



## ***European Aviation Safety Agency***

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**EASA**

**TYPE-CERTIFICATE  
DATA SHEET**

**EASA.A.567**

**APM40**

**ISSOIRE AVIATION**

Aérodrome d'Issoire  
BP 1  
63500 Issoire  
FRANCE

For models: APM40

Issue 01: 23 June 2011

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## **SECTION A: APM40**

### **A.I. General**

1. Data Sheet No.: EASA.A.567
2. a) Type: APM40  
b) Model: APM40  
c) Variant: Not applicable
3. Airworthiness Category: Normal and Utility Categories
4. Type Certificate Holder: ISSOIRE AVIATION
5. Manufacturer: ISSOIRE AVIATION
6. Certification Application Date: 1<sup>st</sup> February 2010
7. (Reserved)
8. (Reserved)

### **A.II. EASA Certification Basis**

1. Reference Date for determining the applicable requirements: 1<sup>st</sup> February 2010
2. Airworthiness Requirements: FAR Part23 Amendment 7 dated 14 September 1969 (refer to CRI-A1)  
CS VLA Amendment 1, CS-VLA 572, 613 (c), 615 (a)(3)
3. Special Conditions: CRI C-01 Fatigue Evaluation of wing and associated structure  
CRI D-01 Design properties  
CRI F-01 Storage battery design and installation
3. Exemptions: None
4. Deviations: None
5. Equivalent Safety Findings: None
6. Requirements elected to comply: None
7. Environmental Standards: CS 36 (Chapter 10 of ICAO, Annex 16, Volume I, Fifth edition, Amendment 9)
8. (Reserved)
9. (Reserved)

### **A.III. Technical Characteristics and Operational Limitations**

1. Type Design Definition: APM40 Master Drawing List reference IA10400
2. Description: Single-engine, composite (mainly carbon-Epoxy), four seater, low-wing airplane, conventional tail, fixed tricycle landing gear, FADEC engine.
3. Equipment:
 

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for airworthiness certification.

The applicable EASA approved Flight Manual is required for all operations. Included within the Flight Manual is information in the form of supplements which cover installation of optional systems and equipment that are necessary for safe operation of the aircraft
4. Dimensions: Refer to Airplane Flight Manual
5. Engine:
  - 5.1.1 Model: Continental IOF-240-B
  - 5.1.2 Type Certificate: The engine has been EASA type certified 10 May 2007 under TC EASA.IM.E.169.
  - 5.1.3 Limitations:
 

|                    |                   |  |
|--------------------|-------------------|--|
| Maximum take-off   | 2800 rpm (125 HP) |  |
| Maximum continuous | 2800 rpm (125 HP) |  |
6. Load factors:
 

|            | Normal Cat. | Utility Cat. |
|------------|-------------|--------------|
| Flaps up   | +3.8g       | +4.4g        |
|            | -1.9g       | -2.2g        |
| Flaps down | +2g         | +2g          |
|            | -0g         | -0g          |
7. Propeller:
  - 7.1 Model: MT Propeller MTV-7-D/175-51
  - 7.2 Type Certificate: The EASA type certification standard includes that of LBA TC N° 32.130/84, 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.
  - 7.3 Number of blades: 3
  - 7.4 Diameter: 1.75m
  - 7.5 Sense of Rotation: Clockwise

8. Fluids:

- 8.1 Fuel: AVGAS 100LL
- 8.2 Oil: MHS-24 SAE 50 (Aero DM 15W50 for instance) and refer to TCM Spec MHS No. 24
- 8.3 Coolant: Not Applicable

9. Fluid capacities:

- 9.1 Fuel: two structural wing tanks  
Total capacity 118 litres  
Total usable capacity 114 litres
- 9.2 Oil: Maximum capacity : 6 litres
- 9.3 Coolant system capacity: Not Applicable

10. Air Speeds:

|   | Normal Category     | Utility Category    |
|---|---------------------|---------------------|
| VNE (Never Exceed speed)                | 147 KIAS (273 km/h) | 163 KIAS (302 km/h) |
| VNO (Maximum structural cruising speed) | 132 KIAS (244 km/h) | 132 KIAS (244 km/h) |
| VA (Manoeuvring speed)                  | 132 KIAS (244 km/h) | 132 KIAS (244 km/h) |
| VFE (Maximum Flap Extended)             | 97 KIAS (180 km/h)  | 97 KIAS (180 km/h)  |

11. Maximum Operating Altitude: 11300 feet

12. Operations Capability: Day and Night VFR

13. Maximum Weights:

|                 | Normal Cat. | Utility Cat. |
|-----------------|-------------|--------------|
| Maximum Takeoff | 985 kg      | 816 kg       |
| Maximum Landing | 985 kg      | 816 kg       |

14. Centre of Gravity Range:

- Normal Category
- (1) Forward Limit: 11.4% of cma aft of datum at 711 kg
- (2) Intermediate limit: 26% of cma aft of datum at 985 kg
- (3) Aft Limit: 31.5% of cma aft of datum at 985 kg
- Utility Category
- (1) Forward Limit: 11.4% of cma aft of datum at 711 kg
- (2) Intermediate limit: 17% of cma aft of datum at 816 kg
- (3) Aft Limit: 20% of cma aft of datum at 816 kg

Cma = 1.114 m

Straight line variation between points given.

15. Datum: Wing leading edge at 1.96 m from aircraft centerline.
16. Control surface deflections:
- |                               |                              |
|-------------------------------|------------------------------|
| Elevator: Up                  | $25^{\circ} \pm 2^{\circ}$   |
| Down                          | $15^{\circ} \pm 2^{\circ}$   |
| Rudder relative to fin: Right | $30^{\circ} \pm 2^{\circ}$   |
| Left                          | $30^{\circ} \pm 2^{\circ}$   |
| Ailerons relative to wing: Up | $25^{\circ} \pm 2^{\circ}$   |
| Down                          | $15^{\circ} \pm 2$           |
| Flaps relative to wing: Up    | $0/-4^{\circ}$               |
| Take-off                      | $12.5^{\circ} \pm 2^{\circ}$ |
| Landing                       | $25^{\circ} \pm 2^{\circ}$   |
17. Levelling Means: Fuselage edge at canopy rail junction at  $9^{\circ}$  pitch down attitude.
18. Minimum Flight Crew: 1 (Pilot)
19. Maximum Passenger Seating Capacity:
- Normal Category :  
4 seats  
Two at Station +0.204 or 0.263 m  
Two at station +1.101 m  
220 kg maximum in the two front seats.
- Utility Category :  
2 seats  
Two at Station +0.204 or 0.263 m  
220 kg maximum in the two front seats.
20. Baggage/Cargo Compartments: Maximum baggage compartment 20 kg at +1.526 m  
Baggage are not authorized on Utility Category
21. Wheels and Tyres: Refer to Airplane Flight Manual
22. Serial Numbers Eligible: From s/n 003

#### **A.IV. Operating and Service Instructions**

1. Flight Manual:

EASA approved Aircraft Manual MDV-APM40-2011-01 Edition 1 dated May 2011 or all further EASA approved version.

EASA approved Aircraft Manual Supplement MDV-APM40-2011-02 Edition 0 dated May 2011 or all further EASA approved version for use in Utility Category.

2. Maintenance Manual and Spare Parts Catalogue:

MDE-03 Edition Originale dated June 2011 or all further EASA approved version.

**A.V. Notes:**

1. The APM40 is not certified for known or expected lightning conditions.
2. The Utility Category operations are limited to any Normal Category operations plus (refer to CRI A10):
  - Spins limited to 3 turns;
  - Lazy eight, chandelles, and steep turns, or similar manoeuvres;
  - positive loop and roll (“school or barrel only”) ;
  - Cuban eight, half Cuban eight, reverse half Cuban eight, and Immelman (Loop and roll).

The Aircraft Manual Supplement MDV-APM40-2011-02 must be used and in the aeroplane when the APM40 is used in Utility Category.

Use of the APM40 under Utility Category must be in the limitations specified in the Aircraft Manual Supplement MDV-APM40-2011-02.

3. FADEC Limitations: Flight is prohibited if any FADEC Health Status Annunciator (HSA) channel lamps (cylinder icons) or annunciators are illuminated.
4. Installation of additional flight-critical electronic equipment, such as an Electronic Flight Instrument System (EFIS), will require review by EASA to determine whether aircraft-level lightning and/or High Intensity Radiated Field (HIRF) testing is required.
5. The second battery is to be utilized as power source for FADEC only.

## **ADMINISTRATIVE SECTION**

### I. Acronyms

None

### II. Type Certificate Holder Record

Issoire Aviation - Aérodrome d'Issoire BP 1 - 63500 Issoire - FRANCE

### III. Change Record

| <b>Issue</b> | <b>Date</b>  | <b>Changes</b> | <b>TC Issue No. &amp; Date</b> |
|--------------|--------------|----------------|--------------------------------|
| Issue 01     | 23 June 2011 | Initial issue  | 23 June 2011                   |
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