>

Note 1: Maximum RPM: 2600 rpm

7. Fluids:
7.1 Fuel: 80/87 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 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>

8. Fluid capacities:
8.1 Fuel: Main fuel tank capacity: 110 liters
Usable: the last 5 liters are only usable during level flight
Supplemental fuel tank capacity: 50 liters

8.2 Oil: Oil sump capacity: 6 U.S. quarts (5.7 liters)
Usable: 4 U.S. quarts (3.8 liters)

9. Air speeds:

<table>
<thead>
<tr>
<th>Speeds</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VNE</td>
<td>290 km/h    (157 knots IAS)</td>
</tr>
<tr>
<td>VNO</td>
<td>216 km/h    (117 knots IAS)</td>
</tr>
<tr>
<td>VA</td>
<td>190 km/h    (103 knots IAS)</td>
</tr>
<tr>
<td>VFE</td>
<td>150 km/h    (81 knots IAS)</td>
</tr>
<tr>
<td>VC</td>
<td>216 km/h    (117 knots IAS)</td>
</tr>
</tbody>
</table>

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.
11. Operational Capability: Refer to approved aircraft flight manual.
.In Normal Category, all aerobatic maneuvers, including spins, are forbidden.
12. Maximum Masses: Normal Category Take-Off: 840 kg
13. Centre of Gravity Range:

**Normal category**
- Forward limit (18.1 % ref.): 0.31 m aft of datum at 600 kg
- Intermediate limit (27.5 % ref.): 0.47 m aft of datum at 840 kg
- Aft limit (33.9 % ref.): 0.58 m aft of datum at 840 kg

**Utility categories**
- Forward limit (18.1 % ref.): 0.31 m aft of datum at 600 kg
- Intermediate limit (25.1 % ref.): 0.43 m aft of datum at 780 kg
- Aft limit (29.8 % ref.): 0.51 m aft of datum at 780 kg

14. Datum:
Leading edge of the rectangular part of the wing.
Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:
**Normal Category:**
- Flaps up: +3.8
- Flaps up: -1.52
- Flaps down: +2

**Utility Category:**
- Flaps up: +4.4
- Flaps up: -1.76
- Flaps down: +2

16. Leveling Means:
Horizontal reference upper fuselage spar

17. Minimum Flight Crew:
1 (pilot) at 0.43 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:
1 at 0.43 ±0.05 m and 2 (maximum 120kg) at 1.22 m aft of datum
The rear seats can be used only if seat belts are provided and if weight and balance are respected.
Rear seats must not be used in utility category

19. Wheels and Tires:
- Main gear track: 2.59 m (ft)
- Wheel tire size: main gear wheel: 380 x 150
- tail wheel: 6 x 2
- Tire pressure: 1.8 kg/cm²
20. Control surface movements:

Elevator: up............... 9°30 (+0°; -0°30')
          down............. 12° (+0°; -0°30')

Ailerons: up................ 12° (+0°; -0°30')
          down...............12° (+0°; -0°30')
          neutral: trailing edge aligned on flaps

Rudder L & R........................................28° (0°; +2°)
before differential braking........15° (0°; +2°)

Elevator anti tab:

   Elevator up
      Tab down position: ...................... 29°30
      Tab up position: ............................ 10°

   Elevator down
      Tab down position: ............................. 8°30
      Tab up position: .............................. 13°30

Wing Flaps: 1st notch.................. 20° ± 2°
             2nd notch...................... 60° ± 2°

21. (Reserved)

F.IV  **Operating and Service Instructions**

   Airplane Flight Manual.......................... Refer to latest amendment of service letter n°6
   Airplane Minor inspection Schedule.......... Refer to latest amendment of service letter n°6
   Airplane Major inspection Schedule......... Refer to latest amendment of service letter n°6

F.V  **Note:**

1. This model is identical to DR220A except power plant and pitch tab deflection.
Section G: DR 221 B

G.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 221 B

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: Centre Est Aéronautique
   Boîte Postale 38
   21 DIJON
   FRANCE

5. (Reserved)

6. DGAC Type Certification Date: July 20, 1968

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

8. The EASA type Certificates replaces DGAC-France Type Certificate no. 40.

G.II Certification Basis

1. Reference Date for determining the applicable requirements: 24 march 1967

2. (Reserved)

3. (Reserved)

4. Certification Basis: France AIR2052

5. Airworthiness Requirements: France AIR2052, amendment May 1st 1965

6. Requirements elected to comply: None

7. EASA Special Conditions: None

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None

10. EASA Environmental Standards: None

G.III Technical Characteristics and Operational Limitations

1. (Reserved)

2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.

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 must be installed.

4. Dimensions:
   Span...............8.72 m (28.6 ft)
   Height.............1.90 m  (6.2 ft)
   Length............6.80 m  (22.3 ft)
5. Engines:
Lycoming O-235-C2A

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:
Takeoff (max 5 minutes): 2800 rpm – 115 HP (85 kW)
Maximum Continuous Power: 2600 rpm – 108 HP (79.5 kW)

6. Propellers:

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Diameter</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac Cauley</td>
<td>1A105BCM7056</td>
<td>1.78 m</td>
<td>2</td>
<td>2400 rpm (Note 1)</td>
</tr>
<tr>
<td>Jodel Evra</td>
<td>88-75-34-F</td>
<td>1.76 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
</tbody>
</table>

Note 1: Maximum RPM: 2600 rpm

7. Fluids:
7.1 Fuel:
80/87 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>SAE15W50 or SAE20W50</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>

8. Fluid capacities:
8.1 Fuel:
Main fuel tank capacity: 110 liters
Usable the last 5 liters are only usable during level flight
Supplemental fuel tank capacity: 50 liters

8.2 Oil:
Oil sump capacity: 6 U.S. quarts (5.7 liters)
Usable: 4 U.S. quarts (3.8 liters)

9. Air speeds:
\[ V_{NE} = 290 \text{ km/h (157 knots IAS)} \]
\[ V_{NO} = 216 \text{ km/h (117 knots IAS)} \]
\[ V_A = 190 \text{ km/h (103 knots IAS)} \]
\[ V_{FE} = 150 \text{ km/h (81 knots IAS)} \]
\[ V_C = 216 \text{ km/h (117 knots IAS)} \]

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

11. Operational Capability:
Refer to approved aircraft flight manual.
In Normal Category, all aerobatic maneuvers, including spins, are forbidden.

12. Maximum Masses:

<table>
<thead>
<tr>
<th>Category</th>
<th>T/O</th>
<th>Ldg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Category</td>
<td>840 kg</td>
<td>840 kg</td>
</tr>
<tr>
<td>Utility Category</td>
<td>780 kg</td>
<td>780 kg</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

**Normal category**
- Forward limit (18.1% ref.): 0.31 m aft of datum at 600 kg
- Intermediate limit (27.5% ref.): 0.47 m aft of datum at 840 kg
- Aft limit (33.9% ref.): 0.58 m aft of datum at 840 kg

**Utility categories**
- Forward limit (18.1% ref.): 0.31 m aft of datum at 600 kg
- Intermediate limit (25.1% ref.): 0.43 m aft of datum at 780 kg
- Aft limit (29.8% ref.): 0.51 m aft of datum at 780 kg

14. Datum:

Leading edge of the rectangular part of the wing.

Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:

**Normal Category**:
- Flaps up: +3.8
- Flaps up: -1.52
- Flaps down: +2

**Utility Category**:
- Flaps up: +4.4
- Flaps up: -1.76
- Flaps down: +2

16. Leveling Means:

Horizontal reference upper fuselage spar

17. Minimum Flight Crew:

1 (pilot) at 0.43 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.43 ±0.05 m and 2 (maximum 120kg) at 1.22m aft of datum

The rear seats can be used only if seat belts are provided and if weight and balance are respected.

Rear seats must not be used in utility category

19. Wheels and Tires:

Main gear track: 2.59 m (ft)
Wheel tire size
- main gear wheel: 380 x 150
- tail wheel: 6 x 2

Tire pressure: 1.8 kg/cm²

20. Control surface movements:

Elevator:
- up: 9°30 (+0°; -0°30°)
- down: 12° (+0°; -0°30°)

Ailerons:
- up: 12° (+0°; -0°30°)
- down: 12° (+0°; -0°30°)

Neutral: trailing edge aligned on flaps

Rudder L & R:
- 28° (0°; +2°)
- before differential braking: 15° (0°; +2°)

Elevator anti tab:

Elevator up
- Tab down position: 29°30
- Tab up position: 10°

Elevator down
- Tab down position: 8°30
- Tab up position: 13°30

Wing Flaps:
- 1st notch: 20° ± 2°
- 2nd notch: 60° ± 2°

G.IV Operating and Service Instructions

Airplane Flight Manual: Refer to latest amendment of service letter n°6
Airplane Minor inspection Schedule: Refer to latest amendment of service letter n°6
Airplane Major inspection Schedule: Refer to latest amendment of service letter n°6

G.V Note:

1. This model is identical to DR221 except leading edge profile of trapezoidal wing part.
Section H: DR 250

H.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 250
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Centre Est Aéronautique
   Boite Postale 40
   21 DIJON
   FRANCE
   Avions P. Robin
   21121 FONTAINE LES DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: May 25, 1965
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 34.

H.II Certification Basis

1. Reference Date for determining the applicable requirements: 18 May 1965
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment May 1st 1965
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None.

H.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.
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 must be installed.
4. Dimensions:

Span ............... 8.72 m  (28.61 ft)
Height .............. 1.86 m  (6.10 ft)
Length .............. 6.98 m  (22.90 ft)
Wing Area ........ 14.15 m² (152.31 ft²)

5. Engines:

Lycoming O-320 E2A (150 HP)

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 (152 HP, 112 kW)

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>HOFFMANN Croisière</td>
<td>FH2/LC23 180 155-6.5R</td>
<td>1.80 m</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>HOFFMANN</td>
<td>FH2/LC23 180-140-6,5 R</td>
<td>1.80 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>JODEL EVRA</td>
<td>91-78-34</td>
<td>1.84 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 6S5-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 6S5-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
</tbody>
</table>

Remark: (*) no diameter reduction for repairs.

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.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>ø</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARTZELL</td>
<td>HC-C2YL-1 7663-4</td>
<td>1.83 m</td>
<td>2</td>
<td>Hartzell H1</td>
<td>Constant speed</td>
</tr>
</tbody>
</table>

The EASA type certification standard includes that of FAA TC P-920, 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:

80/87 octane minimum aviation gasoline grade. 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>
</tbody>
</table>

8. Fluid capacities:

8.1 Fuel:
- **Wing tanks:** ........................................... 2 x 40 liters
- **Main fuel tank capacity:** .................................. 70 liters
- **Usable:** the last 7 liters are only usable during level flight
- **Supplemental fuel tank capacity:** .......................... 50 liters

8.2 Oil:
- **Oil sump capacity:** ........................................ 8 U.S. quarts (7.6 liters)
- **Usable** .................................................. 6 U.S. quarts (5.7 liters)

9. Air speeds:

<table>
<thead>
<tr>
<th>Speed</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>V_{NE}</td>
<td>295 km/h (159 knots IAS)</td>
</tr>
<tr>
<td>V_{NO}</td>
<td>260 km/h (140 knots IAS)</td>
</tr>
<tr>
<td>V_{A}</td>
<td>186 km/h (100 knots IAS)</td>
</tr>
<tr>
<td>V_{FE}</td>
<td>170 km/h (92 knots IAS)</td>
</tr>
<tr>
<td>V_{C}</td>
<td>260 km/h (140 knots IAS)</td>
</tr>
</tbody>
</table>

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

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

12. Maximum Masses:
- **Take-Off:** ............................................. 960 kg (2116.4 lb)
- **Landing:** .................................................. 920 kg (2028.3 lb)

13. Centre of Gravity Range:
- **Forward limit (17 % ref.):** ............................. 0.29 m aft of datum
- **Aft limit (33 % ref.):** .................................. 0.565 m aft of datum

14. Datum:
- **Leading edge of the rectangular part of the wing.**
- **Chord length at reference section:** 1.71 m.

15. Load factor (n) at maximum weight:
- **Flaps retracted positive n** .................... + 3.8
- **Flaps retracted negative n** ................... - 1.52

16. Levelling Means:
- **Horizontal reference upper fuselage spar**

17. Minimum Flight Crew:
- 1 (pilot) at 0.42 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:
- 1 at 0.42 ±0.05 m and 2 at 1.16 m aft of datum

19. Baggage/cargo compartment:
- Maximum baggage compartment 40 kg at 1.90 m aft of datum, within weight and balance limits. See note 1. “Supplementary rear fuel tank”.

20. Wheels and Tires:
- **Main gear track:** ........................................... 2.59 m (ft)
- **Wheel tire size main gear wheel:** .......................... 380 x 150
- **Tail wheel:** .................................................. 6 x 2
- **Tire pressure** .................................................. 2.2 kg/cm²

21. Control surface movements:
- **Elevator:**
  - **up** .................. 9.5° ± 0.5°
  - **down** .................. 12° ± 0.5°
- **Ailerons:**
  - **up** .................. 12° ± 0.5°
  - **down** .................. 12° ± 0.5°
- **Rudder L & R** ............................................ 25° (+0°; -3°)
before differential braking................right: 18°
  left: 15°

Elevator trim tab (manual):
  Elevator nose down
    Tab down position: ....................... 4° ± 1°
    Tab up position: ......................... 30° ± 1°
  Elevator nose up
    Tab down position: ...................... - 11° ± 1°
    Tab up position: ......................... - 16° ± 1°

Wing Flaps:
  1st notch................................. 20° ± 3°
  2nd notch................................. 60° ± 3°

22. (Reserved)

H.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
Airplane Major Inspection Schedule.............Refer to latest amendment of service letter n°6

H.V Note:

1. Supplementary rear fuel tank operation:

   Always use first 50 liters of fuel from rear main tank (more or less 1h40min) then transfer fuel
   from the supplementary tank to the rear main tank (by pulling the valve control located on the
   instrument panel).

   Balance limits with all 4 tanks full, load is generally limited to either:
   - 0 kg in luggage compartment (normal load on rear seats: 154 kg)
   Or
   - 100 kg on rear seats (40 kg in luggage compartment).

   FOR ALL LOADING, USE THE LOADING GRAPH

2. This model is identical to DR200 with Lycoming 0-320 E 2 A (150 HP) engine, longer and larger
   fuselage, flap deflection up to 60°, fuel capacity increased (rear and supplemental tank).
Section I: DR 250 - 160

I.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 250 - 160

2. Airworthiness Category: Normal Category

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

4. Manufacturer: Centre Est Aéronautique
   Boite Postale 40
   21 DIJON
   FRANCE
   Avions P. Robin
   21121 FONTAINE LES DIJON
   FRANCE

5. (Reserved)

6. DGAC Type Certification Date: September 09, 1965

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

8. The EASA Type Certificates replaces DGAC-France Type Certificate no. 34.

I.II Certification Basis

1. Reference Date for determining the applicable requirements: May 1965

2. (Reserved)

3. (Reserved)

4. Certification Basis: France AIR2052

5. Airworthiness Requirements: France AIR2052 amendment May 1st 1965

6. Requirements elected to comply: None

7. EASA Special Conditions: None

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None

10. EASA Environmental Standards: None.

I.III Technical Characteristics and Operational Limitations

1. (Reserved)

2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.

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 must be installed.
4. Dimensions:

Span .................. 8.72 m (28.61 ft)
Height ............... 1.86 m (6.10 ft)
Length .............. 6.98 m (22.90 ft)
Wing Area ........... 14.15 m² (152.31 ft²)

5. Engines:

Lycoming O-320 D2A (160 HP)

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 (162 HP, 119 kW)

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>HOFFMANN</td>
<td>FH2/LC23 180-155-6,5R</td>
<td>1.80 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>HOFFMANN</td>
<td>FH2/LC23 180-140-6,5R</td>
<td>1.80 m</td>
<td>2</td>
<td>2350 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 6S5-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 6S5-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-2-66</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 6S5-2-66</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>JODEL EVRA</td>
<td>91-86-34 F</td>
<td>1.82 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>JODEL EVRA</td>
<td>91-78-34 F</td>
<td>1.84 m</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
</tbody>
</table>

Remark: (*) no diameter reduction for repairs.

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 octane minimum aviation gasoline grade. 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>

8. Fluid capacities:

8.1 Fuel:

Wing tanks: .............................................. 2 x 40 liters
Main fuel tank capacity: .................................. 70 liters
Usable the last 7 liters are only usable during level flight
Supplemental fuel tank capacity: ........................ 50 liters

Oil:
Oil sump capacity: .......................... 8 U.S. quarts (7.6 liters)
Usable: ........................................ 6 U.S. quarts (5.7 liters)

9. Air speeds:
\[ V_{NE} \] ........................................ 295 km/h (159 knots IAS)
\[ V_{NO} \] ........................................ 260 km/h (140 knots IAS)
\[ V_{A} \] ........................................ 186 km/h (100 knots IAS)
\[ V_{FE} \] ........................................ 170 km/h (92 knots IAS)
\[ V_{C} \] ........................................ 260 km/h (140 knots IAS)

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

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

12. Maximum Masses:
Take-Off: ........................................ 960 kg (2116.4 lb)
Landing: ........................................ 920 kg (2028.3 lb)

13. Centre of Gravity Range:
Forward limit (17 % ref.): .............. 0.29 m aft of datum
Aft limit (33 % ref.): ...................... 0.565 m aft of datum

14. Datum:
Leading edge of the rectangular part of the wing.
Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:
Flaps retracted positive n ........... + 3.8
Flaps retracted negative n ........... - 1.52

16. Leveling Means:
Horizontal reference upper fuselage spar

17. Minimum Flight Crew:
1 (pilot) at 0.42 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.42 ±0.05 m aft and 2 at 1.16m aft of datum

19. Baggage/cargo compartment
Maximum baggage compartment 40 kg at 1.90m aft of datum, within weight and balance limits. See note 1. “Supplementary rear fuel tank”.

20. Wheels and Tires
Main gear track: ........................................ 2.59 m (ft)
Wheel tire size:
main gear wheel: ............... 380 x 150
tail wheel: ....................... 6 x 2
Tire pressure: ........................................ 2.2 kg/cm²

21. Control surface movements:
Elevator:
up ........................................ 9.5° ± 0.5°
down ....................................... 12° ± 0.5°
Ailerons:
up ........................................ 12° ± 0.5°
down ....................................... 12° ± 0.5°

Rudder L & R: ........................................ 25° (+0°; -3°)
before differential braking: right: 18°
left: 15°

Elevator trim tab (manual):
Elevator nose down
Tab down position: ...................... 4° ± 1°
Tab up position: ...................... 30° ± 1°

Elevator nose up
Tab down position: ...................... - 11° ± 1°
Tab up position: ....................... - 16° ± 1°

Wing Flaps:
1st notch: ...................... 20° ± 3°
2nd notch: ...................... 60° ± 3°

22. (Reserved)
I.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
Airplane Major Inspection Schedule ............... Refer to latest amendment of service letter n°6

I.V **Note:**

1. Supplementary rear fuel tank operation:
   
   Always use first 50 liters of fuel from rear main tank (more or less 1h40min) then transfer fuel from the supplementary tank to the rear main tank (by pulling the valve control located on the instrument panel).
   
   Balance limits with all 4 tanks full, load is generally limited to either:
   
   - 0 kg in luggage compartment (normal load on rear seats: 154 kg)
   
   Or
   
   - 100 kg on rear seats (40 kg in luggage compartment).
   
   FOR ALL LOADING, USE THE LOADING GRAPH

2. This model is identical to DR250 with Lycoming 0-320 D 2 A (160 HP) engine.
Section J: **DR 250 B**

**J.I General**

1. **a)** Type: DR 200, DR 300 and DR 400 series
   
   **b)** Model: DR 250 B

2. **Airworthiness Category:** Normal Category

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

4. **Manufacturer:** Centre Est Aéronautique
   Boîte Postale 40
   21 DIJON
   FRANCE
   Avions P. Robin
   21121 FONTAINE LES DIJON
   FRANCE

5. (Reserved)

6. **DGAC Type Certification Date:** July 20, 1968

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

8. The EASA type Certificates replaces DGAC-France Type Certificate no. 34.

**J.II Certification Basis**

1. Reference Date for determining the applicable requirements: May 1965

2. (Reserved)

3. (Reserved)

4. **Certification Basis:** France AIR2052

5. **Airworthiness Requirements:** France AIR2052 amendment May 1st 1965

6. Requirements elected to comply: None

7. **EASA Special Conditions:** None

8. **EASA Exemptions:** None

9. **EASA Equivalent Safety Findings:** None

10. **EASA Environmental Standards:** None.

**J.III Technical Characteristics and Operational Limitations**

1. (Reserved)

2. **Description:** Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.

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 must be installed.
4. Dimensions:
Span.................8.72 m (28.61 ft)
Height...............1.86 m  (6.10 ft)
Length...............6.98 m  (22.90 ft)
Wing Area..........14.15 m² (152.31 ft²)

5. Engines:
Lycoming O-320 E2A (150 HP)

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 (152 HP, 112 kW)

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>HOFFMANN Croisière</td>
<td>FH2/LC23 180 155-6.5R</td>
<td>1.80 m</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>HOFFMANN</td>
<td>FH2/LC23 180-140-6,5 R</td>
<td>1.80 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>JODEL-EVRA</td>
<td>91-78-34</td>
<td>1.84 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 6S5-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 6S5-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
</tbody>
</table>

Remark: (*) no diameter reduction for repairs.

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.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Ø</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARTZELL</td>
<td>HC-C2YL-1 7663-4</td>
<td>1.83 m</td>
<td>2</td>
<td>Hartzell H1</td>
<td>Constant speed</td>
</tr>
</tbody>
</table>

The EASA type certification standard includes that of FAA TC P-920, 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:
80/87 octane minimum aviation gasoline grade. 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>SAE50</td>
<td>SAE60</td>
</tr>
</tbody>
</table>
8. Fluid capacities:

8.1 Fuel:
- Wing tanks: ........................................ 2 x 40 liters
- Main fuel tank capacity: .............................. 70 liters
- Usable: the last 7 liters are only usable during level flight
- Supplemental fuel tank capacity: ................. 50 liters

8.2 Oil:
- Oil sump capacity: ................................. 8 U.S. quarts (7.6 liters)
- Usable: ............................................. 6 U.S. quarts (5.7 liters)

9. Air speeds:
- \( V_{NE} \) .......................................... 295 km/h (159 knots IAS)
- \( V_{NO} \) .......................................... 260 km/h (140 knots IAS)
- \( V_A \) ............................................. 186 km/h (100 knots IAS)
- \( V_{FE} \) ........................................... 170 km/h (92 knots IAS)
- \( V_C \) ............................................. 260 km/h (140 knots IAS)

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

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

12. Maximum Masses:
- Take-Off: .......................................... 960 kg (2116.4 lb)
- Landing: ............................................ 920 kg (2028.3 lb)

13. Centre of Gravity Range:
- Forward limit (17% ref.): ......................... 0.29 m aft of datum
- Aft limit (33% ref.): ............................. 0.565 m aft of datum

14. Datum:
- Leading edge of the rectangular part of the wing.
- Chord length at reference section: 1.71 m.

15. Load factor (n) at maximum weight:
- Flaps retracted positive n .......... + 3.8
- Flaps retracted negative n .......... - 1.52

16. Leveling Means:
- Horizontal reference upper fuselage spar

17. Minimum Flight Crew:
1 (pilot) at 0.42 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:
1 at 0.42 ±0.05 m and 2 at 1.16m aft of datum.

19. Baggage/cargo compartment
- Maximum baggage compartment 40 kg at 1.90m aft of datum, within weight and balance limits. See note 1. "Supplementary rear fuel tank”.

20. Wheels and Tires
- Main gear track: .................................. 2.59 m (ft)
- Wheel tire size main gear wheel: .......... 380 x 150
- tail wheel: ........................................ 6 x 2
- Tire pressure: ....................................... 2.2 kg/cm²

21. Control surface movements:
- Elevator: up................................. 9.5° ± 0.5°
- down............................................. 12° ± 0.5°
- Ailerons: up................................. 12° ± 0.5°
- down............................................. 12° ± 0.5°
Rudder L & R: ........................................... 25° (+0°; -3°)
before differential braking ................ right: 18°
left: 15°

Elevator trim tab (manual):
Elevator nose down
Tab down position: .................. 4° ± 1°
Tab up position: .................. 30° ± 1°
Elevator nose up
Tab down position: ................. -11° ± 1°
Tab up position: .................. -16° ± 1°

Wing Flaps:
1st notch.................................. 20° ± 3°
2nd notch................................. 60° ± 3°

22. (Reserved)

J.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
Airplane Major Inspection Schedule ......... Refer to latest amendment of service letter n°6

J.V Note:

1. Supplementary rear fuel tank operation:

   Always use first 50 liters of fuel from rear main tank (more or less 1h40min) then transfer fuel
   from the supplementary tank to the rear main tank (by pulling the valve control located on the
   instrument panel).

   Balance limits with all 4 tanks full, load is generally limited to either:

   - 0 kg in luggage compartment (normal load on rear seats: 154 kg)
   Or

   - 100 kg on rear seats (40 kg in luggage compartment).

   FOR ALL LOADING, USE THE LOADING GRAPH

2. This model is identical to DR250 except the leading edge profile of trapezoidal wing part.
Section K: **DR 250 B - 160**

**K.I General**

1. **a) Type:** DR 200, DR 300 and DR 400 series  
   **b) Model:** DR 250 B - 160

2. **Airworthiness Category:** Normal Category

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

4. **Manufacturer:** Centre Est Aéronautique  
   Boîte Postale 40  
   21 DIJON  
   FRANCE
   Avions P. Robin  
   21121 FONTAINE LES DIJON  
   FRANCE

5. **(Reserved)**

6. **DGAC Type Certification Date:** July 20, 1968

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

8. The EASA type Certificates replaces DGAC-France Type Certificate no. 34.

**K.II Certification Basis**

1. **Reference Date for determining the applicable requirements:** May 1965

2. **(Reserved)**

3. **(Reserved)**

4. **Certification Basis:** France AIR2052

5. **Airworthiness Requirements:** France AIR2052 amendment May 1st 1965

6. **Requirements elected to comply:** None

7. **EASA Special Conditions:** None

8. **EASA Exemptions:** None

9. **EASA Equivalent Safety Findings:** None

10. **EASA Environmental Standards:** None

**K.III Technical Characteristics and Operational Limitations**

1. **(Reserved)**

2. **Description:** Single-engine, four-seat, low-wing airplane, wooden construction, fixed conventional landing gear.

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 must be installed.
4. Dimensions:

Span...............8.72 m  (28.61 ft)
Height.............1.86 m  (6.10 ft)
Length............6.98 m  (22.90 ft)
Wing Area........14.15 m²  (152.31 ft²)

5. Engines:

Lycoming O-320 D2A (160 HP)

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/TCD standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous Power: 2700 rpm (162 HP, 119 kW)

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>HOFFMANN</td>
<td>FH2/LC23 180-155-6,5R</td>
<td>1.80 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>HOFFMANN</td>
<td>FH2/LC23 180-140-6,5R</td>
<td>1.80 m</td>
<td>2</td>
<td>2350 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 655-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>74 DM 655-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>SENSENICH</td>
<td>M74 DMS-2-66</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
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<tr>
<td>SENSENICH</td>
<td>74 DM 655-2-66</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td>JODEL EVRA</td>
<td>91-86-34 F</td>
<td>1.82 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td>JODEL EVRA</td>
<td>91-78-34 F</td>
<td>1.84 m</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
</tbody>
</table>

Remark: (*) no diameter reduction for repairs.

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/TCD standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

91/96 octane minimum aviation gasoline grade. 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 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (O°C a +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C a +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C a +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>
8. Fluid capacities:

8.1 Fuel:
- Wing tanks: ........................................... 2 x 40 liters
- Main fuel tank capacity: ............................... 70 liters
- Usable the last 7 liters are only usable during level flight
- Supplemental fuel tank capacity: ..................... 50 liters
- Usable the last 7 liters are only usable during level flight

8.2 Oil:
- Oil sump capacity: ........................................ 8 U.S. quarts (7.6 liters)
- Usable: .......................................................... 6 U.S. quarts (5.7 liters)

9. Air speeds:

<table>
<thead>
<tr>
<th>Speeds</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{NE}$</td>
<td>295 km/h (159 knots IAS)</td>
</tr>
<tr>
<td>$V_{NO}$</td>
<td>260 km/h (140 knots IAS)</td>
</tr>
<tr>
<td>$V_A$</td>
<td>186 km/h (100 knots IAS)</td>
</tr>
<tr>
<td>$V_{FE}$</td>
<td>170 km/h (92 knots IAS)</td>
</tr>
<tr>
<td>$V_C$</td>
<td>260 km/h (140 knots IAS)</td>
</tr>
</tbody>
</table>

10. Maximum Operating Altitude: Refer to approved aircraft flight manual.
11. Operational Capability: Refer to approved aircraft flight manual.
12. Maximum Masses:
- Take-Off: ........................................... 960 kg (2116.4 lb)
- Landing: ............................................. 920 kg (2028.3 lb)
13. Centre of Gravity Range:
- Forward limit (17 % ref.): ................... 0.29 m aft of datum
- Aft limit (33 % ref.): ......................... 0.565 m aft of datum
14. Datum: Leading edge of the rectangular part of the wing.
15. Load factor (n) at maximum weight:
- Flaps retracted positive n ........... + 3.8
- Flaps retracted negative n ........... - 1.52
16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot) at 0.42 ±0.05 m aft of datum
18. Maximum Passenger Seating Capacity: 1 at 0.42 ±0.05 m and 2 at 1.16m aft of datum.
19. Baggage/cargo compartment:
- Maximum baggage compartment 40 kg at 1.90m aft of datum, within weight and balance limits. See note 1. “Supplementary rear fuel tank”.
20. Wheels and Tires:
- Main gear track: ...................................... 2.59 m (ft)
- Wheel tire size main gear wheel:............ 380 x 150
  - tail wheel:........................................ 6 x 2
- Tire pressure:...................................... 2.2 kg/cm²
21. Control surface movements:
- Elevator: up...................................... 9.5° ± 0.5°
  - down........................................... 12° ± 0.5°
- Ailerons: up..................................... 12° ± 0.5°
  - down........................................... 12° ± 0.5°
- Rudder L & R:................................. 25° (+0°; -3°)
  - before differential braking............. right: 18°
  - left: 15°
- Elevator trim tab (manual):
  - Elevator nose down
  - Tab down position: ...................... 4° ± 1°
  - Tab up position: ......................... 30° ± 1°
K.IV  **Operating and Service Instructions**

Airplane Flight Manual.................................. Refer to latest amendment of service letter n°6
Airplane Minor inspection Schedule.............. Refer to latest amendment of service letter n°6
Airplane Major inspection Schedule.............. Refer to latest amendment of service letter n°6

K.V  **Note:**

1. Supplementary rear fuel tank operation:

   Always use first 50 liters of fuel from rear main tank (more or less 1h40min) then transfer fuel from the supplementary tank to the rear main tank (by pulling the valve control located on the instrument panel).

   Balance limits with all 4 tanks full, load is generally limited to either:

   - 0 kg in luggage compartment (normal load on rear seats: 154 kg)
   - 100 kg on rear seats (40 kg in luggage compartment).

   FOR ALL LOADING, USE THE LOADING GRAPH

2. This model is identical to DR250/160 except the leading edge profile of trapezoidal wing part.
Section L: DR 253

L.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 253
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Centre Est Aéronautique
   Boîte Postale n° 38
   21 DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: July 11, 1967
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no 42

L.II Certification Basis

1. Reference Date for determining the applicable requirements: June 1966
2. (Reserved)
3. (Reserved)
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None.

L.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed tricycle landing gear.
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 Safe Flight n°164
4. Dimensions:
   Span.................8.72 m (28.6 ft)
   Height..............2.38 m (7.8 ft)
   Length...............7.00 m (22.9 ft)
   Wing Area.........14.20 m² (152.8 ft²)

5. Engines:
   Lycoming O-360 A1A (variable-pitch propeller)
   Lycoming O-360 A3A (Sensenich propeller)

   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/TCD S standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:
   Maximum Continuous Power: 2700 rpm (133 kW, 183 HP)

6. Propellers:

<table>
<thead>
<tr>
<th>Make</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>M 76 EMMS-0-64</td>
<td>1.93 m</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
<tr>
<td></td>
<td>76 EM8S5-0-64</td>
<td>(76 in.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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/TCD S standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARTZELL</td>
<td>HC-C2YK 7666-2</td>
<td>1.88 m</td>
<td>2</td>
<td>Hartzell D 16 or F3</td>
<td>Constant speed low pitch: 12° high: 28° 8 (*)</td>
</tr>
<tr>
<td></td>
<td>(74 in.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remark: (*) Continuous operation between 2000 and 2250 rpm must be avoided.

The EASA type certification standard includes that of FAA TC P-920, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCD S standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:
   100/100LL 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, 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>

8. Fluid capacities:

8.1 Fuel:

- Wing tank: ........................................ 40 liters in each tank
- Fuselage tank: ..................................... 100 liters
  (Note: The last 7 liters are usable only in horizontal flight attitude)
- Auxiliary tank: (see note 1) ................... 50 or 60 liters

8.2 Oil:

- Oil sump capacity ......................... 8 U.S. quarts (7.6 liters)
- Usable ............................................. 6 U.S. quarts (5.7 liters)

9. Air speeds:

- \( V_{NE} \) ........................................ 310 km/h (167 knots IAS)
- \( V_{NO} \) ........................................ 260 km/h (140 knots IAS)
- \( V_A \) ................................................. 203 km/h (109 knots IAS)
- \( V_{FE} \) ............................................. 170 km/h (91.8 knots IAS)
- \( V_C \) ................................................. 260 km/h (140 knots IAS)

Stall speed at maximum weight:

- Flaps retracted: ............. 104 km/h (56 knots IAS)
- Flaps extended: ........... 96 km/h (51.8 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 ........................................... 1100 kg
- landing ............................................. 1045 kg

13. Centre of Gravity Range:

Normal category

- Forward limit (14.6 % ref.): 0.250 m aft of datum at 800 kg
- Intermediate limit (25 % ref.): 0.430 m aft of datum at 1100 kg
- Aft limit (33 % ref.): ........ 0.565 m aft of datum at 1100 kg

14. Datum:

Wing leading edge of the rectangular part of wing. Cord length at reference section: 1.71 m.

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

- Flaps up: ......................... + 3.8
- Flaps up: ......................... - 1.52

16. Leveling Means:

Horizontal reference upper fuselage spar.

17. Minimum Flight Crew:

1 (pilot) at 0.47 ±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.47 ±0.05 m and 2 at 1.25m aft of datum
19. Baggage / Cargo Compartment: 40 kg within the limits of weight and balance authorized. Lever arm: + 2.10 m aft of datum

20. Wheels and tires:
   - Main gear track: 2.58 m (8.46 ft)
   - Base width: 1.61 m (5.28 ft)
   - Wheel tire size: 420 x 150 mm
   - Lever arm: + 2.10 m aft of datum
   - Front wheel: Tire pressure: 1.8 bar
   - Oleo strut pressure: 5 bar
   - Rear wheels: Tire pressure: 2 bar
   - Oleo strut pressure: 6 bar
   - Front wheel movements (left and right): +2° -0°

21. Control surface movements:
   - Elevator:
     - nose up: 13° ±0.5°
     - nose down: 6° ±0.5°
   - Ailerons:
     - up: 12° ±0.5°
     - down: 12° ±0.5°
   - Rudder:
     - L & R: 25° ±0°
     - minimum before differential braking (L & R): 15°
   - Wing Flaps:
     - 1st notch (T/O): 15° ±0°
     - 2nd notch (Ldg): 60° ±0°
   - Elevator tab:
     | Tab movements | Up | Down |
     |---------------|----|------|
     | Max "Nose up" | 10° | 31°  |
     | Max "Nose down" | 12° | 3°   |

22. (Reserved)

L.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
Airplane Major inspection schedule: Refer to latest amendment of service letter n°6
1. Supplementary rear fuel tank operation:

   Always use first 60 liters of fuel from rear main tank (more or less 1h30min) then transfer fuel from the supplementary tank to the rear main tank (by pulling the valve control located on the instrument panel).

   Balance limits with all 4 tanks full, load is generally limited to either:

   - 0 kg in luggage compartment (normal load on rear seats: 154 kg)
   - 100 kg on rear seats (40 kg in luggage compartment).

   FOR ALL LOADING, USE THE LOADING GRAPH
Section M: DR 253 B

M.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 253 B
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Centre Est Aéronautique
   Boîte Postale n° 38
   21 DIJON
   FRANCE
5. (Reserved)
6. DGAC Type Certification Date: July 20, 1968
7. EASA Type Certification Date: Transferred by Commission Regulation (EC) No. 1702/2003
8. The EASA type Certificates replaces DGAC-France Type Certificate no 42

M.II Certification Basis

1. Reference date for determining the applicable requirements: June 1966
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

M.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wooden construction, fixed tricycle landing gear.
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 Safe Flight n°164
4. Dimensions:

Span.................8.72 m (28.6 ft)
Height................2.38 m (7.8 ft)
Length...............7.00 m (22.9 ft)
Wing Area..........14.20 m² (152.8 ft²)

5. Engines:

Lycoming O-360 A1A (variable-pitch propeller)
Lycoming O-360 A3A (Sensenich propeller)

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 (133 kW, 183 HP)

6. Propellers:

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
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</thead>
<tbody>
<tr>
<td>SENSENICH</td>
<td>M 76 EMMS-0-64</td>
<td>1.93 m (76 in.)</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
<tr>
<td></td>
<td>76 EM8S5-0-64</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>∅</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARTZELL</td>
<td>HC-C2YK 7666-2</td>
<td>1.88 m (74 in.)</td>
<td>2</td>
<td>Hartzell D 16 or F3</td>
<td>Constant speed low pitch: 12° high: 28° 8 (*)</td>
</tr>
</tbody>
</table>

Remark: (*) Continuous operation between 2000 and 2250 rpm must be avoided.

The EASA type certification standard includes that of FAA TC P-920, 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:

100/100LL 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>
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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>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>
8. Fluid capacities:
   8.1 Fuel:
   Wing tank: ........................................ 40 liters in each tank
   Fuselage tank: ......................................... 100 liters
   (Note: The last 7 liters are usable only in horizontal flight attitude)
   Auxiliary tank: (see note 1) ....................... 50 or 60 liters
   8.2 Oil:
   Oil sump capacity ......................... 8 U.S. quarts (7.6 liters)
   Usable .............................................. 6 U.S. quarts (5.7 liters)

9. Air speeds:
   $V_{NE}$ ..................................... 310 km/h (167 knots IAS)
   $V_{NO}$ ..................................... 260 km/h (140 knots IAS)
   $V_A$ ......................................... 203 km/h (109 knots IAS)
   $V_{FE}$ ..................................... 170 km/h (91.8 knots IAS)
   $V_C$ ..................................... 260 km/h (140 knots IAS)
   Stall speed at maximum weight:
   Flaps retracted: .............. 104 km/h (56 knots IAS)
   Flaps extended: ............. 96 km/h (51.8 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 ........................................ 1100 kg
   landing ........................................... 1045 kg
13. Centre of gravity range:
   Normal Category
   Forward limit (14.6 % ref.): 0.250 m aft of datum at 800 kg
   Intermediate limit (25 % ref.): 0.430 m aft of datum at 1100 kg
   Aft limit (33 % ref.): .......... 0.565 m aft of datum at 1100 kg

14. Datum:
   Wing leading edge of the rectangular part of wing. Cord length at reference section: 1.71 m.
15. Load factor (n) at maximum weight: Normal Category:
   Flaps up ........................................... + 3.8
   Flaps up ........................................... - 1.52
16. Levelling means:
   Horizontal reference upper fuselage spar.
17. Minimum flight crew: 1 (pilot) at 0.47 ±0.05 m aft of datum
18. Maximum passenger seating capacity: 1 at 0.47 ±0.05 m and 2 at 1.25 m aft of datum
19. Baggage / Cargo compartment
   40 kg within the limits of weight and balance authorized.
   Lever arm: ....................................... + 2.1 m aft of datum
20. Wheels and tires

- Main gear track: 2.58 m (8.46 ft)
- Base width: 1.61 m (5.28 ft)
- Wheel tire size: 420 x 150 mm

Front wheel:
- Tire pressure: 1.8 bar
- Oleo strut pressure: 5 bar

Rear wheels:
- Tire pressure: 2 bar
- Oleo strut pressure: 6 bar

Front wheel movements (left and right): 25° +2° -0°

21. Control surface movements:

- Elevator:
  - Nose up: 13° +0.5° -0°
  - Nose down: 6° +0.5° -0°

- Ailerons:
  - Up: 12° -0° +0.5°
  - Down: 12° -0° +0.5°

- Rudder:
  - L & R: 25° +0° -3°
  - Minimum before differential braking (L & R): 15°

- Wing Flaps:
  - 1st notch (T/O): 15° +0° -5°
  - 2nd notch (Ldg): 60° +0° -5°

Elevator tab:

<table>
<thead>
<tr>
<th>Tab movements</th>
<th>Up</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum &quot;Nose up&quot;</td>
<td>10°5</td>
<td>31°</td>
</tr>
<tr>
<td>Maximum &quot;Nose down&quot;</td>
<td>12°</td>
<td>3°</td>
</tr>
</tbody>
</table>

22. (Reserved)

M.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
- Airplane Major inspection schedule: Refer to latest amendment of service letter n°6

M.V Note:

1. Supplementary rear fuel tank operation:

   Always use first 60 liters of fuel from rear main tank (more or less 1h30min) then transfer fuel from the supplementary tank to the rear main tank (by pulling the valve control located on the instrument panel).

   Balance limits with all 4 tanks full, load is generally limited to either:
   - 0 kg in luggage compartment (normal load on rear seats: 154 kg)
   - 100 kg on rear seats (40 kg in luggage compartment).

   FOR ALL LOADING, USE THE LOADING GRAPH
2. This model is identical to the DR 253 except the leading edge profile of trapezoidal wing part.
Section N: DR 340

N.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 340
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: May 21, 1968
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

N.II Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

N.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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 ................. 8.72 m (28.61 ft)
   Height ................. 2.23 m (7.32 ft)
5. Engines:

Lycoming O-320-E2A

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/T CDS 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>∅ (m)</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>M 74 DMS-2-64 or</td>
<td>1.83</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td></td>
<td>M 74 DM-6S5-2-64</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>M 74 DMS-0-64 or</td>
<td>1.88</td>
<td>2</td>
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</tr>
<tr>
<td></td>
<td>M 74 DM-6S5-0-64</td>
<td></td>
<td></td>
<td></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/T CDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

80/87 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, SAE50</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, SAE40</td>
</tr>
<tr>
<td>30°F to 90°F (0°C à +30°C)</td>
<td>SAE40</td>
<td>SAE30, SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE20W50 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters) Capacity</th>
<th>Usable</th>
<th>RH wing tank (liters) Capacity</th>
<th>Usable</th>
<th>LH wing tank (liters) Capacity</th>
<th>Usable</th>
<th>Auxiliary tank (optional) (liters) Capacity</th>
<th>Usable</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>65</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity................. 8 U.S. quarts (7.57 liters)
Usable.......................... 6 U.S. quarts (5.68 liters)

9. Air speeds:

\[ V_{NE} \] .................. 295 km/h (159 knots IAS)
\[ V_{NO} \] .................. 260 km/h (140 knots IAS)
\[ V_{C} \] .................... 260 km/h (140 knots IAS)
\[ V_{A} \] .................... 200 km/h (108 knots IAS)

An agency of the European Union
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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>1000 kg (2205 lb)</td>
<td>950 kg (2094 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>865 kg (1907 lb)</td>
<td></td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor (n) at maximum weight: Normal Category:
   Flaps up n.......................... + 3.8
   Flaps up n.......................... - 1.9
   Flaps down n........................ + 2
   Flaps down n........................ 0

   Utility Category:
   Flaps up n .......................... + 4.4
   Flaps up n .......................... - 2.2
   Flaps down n ........................ + 2
   Flaps down n ........................ 0

16. Levelling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires

Main gear track: .......................................................... 2.58 m (8.46 ft)
Wheel tire size: ..................................................... 380 x 150
Front gear angular movement: ........................... left: 27º
........................................................................ right: 27º
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>1.8 bar</td>
<td>4.5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator: ................................................................. up 9°30’ -30’
................................................................. down 12° -30’

Ailerons: Relative to the trailing edge of the wings
Refer to following table

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>16°30’</td>
<td>2°30’</td>
<td>11°10’</td>
</tr>
<tr>
<td>15°</td>
<td>1°45’</td>
<td>9°45’</td>
</tr>
</tbody>
</table>

elevator tab: Elevator up: 25°30’ ± 1°, 6° ± 1°
.............................................. Elevator down: 10°30’ ± 1°, 16°30’ ± 1°
Flaps: .............................................................. 1st notch: 15° ± 5°
.............................................................. 2nd notch: 60° ± 5°

Rudder: .............................................................. 25° ± 0°

22. (Reserved)

N.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

N.V Note:

1. This plane is identical to DR315 except:
   - powerplant
   - addition of leading edge fuel tanks and 75 liters rear fuel tank
   - wings profile at rectangular part
Section O: DR 315

O.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 315
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: June 24, 1968
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

O.II Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

O.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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.................8.72 m (28.61 ft)
   Height................2.23 m (7.32 ft)
5. Engines:

Lycoming O-235-C2A or O-235-C2C

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:

<table>
<thead>
<tr>
<th>Propeller Manufacturer</th>
<th>Model</th>
<th>Maximum Continuous Power RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evra</td>
<td>88-75-34 F</td>
<td>2800</td>
</tr>
<tr>
<td>Mac Cauley</td>
<td>1 A 105 BCM 70-60</td>
<td>2600</td>
</tr>
<tr>
<td></td>
<td>1 A 105 BCM 70-56</td>
<td>2600</td>
</tr>
<tr>
<td></td>
<td>1 B 90 ECM 72-50</td>
<td>2800</td>
</tr>
</tbody>
</table>

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evra</td>
<td>88-75-34 F</td>
<td>1.76 m</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1 A 105 BCM 70-60</td>
<td>1.78 m</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1 A 105 BCM 70-56</td>
<td>1.78 m</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1 B 90 ECM 72-50</td>
<td>1.83 m</td>
<td>2</td>
</tr>
</tbody>
</table>

The EASA type certification standard includes that of FAA TC P-918 and FAA TC P-842, 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:

80/87 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>SAE15W50</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 a +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C a +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C a +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>
8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th></th>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>110</td>
<td>50</td>
</tr>
<tr>
<td>Usable capacity</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

8.2 Oil:

- Oil sump capacity: 6 U.S. quarts (5.68 liters)
- Usable capacity: 4 U.S. quarts (3.79 liters)

9. Air speeds:

- $V_{NE} = 295$ km/h (159 knots IAS)
- $V_{NO} = 260$ km/h (140 knots IAS)
- $V_{C} = 260$ km/h (140 knots IAS)
- $V_{A} = 200$ km/h (108 knots IAS)
- $V_{FE} = 170$ km/h (92 knots IAS)

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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td></td>
<td>865 kg (1907 lb)</td>
<td>865 kg (1907 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- Normal and Utility Category
  - Forward limit (14 % ref.): 0.240 m aft of datum at 700 kg
  - Intermediate limit (25 % ref.): 0.427 m aft of datum at 865 kg
  - Aft limit (33 % ref.): 0.564 m aft of datum at 865 kg

14. Datum:

Wing leading edge of the rectangular part of the wings.

Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- **Normal Category:**
  - Flaps up: +3.8
  - Flaps down: +2

- **Utility Category:**
  - Flaps up: +4.4
  - Flaps down: +2
16. Levelling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 (maximum 120kg (265lb)) at 1.19m aft of datum.

19. Baggage / Cargo Compartment Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum

20. Wheels and Tires

Main gear track.................................2.58 m (8.46 ft)
Wheel tire size................................380 x 150
Front gear angular movement....................left: 27°
..............................................right: 27°
Tire pressure.................................. refer to following table

Oleo strut pressure............. refer to following table

<table>
<thead>
<tr>
<th>Tire</th>
<th>Oleo strut</th>
<th>Tire</th>
<th>Oleo strut</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6 bar</td>
<td>4 bar</td>
<td>1.8 bar</td>
<td>5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator:............................................ up 9°30’ ±30°
............................................... down 12° ±30°

Ailerons:........ Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>16°30’</td>
<td>2°30’</td>
<td>11°10’</td>
</tr>
<tr>
<td>15°</td>
<td>1°45’</td>
<td>9°45’</td>
</tr>
</tbody>
</table>

Elevator tab:

Elevator up: ........25°30’ ± 1°  6° ± 1°
Elevator down: ......10°30’ ± 1°16°30’ ± 1°

Flaps:

1st notch:.............15° ± 5°
2nd notch:............60° ± 5°

Rudder:..................................................25° ±0°

22. (Reserved)

O.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

O.V Note:
Section P: DR 360

P.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 360
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: July 19, 1968
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

P.II Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

P.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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.................8.72 m (28.61 ft)
   Height..............2.23 m (7.32 ft)
   Length............7.08 m (23.23 ft)
Wing Area........14.20 m²  (152.85 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 conforming to TC/TCDs standards certified 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>Ø</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>M 74 DMS-2-66 or M 74 DM-6S5-2-66</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 conforming to TC/TCDs standards certified 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>SAE40 or SAE50</td>
</tr>
<tr>
<td>Above 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE60</td>
</tr>
<tr>
<td>30°F to 90°F (O°C à +30°C)</td>
<td>SAE15W50 or SAE20W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C à +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE20W50</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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>RH wing tank (liters)</th>
<th>LH wing tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity Usable</td>
<td>Capacity Usable</td>
<td>Capacity Usable</td>
<td>Capacity Usable</td>
</tr>
<tr>
<td>75</td>
<td>65</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

8.2 Oil:
Oil sump capacity................. 8 U.S. quarts (7.57 liters)
Usable................................ 6 U.S. quarts (5.68 liters)

9. Air speeds:

V_{NE} ...........................................295 km/h (159 knots IAS)
V_{NO} ...........................................260 km/h (140 knots IAS)
V_{C} ...........................................260 km/h (140 knots IAS)
V_{A} ...........................................200 km/h (108 knots IAS)
V_{FE} ..........................................170 km/h (92 knots IAS)

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>“N” Category</th>
<th>“U” Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td>1000 kg</td>
<td>950 kg</td>
</tr>
<tr>
<td>(2205 lb)</td>
<td>(2094 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

![DR 360 Weight and balance envelope](image)

**Normal Category**
- Forward limit (14% ref.): 0.240 m aft of datum at 700 kg
- Intermediate limit (25% ref.): 0.427 m aft of datum at 1000 kg
- Aft limit (33% ref.): 0.564 m aft of datum at 1000 kg

**Utility category**
- Forward limit (14% ref.): 0.240 m aft of datum at 700 kg
- Intermediate limit (25% ref.): 0.427 m aft of datum at 865 kg
- Aft limit (33% ref.): 0.564 m aft of datum at 865 kg

14. Datum:
   Wing leading edge of the rectangular part of the wings
   Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:
   **Normal Category**:
   - Flaps up n: + 3.8
   - Flaps up n: - 1.9
   - Flaps down n: + 2
   - Flaps down n: 0

   **Utility Category**:
   - Flaps up n: + 4.4
   - Flaps up n: - 2.2
   - Flaps down n: + 2
   - Flaps down n: 0

16. Leveling Means:
   Horizontal reference upper fuselage spar

17. Minimum Flight Crew:
   1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity:
   1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

   Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires

Main gear track ........................................ 2.58 m (8.46 ft)
Wheel tire size ................................. 380 x 150
Front gear angular movement .................. left: 27°
............................................................. right: 27°
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>1.8 bar</td>
<td>4.5 bar</td>
<td>2 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator:
up ...................................................... 9°30’ ± 0° -30°
down ..................................................... 12° ± 0° -30°
Ailerons: Relative to the trailing edge of the wings.

<table>
<thead>
<tr>
<th></th>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator tab: Elevator up:</td>
<td>25°30’ ± 1° 6° ± 1°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevator down:</td>
<td>10°30’ ± 1°16°30’ ± 1°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flaps: 1st notch:</td>
<td>15° ± 5°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flaps: 2nd notch:</td>
<td>60° ± 0° -5°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rudder:</td>
<td>25° ± 3°</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. (Reserved)

P.IV Operating and Service Instructions

Airplane Flight Manual .................. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual .......... Refer to the latest amendment of Service Letter no. 6

P.V Note:

1. This plane is identical to DR 340 except powerplant.
Section Q: DR 380

Q.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 380
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: May 29, 1969
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

Q.II Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

Q.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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..................8.72 m (28.61 ft)
   Height..................2.23 m (7.32 ft)
   Length..................7.08 m (23.23 ft)
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>ø</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>76 EM 8S5-0-64</td>
<td>1.93 m (1)</td>
<td>2</td>
<td>2250 (2)</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-0-68</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:
(1) No acceptable diameter reduction for repair.
(2) Do not continuous operate between 2025 rpm and 2325 rpm.

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:

100/100LL 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>SAE60</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>SAE40 or SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (0°C ± 30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C ± 20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C ± 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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>RH tank (liters)</th>
<th>LH tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>75</td>
<td>65</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity ..................... 8 U.S. quarts (7.57 liters)
Usable .......................... 6 U.S. quarts (5.68 liters)

9. Air speeds:

V_{NE} ..................................... 305 km/h (165 knots IAS)
V_{NO} ..................................... 270 km/h (146 knots IAS)
V_{C} ....................................... 270 km/h (146 knots IAS)
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</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>1070 kg (2359 lb)</td>
<td>1020 kg (2249 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- Normal category:
  - Forward limit (12% ref.): 0.205 m aft of datum at 700 kg
  - Intermediate limit (24% ref.): 0.410 m aft of datum at 1070 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 1070 kg

14. Datum:

- Wing leading edge of the rectangular part of the wings
- Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- Normal Category:
  - Flaps up: +3.8  
  - Flaps up: -1.9
  - Flaps down: +2
  - Flaps down: 0

16. Leveling means:

- Horizontal reference upper fuselage spar

17. Minimum Flight Crew:

- 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity:

- 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment:

- Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum

20. Wheels and Tires:

- Main gear track: 2.58 m (8.46 ft)
- Wheel tire size: 380 x 150
- Front gear angular movement: left: 27° right: 27°
- Tire pressure: refer to following table
- Oleo strut pressure: refer to following table

<table>
<thead>
<tr>
<th>Tire</th>
<th>Oleo strut</th>
<th>Tire</th>
<th>Oleo strut</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 bar</td>
<td>6 bar</td>
<td>2.2 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>
21. Control surface movements

Elevator: up ........................................... 9°30’ + 0°
down ............................................... 12°- 30°

Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>16°30’</td>
<td>2°30’</td>
<td>11°10°</td>
</tr>
<tr>
<td>15°</td>
<td>1°45’</td>
<td>9°45’</td>
</tr>
</tbody>
</table>

Elevator tab:
Elevator up: .......... 25°30’ ± 1°  6° ± 1°
Elevator down: ...... 10°30’ ± 1° 16°30’ ± 1°

Flaps: 1st notch:...................................... 15° ± 5°
2nd notch:........................................... 60° ± 3°

Rudder: ............................................. 25° ± 3°

22. (Reserved)

Operating and Service Instructions

Airplane Flight Manual...................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual............. Refer to the latest amendment of Service Letter no. 6

Note:

1. This plane is identical to DR 340 except:
   - Powerplant
   - Structure
   - Landing gears

Proprietary document. Copies are not controlled. Confirm revision status through the EASA-internet/Intranet.
Section R: DR 300/108

R.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 300/108
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: June 18, 1970
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

R.II Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

R.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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...............8.72 m (28.61 ft)
   Height.................2.23 m (7.32 ft)
   Length...............6.96 m (22.83 ft)
5. Engines:

Lycming O-235-C2A or Lycming O-235-C2C

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

Remark: Maximum continuous power limited by noise regulation.

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>Mac Cauley</td>
<td>1 A 105 BCM 70-56</td>
<td>1.78 m</td>
<td>2</td>
<td>2250 rpm (*)</td>
</tr>
<tr>
<td></td>
<td>1 A 105 BCM 70-60</td>
<td>1.78 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 B 90 ECM 72-50</td>
<td>1.83 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Evra</td>
<td>88-75-34 F</td>
<td>1.76 m</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: (*) Maximum authorized RPM: 2600 rpm

The EASA type certification standard includes that of FAA TC P-918 and FAA TC P-842, 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:

80/87 octane minimum aviation grade gasoline.

Refer to latest revision of Service Instruction Lycming No. 1070

7.2 Engine Oil:

Refer to latest revision of Service Instruction Lycming 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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity ................. 6 U.S. quarts (5.68 liters)
Usable .................................. 4 U.S. quarts (3.79 liters)
9. Air speeds:

\[
\begin{align*}
V_{NE} & = 295 \text{ km/h (159 knots IAS)} \\
V_{NO} & = 260 \text{ km/h (140 knots IAS)} \\
V_C & = 260 \text{ km/h (140 knots IAS)} \\
V_A & = 200 \text{ km/h (108 knots IAS)} \\
V_{FE} & = 170 \text{ km/h (92 knots IAS)} \\
\end{align*}
\]

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>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td>840 kg (1852 lb)</td>
<td>840 kg (1852 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

14. Datum:

Wing leading edge of the rectangular part of the wings.

15. Load factor at maximum weight:

Normal Category:

- Flaps up \( n \) ................. + 3.8
- Flaps up \( n \) ................. - 1.9
- Flaps down \( n \) ................. + 2
- Flaps down \( n \) ................. 0

Utility Category:

- Flaps up \( n \) ................. + 4.4
- Flaps up \( n \) ................. - 2.2
- Flaps down \( n \) ................. + 2
- Flaps down \( n \) ................. 0

16. Leveling Means:

Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 (maximum 100kg (220lb)) at 1.19m aft of datum.

19. Baggage / Cargo Compartment: Not applicable
20. Wheels and Tires:

Main gear track ......................... 2.58 m (8.46 ft)
Wheel tire size ......................... 380 x 150
Front gear angular movement ............. left: 27°
........................................... right: 27°
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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator: up ................................ 9°30’+30’
          down ................................ 12°-30’
Ailerons: Relative to the trailing edge of the wings
          up | neutral | down
          16°30’ | 2°30’ | 11°10’
          15° | 1°45’ | 9°45’

Elevator tab: Elevator up: 25°30’ ± 1° .... 6° ± 1°
              Elevator down: 10°30’ ± 1°  16°30’ ± 1°
Flaps: 1st notch: ....................... 15° ± 5°
       2nd notch: ....................... 60° +0°
               -5°
Rudder: ............................................. 25°+3°

22. (Reserved)

R.IV Operating and Service Instructions

Airplane Flight Manual ..................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual ............ Refer to the latest amendment of Service Letter no. 6

R.V Note:

1. This plane is identical to DR 315 except cabin layout
Section S: DR 300/180 R

S.I  General

1. a) Type: DR 200, DR 300 and DR 400 series
    b) Model: DR 300/180 R
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: July 24, 1970
7. EASA Type Certification date: January 28, 2013 (Type Certificate transfer)
8. The EASA Type Certificates replaces DGAC-France Type Certificate no. 45

S.II  Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

S.III  Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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 ................. 8.72 m (28.61 ft)
   - Height ................ 2.23 m (7.32 ft)
   - Length ............. 7.08 m (23.23 ft)
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>76 EM 8S5-058</td>
<td>1.93 m (1)</td>
<td>2</td>
<td>2450 (2)</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-064</td>
<td>1.93 m (1)</td>
<td>2</td>
<td>2250 (2)</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-054</td>
<td>1.93 m (1)</td>
<td>2</td>
<td>2500 (2)</td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO4-27HM-170-128</td>
<td>1.70 m</td>
<td>4</td>
<td>2240 (2)</td>
</tr>
</tbody>
</table>

Remarks:
(1) No acceptable diameter reduction for repair.
(2) Do not continuous operate between 2150 rpm and 2350 rpm.

The EASA type certification standard includes that of FAA TC P4EA and P6NE, 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:

100/100LL 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>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 to +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C to +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>Below 10°F (-10°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
</tbody>
</table>

8. Fluid capacities:

8.1 Fuel:

Main tank capacity: 110 liters (100 usable)

Auxiliary tank (optional) capacity: 50 liters (50 usable)

8.2 Oil:

Oil sump capacity: 8 U.S. quarts (7.57 liters)

Usable: 6 U.S. quarts (5.68 liters)
9. Air speeds:

\[
\begin{align*}
    V_{NE} & = 305 \text{ km/h (165 knots IAS)} \\
    V_{NO} & = 270 \text{ km/h (146 knots IAS)} \\
    V_{C} & = 270 \text{ km/h (146 knots IAS)} \\
    V_{A} & = 200 \text{ km/h (108 knots IAS)} \\
    V_{FE} & = 170 \text{ km/h (92 knots IAS)}
\end{align*}
\]

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</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000 kg (2205 lb)</td>
<td>950 kg (2094 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

\[
\begin{align*}
    \text{Normal Category} \\
    \text{Forward limit (12\% ref.):} & \ 0.205 \text{ m aft of datum at 700 kg} \\
    \text{Intermediate limit (22\% ref.):} & \ 0.376 \text{ m aft of datum at 1000 kg} \\
    \text{Aft limit (33\% ref.):} & \ 0.564 \text{ m aft of datum at 1000 kg}
\end{align*}
\]

14. Datum:

Wing leading edge of the rectangular part of the wings.

Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

<table>
<thead>
<tr>
<th>Category</th>
<th>Flaps up n</th>
<th>Flaps up n</th>
<th>Flaps down n</th>
<th>Flaps down n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>+3.8</td>
<td>-1.9</td>
<td>+2</td>
<td>0</td>
</tr>
</tbody>
</table>

16. Leveling Means:

Horizontal reference upper fuselage spar

17. Minimum Flight Crew:

1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.


Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum
20. Wheels and Tires

Main gear track ........................................... 2.58 m (8.46 ft)
Wheel tire size ............................................. 380 x 150
Front gear angular movement ......................... left: 27°
........................................................................ right: 27°
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>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator: up ............................................. 9°30' - 30°
........................................................................ 0°
down ......................................................... 12° - 30°

Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>16°30'</td>
<td>2°30'</td>
<td>11°10'</td>
</tr>
<tr>
<td>15°</td>
<td>1°45'</td>
<td>9°45'</td>
</tr>
</tbody>
</table>

Elevator tab:
Elevator up: 25°30' ± 1° ± 6° ± 1°
Elevator down: 10°30' ± 1° 16°30' ± 1°

Flaps:
1st notch: ............................................. 15° ± 5°
........................................................................ 0°
2nd notch: ............................................. 60° ± 3°

Rudder: ................................................... 25° ± 0°

22. (Reserved)

S.I.V Operating and Service Instructions

Airplane Flight Manual ...................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual ............ Refer to the latest amendment of Service Letter no. 6

S.V Note:

1. This plane is identical to DR 315 except:
   - powerplant
   - structure
   - landing gears
   - towing ability

2. Glider and banner towing
   Refer to approved flight manual

Takeoff maximum mass: 720kg
Seaplane maximum mass towed: 550kg
Propeller approved for these operations:
Sensenich 76 EM 8S5-058
Hoffmann H04-27HM-170-128
Section T: DR 300/140

T.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 300/140
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: February 22, 1971
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

T.II Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

T.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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....................8.72 m (28.61 ft)
   Height...................2.23 m (7.32 ft)
   Length...................6.96 m (22.83 ft)
5. Engines:

Lycoming O-320-E2A

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

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>M 74 DMS-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td></td>
<td>74 DM 6S5-2-64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M 74 DMS-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>74 DM 6S5-0-64</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

7. Fluids:

7.1 Fuel:

80/87 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 a +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C a +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C a +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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity............. 8 U.S. quarts (7.57 liters)

Usable.......................... 6 U.S. quarts (5.68 liters)

9. Air speeds:

\[ V_{NE} \] ......................... 295 km/h (159 knots IAS)
\[ V_{NO} \] ......................... 260 km/h (140 knots IAS)
\[ V_{C} \] ......................... 260 km/h (140 knots IAS)
\[ V_{A} \] .......................... 200 km/h (108 knots IAS)
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>“N” Category</th>
<th>“U” Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Take-off</strong></td>
<td><strong>Landing</strong></td>
</tr>
<tr>
<td>1000 kg (2205 lb)</td>
<td>950 kg (2094 lb)</td>
</tr>
<tr>
<td>865 kg (1907 lb)</td>
<td></td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

| Normal Category | Forward limit (14 % ref.): 0.240 m aft of datum at 700 kg |
| Intermediate limit (25 % ref.): 0.427 m aft of datum at 1000 kg |
| Aft limit (33 % ref.): 0.564 m aft of datum at 1000 kg |

| Utility Category | Forward limit (14 % ref.): 0.240 m aft of datum at 700 kg |
| Intermediate limit (25 % ref.): 0.427 m aft of datum at 865 kg |
| Aft limit (33 % ref.): 0.564 m aft of datum at 865 kg |

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

Normal Category:
- Flaps up n: + 3.8
- Flaps up n: + 1.9
- Flaps down n: + 2
- Flaps down n: 0

Utility Category:
- Flaps up n: + 4.4
- Flaps up n: - 2.2
- Flaps down n: + 2
- Flaps down n: 0

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum

19. Baggage / Cargo Compartment: Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires

Main gear track ...........................................2.58 m (8.46 ft)
Wheel tire size ........................................... 380 x 150
Front gear angular movement......................left: 27°
.........................................................right: 27°
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>1.8 bar</td>
<td>4.5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator: up ........................................... 9°30' ± 0°
          down .......................................... 12° ± 0°
Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>16°30'</td>
<td>2°30'</td>
<td>11°10'</td>
</tr>
<tr>
<td>15°</td>
<td>1°45'</td>
<td>9°45'</td>
</tr>
</tbody>
</table>

Elevator tab:
Elevator up: 25°30' ± 1° .... 6° ± 1°
Elevator down: 10°30' ± 1° .... 16°30' ± 1°
Flaps:
1st notch: ........................................... 15° ± 5°
          +0°                                    
2nd notch: ......................................... 60° ± 5°
          +3°                                    
Rudder: ................................................................ 25° ± 0°

22. (Reserved)

T.IV Operating and Service Instructions

Airplane Flight Manual......................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual................. Refer to the latest amendment of Service Letter no. 6

T.V Note:

1. This plane is identical to DR 315 except powerplant
Section U: DR 300/125

U.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 300/125
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: May 11, 1971
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

U.II Certification Basis

1. Reference Date for determining the applicable requirements: 22 December 1967
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

U.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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.................8.72 m (28.61 ft)
   Height..............2.23 m (7.32 ft)
   Length.............6.96 m (22.83 ft)
5. Engines:

Lycoming O-235-F2B or O-235-F2A or O-235-J2A

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

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac Cauley</td>
<td>1 A 135 JCM 71-54</td>
<td>1.80 m 2</td>
<td>2300 rpm (*)</td>
</tr>
</tbody>
</table>

Remarks: (*) Do not continuous operate between 2025 rpm and 2325 rpm.

The EASA type certification standard includes that of FAA TC P-842, 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:

100/100LL 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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Capacity (liters)</th>
<th>Usable</th>
<th>Capacity (optional) (liters)</th>
<th>Usable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main tank</td>
<td></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Auxiliary tank</td>
<td>110</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity................. 6 U.S. quarts (5.68 liters)

Usable............................ 4 U.S. quarts (3.79 liters)

9. Air speeds:

\[ V_{NE} \] .................... 295 km/h (159 knots IAS)
\[ V_{NO} \] .................... 260 km/h (140 knots IAS)
\[ V_{C} \] ...................... 260 km/h (140 knots IAS)
\[ V_{A} \] .................... 200 km/h (108 knots IAS)
\[ V_{FE} \] .................... 170 km/h (92 knots IAS)
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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>865 kg (1907 lb)</td>
<td>865 kg (1907 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>865 kg (1907 lb)</td>
<td>865 kg (1907 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)
15. Load factor at maximum weight:

   - Normal Category:
     - Flaps up n: +3.8
     - Flaps up n: -1.9
     - Flaps down n: +2
     - Flaps down n: 0

   - Utility Category:
     - Flaps up n: +4.4
     - Flaps up n: -2.2
     - Flaps down n: +2
     - Flaps down n: 0

16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot) at 0.41 ±0.05m aft of datum
18. Maximum Passenger Seating Capacity: 1 at 0.41 ±0.05m aft of datum and 2 (maximum 120kg (265lb)) at 1.19m aft of datum.
19. Baggage / Cargo Compartment: Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires

Main gear track .....................................2.58 m (8.46 ft)
Wheel tire size ......................................380 x 150
Front gear angular movement.......................left: 27°
....................................................right: 27°
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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator: up ...................................9°30’ ± 30’
          down ................................12° ± 30’
Ailerons: Relative to the trailing edge of the wings
          up      neutral    down
          16°30’  15°        11°10’
          2°30’   1°45’     1°45’
Elevator tab: Elevator up: 25°30’ ± 1°, 6° ± 1°
             Elevator down: 10°30’ ± 1°, 16°30’ ± 1°
Flaps: 1st notch: ..............................15° ± 5°
       2nd notch: ............................60° ± 5°
Rudder: ........................................25° ± 3°

22. (Reserved)

U.IV Operating and Service Instructions

Airplane Flight Manual.........................Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual...............Refer to the latest amendment of Service Letter no. 6

U.V Note:

1. This plane is identical to DR 315 except powerplant
Section V: DR 300/120

V.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 300/120
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:
   Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: February 11, 1975
7. EASA Type Certification date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

V.II Certification Basis

1. Reference Date for determining the applicable requirements: 3 February 1975
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
6. Requirements elected to comply: None
7. EASA Special Conditions: None
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

V.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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..................8.72 m (28.61 ft)
   Height..................2.23 m (7.32 ft)
   Length..................6.96 m (22.83 ft)
5. Engines:
Lycoming O-235-L2A or O-235-K2A or O-235-K2B

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

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>$\varnothing$</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac Cauley</td>
<td>1A 135 JCM 71-47</td>
<td>1.80 m 1.77 m (1)</td>
<td>2</td>
<td>2200 (2)</td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO 14-178/115</td>
<td>1.78 m 1.73 m (1)</td>
<td>2</td>
<td>2250</td>
</tr>
<tr>
<td>Sensenich</td>
<td>72 CKS6-56</td>
<td>1.83 m (3)</td>
<td>2</td>
<td>2220</td>
</tr>
<tr>
<td></td>
<td>72 CKS5-56</td>
<td>1.83 m (3)</td>
<td>2</td>
<td>2220</td>
</tr>
</tbody>
</table>

Remarks:
(1) Minimum diameter after repair.
(2) Do not continuous operate between 2025 rpm and 2325 rpm.
(3) No acceptable diameter reduction for repair.

The EASA type certification standard includes that of FAA TC P-842 and 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:
100/100LL 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>SAE60</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>

8. Fluid capacities:

8.1 Fuel:
Main tank (liters) | Auxiliary tank (optional) (liters)
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil:
Oil sump capacity................. 6 U.S. quarts (5.68 liters)
Usable.......................... 4 U.S. quarts (3.79 liters)
9. Air speeds:

\[ V_{NE} = 295 \text{ km/h (159 knots IAS)} \]

\[ V_{NO} = 260 \text{ km/h (140 knots IAS)} \]

\[ V_{C} = 260 \text{ km/h (140 knots IAS)} \]

\[ V_{A} = 200 \text{ km/h (108 knots IAS)} \]

\[ V_{FE} = 170 \text{ km/h (92 knots IAS)} \]

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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>865 kg (1907 lb)</td>
<td>865 kg (1907 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>865 kg (1907 lb)</td>
<td>865 kg (1907 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- **Normal and Utility Category**
  - Forward limit (14% ref.): 0.240 m aft of datum at 700 kg
  - Intermediate limit (25% ref.): 0.427 m aft of datum at 865 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 865 kg

14. Datum:

Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

<table>
<thead>
<tr>
<th></th>
<th>Normal Category</th>
<th>Utility Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flaps up n</td>
<td>+ 3.8</td>
<td>+ 4.4</td>
</tr>
<tr>
<td>Flaps up n</td>
<td>- 1.9</td>
<td>- 2.2</td>
</tr>
<tr>
<td>Flaps down n</td>
<td>+ 2</td>
<td>+ 2</td>
</tr>
<tr>
<td>Flaps down n</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

16. Leveling Means:

Horizontal reference upper fuselage spar

17. Minimum Flight Crew:

1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.41±0.05m aft of datum and 2 (maximum 120kg (265lb)) at 1.19m aft of datum.

19. Baggage / Cargo Compartment:

Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires

Main gear track ......................2.58 m (8.46 ft)
Wheel tire size .....................380 x 150
Front gear angular movement ......................left: 27°
........................................right: 27°
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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator: 
- up .........................9°30' ± 30'
- down .......................12° ± 30'

Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th></th>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator tab:</td>
<td>16°30'</td>
<td>1°30'</td>
<td>1°45'</td>
</tr>
<tr>
<td></td>
<td>15°</td>
<td>1°45'</td>
<td>9°45'</td>
</tr>
</tbody>
</table>

Flaps:
1st notch: ..........................15° ± 5°
2nd notch: ..........................60° ± 5°

Rudder: ............................................25° ± 0° ± 3°

22. (Reserved)

V.IV Operating and Service Instructions

Airplane Flight Manual ......................Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual ............Refer to the latest amendment of Service Letter no. 6

V.V Note:

1. This plane is identical to DR 315 except powerplant
Section W: DR 400/125

W.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/125

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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.

5. (Reserved)

6. DGAC Type Certification date: May 10, 1972

7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)

8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

W.II Certification Basis

1. Reference Date for determining the applicable requirements: 21 March 1971

2. (Reserved)

3. (Reserved)

4. Certification Basis: France AIR2052

5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7

6. Requirements elected to comply: None

7. EASA Special Conditions: Canopy emergency release system

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None

10. EASA Environmental Standards: None

W.III Technical Characteristics and Operational Limitations

1. (Reserved)

2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.

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.................8.72 m (28.61 ft)
   Height.............2.23 m (7.32 ft)
5. Engines:

Lycoming O-235-F2B or O-235-J2A

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/TCD standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

Maximum Continuous Power: 2800 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>Mac Cauley</td>
<td>1A 135 JCM 71-54</td>
<td>1.80 m</td>
<td>2</td>
<td>2300 rpm (*)</td>
</tr>
</tbody>
</table>

Remarks: (*) Do not continuous operate between 2025 rpm and 2325 rpm.

The EASA type certification standard includes that of FAA TC P-842, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCD standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

100/100LL 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>SAE60</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 to +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C to +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C to +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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th></th>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
<td>Capacity</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity........... 6 U.S. quarts (5.68 liters)  
Usable..................... 4 U.S. quarts (3.79 liters)

9. Air speeds:

\[ V_{NE} = 308 \text{ km/h (166 knots IAS) } \]
\[ V_{NO} = 260 \text{ km/h (140 knots IAS) } \]
\[ V_{C} = 260 \text{ km/h (140 knots IAS) } \]
\[ V_{A} = 215 \text{ km/h (116 knots IAS) } \]
\[ V_{FE} = 170 \text{ km/h (92 knots IAS) } \]
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></th>
<th>“N” Category</th>
<th>“U” Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>900 kg (1984 lb)</td>
<td>900 kg (1984 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>900 kg (1984 lb)</td>
<td>900 kg (1984 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)
15. Load factor at maximum weight:

<table>
<thead>
<tr>
<th></th>
<th>Normal Category</th>
<th>Category Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flaps up</td>
<td>+ 3.8</td>
<td>Flaps up</td>
</tr>
<tr>
<td>Flaps down</td>
<td>- 1.9</td>
<td>Flaps down</td>
</tr>
<tr>
<td></td>
<td>+ 2</td>
<td>Flaps down</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum
18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.
19. Baggage / Cargo Compartment Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires:

- Main gear track .................................................. 2.58 m (8.46 ft)
- Wheel tire size .................................................. 380 x 150
- Front gear angular movement ...................... left: 27°
  .................................................. right: 27°
- 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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

- Elevator: up ....................................... 9°30' ± 30'
  down ............................................. 12° ± 30'
- Ailerons: Relative to the trailing edge of the wings,
  up ............................................. 15°± 1°
  neutral ...................................... 2° ± 1°
  down ........................................... 10°± 1°
- Elevator tab:
  Elevator up: 25°30' ± 1° .... 6° ± 1°
  Elevator down: 10°30' ± 1°6°30' ± 1°
- Flaps:
  1st notch: ..................................... 15° ± 5°
  +0°
  2nd notch: .................................... 60° ± 5°
- Rudder: ............................................ 25° ±3°

(1) For planes fitted with brakes controlled with rudder pedals:
  16° (-0°, +2°) before operating drum brakes
  20° (-0°, +3°) before operating disk brakes

22. (Reserved)

W.IV Operating and Service Instructions

- Airplane Flight Manual .................. Refer to the latest amendment of Service Letter no. 6
- Airplane Maintenance Manual ........ Refer to the latest amendment of Service Letter no. 6
- Airplane Maintenance Schedule ........ Refer to the latest amendment of Service Letter no. 6

W.V Note:

1. This plane is identical to DR 300/180R except:
   - powerplant
   - centre and front parts of the fuselage
   - forward sliding canopy
   - fuel circuit
Section X: DR 400/140

X.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/140
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE
5. (Reserved)
6. DGAC Type Certification date: December 01, 1972
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

X.II Certification Basis

1. Reference Date for determining the applicable requirements: 21 March 1971
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards: None

X.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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................. 8.72 m (28.61 ft)
   - Height.............. 2.23 m (7.32 ft)
5. Engines:

Lycoming O-320-E2A

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/TCD 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>Diameter</th>
<th>Number of Blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>M 74 DMS-2-64</td>
<td>1.83 m (*)</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td></td>
<td>M 74 DMS-0-64</td>
<td>1.88 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M 74 6S5-2-64</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M 74 6S5-0-64</td>
<td></td>
<td>2</td>
<td></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/TCD standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

80/87 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 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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity......8 U.S. quarts (7.57 liters) Usable..................6 U.S. quarts (5.68 liters)

9. Air speeds:

\[ V_{NE} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots 308 \text{ km/h (166 knots IAS)} \]

\[ V_{NO} \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots 260 \text{ km/h (140 knots IAS)} \]
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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>1000 kg (2205 lb)</td>
<td>1000 kg (2205 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>910 kg (2006 lb)</td>
<td></td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

```
DR 400/140
Weight and balance envelope

Normal Category
Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
Intermediate limit (25% ref.): 0.428 m aft of datum at 1000 kg
Aft limit (33% ref.): 0.564 m aft of datum at 1000 kg

Utility Category
Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
Intermediate limit (25% ref.): 0.428 m aft of datum at 910 kg
Aft limit (33% ref.): 0.564 m aft of datum at 910 kg
```

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

<table>
<thead>
<tr>
<th></th>
<th>Normal Category</th>
<th>Utility Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flaps up n</td>
<td>+3.8</td>
<td>+4.4</td>
</tr>
<tr>
<td>Flaps up n</td>
<td>-1.9</td>
<td>-2.2</td>
</tr>
<tr>
<td>Flaps down n</td>
<td>+2</td>
<td>+2</td>
</tr>
<tr>
<td>Flaps down n</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

Maximum baggage compartment: 40 kg (88 lb) at 1.90 m aft of datum

20. Wheels and Tires

Main gear track: 2.58 m (8.46 ft)
Wheel tire size: 380 x 150
Front gear angular movement: left: 27°, right: 27°

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>1.8 bar</td>
<td>5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator: up: 9°30’ ± 30’, down: 12° ± 30’
Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>Ailerons</th>
<th>Neutral</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>up</td>
<td>15° ± 1°</td>
<td>2° ± 1°</td>
</tr>
<tr>
<td>down</td>
<td>10° ± 1°</td>
<td></td>
</tr>
</tbody>
</table>

Elevator tab: Elevator up: 25°30’ ± 1°, 6° ± 1°
Elevator down: 10°30’ ± 1°, 16°30’ ± 1°

Flaps: 1st notch: 15° ± 5°
2nd notch: 60° ± 5°

Rudder: 25° ± 0° (1)

(1) For planes fitted with brakes controlled with rudder pedals:
16° (-0°, +2°) before operating drum brakes
20° (-0°, +3°) before operating disk brakes

22. (Reserved)

X.IV Operating and Service Instructions

Airplane Flight Manual............. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual........ Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule........ Refer to the latest amendment of Service Letter no. 6

X.V Note:

1. This plane is identical to DR 400/125 except powerplant.
Section Y: DR 400/160

Y.I  General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/160
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: September 06, 1972
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

Y.II  Certification Basis

1. Reference Date for determining the applicable requirements: 21 March 1971
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

Y.III  Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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................. 8.72 m (28.61 ft)
   Height............... 2.23 m (7.32 ft)
   Length............... 6.96 m (22.83 ft) - Round spinner
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
Remarks: Maximum continuous power limited by noise regulation.

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>74 DM 6S5-2-66</td>
<td>1.83 m (*)</td>
<td>2 2150 rpm</td>
</tr>
<tr>
<td></td>
<td>74 DM 6S5-2-64</td>
<td></td>
<td>2 2250 rpm</td>
</tr>
</tbody>
</table>

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

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>SAE50</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 a +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C a +20°C)</td>
<td>SAE30, SAE40 or SAE20W50</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C a +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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Usable</th>
<th>Capacity</th>
<th>Usable</th>
<th>Capacity</th>
<th>Usable</th>
<th>Capacity</th>
<th>Usable</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>100/109(1)</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

(1) New standard called “Standard 92” from serial no. 2210, unusable quantity of fuel reduced from 10 liters to 1 liter, (Refer to note 2).
8.2 Oil:

Oil sump capacity.............. 8 U.S. quarts (7.57 liters)
Usable.......................... 6 U.S. quarts (5.68 liters)

9. Air speeds:

- $V_{NE}$ .................................... 308 km/h (166 knots IAS)
- $V_{NO}$ .................................... 260 km/h (140 knots IAS)
- $V_{C}$ ....................................... 260 km/h (140 knots IAS)
- $V_{A}$ ....................................... 215 km/h (116 knots IAS)
- $V_{FE}$ ..................................... 170 km/h (92 knots IAS)

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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>1050 kg (2315 lb)</td>
<td>1045 kg (2304 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>950 kg (2094 lb)</td>
<td></td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

Normal Category
- Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
- Intermediate limit (25% ref.): 0.428 m aft of datum at 1050 kg
- Aft limit (33% ref.): 0.564 m aft of datum at 1050 kg

Utility Category
- Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
- Intermediate limit (25% ref.): 0.428 m aft of datum at 950 kg
- Aft limit (33% ref.): 0.564 m aft of datum at 950 kg

14. Datum:
Wing leading edge of the rectangular part of the wings.
Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

Normal Category:
- Flaps up n ......................... + 3.8
- Flaps up n ......................... - 1.9
- Flaps down n ..................... + 2
- Flaps down n ..................... 0

Utility Category:
- Flaps up n ......................... + 4.4
- Flaps up n ......................... - 2.2
- Flaps down n ..................... + 2
- Flaps down n ..................... 0
16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum
18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.
19. Baggage / Cargo Compartment: Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires:
   Main gear track ...........................................2.58 m (8.46 ft)
   Wheel tire size ........................................ 380 x 150
   Front gear angular movement: left: 27°
                                 right: 27°
   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>1.8 bar</td>
<td>5 bar</td>
<td>2 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:
   Elevator: up ...................... 9°30’ ± 30’
             down ...................... 12° ± 30’
   Ailerons: Relative to the trailing edge of the wings
             up .................. 15°± 1°
             down .............. 2° ± 1°
   Elevator tab: Elevator up: ....25°30’ ± 1°......6° ± 1°
                 Elevator down: 10°30’ ± 1°16°30’ ± 1°
   Flaps: 1st notch: ................. 15° ± 5°
           +0°
         2nd notch: ......................60° ± 5°
           +3°
   Rudder: .........................................25° ±0° (1)
          (1) For planes fitted with brakes controlled with rudder pedals:
             16° (-0°, +2°) before operating drum brakes
             20° (-0°, +3°) before operating disk brakes

22. (Reserved)

Y.IV Operating and Service Instructions
   Airplane Flight Manual........ Refer to the latest amendment of Service Letter no. 6
   Airplane Maintenance ManualRefer to the latest amendment of Service Letter no. 6
   Airplane Maintenance ScheduleRefer to the latest amendment of Service Letter no. 6

Y.V Note:
1. This plane is identical to DR 400/125 except:
   - powerplant
   - leading edge of centre part of the wings
   - leading edge fuel tanks
   - luggage compartment door
2. "Standard 92" models: Since February 1995 (from serial no. 2220 included)
Section Z:  

Z.I  General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/180
2. Airworthiness Category: Normal and Utility Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DARIOIS
   FRANCE.
4. Manufacturer: Robin Aviation
   1 route de Troyes
   21121 DARIOIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: May 10, 1972
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

Z.II  Certification Basis

1. Reference Date for determining the applicable requirements: 21 March 1971
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

Z.III  Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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..................8.72 m (28.61 ft)
   Height.................2.23 m (7.32 ft)
   Length................6.96 m (22.83 ft) - Round spinner

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Proprietary document. Copies are not controlled. Confirm revision status through the EASA-internet/Intranet.
5. Engines:
Lycoming O-360-A3A or O-360-A1A or O-360-A1P (*)
(*) from serial nr 2207 included

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>Ø</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>76 EM 8S5-0-54</td>
<td>1.93 m (1)</td>
<td>2</td>
<td>2500 rpm (3)</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-0-56</td>
<td></td>
<td>2</td>
<td>2500 rpm (3)</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-0-64</td>
<td></td>
<td>2</td>
<td>2200 rpm (3)</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-0-66</td>
<td></td>
<td>2</td>
<td>2250 rpm (3)</td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO 27 HM/180/160</td>
<td>1.80 m (2)</td>
<td>2</td>
<td>2350 rpm</td>
</tr>
</tbody>
</table>

Remarks:
(1) No acceptable diameter reduction for repair.
(2) When Hoffmann HO 27 installed, major change nr 35 must be applied.
(3) Do not continuous operate between 2150 rpm and 2350 rpm.

The EASA type certification standard includes that of FAA TC P4EA and FAA TC P3EU, 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.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Ø</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoffmann</td>
<td>HO V 123 K/180R</td>
<td>1.80 m (2)</td>
<td>3</td>
<td>Woodward B 210-689</td>
<td>Constant speed (4)</td>
</tr>
</tbody>
</table>

Remarks:
(4) Modification of engine from O-360-A3A to O-360-A1A
The EASA type certification standard includes that of FAA TC P5EU, 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:
Lycoming O-360-A3A or Lycoming O-360-A1A:
100/100LL octane minimum aviation grade gasoline.
Lycoming O-360-A1P:
91/96 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>SAE40 or SAE50</td>
<td>SAE40</td>
</tr>
<tr>
<td>Above 60°F (+15°C)</td>
<td>SAE60</td>
<td>SAE60</td>
</tr>
<tr>
<td>30°F to 90°F (O°C +30°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C +20°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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>RH tank (liters)</th>
<th>LH tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100/109 (1)</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) New standard called “Standard 92” from serial no. 2210, unusable quantity of fuel reduced from 10 liters to 1 liter, (refer to note 2).

8.2 Oil: Oil sump capacity................. 8 U.S. quarts (7.57 liters) Usable...................... 6 U.S. quarts (5.68 liters)

9. Air speeds:

\[
V_{NE} = 308 \text{ km/h (166 knots IAS)} \\
V_{NO} = 260 \text{ km/h (140 knots IAS)} \\
V_{C} = 260 \text{ km/h (140 knots IAS)} \\
V_{A} = 215 \text{ km/h (116 knots IAS)} \\
V_{FE} = 170 \text{ km/h (92 knots IAS)}
\]

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></th>
<th>“N” Category</th>
<th>“U” Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>1100 kg (2425 lb)</td>
<td>1045 kg (2304 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>950 kg (2094 lb)</td>
<td></td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

[Diagram of weight and balance envelope for DR 400/180 aircraft showing mass limits for Cat. N and Cat. U within the envelope]
14. Datum:
Wing leading edge of the rectangular part of the wings.
Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:
Normal Category: Flaps up n ................................ + 3.8
                        Flaps up n ................................ - 1.9
                        Flaps down n .............................. + 2
                        Flaps down n .............................. 0

Utility Category: Flaps up n ................................ + 4.4
                        Flaps up n ................................ - 2.2
                        Flaps down n .............................. + 2
                        Flaps down n .............................. 0

16. Leveling means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment: Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum

20. Wheels and Tires:
Main gear track ........................................... 2.58 m (8.46 ft)
Wheel tire size ............................................. 380 x 150
Front gear angular movement..............................left: 27°
                                              .....................right: 27°
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>1.8 bar</td>
<td>5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:
Elevator: up ............................................. 9°30' ± 30'
                        down ........................................... 12° ± 30'
Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°± 1°</td>
<td>2° ± 1°</td>
<td>10°± 1°</td>
</tr>
</tbody>
</table>

Elevator tab: Elevator up: 25°30' ± 1°..... 6° ± 1°
                        Elevator down: 10°30' ± 1°+16°30' ± 1°
Flaps: 1st notch: .............................................. 15° ± 5°
                        +0°
                        2nd notch: .............................................. 60° - 5°
                        +3°
Rudder: .............................................. 25° -0° (1)
(1) For planes fitted with brakes controlled with rudder pedals:
   16° (-0°, +2°) before operating drum brakes
   20° (-0°, +3°) before operating disk brakes

22. (Reserved)

Z.IV Operating and Service Instructions

Airplane Flight Manual...................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual............ Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule.......... Refer to the latest amendment of Service Letter no. 6

Z.V Note:

1. This plane is identical to DR 400/160 except:
   - Powerplant
   - towing ability (if equipped with towing hook)

2. "Standard 92" models: Since 11/1993 (serial number 2207 and from serial nr 2216 included)
Section AA: DR 400/180 R

AA.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/180 R
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: November 28, 1972
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

AA.II Certification Basis

1. Reference Date for determining the applicable requirements: 3 August 1972
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
   Airplane and towed sailplane maximum masses are limited considering the minimum climb performances required.
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

AA.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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: 8.72 m (28.61 ft)
   - Height: 2.23 m (7.32 ft)
   - Length: 6.96 m (22.83 ft) - Round spinner
   - 7.10 m (23.29 ft) - Sharp spinner
   - Wing Area: 13.60 m² (146.39 foot²)

5. Engines:
   Lycoming O-360-A3A or Lycoming O-360-A1P (*)
   (*) from serial nr 2207 included

   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 certified by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:
   - Maximum Continuous Power: 2600 rpm
   - Remark: Maximum continuous power limited by noise regulation.

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>76 EM 8S5-0-54</td>
<td>1.93 m (*)</td>
<td>2</td>
<td>2500</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-0-58</td>
<td></td>
<td>2</td>
<td>2400</td>
</tr>
<tr>
<td></td>
<td>76 EM 8S5-0-64</td>
<td></td>
<td>2</td>
<td>2300</td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO 27 HM/180/138</td>
<td>1.80 m</td>
<td>2</td>
<td>2400</td>
</tr>
<tr>
<td>Eva</td>
<td>TR5-180-102-140</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

   The EASA type certification standard includes that of FAA TC P4EA and FAA TC P3EU, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certified by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:
   - Lycoming O-360-A3A: 100/100LL 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>SAE30, SAE40 or SAE20W40</td>
</tr>
<tr>
<td>Above 80°F (+25°C)</td>
<td>SAE80</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 ±30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C ±20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C ±30°C)</td>
<td>SAE20W50 or SAE15W50</td>
<td>SAE20W50</td>
</tr>
<tr>
<td>Below 10°F (-20°C)</td>
<td>SAE30 or SAE20W30</td>
<td>SAE20</td>
</tr>
</tbody>
</table>
8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Capacity (liters)</th>
<th>Usable Capacity (liters)</th>
<th>Auxiliary tank (optional)</th>
<th>Usable</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>100/109 (1)</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

(1) New standard called “Standard 92” from serial no. 2210, unusable quantity of fuel reduced from 10 liters to 1 liter, (refer to note 2).

8.2 Oil:

Oil sump capacity ................. 8 U.S. quarts (7.57 liters)
Usable............................... 6 U.S. quarts (5.68 liters)

9. Air speeds:

\[ V_{\text{NE}} \] ..................... 308 km/h (166 knots IAS)
\[ V_{\text{NO}} \] ..................... 260 km/h (140 knots IAS)
\[ V_{\text{C}} \] ..................... 260 km/h (140 knots IAS)
\[ V_{\text{A}} \] ..................... 215 km/h (116 knots IAS)
\[ V_{\text{FE}} \] ..................... 170 km/h (92 knots IAS)

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>“N” Category</th>
<th>“U” Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td>1000 kg (2205 lb)</td>
<td>1000 kg (2205 lb)</td>
</tr>
</tbody>
</table>

12.1 Towing mass limitations: Each maximum mass of the tug and of the towed glider is limited by the minimum climb performance.

13. Centre of Gravity Range:

**Normal Category**
Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
Intermediate limit (25% ref.): 0.428 m aft of datum at 1000 kg
Aft limit (33% ref.): .... 0.564 m aft of datum at 1000 kg

**Utility Category**
Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
Intermediate limit (25% ref.): 0.428 m aft of datum at 910 kg
Aft limit (33% ref.): .... 0.564 m aft of datum at 910 kg
14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

Normal Category:

| Flaps up n | +3.8 |
| Flaps up n | +1.9 |
| Flaps down n | +2 |
| Flaps down n | 0 |

Category Utility:

| Flaps up n | +4.4 |
| Flaps up n | -2.2 |
| Flaps down n | +2 |
| Flaps down n | 0 |

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum

20. Wheels and Tires:

Main gear track: 2.58 m (8.46 ft)
Wheel tire size: 380 x 150
Front gear angular movement: left: 27° right: 27°

Tire pressure: refer to following table
Oleo strut pressure: refer to following table

<table>
<thead>
<tr>
<th>Front gear</th>
<th>Tire</th>
<th>Main gear</th>
<th>Oleo strut</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 bar</td>
<td>5</td>
<td>bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator:

up: 9°30' ± 30'
down: 12° ± 30'

Ailerons:

Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°± 1°</td>
<td>2° ± 1°</td>
<td>10°± 1°</td>
</tr>
</tbody>
</table>

Elevator tab:

Elevator up: 25°30' ± 1°...6°± 1°
Elevator down: 10°30' ± 1° - 16°30' ± 1°

Flaps:

1st notch: 15° ± 5°
2nd notch: 60° ± 5°

Rudder:

25°-0° (1)

(1) For planes fitted with brakes controlled with rudder pedals:

16° (-0°, +2°) before operating drum brakes
20° (-0°, +3°) before operating disk brakes

22. (Reserved)
AA.IV  Operating and Service Instructions

Airplane Flight Manual ....................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual .......... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule ......... Refer to the latest amendment of Service Letter no. 6

AA.V  Note:

1. This plane is identical to DR 400/125 except:
   - powerplant
   - towing ability
   - landing gears
   - rearview mirror and rear panoramic windows

2. “Standard 92” models: Since November 1993 (serial nr 2207 and from serial number 2216 included)

3. Glider and banner towing: Refer to approved flight manual.
Section BB: DR 400/2+2

BB.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/2+2
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: December 19, 1972
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

BB.II Certification Basis

1. Reference Date for determining the applicable requirements: 3 August 1972
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

BB.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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.................8.72 m (28.61 ft)
                  Height...............2.23 m (7.32 ft)
5. Engines:

Lycoming O-235-H2C or O-235-C2C

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

Remark: Maximum continuous power limited by noise regulation.

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>Mac Cauley</td>
<td>1 A 105 BCM 70-56</td>
<td>1.78 m</td>
<td>2</td>
<td>2250</td>
</tr>
<tr>
<td></td>
<td>1 A 105 BCM 70-60</td>
<td>1.70 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 A 90 ECM 72-50</td>
<td>1.83 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ewa</td>
<td>88-75-34 F</td>
<td>1.76 m</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

The EASA type certification standard includes that of FAA TC P-918 and FAA TC P-842, 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:

80/87 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 to +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C to +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C to +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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable Capacity</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity: 6 U.S. quarts (5.68 liters)

Usable: 4 U.S. quarts (3.79 liters)
9. Air speeds:

\begin{align*}
    V_{NE} & = 308 \text{ km/h (166 knots IAS)} \\
    V_{NO} & = 260 \text{ km/h (140 knots IAS)} \\
    V_{C} & = 260 \text{ km/h (140 knots IAS)} \\
    V_{A} & = 215 \text{ km/h (116 knots IAS)} \\
    V_{FE} & = 170 \text{ km/h (92 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 (kg)</th>
<th>Landing (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;N&quot; Category</td>
<td>865</td>
<td>865</td>
</tr>
<tr>
<td>&quot;U&quot; Category</td>
<td>865</td>
<td>865</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- Normal and Utility Category
  - Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
  - Intermediate limit (25% ref.): 0.428 m aft of datum at 865 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 865 kg

14. Datum:

Wing leading edge of the rectangular part of the wings.

Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- Normal Category:
  - Flaps up \( n \): \( +3.8 \)
  - Flaps up \( n \): \( -1.9 \)
  - Flaps down \( n \): \( +2 \)
  - Flaps down \( n \): \( 0 \)

- Utility Category:
  - Flaps up \( n \): \( +4.4 \)
  - Flaps up \( n \): \( -2.2 \)
  - Flaps down \( n \): \( +2 \)
  - Flaps down \( n \): \( 0 \)

16. Leveling Means:

Horizontal reference upper fuselage spar

17. Minimum Flight Crew:

1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.


None
20. Wheels and Tires:

Main gear track ...........................................2.58 m (8.46 ft)
Wheel tire size .................................380 x 150
Front gear angular movement........left: 27°
...........................................right: 27°
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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator:  up .......................... 9°30’ ± 30’
           down ........................... 12° ± 30’

Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th></th>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator tab:</td>
<td>15°± 1°</td>
<td>2° ± 1°</td>
<td>10°± 1°</td>
</tr>
<tr>
<td>Flaps:</td>
<td>Elevator up:</td>
<td>25°30’ ± 1°</td>
<td>6° ± 1°</td>
</tr>
<tr>
<td></td>
<td>Elevator down:</td>
<td>10°30’ ± 1°</td>
<td>16°30’ ± 1°</td>
</tr>
<tr>
<td>2nd notch:</td>
<td>60°</td>
<td>+3°</td>
<td>-5°</td>
</tr>
</tbody>
</table>

Rudder: ..............................................25°+3°

(1) For planes fitted with brakes controlled with rudder pedals:

16° (-0°, +2°) before operating drum brakes
20° (-0°, +3°) before operating disk brakes

22. (Reserved)

BB.IV Operating and Service Instructions

Airplane Flight Manual.................. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual........... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule......... Refer to the latest amendment of Service Letter no. 6

BB.V Note:

1. This plane is identical to DR 400/125 except:
   - powerplant
   - luggage compartment removed
   - rear seat
Section CC: DR 400/120

CC.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/120
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: February 11, 1975
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

CC.II Certification Basis

1. Reference Date for determining the applicable requirements: 18 September 1974
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

CC.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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” no. 164 or APR 79.88.00 or approved equivalent must be installed.
4. Dimensions:
   Span................. 8.72 m (28.61 ft)
   Height................ 2.23 m (7.32 ft)
   Length............... 6.96 m (22.83 ft) - Round spinner
7.10 m (23.29 ft) - Sharp spinner
Wing Area.........13.60 m² (146.39 foot²)

5. Engines:
Lycoming O-235-L2A or O-235-K2A or O-235-K2B

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

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Number of blades</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac Cauley</td>
<td>1 A 135 JCM 71-47</td>
<td>1.80 m</td>
<td>2 2220</td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO-14-178/115</td>
<td>1.78 m</td>
<td>2 2250</td>
</tr>
<tr>
<td>Sensenich</td>
<td>72CK-S6-0-56</td>
<td>1.83 m (*)</td>
<td>2 2220</td>
</tr>
<tr>
<td></td>
<td>72CK-S5-0-56</td>
<td>1.83 m (*)</td>
<td>2 2300</td>
</tr>
<tr>
<td></td>
<td>72CK-S6-0-54</td>
<td>1.83 m (*)</td>
<td>2 2300</td>
</tr>
</tbody>
</table>

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

7. Fluids:

7.1 Fuel:
100/100LL 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 ±30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C ±20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C ±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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100/109</td>
</tr>
</tbody>
</table>

(1) New standard called “Standard 92” from serial number 2210, unusable quantity of fuel reduced from 10 liters to 1 liter. (Refer to note 2)
8.2 Oil:

- Oil sump capacity: 6 U.S. quarts (5.68 liters)
- Usable: 4 U.S. quarts (3.79 liters)

9. Air speeds:

- \( V_{NE} \): 308 km/h (166 knots IAS)
- \( V_{NO} \): 260 km/h (140 knots IAS)
- \( V_C \): 260 km/h (140 knots IAS)
- \( V_A \): 215 km/h (116 knots IAS)
- \( V_{FE} \): 170 km/h (92 knots IAS)

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</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;N&quot;</td>
<td>900 kg (1984 lb)</td>
<td>900 kg (1984 lb)</td>
</tr>
<tr>
<td>&quot;U&quot;</td>
<td>900 kg (1984 lb)</td>
<td></td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- Normal and Utility Category
  - Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
  - Intermediate limit (25% ref.): 0.428 m aft of datum at 900 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 900 kg

14. Datum:

Wing leading edge of the rectangular part of the wings.

Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

Normal Category:
- Flaps up \( n \): + 3.8
- Flaps up \( n \): - 1.9
- Flaps down \( n \): + 2
- Flaps down \( n \): 0

Utility Category:
- Flaps up \( n \): + 4.4
- Flaps up \( n \): - 2.2
- Flaps down \( n \): + 2
- Flaps down \( n \): 0

16. Leveling Means:

Horizontal reference upper fuselage spar.

17. Minimum Flight Crew:

1 (pilot) at 0.41 ± 0.05 m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.41 ± 0.05 m aft of datum and 2 at 1.19 m aft of datum.

Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum

20. Wheels and Tires:

Main gear track ........................................2.58 m (8.46 ft)
Wheel tire size ........................................380 x 150
Front gear angular movement ....................left: 27°
......................................................right: 27°
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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

Elevator:
up .............................................. 9°30’ ± 30’
down .............................................. 12° ± 30’
Ailerons: Refer to following table
up ............................................. 15° ± 1°
neutral ...................................... 2° ± 1°
down .......................................... 10° ± 1°
Elevator tab:
Elevator up: ....25°30’ ± 1° ......6° ± 1°
Elevator down: 10°30’ ± 1°16°30’ ± 1°
Flaps:
1st notch: ..................................... 15° ± 5°
........................................ 0° ± 5°
2nd notch: ..................................... 60° – 5°
Rudder: .......................................... 25° +3° (1)
(1) For planes fitted with brakes controlled with rudder pedals:
16° (-0°, +2°) before operating drum brakes
20° (-0°, +3°) before operating disk brakes

22. (Reserved)

CC.IV Operating and Service Instructions

Airplane Flight Manual ...................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual.......... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule....... Refer to the latest amendment of Service Letter no. 6

CC.V Note:

1. This plane is identical to DR 400/125 except powerplant

2. “Standard 92” models: Since January 1994 (from serial nr 2212 included)
Section DD: **DR 400/125i**

**DD.I General**

1. a) Type: DR 200, DR 300 and DR 400 series  
b) Model: DR 400/125i  
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: Robin Aviation  
   1 route de Troyes  
   21121 DAROIS  
   FRANCE.  
5. (Reserved)  
6. DGAC Type Certification date: September 25, 1975  
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)  
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

**DD.II Certification Basis**

1. Reference Date for determining the applicable requirements: 18 September 1974  
2. (Reserved)  
3. (Reserved)  
4. Certification Basis: France AIR2052  
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966  
FAR part 23 as amended by amendment 7  
6. Requirements elected to comply: None  
7. EASA Special Conditions: Canopy emergency release system  
8. EASA Exemptions: None  
9. EASA Equivalent Safety Findings: None  

**DD.III Technical Characteristics and Operational Limitations**

1. (Reserved)  
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.  
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……………….8.72 m (28.61 ft)  
   Height……………..2.23 m (7.32 ft)
5. Engines:
Continental IO-240 A, B

The EASA type certification standard includes that of FAA TC E-7SO, 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

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Ø</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT Propeller</td>
<td>MTV-7-D/170-09</td>
<td>1.70 m</td>
<td>3</td>
<td>Electrical variable pitch</td>
<td>Constant speed</td>
</tr>
</tbody>
</table>

The EASA type certification standard includes that of FAA TC P20BO, 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

7.2 Engine Oil:
Teledyne Continental engine IO-240-B (Refer to Continental specifications MHS24 or MHS-25 and SB M87-12R1)

<table>
<thead>
<tr>
<th>Oil</th>
<th>Ashless dispersant (AD)</th>
<th>Straight mineral</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temperatures</td>
<td>SAE15W50 or 20W50</td>
<td>------</td>
</tr>
<tr>
<td>Above +4°C (40°F)</td>
<td>SAE15W50 or 20W60</td>
<td>SAE50</td>
</tr>
<tr>
<td>Below +4°C (40°F)</td>
<td>10W30, 15W30, 20W50</td>
<td>SAE30</td>
</tr>
</tbody>
</table>

7.3 Coolant:
Not Applicable

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>109</td>
</tr>
</tbody>
</table>

8.2 Oil:

<table>
<thead>
<tr>
<th>maximum</th>
<th>minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7 liters</td>
<td>2.9 liters</td>
</tr>
</tbody>
</table>

9. Air speeds:

\[\begin{align*}
V_{NE} & = 308 \text{ km/h (166 knots IAS)} \\
V_{NO} & = 260 \text{ km/h (140 knots IAS)} \\
V_{C} & = 260 \text{ km/h (140 knots IAS)} \\
V_{A} & = 215 \text{ km/h (116 knots IAS)} \\
V_{FE} & = 170 \text{ km/h (92 knots IAS)}
\end{align*}\]

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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>900 kg (1984 lb)</td>
<td>900 kg (1984 lb)</td>
</tr>
<tr>
<td>Landing</td>
<td>900 kg (1984 lb)</td>
<td>900 kg (1984 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

![DR 400/125i Weight and balance envelope](attachment:image.png)

- **Normal and Utility Category**
  - Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
  - Intermediate limit (25% ref.): 0.428 m aft of datum at 900 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 900 kg

14. Datum:

Wing leading edge of the rectangular part of the wings.
Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- **Normal Category**:
  - Flaps up n: +3.8
  - Flaps up n: +1.9
  - Flaps down n: +2
  - Flaps down n: 0

- **Utility Category**:
  - Flaps up n: +4.4
  - Flaps up n: -2.2
  - Flaps down n: +2
  - Flaps down n: 0

16. Leveling Means:

Horizontal reference upper fuselage spar

17. Minimum Flight Crew:

1 (pilot) at 0.41±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:

1 at 0.41±0.05 m aft of datum and 2 at 1.19 m aft of datum.

19. Baggage / Cargo Compartment:

Maximum baggage compartment: 40 kg (88 lb) at 1.90 m aft of datum

20. Wheels and Tires

- **Main gear track**: 2.58 m (8.46 ft)
- **Wheel tire size**: 380 x 150
- **Front gear angular movement**:
  - Left: 27°
  - Right: 27°
- **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>1.6 bar</td>
<td>4 bar</td>
</tr>
<tr>
<td>Oleo strut</td>
<td>4 bar</td>
<td>1.8 bar</td>
</tr>
<tr>
<td>Tire</td>
<td>1.8 bar</td>
<td>6 bar</td>
</tr>
<tr>
<td>Oleo strut</td>
<td>6 bar</td>
<td></td>
</tr>
</tbody>
</table>
21. Control surface movements

<table>
<thead>
<tr>
<th></th>
<th>Elevator:</th>
<th>Ailerons:</th>
<th>Elevator tab:</th>
<th>Flaps:</th>
<th>Rudder:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>up</td>
<td>down</td>
<td>up neutral</td>
<td>up</td>
<td>up</td>
</tr>
<tr>
<td></td>
<td>9°30' ± 30'</td>
<td>12° ± 30'</td>
<td>15° ± 1°</td>
<td>15° ± 5°</td>
<td>25° ± 3°</td>
</tr>
<tr>
<td></td>
<td>down</td>
<td>Relative to the trailing edge of the wings</td>
<td>2° ± 1°</td>
<td>6° ± 1°</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12° ± 30'</td>
<td>10° ± 1°</td>
<td>10° ± 1°</td>
<td>10° ± 1°</td>
<td>2° ± 1°</td>
</tr>
</tbody>
</table>

(1) For planes fitted with brakes controlled with rudder pedals:
16° (-0°, +2°) before operating drum brakes
20° (-0°, +3°) before operating disk brakes

22. (Reserved)

**DD.IV Operating and Service Instructions**

Airplane Flight Manual.............. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual........ Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule........ Refer to the latest amendment of Service Letter no. 6

**DD.V Note:**

1. This plane is identical to DR 400/120 except powerplant
Section EE: DR 400/140 B

EE.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.

5. (Reserved)

6. DGAC Type Certification date: November 09, 1975

7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)

8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

EE.II Certification Basis

1. Reference Date for determining the applicable requirements: 29 August 1975

2. (Reserved)

3. (Reserved)

4. Certification Basis: France AIR2052

5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7

6. Requirements elected to comply: None

7. EASA Special Conditions: Canopy emergency release system

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None


EE.III Technical Characteristics and Operational Limitations

1. (Reserved)

2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.

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.................8.72 m (28.61 ft)
   Height..................2.23 m (7.32 ft)
   Length..................6.96 m (22.83 ft) - Round spinner

TE.CERT.00048-001 © European Aviation Safety Agency, 2019. All rights reserved. ISO9001 Certified. Page 130 of 177 Proprietary document. Copies are not controlled. Confirm revision status through the EASA-Internet/Intranet.
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:

<table>
<thead>
<tr>
<th>Propeller Manufacturer</th>
<th>Model</th>
<th>Maximum Continuous Power RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>74 DM 6S5-2-64</td>
<td>2700 rpm (1)</td>
</tr>
<tr>
<td>Sensenich</td>
<td>74 DM 6S5-2-60</td>
<td>2500 rpm (1)</td>
</tr>
</tbody>
</table>

Remarks: (1) Maximum continuous power limited by noise regulation.

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>74 DM 6S5-2-64</td>
<td>1.83 m (1)</td>
<td>2</td>
<td>2200 rpm</td>
</tr>
<tr>
<td>Sensenich</td>
<td>74 DM 6S5-2-60</td>
<td>1.83 m (1)</td>
<td>2</td>
<td>2300 rpm</td>
</tr>
</tbody>
</table>

Remarks: (1) No acceptable diameter reduction for repair.

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 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>

7.10 m (23.29 ft) - Sharp spinner

Wing Area........ 13.60 m² (146.39 foot²)
8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100/109 (1)</td>
</tr>
</tbody>
</table>

(1) New standard called "Standard 92" from serial number 2210, unusable quantity of fuel reduced from 10 liters to 1 liter, (refer to note 2).

8.2 Oil:

Oil sump capacity.............. 8 U.S. quarts (7.57 liters)
Usable............................ 6 U.S. quarts (5.68 liters)

9. Air speeds:

\[
\begin{align*}
V_{NE} & = 308 \text{ km/h (166 knots IAS)} \\
V_{NO} & = 260 \text{ km/h (140 knots IAS)} \\
V_{C} & = 260 \text{ km/h (140 knots IAS)} \\
V_{A} & = 215 \text{ km/h (116 knots IAS)} \\
V_{FE} & = 170 \text{ km/h (92 knots IAS)}
\end{align*}
\]

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>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td>1000 kg (2205 lb)</td>
<td>1000 kg (2205 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

14. Datum:
Wing leading edge of the rectangular part of the wings.
Cord length at reference section: 1.71 m (5.61 ft)
15. Load factor 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) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity:
- 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

- Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum

20. Wheels and Tires:
- Main gear track: 2.58 m (8.46 ft)
- Wheel tire size: 380 x 150
- Front gear angular movement: left: 27° ± 3°
  right: 27° ± 3°
- Tire pressure: refer to following table
- Oleo strut pressure: refer to following table

<table>
<thead>
<tr>
<th>Tire Pressure</th>
<th>Main Gear Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 bar</td>
<td>5 bar</td>
</tr>
<tr>
<td>2 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:
- Elevator:
  - up: 9°30’ ± 30’
  - down: 12° ± 30’
- Ailerons:
  - Relative to the trailing edge of the wings
  - up: 15° ± 1°
  - neutral: 2° ± 1°
  - down: 10° ± 1°
- Elevator tab:
  - Elevator up: 25°30’ ± 1°.....6° ± 1°
  - Elevator down: 10°30’ ± 1°6’30’ ± 1°
- Flaps:
  - 1st notch: 15° ± 5°
  - 2nd notch: 60° ± 5°
  - 3° (1)
- Rudder:
  - 25° ± 0°

(1) For planes fitted with brakes controlled with rudder pedals:
- 16° (-0°, +2°) before operating drum brakes
- 20° (-0°, +3°) before operating disk brakes

22. (Reserved)

**EE.IV Operating and Service Instructions**

Airplane Flight Manual
- Refer to the latest amendment of Service Letter no. 6

Airplane Maintenance Manual
- Refer to the latest amendment of Service Letter no. 6

Airplane Maintenance Schedule
- Refer to the latest amendment of Service Letter no. 6
EE.V Note:

1. This plane is identical to DR 400/140 except powerplant

2. “Standard 92” model: since November 1993 (from serial nr 2211 included)
Section FF: DR 400/120A

**FF.I General**

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/120 A
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: November 15, 1976
7. EASA Type Certification date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

**FF.II Certification Basis**

1. Reference Date for determining the applicable requirements: 28 June 1976
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

**FF.III Technical Characteristics and Operational Limitations**

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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 .................. 8.72 m (28.61 ft)
   Height ................... 2.23 m (7.32 ft)
5. Engines:
Lycoming O-235-L2A or O-235-K2A or O-235-K2B
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

<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>Mac Cauley</td>
<td>1 A 135 JCM 71-50</td>
<td>1.80 m</td>
<td>2</td>
<td>2200 rpm (2)</td>
</tr>
<tr>
<td></td>
<td>1 A 135 JCM 71-47</td>
<td>1.80 m</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 A 135 JCM 71-47</td>
<td>1.77 m (1)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO-14-178/115</td>
<td>1.78 m</td>
<td>2</td>
<td>2250 rpm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.73 m (1)</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Remarks:
(1) Minimum diameter after repair.
(2) Do not continuous operate between 2025 rpm and 2325 rpm.

The EASA type certification standard includes that of FAA TC P-842, 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.

6. Propellers:

7. Fluids:

7.1 Fuel:
100/100LL 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>SAE60</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 a +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C a +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C a +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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity .................. 6 U.S. quarts (5.68 liters)
Usable.............................. 4 U.S. quarts (3.79 liters)
9. Air speeds:

- $V_{NE}$: 308 km/h (166 knots IAS)
- $V_{NO}$: 260 km/h (140 knots IAS)
- $V_C$: 260 km/h (140 knots IAS)
- $V_A$: 215 km/h (116 knots IAS)
- $V_{FE}$: 170 km/h (92 knots IAS)

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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>880 kg (1940 lb)</td>
<td>880 kg (1940 lb)</td>
<td>880 kg (1940 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

Normal and Utility Category
- Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
- Intermediate limit (25% ref.): 0.428 m aft of datum at 880 kg
- Aft limit (33% ref.): 0.564 m aft of datum at 880 kg

14. Datum:
- Wing leading edge of the rectangular part of the wings.
- Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- Normal Category:
  - Flaps up n: +3.8
  - Flaps up n: -1.9
  - Flaps down n: +2
  - Flaps down n: 0

- Utility Category:
  - Flaps up n: +4.4
  - Flaps up n: -2.2
  - Flaps down n: +2
  - Flaps down n: 0

16. Leveling Means:
- Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment:
- Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires:

Main gear track ........................................2.58 m (8.46 ft)
Wheel tire size ............................................. 380 x 150
Front gear angular movement..............................left: 27°
.................................................................right: 27°

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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator:
up ................................................................ 9°30’ ± 30’
down .......................................................... 12° ± 30’

Ailerons:
Relative to the trailing edge of the wings:

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°± 1°</td>
<td>2° ± 1°</td>
<td>10°± 1°</td>
</tr>
</tbody>
</table>

Elevator tab:
Elevator up: ....25°30’ ± 1°......6° ± 1°
Elevator down: 10°30’ ± 1°16°30’ ± 1°

Flaps:
1st notch: .................................................. 15° ± 5°
2nd notch: ............................................60° ± 5°

Rudder: ..................................................25° ± 5° (1)

(1) For planes fitted with brakes controlled with rudder pedals:
16° (-0°, +2°) before operating drum brakes
20° (-0°, +3°) before operating disk brakes

22. (Reserved)

**FF.IV Operating and Service Instructions**

Airplane Flight Manual ......................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual ................ Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule ............... Refer to the latest amendment of Service Letter no. 6

**FF.V Note:**

1. This plane is identical to DR 400/120 except:
   - propeller
   - maximum mass
Section GG: DR 400/160D

GG.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/160 D
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: April 27, 1981
7. EASA Type Certification date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

GG.II Certification Basis

1. Reference Date for determining the applicable requirements: 21 March 1971
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

GG.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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.................8.72 m (28.61 ft)
   Height..................2.23 m (7.32 ft)
   Length..................6.96 m (22.83 ft) - Round spinner
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: 2600 rpm
Remark: Maximum continuous power limited by noise regulation.

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>M74 DMS-2-66</td>
<td>1.83 m (1)</td>
<td>2</td>
<td>2150 rpm</td>
</tr>
<tr>
<td></td>
<td>74 DM6S5-2-64</td>
<td></td>
<td>2</td>
<td>2250 rpm</td>
</tr>
</tbody>
</table>

Remark: (1) No acceptable diameter reduction for repair.

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 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (O°C ±30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C ±20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C ±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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>RH tank (liters)</th>
<th>LH tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100/109 (1)</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

(1) New standard called “Standard 92” from serial number 2210, unusable quantity of fuel reduced from 10 liters to 1 liter (refer to note 2).
8.2 Oil:

- Oil sump capacity: 8 U.S. quarts (7.57 liters)
- Usable: 6 U.S. quarts (5.68 liters)

9. Air speeds:

- $V_{NE}$: 308 km/h (166 knots IAS)
- $V_{NO}$: 260 km/h (140 knots IAS)
- $V_C$: 260 km/h (140 knots IAS)
- $V_A$: 215 km/h (116 knots IAS)
- $V_{FE}$: 170 km/h (92 knots IAS)

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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td>1000 kg (2205 lb)</td>
<td>1000 kg (2205 lb)</td>
<td>950 kg (2094 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- Normal Category:
  - Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
  - Intermediate limit (25% ref.): 0.428 m aft of datum at 1000 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 1000 kg

- Utility Category:
  - Forward limit (12% ref.): 0.205 m aft of datum at 750 kg
  - Intermediate limit (25% ref.): 0.428 m aft of datum at 950 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 950 kg

14. Datum:

- Wing leading edge of the rectangular part of the wings.
- Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- Normal Category:
  - Flaps up n: + 3.8
  - Flaps up n: - 1.9
  - Flaps down n: + 2
  - Flaps down n: 0

- Utility Category:
  - Flaps up n: + 4.4
  - Flaps up n: - 2.2
  - Flaps down n: + 2
  - Flaps down n: 0
16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum
18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.
19. Baggage / Cargo Compartment Maximum baggage compartment: 40 kg (88 lb) at 1.90m aft of datum
20. Wheels and Tires:
   Main gear track .................................................2.58 m (8.46 ft)
   Wheel tire size ..................................................380 x 150
   Front gear angular movement................................left: 27°
   ...............................................................right: 27°
   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>1.8 bar</td>
<td>5 bar</td>
</tr>
<tr>
<td>Oleo strut</td>
<td>2 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements:

   Elevator: up ........................................ 9°30' ± 30'
   down ........................................... 12° ± 30'

   Ailerons: Refer to following table
   up | neutral | down
   15°± 1° | 2° ± 1° | 10°± 1°

   Elevator tab: Elevator up: 25°30' ± 1°......6° ± 1°
   Elevator down: 10°30’ ± 1°16’30’ ± 1°

   Flaps: 1st notch: ........................................15° ± 5°
   2nd notch: ........................................60° ± 3°

   Rudder: ......................................................25° ± 0° (1)

   (1) For planes fitted with brakes controlled with rudder pedals:
   16° (-0°, +2°) before operating drum brakes
   20° (-0°, +3°) before operating disk brakes

22. (Reserved)

GG.IV Operating and Service Instructions

Airplane Flight Manual....................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual............. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule.......... Refer to the latest amendment of Service Letter no. 6
GG.VNote:

1. This plane is identical to DR 400/160 except:
   - maximum continuous power rpm
   - maximum mass

2. “Standard 92” model: since November 1993
Section HH: DR 400/120 D

HH.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/120 D
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: April 28, 1981
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

HH.II Certification Basis

1. Reference Date for determining the applicable requirements: 28 June 1976
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

HH.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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.................8.72 m (28.61 ft)
   Height...............2.23 m (7.32 ft)
5. Engines:

Lycoming O-235-L2A or O-235-K2A or O-235-K2B

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/TCD standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

5.1 Engine Limits:

<table>
<thead>
<tr>
<th>Propeller Manufacturer</th>
<th>Propeller model</th>
<th>Maximum Continuous Power RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>72 CKS6-0-56</td>
<td>2600 (1)</td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO-14-178/115</td>
<td>2583 (1)</td>
</tr>
</tbody>
</table>

Remarks: (1) Maximum continuous power limited by noise regulation.

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>72 CK-S6-0-56</td>
<td>1.83 m (1)</td>
<td>2</td>
<td>2220</td>
</tr>
<tr>
<td>Hoffmann</td>
<td>HO-14-178/115</td>
<td>1.78 m</td>
<td>2</td>
<td>2220</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.73 m (2)</td>
<td>2</td>
<td>2250</td>
</tr>
</tbody>
</table>

Remarks:
(1) No acceptable diameter reduction for repair.
(2) Minimum diameter after repair.

7. Fluids:

7.1 Fuel:

100/100LL 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>SAE40 or SAE50</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 or 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>
8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity ............... 6 U.S. quarts (5.68 liters)
Usable ................................ 4 U.S. quarts (3.79 liters)

9. Air speeds:

\[ \begin{align*}
V_{NE} & \quad 308 \text{ km/h} \ (166 \text{ knots IAS}) \\
V_{NO} & \quad 260 \text{ km/h} \ (140 \text{ knots IAS}) \\
V_{C} & \quad 260 \text{ km/h} \ (140 \text{ knots IAS}) \\
V_{A} & \quad 215 \text{ km/h} \ (116 \text{ knots IAS}) \\
V_{FE} & \quad 170 \text{ km/h} \ (92 \text{ knots IAS})
\end{align*} \]

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>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

<table>
<thead>
<tr>
<th>Normal and Utility Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward limit (12 % ref.): 0.205 m aft of datum at 750 kg</td>
</tr>
<tr>
<td>Intermediate limit (25 % ref.): 0.428 m aft of datum at 900 kg</td>
</tr>
<tr>
<td>Aft limit (33 % ref.): 0.564 m aft of datum at 900 kg</td>
</tr>
</tbody>
</table>

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

Normal Category:
- Flaps up n .................................. + 3.8
- Flaps up n .................................. + 1.9
- Flaps down n .................................. + 2
- Flaps down n .................................. + 0

Utility Category:
- Flaps up n .................................. + 4.4
- Flaps up n .................................. + 2.2
- Flaps down n .................................. + 2
16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment Maximum baggage compartment: 40kg (88lb) at 1.90m aft of datum

20. Wheels and Tires

| Main gear track | 2.58 m (8.46 ft) |
| Wheel tire size | 380 x 150 |
| Front gear angular movement | left: 27° right: 27° |
| 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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

<table>
<thead>
<tr>
<th>Elevator:</th>
<th>up</th>
<th>9°30' ± 30'</th>
</tr>
</thead>
<tbody>
<tr>
<td>down</td>
<td>12° ± 30'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ailerons:</th>
<th>Relative to the trailing edge of the wings</th>
</tr>
</thead>
<tbody>
<tr>
<td>up</td>
<td>15°± 1°</td>
</tr>
<tr>
<td>neutral</td>
<td>2° ± 1°</td>
</tr>
<tr>
<td>down</td>
<td>10°± 1°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elevator tab:</th>
<th>Elevator up:</th>
<th>25°30' ± 1°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator down:</td>
<td>10°30' ± 1°</td>
<td></td>
</tr>
<tr>
<td>Flaps:</td>
<td>1st notch:</td>
<td>5° ± 5°</td>
</tr>
<tr>
<td>2nd notch:</td>
<td>0° - 5°</td>
<td></td>
</tr>
<tr>
<td>Rudder:</td>
<td>25° - 0° (1)</td>
<td></td>
</tr>
</tbody>
</table>

1) For planes fitted with brakes controlled with rudder pedals:

- 16° (-0°, +2°) before operating drum brakes
- 20° (-0°, +3°) before operating disk brakes

22. (Reserved)

**HH.IV Operating and Service Instructions**

Airplane Flight Manual................. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual............ Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule........... Refer to the latest amendment of Service Letter no. 6

**HH.V Note:**

1. This plane is identical to DR 400/120 except maximum continuous power rpm
Section II: DR 400/180 S

II.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/180S
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: February 11, 1985
7. EASA Type Certification Date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

II.II Certification Basis

1. Reference Date for determining the applicable requirements: 31 January 1985
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

II.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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...............8.72 m (28.61 ft)
   Height.............2.23 m (7.32 ft)
   Length...........6.96 m (22.83 ft) - Round spinner
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

Remark: Maximum continuous power limited by noise regulation.

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>76 EM8S5-0-64</td>
<td>1.93 m (1)</td>
<td>2</td>
<td>2250 (2)</td>
</tr>
</tbody>
</table>

Remarks:
(1) No acceptable diameter reduction for repair.
(2) Do not continuous operate between 2150 rpm and 2350 rpm.

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:

100/100LL 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 ±30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C ±20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C ±30°C)</td>
<td>SAE20W50, 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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Capacity</th>
<th>Usable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>110</td>
<td>100/109</td>
</tr>
</tbody>
</table>

(1) New standard called "Standard 92" from serial number 2210, unusable quantity of fuel reduced from 10 liters to 1 liter, (refer to note 2).

8.2 Oil:

Oil sump capacity............... 8 U.S. quarts (7.57 liters)
9. Air speeds:

- $V_{NE}$: 308 km/h (166 knots IAS)
- $V_{NO}$: 260 km/h (140 knots IAS)
- $V_{C}$: 260 km/h (140 knots IAS)
- $V_{A}$: 215 km/h (116 knots IAS)
- $V_{FE}$: 170 km/h (92 knots IAS)

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></th>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
<td></td>
</tr>
<tr>
<td>1100 kg (2425 lb)</td>
<td>1045 kg (2304 lb)</td>
<td>950 kg (2094 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

14. Datum:

- Wing leading edge of the rectangular part of the wings.
- Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- **Normal Category:**
  - Flaps up n: +3.8
  - Flaps up n: -1.9
  - Flaps down n: +2
  - Flaps down n: 0

- **Utility Category:**
  - Flaps up n: +4.4
  - Flaps up n: -2.2
  - Flaps down n: +2
  - Flaps down n: 0
16. Leveling Means: Horizontal reference upper fuselage spar
17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum
18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.
19. Baggage / Cargo Compartment Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum)

20. Wheels and Tires:

- Main gear track: 2.58 m (8.46 ft)
- Wheel tire size: 380 x 150
- Front gear angular movement: left: 27°, right: 27°
- Tire pressure: refer to following table
- Oleo strut pressure: refer to following table

<table>
<thead>
<tr>
<th>Tire</th>
<th>Oleo strut</th>
<th>Tire</th>
<th>Oleo strut</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 bar</td>
<td>5 bar</td>
<td>2 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

- Elevator: up: 9°30' ± 30', down: 12° ± 30'
- Ailerons: Relative to the trailing edge of the wings
  
<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°± 1°</td>
<td>0° ± 1°</td>
<td>10°± 1°</td>
</tr>
</tbody>
</table>

- Elevator tab: Elevator up: 25°30' ± 1°, 6° ± 1°
- Elevator down: 10°30' ± 1°6°30' ± 1°
- Flaps: 1st notch: 15° ± 5°
- 2nd notch: 60° ± 5°

- Rudder: 25° ± 3° (1)

(1) For planes fitted with brakes controlled with rudder pedals:
  16° (-0°, +2°) before operating drum brakes
  20° (-0°, +3°) before operating disk brakes

22. (Reserved)

II.IV Operating and Service Instructions

- Airplane Flight Manual: Refer to the latest amendment of Service Letter no. 6
- Airplane Maintenance Manual: Refer to the latest amendment of Service Letter no. 6
- Airplane Maintenance Schedule: Refer to the latest amendment of Service Letter no. 6

II.V Note:

1. This plane is identical to DR 400/180 except:
   - maximum continuous power rpm
   - Sensenich 76 EM8S5-0-64 propeller only

2. “Standard 92” model
Section JJ: DR 400/100

JJ.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400/100
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: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: November 06, 1987
7. EASA Type Certification date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

JJ.II Certification Basis

1. Reference Date for determining the applicable requirements: 13 April 1987
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

JJ.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, two-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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.............8.72 m (28.61 ft)
   Height.................2.23 m (7.32 ft)
   Length.................6.96 m (22.83 ft) - Round spinner
5. Engines: 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

Remark: Maximum continuous power limited by noise regulation.

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Diameter (m)</th>
<th>Number of Blades</th>
<th>Minimum Static RPM at Sea Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensenich</td>
<td>72 CKS6-0-56</td>
<td>1.83 (*)</td>
<td>2</td>
<td>2220 rpm</td>
</tr>
</tbody>
</table>

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

7. Fluids:

7.1 Fuel: 100/100LL 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.

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Oil: Oil sump capacity 6 U.S. quarts (5.68 liters) Usable 4 U.S. quarts (3.79 liters)

9. Air speeds:

$V_{NE} = 308$ km/h (166 knots IAS)

$V_{NO} = 260$ km/h (140 knots IAS)

$V_{C} = 260$ km/h (140 knots IAS)
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</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>800 kg (1764 lb)</td>
<td>800 kg (1764 lb)</td>
</tr>
<tr>
<td>U</td>
<td>800 kg (1764 lb)</td>
<td>800 kg (1764 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

<table>
<thead>
<tr>
<th>Category</th>
<th>Forward limit (12 % ref.)</th>
<th>Intermediate limit (25 % ref.)</th>
<th>Aft limit (33 % ref.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>0.205 m aft of datum</td>
<td>0.428 m aft of datum</td>
<td>0.564 m aft of datum</td>
</tr>
<tr>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

**Normal Category:**
- Flaps up $n$ $\leq +3.8$
- Flaps up $n$ $\leq -1.9$
- Flaps down $n$ $\leq +2$
- Flaps down $n$ $\leq 0$

**Utility Category:**
- Flaps up $n$ $\leq +4.4$
- Flaps up $n$ $\leq -2.2$
- Flaps down $n$ $\leq +2$
- Flaps down $n$ $\leq 0$

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05 m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05 m aft of datum

19. Baggage / Cargo Compartment Maximum baggage compartment: 40 kg (88 lb) at 1.10 m aft of datum
20. Wheels and Tires:

Main gear track ............................. 2.58 m (8.46 ft)
Wheel tire size .............................. 380 x 150
Front gear angular movement.............. left: 27°
............................................. right: 27°
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>1.6 bar</td>
<td>4 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator:........... up ....................... 9°30’ ± 30’
...................... down .......................... 12° ± 30’
Ailerons:............ Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>15° ± 1°</td>
<td>2° ± 1°</td>
<td>10° ± 1°</td>
</tr>
</tbody>
</table>

Elevator tab: ...... Elevator up: ....25°30’ ± 1°......6° ± 1°
.................. Elevator down: 10°30’ ± 1°16°30’ ± 1°
Flaps: .............. 1st notch: .................. 15° ± 5°
.......................... 2nd notch: .................. 60° ± 5°
Rudder: .................. .......................... 25° ±0°(1)

(1) For planes fitted with brakes controlled with rudder pedals:
16° (-0°, +2°) before operating drum brakes
20° (-0°, +3°) before operating disk brakes

22. (Reserved)

JJ.IV Operating and Service Instructions

Airplane Flight Manual .................. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual .......... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule .......... Refer to the latest amendment of Service Letter no. 6

JJ.V Note:

1. This plane is identical to DR 400/120 D except:
   - rear seats removed
   - luggage compartment layout
   - maximum weight
   - brakes
   - new instrument panel
Section KK: **DR 400 RP**

**KK.I General**

1. a) Type: DR 200, DR 300 and DR 400 series  
   b) Model: DR400 RP  
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: Robin Aviation  
   1 route de Troyes  
   21121 DAROIS  
   FRANCE.  

5. (Reserved)  
6. DGAC Type Certification date: August 11, 1988  
7. EASA Type Certification date: January 28, 2013 (Type Certificate transfer)  
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

**KK.II Certification Basis**

1. Reference Date for determining the applicable requirements: January 1986  
2. (Reserved)  
3. (Reserved)  
4. Certification Basis: France AIR2052  
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966  
FAR part 23 as amended by amendment 32  
6. Requirements elected to comply: None  
7. EASA Special Conditions: Canopy emergency release system  
8. EASA Exemptions: None  
9. EASA Equivalent Safety Findings: None  

**KK.III Technical Characteristics and Operational Limitations**

1. (Reserved)  
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.  
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..................8.72 m  (28.61 ft)  
   Height.............2.23 m  (7.32 ft)
5. Engines:
   Porsche PFM 3200 N01

5.1 Engine Limits:
   Maximum Continuous Power: 2200 rpm

6. Propellers:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Ø</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoffmann</td>
<td>HO V 123 F1/200 CQ</td>
<td>2.00 m</td>
<td>3</td>
<td>Woodward B 2109-881</td>
<td>Constant speed</td>
</tr>
</tbody>
</table>

The EASA type certification standard includes that of FAA TC P5EU, 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

7.2 Engine Oil:
   Only automotive type
   - SAE 5W 30
   - SAE 5W 50
   - SAE 10W 30
   - SAE 15W 50 (*)
   - SAE 20W 50 (*)
   (*) Do not use below -5°C (25°F) external on ground temperature

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>115</td>
<td>108</td>
</tr>
</tbody>
</table>

8.2 Oil:

Refer to approved flight manual

9. Air speeds:

- \( V_{NE} \) .........................308 km/h (166 knots IAS)
- \( V_{NO} \) .........................260 km/h (140 knots IAS)
- \( V_{C} \) ..........................260 km/h (140 knots IAS)
- \( V_{A} \) ...........................215 km/h (116 knots IAS)
- \( V_{FE} \) ..........................170 km/h (92 knots IAS)

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>“N” Category</th>
<th>“U” Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td>1100 kg (2425 lb)</td>
<td>1100 kg (2425 lb)</td>
</tr>
</tbody>
</table>
13. Centre of Gravity Range:

![DR 400RP Weight and balance envelope diagram]

**Normal category**
- Forward limit (12% ref.): 0.205 m aft of datum at 850 kg
- Intermediate limit (25% ref.): 0.428 m aft of datum at 1100 kg
- Aft limit (30% ref.): 0.513 m aft of datum at 1100 kg

**Utility category**
- Forward limit (12% ref.): 0.205 m aft of datum at 850 kg
- Intermediate limit (17% ref.): 0.294 m aft of datum at 950 kg
- Aft limit (30% ref.): 0.513 m aft of datum at 950 kg

14. Datum:
Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

**Normal Category**
- Flaps up \( n \) .......................................................... + 3.8
- Flaps up \( n \) .......................................................... - 1.9
- Flaps down \( n \) .......................................................... + 2
- Flaps down \( n \) .......................................................... 0

**Utility Category**
- Flaps up \( n \) .......................................................... + 4.4
- Flaps up \( n \) .......................................................... - 2.2
- Flaps down \( n \) .......................................................... + 2
- Flaps down \( n \) .......................................................... 0

16. Leveling Means:
Horizontal reference upper fuselage spar

17. Minimum Flight Crew:
1 (pilot) at 0.41±0.05 m aft of datum

18. Maximum Passenger Seating Capacity:
1 at 0.41±0.05 m aft of datum and 2 at 1.19 m aft of datum.

Maximum baggage compartment: 60 kg (132 lb) at 1.90 m aft of datum
20. Wheels and Tires

Main gear track ...................................... 2.58 m (8.46 ft)
Wheel tire size ...................................... 380 x 150
Front gear angular movement ...................... left: 27°
...................................................... right: 27°
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>2.5 bar</td>
<td>12 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator: up ..................................... 9°30’ ± 30’
down ............................................ 12° ± 30’
Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°± 1°</td>
<td>2° ± 1°</td>
<td>10°± 1°</td>
</tr>
</tbody>
</table>

Elevator tab: Elevator up: ...25°30’ ± 1°.....6° ± 1°
Elevator down: 10°30’ ± 1°±30’ ± 1°
Flaps: 1st notch: .................................... 15° ± 5°
...................................... 60° ± 5°
2nd notch: ......................................... 60° ± 5°
Rudder: ............................................. 25° ± 0°

22. (Reserved)

KK.IV Operating and Service Instructions

Airplane Flight Manual ....................... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual ............. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule .......... Refer to the latest amendment of Service Letter no. 6

KK.V Note:

1. This plane is identical to DR 400/180 R except:
   - powerplant
   - maximum weight
Section LL: DR 400 NGL

LL.I General

1. a) Type: DR 200, DR 300 and DR 400 series
   b) Model: DR 400 NGL
2. Airworthiness Category: Normal Category
3. Type Certificate Holder: C.E.A.P.R.
   1 route de Troyes
   21121 DAROIS
   FRANCE
4. Manufacturer: Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.
5. (Reserved)
6. DGAC Type Certification date: February 19, 1991
7. EASA Type Certification date: January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

LL.II Certification Basis

1. Reference Date for determining the applicable requirements: 21 March 1971
2. (Reserved)
3. (Reserved)
4. Certification Basis: France AIR2052
5. Airworthiness Requirements: France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7
6. Requirements elected to comply: None
7. EASA Special Conditions: Canopy emergency release system
8. EASA Exemptions: None
9. EASA Equivalent Safety Findings: None

LL.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. Description: Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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................8.72 m (28.61 ft)
   Height.............2.23 m (7.32 ft)
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

Remark: Maximum continuous power limited by noise regulation.

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>76 EM8S5-0-64</td>
<td>1.93 m (1)</td>
<td>2</td>
<td>2180 rpm (2)</td>
</tr>
</tbody>
</table>

Remarks:
(1) No acceptable diameter reduction for repair.
(2) Do not continuous operate between 2150 rpm and 2350 rpm.

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:

100/100LL 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>SAE60</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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>RH tank (liters)</th>
<th>LH tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>110</td>
<td>100</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity.......................... 8 U.S. quarts (7.57 liters)
Usable.......................... 6 U.S. quarts (5.68 liters)
9. Air speeds:

- $V_{NE}$ ........................................ 308 km/h (166 knots IAS)
- $V_{NO}$ ........................................ 260 km/h (140 knots IAS)
- $V_{C}$ ........................................... 260 km/h (140 knots IAS)
- $V_{A}$ ........................................... 215 km/h (116 knots IAS)
- $V_{FE}$ ........................................ 170 km/h (92 knots IAS)

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>“N” Category</th>
<th>Take-off</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1150 kg (2535 lb)</td>
<td>1150 kg (2535 lb)</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- Normal Category
  - Forward limit (17% ref.): 0.294 m aft of datum at 900 kg
  - Intermediate limit (28% ref.): 0.478 m aft of datum at 1150 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 1150 kg

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- Normal Category
  - Flaps up n ................................ + 3.8
  - Flaps up n ................................... - 1.9
  - Flaps down n ................................ + 2
  - Flaps down n ................................ 0

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum.
20. Wheels and Tires:

Main gear track ........................................ 2.58 m (8.46 ft)
Wheel tire size ........................................... 380 x 150
Front gear angular movement .....................
left: 27°
right: 27°
Tire pressure ........................................... refer to following table

<table>
<thead>
<tr>
<th>Tire</th>
<th>Oleo strut</th>
<th>Tire</th>
<th>Oleo strut</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 bar</td>
<td>5.5 bar</td>
<td>3 bar</td>
<td>6.5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator:............. up .............................. 9°30’ ± 30’
down ...................... 12° ± 30’
Ailerons: ............. Relative to the trailing edge of the wings
up ................................. 15° ± 1°
neutral ............................ 2° ± 1°
down ............................... 10° ± 1°

Elevator tab: ....... Elevator up: 25°30’ ± 1° .... 6° ± 1°
Elevator down: 10°30’ ± 1° 60° ± 1°

Flaps: ................ 1st notch: ............. 15° ± 5°
2nd notch: ............. 60° - 5°
22. (Reserved)

LL.IV Operating and Service Instructions

Airplane Flight Manual ............. Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual ......... Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule ....... Refer to the latest amendment of Service Letter no. 6

LL.V Note:

1. This plane is identical to DR 400/180 except:
   - larger cabin
   - maximum weight
   - Sensenich 76 EM8S5-0-64 propeller only
**Section MM:** DR 400/200R

### MM.I General

1. a) **Type:** DR 200, DR 300 and DR 400 series  
   b) **Model:** DR 400/200 R
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:** Robin Aviation  
   1 route de Troyes  
   21121 DAROIS  
   FRANCE.
5. (Reserved)
6. **DGAC Type Certification date:** December 11, 1992
7. **EASA Type Certification Date:** January 28, 2013 (Type Certificate transfer)
8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

### MM.II Certification Basis

1. **Reference Date for determining the applicable requirements:** 3 August 1972
2. (Reserved)
3. (Reserved)
4. **Certification Basis:** France AIR2052
5. **Airworthiness Requirements:**  
   France AIR2052 amendment June 6th, 1966  
   FAR part 23 as amended by amendment 7
6. **Requirements elected to comply:** None
7. **EASA Special Conditions:** Canopy emergency release system  
   Airplane and towed sailplane maximum masses are limited considering the minimum climb performances required.
8. **EASA Exemptions:** None
9. **EASA Equivalent Safety Findings:** None

### MM.III Technical Characteristics and Operational Limitations

1. (Reserved)
2. **Description:** Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.
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..........8.72 m (28.61 ft)
Height.........2.23 m (7.32 ft)
Length.........7.22 m (23.69 ft)
Wing Area.......13.60 m² (146.39 foot²)

5. Engines:

Lycoming IO-360-A1 B6

The EASA type certification standard includes that of FAA TC 1E10, 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>(\varnothing)</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartzell</td>
<td>HC-C2YK-1BF/F7666A-2</td>
<td>1.88 m</td>
<td>2</td>
<td>Woodward B 2109-681</td>
<td>Constant speed (<em>), Remarks: (</em>) Variable pitch from 14° to 29.2°</td>
</tr>
</tbody>
</table>

The EASA type certification standard includes that of FAA TC P-920, 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:

100/130 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>-----</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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Capacity (liters)</th>
<th>Usable (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main tank</td>
<td>Auxiliary tank</td>
</tr>
<tr>
<td>110</td>
<td>50</td>
</tr>
</tbody>
</table>

8.2 Oil:

Oil sump capacity.......... 8 U.S. quarts (7.57 liters)
Usable.......................... 6 U.S. quarts (5.68 liters)
9. Air speeds:

\[ V_{NE} = 308 \text{ km/h (166 knots IAS)} \]
\[ V_{NO} = 260 \text{ km/h (140 knots IAS)} \]
\[ V_{C} = 260 \text{ km/h (140 knots IAS)} \]
\[ V_{A} = 215 \text{ km/h (116 knots IAS)} \]
\[ V_{FE} = 170 \text{ km/h (92 knots IAS)} \]

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</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;N&quot; Category</td>
<td>1100 kg (2425 lb)</td>
<td>1100 kg (2425 lb)</td>
</tr>
<tr>
<td>&quot;U&quot; Category</td>
<td>950 kg (2094 lb)</td>
<td></td>
</tr>
</tbody>
</table>

12.1 Towing mass limitations: Each maximum mass of the tug and of the towed glider is limited by the minimum climb performance.

13. Centre of Gravity Range:

<table>
<thead>
<tr>
<th>Category</th>
<th>Forward limit</th>
<th>Intermediate limit</th>
<th>Aft limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Category</td>
<td>0.257 m aft of datum</td>
<td>0.462 m aft of datum</td>
<td>0.564 m aft of datum</td>
</tr>
<tr>
<td>Utility Category</td>
<td>0.257 m aft of datum</td>
<td>0.462 m aft of datum</td>
<td>0.564 m aft of datum</td>
</tr>
</tbody>
</table>

14. Datum:

Wing leading edge of the rectangular part of the wings

Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

<table>
<thead>
<tr>
<th>Category</th>
<th>Flaps up</th>
<th>Flaps down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Category</td>
<td>+ 3.8</td>
<td>+ 2</td>
</tr>
<tr>
<td>Utility Category</td>
<td>+ 4.4</td>
<td>+ 2</td>
</tr>
</tbody>
</table>
16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum

20. Wheels and Tires

- Main gear track ..................................2.58 m (8.46 ft)
- Wheel tire size .................................. 380 x 150
- Front gear angular movement ................. left: 27°
- .................................................... right: 27°
- Tire 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>1.8 bar</td>
<td>6.5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

- Elevator: up ..................... 9°30' ± 30'
- down ......................... 12° ± 30'
- Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°± 1°</td>
<td>2°± 1°</td>
<td>10°± 1°</td>
</tr>
</tbody>
</table>

- Elevator tab: Elevator up: 25°30' ± 1°......6° ± 1°
- Elevator down: 10°30' ± 1°16"30' ± 1°

- Flaps: 1st notch: .......................... 15° ± 5°
- ........................................... 0°
- 2nd notch: ............................... 60° ± 5°

- Rudder: .................................. 25° ± 0°

22. (Reserved)

**MM.IV Operating and Service Instructions**

- Airplane Flight Manual ................. Refer to the latest amendment of Service Letter no. 6
- Airplane Maintenance Manual .......... Refer to the latest amendment of Service Letter no. 6
- Airplane Maintenance Schedule ........ Refer to the latest amendment of Service Letter no. 6

**MM.V Note:**

1. This plane is identical to DR 400/180 R except:
   - Powerplant
   - Maximum weight

2. Glider and Banner towing: Refer to approved flight manual.
Section NN: **DR 400/500**

### NN.I General

1. a) **Type:** DR 200, DR 300 and DR 400 series

2. **Model:** DR 400/500

3. **Airworthiness Category:** Normal Category

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

5. **Manufacturer:** Robin Aviation
   1 route de Troyes
   21121 DAROIS
   FRANCE.

6. **DGAC Type Certification date:** March 10, 1998

7. **EASA Type Certification date:** January 28, 2013 (Type Certificate transfer)

8. The EASA type Certificates replaces DGAC-France Type Certificate no. 45

### NN.II Certification Basis

1. **Reference Date for determining the applicable requirements:** 21 March 1971

2. **Certification Basis:** France AIR2052

3. **Airworthiness Requirements:** France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7

4. **Requirements elected to comply:** None

5. **EASA Special Conditions:** Canopy emergency release system

6. **EASA Exemptions:** None

7. **EASA Equivalent Safety Findings:** None


### NN.III Technical Characteristics and Operational Limitations

1. **Description:** Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.

2. **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.

3. **Dimensions:**
   - Span..................8.72 m (28.61 ft)
   - Height.................2.23 m (7.32 ft)
5. Engines:

Lycoming IO-360-A1 B6

The EASA type certification standard includes that of FAA TC 1E10, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCD 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>Ø</th>
<th>Number of blades</th>
<th>Governor</th>
<th>Minimum static RPM at sea level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartzell</td>
<td>HC-C2YK-1BF/F7666A-2</td>
<td>1.88 m</td>
<td>2</td>
<td>Woodward B 2109-681</td>
<td>Constant speed (*)</td>
</tr>
</tbody>
</table>

Remarks: (*) variable pitch from 14° to 29.2°

The EASA type certification standard includes that of FAA TC P-920, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCD standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.

7. Fluids:

7.1 Fuel:

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 60°F (+15°C)</td>
<td>SAE40 or SAE50</td>
<td>SAE50</td>
</tr>
<tr>
<td>30°F to 90°F (0°C to +30°C)</td>
<td>SAE40</td>
<td>SAE40</td>
</tr>
<tr>
<td>0°F to 70°F (-15°C to +20°C)</td>
<td>SAE30, SAE40 or SAE20W40</td>
<td>SAE30</td>
</tr>
<tr>
<td>0°F to 90°F (-15°C to +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>

8. Fluid capacities:

8.1 Fuel:

<table>
<thead>
<tr>
<th>Main tank (liters)</th>
<th>RH tank (liters)</th>
<th>LH tank (liters)</th>
<th>Auxiliary tank (optional) (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Usable</td>
<td>Capacity</td>
<td>Usable</td>
</tr>
<tr>
<td>105</td>
<td>104</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

8.2 Oil:

<table>
<thead>
<tr>
<th>Oil sump capacity</th>
<th>Usable capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 U.S. quarts (7.57 liters)</td>
<td>6 U.S. quarts (5.68 liters)</td>
</tr>
</tbody>
</table>

9. Air speeds:

\[ \begin{align*}
V_{NE} & = 308 \text{ km/h (166 knots IAS)} \\
V_{NO} & = 260 \text{ km/h (140 knots IAS)} \\
V_{C} & = 260 \text{ km/h (140 knots IAS)} \\
V_{A} & = 215 \text{ km/h (116 knots IAS)}
\end{align*} \]
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</th>
<th>Landing</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>1150 kg</td>
<td>1150 kg</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

- Normal Category
  - Forward limit (17% ref.): 0.294 m aft of datum at 900 kg
  - Intermediate limit (28% ref.): 0.478 m aft of datum at 1150 kg
  - Aft limit (33% ref.): 0.564 m aft of datum at 1150 kg

14. Datum: Wing leading edge of the rectangular part of the wings. Cord length at reference section: 1.71 m (5.61 ft)

15. Load factor at maximum weight:

- Normal Category:
  - Flaps up n: +3.8
  - Flaps up n: -1.9
  - Flaps down n: +2
  - Flaps down n: 0

- Utility Category:
  - Flaps up n: +4.4
  - Flaps up n: -2.2
  - Flaps down n: +2
  - Flaps down n: 0

16. Leveling Means: Horizontal reference upper fuselage spar

17. Minimum Flight Crew: 1 (pilot) at 0.41±0.05m aft of datum

18. Maximum Passenger Seating Capacity: 1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

19. Baggage / Cargo Compartment Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum

\( V_{FE} \), \( 170 \text{ km/h (92 knots IAS) } \)
20. Wheels and Tires:

- Main gear track: 2.58 m (8.46 ft)
- Wheel tire size: 380 x 150
- Front gear angular movement: left: 27°, right: 27°
- 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>1.8 bar</td>
<td>6.5 bar</td>
</tr>
</tbody>
</table>

21. Control surface movements

Elevator: up: 9°30’ ± 30’
         down: 12° ± 30’

Ailerons: Relative to the trailing edge of the wings

<table>
<thead>
<tr>
<th></th>
<th>up</th>
<th>neutral</th>
<th>down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator tab</td>
<td>15° ± 1°</td>
<td>2° ± 1°</td>
<td>10° ± 1°</td>
</tr>
<tr>
<td>Elevator up</td>
<td>25°30’ ± 1°</td>
<td>6° ± 1°</td>
<td></td>
</tr>
<tr>
<td>Elevator down</td>
<td>10°30’ ± 1°</td>
<td>6° ± 1°</td>
<td></td>
</tr>
</tbody>
</table>

Flaps:

- 1st notch: 15° ± 5°
- 2nd notch: 60° - 5°

Rudder: 25° - 0°

22. (Reserved)

NN.IV Operating and Service Instructions

Airplane Flight Manual: Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Manual: Refer to the latest amendment of Service Letter no. 6
Airplane Maintenance Schedule: Refer to the latest amendment of Service Letter no. 6

NN.V Note:

1. This plane is identical to DR 400 NGL except powerplant
Section OO: DR400 / 200 I

OO.I General

1. Type/ Model/ Variant
   1.1 Type
       DR 200, DR 300 and DR 400 series
   1.2 Model
       DR400 / 200 I

2. Airworthiness Category
   Normal and Utility Category

3. Manufacturer
   Robin Aviation

4. EASA Type Certification Application Date
   26 April 2016

5. (Reserved)

6. (Reserved)

7. EASA Type Certification Date
   25 September 2017

OO.II EASA Certification Basis

1. Reference Date for determining the applicable requirements
   3 August 1972

2. Airworthiness Requirements
   France AIR2052 amendment June 6th, 1966
   FAR part 23 as amended by amendment 7

3. Special Conditions
   Canopy emergency release system

4. Exemptions
   None

5. (Reserved) Deviations

6. Equivalent Safety Findings
   None

7. Environmental Protection
Technical Characteristics and Operational Limitations

1. Type Design Definition
Refer to C.E.A.P.R. document 1001130

2. Description
Single-engine, four-seat, low-wing airplane, wood construction, fixed tricycle landing gear.

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: 8.72 m (28.61 ft)
- Height: 2.23 m (7.32 ft)
- Length: 7.10 m (23.29 ft)
- Wing Area: 14.20 m² (152.85 ft²)

5. Engine
5.1 Model
Lycoming IO-360-A1 B6

5.2 Type Certificate
The EASA type certification standard includes that of FAA TC 1E10, 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.

5.3 Limitations
Maximum Continuous Power: 2700 rpm

6. Load factors
Normal Category:
- Flaps up: +3.8
- Flaps up n: -1.9
- Flaps down n: +2
- Flaps down n: 0

Utility Category:
- Flaps up: +4.4
- Flaps up n: -2.2
- Flaps down n: +2
- Flaps down n: 0

7. Propeller
7.1 Model
MT Propeller MTV-12B/188-59b

7.2 Type Certificate
EASA TC P.013

7.3 Number of blades
3

7.4 Diameter
1.88 m

7.5 Sense of Rotation
Clockwise (viewed in flight direction)
8. Fluids

8.1 Fuel
100/130 octane minimum aviation grade gasoline.
Refer to latest revision of Service Instruction Lycoming No. 1070.

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

8.3 Coolant
Not Applicable

9. Fluid capacities

9.1 Fuel

<table>
<thead>
<tr>
<th>Capacity (liters)</th>
<th>Usable (liters)</th>
<th>Capacity (liters)</th>
<th>Usable (liters)</th>
<th>Capacity (liters)</th>
<th>Usable (liters)</th>
<th>Capacity (optional) (liters)</th>
<th>Usable (liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main tank</td>
<td>110</td>
<td>RH tank</td>
<td>40</td>
<td>LH tank</td>
<td>40</td>
<td>Auxiliary tank</td>
<td>50</td>
</tr>
<tr>
<td>Lh tank</td>
<td>109</td>
<td>Lh tank</td>
<td>40</td>
<td>Lh tank</td>
<td>40</td>
<td>Lh tank</td>
<td>40</td>
</tr>
</tbody>
</table>

9.2 Oil
Oil sump capacity 8 U.S. quarts (7.57 liters)
Usable 6 U.S. quarts (5.68 liters)

9.3 Coolant system capacity
Not Applicable

10. Air Speeds

<table>
<thead>
<tr>
<th>$V_{NE}$</th>
<th>308 km/h (166 knots IAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{NO}$</td>
<td>260 km/h (140 knots IAS)</td>
</tr>
<tr>
<td>$V_{C}$</td>
<td>260 km/h (140 knots IAS)</td>
</tr>
<tr>
<td>$V_{A}$</td>
<td>215 km/h (116 knots IAS)</td>
</tr>
<tr>
<td>$V_{FE}$</td>
<td>170 km/h (92 knots IAS)</td>
</tr>
</tbody>
</table>

11. Flight Envelope
Refer to approved aircraft flight manual.

12. Approved Operations Capability
Refer to approved aircraft flight manual.

13. Maximum Masses

<table>
<thead>
<tr>
<th>&quot;N&quot; Category</th>
<th>&quot;U&quot; Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>Landing</td>
</tr>
<tr>
<td>1100 kg (2425 lb)</td>
<td>1100 kg (2425 lb)</td>
</tr>
</tbody>
</table>

14. Centre of Gravity Range

Normal Category
Forward limit (15 % ref.): 0.257 m aft of datum at 750 kg
Intermediate limit (25 % ref.): 0.427 m aft of datum at 1100 kg
Aft limit (33 % ref.): 0.564 m aft of datum at 1100 kg
Utility Category
Forward limit (15 % ref.): 0.257 m aft of datum at 750 kg
Intermediate limit (25 % ref.): 0.427 m aft of datum at 950 kg
Aft limit (33 % ref.): 0.564 m aft of datum at 950 kg

15. Datum
Wing leading edge of the rectangular part of the wings
Cord length at reference section: 1.71 m (5.61 ft)

16. Control surface deflections
Elevator: up .......................... 9°30' ± 30'
down ...................................... 12° ± 30'
Ailerons: .................. Relative to the trailing edge of the wings
  up .......................... 15°± 1°
  neutral
  down .......................... 10°± 1°

Elevator tab: ...... Elevator up: 25°30' ± 1° .... 6° ± 1°
  Elevator down: 10°30' ± 1° 16°30' ± 1°
Flaps: ........... 1st notch: .................. 15° ± 5°
  2nd notch: .................. 60° ± 5°
Rudder: ......... 25° ± 3°

17. Levelling Means
Horizontal reference upper fuselage spar

18. Minimum Flight Crew
1 (pilot) at 0.41±0.05m aft of datum

19. Maximum Passenger Seating Capacity
1 at 0.41±0.05m aft of datum and 2 at 1.19m aft of datum.

20. Baggage/Cargo Compartments
Maximum baggage compartment: 60 kg (132 lb) at 1.90m aft of datum

21. Wheels and Tyres
Main gear track .......................... 2.58 m (8.46 ft)
Wheel tire size .......................... 380 x 150
Front gear angular movement .................. left: 27°
........................................ right: 27°
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>1.8 bar</td>
<td>6.5 bar</td>
</tr>
</tbody>
</table>
**Operating and Service Instructions**

1. Flight Manual  
   Refer to the latest amendment of Service Letter no. 6
   Refer to the latest amendment of Service Letter no. 6
   Refer to the latest amendment of Service Letter no. 6
   Refer to the latest amendment of Service Letter no. 6
5. Illustrated Parts Catalogue  
   Refer to the latest amendment of Service Letter no. 6

**Notes**

1. This plane is identical to DR 400/180 except for:  
   Powerplant installation which is identical to DR400/200R except for the propeller  
   MT Propeller MTV-12B/188-59b
2. First model is serial number 2695.
Section PP: Common Notes

1. **DR 400 RP**: The fuselage and wing spar are made of Oregon pine which has a minimum strength of 426 daN/cm². Refer to the drawing APR 04.80.12. It is not authorized to transform a DR400/180R to a DR400 RP.

2. **DR 400 NGL and DR 400/500**: The fuselage and wing spar are made of Oregon pine which has a minimum strength of 448 daN/cm². Refer to the drawing APR 04.88.01.

3. **DR 400/200 R and DR 400/200 I**: The fuselage and wing spar are made of Oregon pine which has a minimum strength of 426 daN/cm². Refer to the drawing APR 04.18.02. It is not authorized to transform a DR 400/180R to a DR 400/200 R or a DR 400/200 I.

4. **All others DR400 models**:  
   - “Standard 92” models: refer to drawing APR 04.18.05  
   - Others models: refer to drawing APR 01.400

**ADMINISTRATIVE SECTION**

I. Acronyms

II. Type Certificate Holder Record

   Société Avions Pierre Robin  
   Société Avions Robin  
   ROBIN Aviation  
   APEX Aircraft  
   C.E.A.P.R.

III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue 1</td>
<td>January 28, 2013</td>
<td>Initial issue on transfer of this Type Certificate to CEAPR</td>
</tr>
<tr>
<td>Issue 2</td>
<td>September 25, 2017</td>
<td>New model DR400/200 I (refer to section AB)</td>
</tr>
<tr>
<td>Issue 3</td>
<td>December 07, 2018</td>
<td>Merger with EASA.A.510 (DR 200 series)</td>
</tr>
</tbody>
</table>