TYPE-CERTIFICATE

DATA SHEET

NO. EASA.IM.A.352

for
Honda Aircraft HA-420

Type Certificate Holder
Honda Aircraft Company

6430 Ballinger Road
Greensboro, North Carolina 27410
United States of America

For models: HA-420
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SECTION 1: GENERAL HA-420

1. Data Sheet No: EASA.IM.A.352


3. Certifying Authority: Federal Aviation Administration
Atlanta Aircraft Certification Office
1701 Columbia Avenue
College Park, Georgia 30337
United States of America

4. Type Certificate Holder: Honda Aircraft Company
6430 Ballinger Road
Greensboro, North Carolina 27410
United States of America

5. Manufacturer: Honda Aircraft Company
6430 Ballinger Road
Greensboro, North Carolina 27410
United States of America

SECTION 2

I. General

1. Aeroplane: Honda Aircraft HA-420
(See Note 6)

2. EASA Validation Application Date: 8 February 2007

3. FAA Type Certification Date: 8 December 2015

4. EASA Validation Date: 23 May 2016

II. Certification Basis

1. Reference Date for FAA Certification: 1 October 2013

   FAA Type Certificate Data Sheet No. A00018AT


14 CFR Part 36, Noise Standards: Aircraft Type and Airworthiness Certification, effective December 1, 1969, as amended by Amendments 36-1, effective December 1, 1969, through Amendment 36-29, effective March 11, 2013

3. **EASA Airworthiness Requirements:**

   - **CS 23**

   - **CS 34**
     Am 1, Aircraft Engine Emissions and fuel venting, Am 1, dated 23 January 2013.

   - **CS 36:**

   - **CS-ACNS**

   - **CS-FCD**
     Operational Suitability Data (OSD) Flight Crew Data, 31 January 2014

   - **CS-MMEL**
     Master Minimum Equipment List, 31 January 2014

   - **CS 25, Appendix Q**
     Am 21, Large Aeroplanes – Additional airworthiness requirements for approval of a Steep Approach Landing (SAL) capability, dated 27 March 2018.

4. **EASA Special Conditions:**

   - **B-01** Handling and Performance
   - **B-02** High Speed Characteristics
   - **B-03** Stall Speed Determination
   - **B-05** Stick Pusher
   - **C-01** Sonic Fatigue
   - **C-02** Pressurisation into Non Pressurised Areas
   - **C-03** Speed Margins
   - **C-04** Yawing Manoeuvre
   - **C-05** Dynamic Response
   - **C-06** Out Of Trim Characteristics (Structures)
   - **C-102** Side Facing Seats/Divans
   - **D-01** Take Off Warning System
   - **D-02** Extension and Retraction Systems
   - **D-03** Wheels
   - **D-04** Brakes and Braking System
   - **D-05** Doors
   - **D-06** Bird Strike
   - **E-01** Fuel Tank Installation
   - **E-04** Lines, Fittings and Components
E-06 Fire Extinguishing Fuselage Mounted Engines
E-10 Fuel Tank Ignition Prevention
F-02 Hydraulic Systems
F-03 Interaction of Systems and Structure
F-56 FADEC Integration
F-63 High Altitude Operations (41000 Ft)
F-104 Cruise Speed Control
O-01 Steep Approach and Landing (SAL)

5. **EASA Exemptions:**

N/A

6. **EASA Equivalent Safety Findings:**

B-56 Dynamic Stability
E-102 Digital Only N2 and Fuel Flow
E-103 Calculated vs Measured Fuel Flow
F-57 Use of LED Lights
F-102 Use of Aircraft Battery for Starting
F-103 Uncompensated Magnetic Compass
G-101 Airspeed Indicator (ASI) Flap Markings

7. **EASA Environmental Standards:**

CS 34 - Aircraft Engine Emissions and Fuel Venting, of 23 January 2013;
CS 36 - Aircraft Noise, of 23 January 2013;

III. **Technical Characteristics and Operational Limitations**

1. **Design Standard:** Defined by Report HA420-100-10001 “EASA Type Design Configuration Report” at Revision A or later approved revision.

2. **Description:** Low wing jet with a T-tail configuration, powered by two turbofan engines mounted on pylons over the wing.

   The structure is conventional, with a predominant composite fuselage and aluminium wing. The landing gear is retractable tricycle type, and both main and nose landing gear are single wheeled.

3. **Dimensions:**

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<tr>
<td>Length</td>
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<td>Span</td>
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<td>Height</td>
<td>4.56 m (14.97 ft)</td>
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<td>Wing Area</td>
<td>16.40 m² (176.56 ft²)</td>
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4. **Engines:** Two GE Honda Aero Engines HF120-H1A turbofans (TC/TCDS reference EASA.IM.E.054)
5. **Fuel:** Refer to applicable approved manuals

6. **Oil:** Refer to applicable approved manuals

7. **Airspeeds:** $V_{MO}$ 270 KIAS, $M_{MO}$ 0.72 (See Airplane Flight Manual)

8. **Maximum Operating Altitude:** 13106 m (43,000 ft) MSL

9. **Operational Capability:** Single Pilot / Two Pilots
   VFR Day and Night
   IFR Day and Night
   Over Water
   Reduced Vertical Separation Minima (RVSM) (Note 9)
   Flight into Known Icing Conditions (FIKI) (Note 10)
   Steep Approach and Landing (SAL) (Note 11)

10. **Maximum Certified Weights:**
    For S/N 42000012 through 42000125:
    - Takeoff: 4808 kg (10,600 lb)
    - Landing: 4472 kg (9,860 lb)
    - Zero Fuel: 3992 kg (8,800 lb)
    - Ramp: 4844 kg (10,680 lb)

    For S/N 42000011, 42000012 through 42000125 with SB-420-42-004 and SB-420-55-001 installed, 42000126 and up:
    - Takeoff: 4853 kg (10,700 lb)
    - Landing: 4517 kg (9,960 lb)
    - Zero Fuel: 4036 kg (8,900 lb)
    - Ramp: 4889 kg (10,780 lb)

11. **Centre of Gravity:** See Airplane Flight Manual

12. **Datum:** 1.75 m (69.0 in) forward of the nose jacking position

13. **Mean Aerodynamic Chord (MAC):** 1.52 m (59.72 in.)
    L.E. of MAC at + 5.90 m (232.2 in.) aft of datum

14. **Levelling Means:** Left hand floorboard inside main entry way
    (see AFM for further information)

15. **Minimum Flight Crew:** (See note 5 for cockpit equipment /arrangement restrictions)
    One pilot (in the left pilot seat) plus additional equipment as specified in the Limitations Section of the EASA Approved Airplane Flight Manual, or
    One pilot and one copilot.

16. **Maximum Passenger Capacity:** Maximum six (S/N 42000012 through 42000125).
    Maximum seven (S/N 42000011, 42000126 and up).
17. **Baggage / Cargo Compartment:**

For S/N 42000012 through 42000125:
- Forward Baggage Compartment: 45 kg (100 lb)
- *SB-420-52-002 incorporated*
- Forward Baggage Compartment*: 90 kg (200 lb)
- AFT Baggage Compartment: 181 kg (400 lb)
- Luggage Valet: 23 kg (50 lb)

For S/N 42000011, 42000012 through 42000125 with SB-420-42-004 and SB-420-55-001 installed, 42000126 and up:
- Forward Baggage Compartment: 90 kg (200 lb)
- Aft Baggage Compartment: 181 kg (400 lb)
- Luggage Valet: 23 kg (50 lb)

For Aft Compartment loading distribution, refer to Section 6 of the latest EASA Approved Airplane Flight Manual

IV. **Operating and Servicing Instructions**

1. **Airplane Flight Manual (AFM):**

For S/N 42000012 through 42000125:
Airplanes must be operated according to the EASA approved AFM, part number HJ1-29000-003-001, revision A2 (or later EASA approved revision)

For S/N 42000012 through 42000125 with SB-420-42-004 and SB-420-55-001 installed:
Airplanes must be operated according to the EASA approved AFM, part number HJ1-29001-003-001, revision A4 (or later EASA approved revision)

For S/N 42000011, 42000126 and up:
Airplanes must be operated according to the EASA approved AFM, part number HJ1-29001-003-001, revision A1 (or later EASA approved revision)

2. **Airplane Maintenance Manual (AMM):**

Airplane Maintenance Manual, part number HJ1-29000-011 revision A3 (or later accepted revision). See HJ1-29000-013, Chapter 5, Section 05-60-00, “Airworthiness Limitations” (Note 3). “Airworthiness Limitations” may not be changed without the approval of EASA.

V. **Operational Suitability Data (OSD)**

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. **Master Minimum Equipment List**

   a) HA-005-00101 EASA Master Minimum Equipment List, revision A or later approved revision.
   b) Required for entry into service by EU operator.
2. Flight Crew Data

a) HA420-100-10004 EASA Operational Suitability Data, Flight Crew, revision original or later approved revision.

b) Required for entry into service by EU operator.

c) Pilot Type Rating: HA-420

VI Notes

NOTE 1 - Weight and balance.
Current weight and balance report, including the list of equipment that are part of the certificated basic empty weight and loading instructions, must be provided for each aircraft at the time of original airworthiness certification.

The certificated empty weight and corresponding center of gravity location must include:

For S/N 42000012 through 42000125:
Unusable fuel: 20.6 kg (45.4 lb) at + 6.53 m (257.18 in.) aft of datum
Full oil:* 5.58 kg (12.3 lb) at + 8.13 m (320.00 in) aft of datum*
Hydraulic Fluid: 4.0 kg (8.8 lb) at + 7.4 m (291.9 in.) aft of datum, considering density of 0.837 kg/l (6.99 lb/gal).

*It is considered the oil from the engine installation (filters and lines)

For S/N 42000011, 42000126 and up:
Unusable fuel: 22.4 kg (49.4 lb) at + 6.61 m (260.13 in.) aft of datum
Full oil:* 5.58 kg (12.3 lb) at + 8.13 m (320.00 in) aft of datum*
Hydraulic Fluid: 4.0 kg (8.8 lb) at + 7.4 m (291.9 in.) aft of datum

*It is considered the oil from the engine installation (filters and lines)

NOTE 2 - Markings and placards.
All marking and placards required by the applicable certification requirements (see certification basis) and by the operational requirements must be installed in the appropriated locations. Required placards and marking are listed in Section 2 of the AFM.

NOTE 3 - Continuing Airworthiness.
See Airworthiness Limitation and Inspection Manual HJ1-29000-013, Chapter 5, Section 05-60-00, "Airworthiness Limitations" for Systems Airworthiness Limitations, Structure Airworthiness Limitations (ALI) and Life-Limited Items (LLI). The life limit for rotating parts on the HF120-H1A engine is in the Airworthiness Limitations Manual of the GE Honda LMM P/N GEK 112112, latest revision.

NOTE 4 - All replacement seats (crew and passenger), although they may comply with TSO C127, must also be demonstrated to comply with installation requirements into the aircraft listed in CS 23.2, 23.561, 23.562, and 23.785.

The foam cushion buildup of all seats (crew and passenger) may not be altered. Any deviation in the foam construction or stiffness must be demonstrated by test or analysis to comply with the CS 23.562 paragraph.

The cabinet that is installed forward of the RH side-facing seat is an integral part of the certified seat and restraint system (applicable for S/N 42000011 and up). The divider
forward of the RH belted lavatory seat is an integral part of the certified seat and restraint system (applicable for S/N 42000011, 42000126 and up). These items may not be structurally altered unless the changes are shown to comply with the requirements of the Certification Basis (including CS 23.561, 23.562 and 23.785).

**NOTE 5** - Approval for operation with a minimum crew of one pilot (in the left pilot seat) is based upon the cockpit equipment installation and arrangement evaluated during EASA certification testing. No significant changes may be made to the installed cockpit equipment or arrangement (EFIS, autopilot, avionics, etc.), except as permitted by the approved MMEL/MEL, without prior approval from the appropriate Competent Authority. For single pilot operations, the following equipment must be operative / available: Autopilot and the EASA Approved Quick Reference Handbook (HJ1-29000-007-001 (Volumes 1 and 2) for S/N 42000012 through 42000125, or HJ1-29001-007-001 for S/N 42000011, 42000012 through 42000125 with SB-420-42-004 and SB-420-55-001 installed, 42000126 and up).

**NOTE 6** - The HA-420 is often referred to as the “HondaJet” or “HondaJet Elite”. These names are strictly marketing designations and are not part of the official model designation.

**NOTE 7** - The Model HA-420 is approved for One Engine Inoperative 10 minutes thrust capability with the GE Honda Aero Engines HF120-H1A engine, As an option under CS-Definitions Am 2 dated 23 December 2010 item “Take-off Power and/or Thrust” page 19 subpara c.

**NOTE 8** – The Aircell CTR System is intended to provide cabin internet connection and email services using portable electronic devices (PEDs). Any other intended function of this equipment will require a re-examination of the certification basis.

**NOTE 9** – Per Type Design, Aircraft Serial 42000011 and subsequent meet the Reduced Vertical Separation Minima (RVSM) technical requirements. Each Operator must obtain an Operational Approval for flight in RVSM airspace from their Competent National Aviation Authority (NAA).

**NOTE 10** – Per Type Design, Aircraft Serial 42000049 and subsequent are FIKI capable. For aircraft Serials 42000011 through 42000048 Honda Service Bulletin ref SB-420-42-001 must be incorporated to allow FIKI.

**NOTE 11** – Compliance has been shown for steep approach operations as an optional kit with appropriate manual supplements.
Change Record

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<td>23 May 2016</td>
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<td>16 Feb 2017</td>
<td>RVSM and FIKI approvals added Section III 9, and Notes 9 and 10 added</td>
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<td>17 Oct 2018</td>
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<td>14 Feb 2020</td>
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