DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A00018AT
Revision 7
Honda Aircraft
Company LLC
HA-420
February 13, 2019

TYPE CERTIFICATE DATA SHEET NO. A00018AT

This data sheet, which is part of Type Certificate No. A00018AT, prescribes conditions and
limitations under which the product for which the type certificate was issued meets the
airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Honda Aircraft Company LLC
6430 Ballinger Road
Greensboro, North Carolina 27410

I – Model HA-420 (6/7/8PCLM, Normal Category) Approved December 8, 2015

Engines: Two (2) GE Honda Aero Engines HF120-H1A turbofan engines
Type Certificate E00085EN


For approved and prohibited fuel additives, refer to the FAA
Approved Airplane Flight Manual (see NOTE 8)

Oil: For approved oils, refer to the FAA Approved Airplane Flight
Manual (see NOTE 8)
Engine Limits:

**Thrust Setting** | **N₁ Fan RPM** | **ITT (°C)** | **N₂ Turbine RPM**
--- | --- | --- | ---
Takeoff | 100.0% (19,055 RPM) | 860°C (2) | 100.9% (49,200 RPM)
Max Continuous | 100.0% (19,055 RPM) | 860°C (2) | 100.9% (49,200 RPM)

The HA-420 is approved for 10 Minutes OEI (see NOTE 5)
(1) ITT values are displayed limits and not actual temperature values.
(2) Maximum transient for 2 minutes is 885°C

HF120-H1A power management de-rated minimum static thrust ratings at sea level and 77°F/25°C with no installation losses:
- Takeoff: 2037 lbs thrust
- Max Continuous: 1922 lbs thrust

Airspeed Limits:
- $V_{MO}$: 270 KIAS
- $M_{MO}$: 0.72 Mach
- $V_A$: 200 KIAS
- $V_{MCA}$
  - Flaps UP: 105 KIAS
  - Flaps TO/APPR: 100 KIAS
- $V_{MCL}$
  - Flaps LDG: 95 KIAS
- $V_{FE/FO}$
  - Flaps TO/APPR: 200 KIAS
  - Flaps LDG: 160 KIAS
- $V_{LE/LO}$: 200 KIAS
- $V_{TIRE}$: 165 knots (Max Tire Ground Speed)

Maximum Weights:

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<tbody>
<tr>
<td>42000012 thru 42000125</td>
<td>10,680 lbs</td>
<td>10,600 lbs</td>
<td>9,860 lbs</td>
<td>8,800 lbs</td>
</tr>
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</table>

For S/N 42000011, 42000012 thru 42000125 with SB-420-42-004 and SB-420-55-001 installed, 42000126 and up:
- Max. Ramp: 10,780 lbs
- Max. Takeoff: 10,700 lbs
- Max. Landing: 9,960 lbs
- Max. Zero Fuel: 8,900 lbs
Max Baggage Loading:

For S/N 42000012 thru 42000125
Fwd Compartment.................. 100 lbs (F-Sta 54.5)
Fwd Compartment.................. 200 lbs (F-Sta 54.5)
(SB-420-52-002 Incorporated)
Aft Compartment.................... 400 lbs (F-Sta 328.4)
Luggage Valet........................ 50 lbs (F-Sta 162.6)

For S/N 42000011, 42000012 thru 42000125 with SB-420-42-004 and SB-420-55-001 installed, 42000126 and up
Fwd Compartment.................. 200 lbs (F-Sta 54.5)
Aft Compartment.................... 400 lbs (F-Sta 328.4)
Luggage Valet........................ 50 lbs (F-Sta 162.6)

For Aft Compartment loading distribution, refer to the latest FAA Approved Airplane Flight Manual Section 6 (see NOTE 8).

Datum:
(F-Sta 0.00) 69.0 inches forward of the nose jacking position

Mean Aerodynamic Chord:
59.72 inches (M.A.C. leading edge is 232.2 inches aft of datum)

Leveling Means:
Left hand floorboard inside main entry way

Empty Weight C.G. Range:
None

CG Range:
For approved CG range, refer to the FAA Approved Airplane Flight Manual (see NOTE 8)

Fuel Capacity:

For S/N 42000012 thru 42000125
430.7 US gal TOTAL (F-Sta 263.5)
423.9 US gal Usable
6.8 US gal Unusable

For S/N 42000011, 42000126 and up
446.73 US gal TOTAL (F-Sta 264.08)
439.37 US gal Usable
7.36 US gal Unusable

Oil Tank Capacity:
Each engine tank:
MAX Oil Level (FULL line): 4.99 quarts (F-Sta 320.0)
2.64 quarts Usable, 2.35 quarts Unusable
Control Surface Movements:

<table>
<thead>
<tr>
<th>Control Surface</th>
<th>Maximum Deflection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trailing Edge Up or Left</td>
</tr>
<tr>
<td>Elevator</td>
<td>20.5° ± 0.5°</td>
</tr>
<tr>
<td>Rudder</td>
<td>34.5° ± 0.5°</td>
</tr>
<tr>
<td>Aileron</td>
<td>21.1° ± 0.5°, -1.5°</td>
</tr>
<tr>
<td>Aileron Trim</td>
<td>15° ± 1.0°</td>
</tr>
<tr>
<td>Rudder Trim</td>
<td>25° ± 1.0°</td>
</tr>
<tr>
<td>Elevator Trim</td>
<td>10° ± 1.0°</td>
</tr>
<tr>
<td>Flaps</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Manufacturer Serial No. Eligible: 42000011 and up

PERTINENT DATA

Minimum Crew: One (1) pilot (left seat) -OR- Two (2) pilots

Number of Seats:

- For S/N 42000012 thru 42000125: 7 Max (Includes pilot(s) and passengers). Refer to the latest FAA Approved Airplane Flight Manual Section 6 (see NOTE 8) for seat configurations and moment arms.
- For S/N 42000011, 42000126 and up: 8 Max (Includes pilot(s) and passengers). Refer to the latest FAA Approved Airplane Flight Manual Section 6 (see NOTE 8) for seat configurations and moment arms.

Maximum Operating Altitude: 43,000 ft MSL

Maximum Takeoff Field Elevation: 10,000 ft MSL

Temperature Operating Limitation: 55°C -40°C (Starting)

Maneuver Limits: Maneuvers are limited to any maneuver incident to normal flying, stalls (except whip stalls) and steep turns in which the angle of bank is not more than 60 degrees. Acrobatic maneuvers, including spins, are prohibited.

Other Operating Limitations: The aircraft must be operated in accordance with the FAA approved Airplane Flight Manual (see NOTE 8).
**Type Certificate Application:** October 11, 2006

**Type Certificate Issuance:** Type Certificate A00018AT Issued December 8, 2015

**Certification Basis:**


14 CFR Part 36, Noise Standards: Aircraft Type and Airworthiness Certification, as amended by Amendments 36-1 through Amendment 36-29, Stage 4, as established on March 11, 2013.

**Optional Design Regulations:** None

Exemptions from 14 CFR Part 23 in accordance with 14 CFR Part 11:

Exemption 11123 dated December 16, 2014, 23.181(b), Dynamic Stability Compliance with 23.181(b) during takeoff and landing.
Equivalent Safety Findings (ELOS) according to the provisions of 14 CFR part 21.21(b)(1) for the following subjects:

<table>
<thead>
<tr>
<th>ELOS No., date and Subject</th>
<th>Regulation modified by ELOS</th>
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<tbody>
<tr>
<td>ACE-15-10, dated March 25, 2015: Storage Battery Design and Installation</td>
<td>§23.1353(h)</td>
</tr>
</tbody>
</table>
The following Special Conditions (SC) in accordance with 14 CFR Part 11:

<table>
<thead>
<tr>
<th>Special Condition No., Date and Subject</th>
<th>Regulation modified by Special Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Condition No. 23-264-SC, dated March 25, 2015, Electronic Engine Control System</td>
<td>§23.1309</td>
</tr>
<tr>
<td>Note: This special condition supersedes the ELOS finding of ELOS Memo ACE-15-15.</td>
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<tr>
<td>Special Condition No. 23-269-SC, dated Sept 14, 2015, Lithium-Ion Battery Installation</td>
<td>§23.1353</td>
</tr>
<tr>
<td>Special Condition Notice No. 23-271-SC, dated October 26, 2015, Cruise Speed Control</td>
<td>§23.1329</td>
</tr>
<tr>
<td>Special Condition No. 23-287-SC, dated March 7, 2018, Type Certification of Side Facing Belted Lavatory Seat to meet the modified requirements of 14 CFR Parts 23.562, 23.785, 23.791, and 23.1581 for an area bounded by privacy pocket door and a bulkhead (Note: This special condition is applicable to S/N 42000011, 42000126 and up)</td>
<td>§23.562, §23.785, §23.791, §23.1581</td>
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</table>
Compliance has been shown for Day/Night VFR and Day/Night IFR operations.

Compliance has been shown for applicable ditching provisions.

S/N 42000049 and up, and S/N’s 42000011 through 42000048 incorporating Honda Aircraft Service Bulletin SB-420-42-001, are eligible for flight into known or forecast icing.

Per the type design, S/N 42000011 and up meet the Reduced Vertical Separation Minima (RVSM) technical requirements. Each operator must obtain operational approval for flight in RVSM airspace from their cognizant Flight Standards District Office (FSDO).

Compliance has been shown for steep approach operations as an optional kit with appropriate manual supplements.

Model HA-420 is defined by drawing, HJ1-10000-000, Rev G or later FAA approved revision.

ADDITIONAL DESIGN REQUIREMENTS AND CONDITIONS:
The following design details or information must be maintained to ensure that an unsafe design condition is not present: None


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

1. FAA Approved Airplane Flight Manual (see NOTE 8)

For single pilot operations, the following equipment must be operative/available in addition to those items listed above:

1. Autopilot
2. FAA Approved Quick Reference Handbook (see NOTE 8)

NOTES:

NOTE 1. Weight and Balance:

A current weight and balance report, including a list of equipment included in the certificated empty weight, and loading instructions must be provided for each aircraft at the time of original certification.
NOTE 2. **Placards**

Airplane operation must be in accordance with the FAA Approved Airplane Flight Manual (see NOTE 8). All placards required by the Flight Manual, the applicable operating rules, and the Certification Basis must be installed in the airplane.

NOTE 3. **Service Life Limits and required Maintenance/Inspections**

Inspection time limits and maintenance checks are included in the Airworthiness Limitation and Inspection Manual (HJ1-29000-013). The retirement times of the life limited components in Section 05-60-00 cannot be altered without FAA Engineering approval.

NOTE 4. **Interior Components**

Replacement Seats (crew and passenger) must be demonstrated to comply with installation requirements as established by the Certification Basis (including 14 CFR §23.2, 23.561, 23.562 and 23.785) even if they are previously found to be compliant to TSO C127a (or later amended version).

The cushion buildup of all seats (crew and passenger) may not be altered without appropriate qualification as established by the Certification Basis (including 14 CFR §23.562).

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 14 CFR §23.561, 23.562 and 23.785).

NOTE 5. **Engine Operation**


NOTE 6. **Aircell CTR System**

The Aircell CTR System is intended to provide internet connection and email services using portable electronic devices (PEDs). Any other intended function of this equipment will require a reexamination of the certification basis.

NOTE 7. **S/N 42000011 and Blockpoint S/N 42000126 Change**
The HA-420 aircraft configuration was changed for S/N 42000011 and S/N 42000126 and up to include an avionics software upgrade, increased gross weight, elevator improvement, added fuel, and optional interior enhancements.

NOTE 8. Applicable Flight Manuals

The following Airplane Flight Manuals are applicable to the indicated serial numbers:

- HJ1-29000-003-001 for S/N 42000012 thru 42000125, or
- HJ1-29001-003-001 for S/N 42000012 thru 42000125 with SB-420-42-004 and SB-420-55-001 installed, or
- HJ1-29001-003-001 for S/N 42000011, S/N 42000126 and up

The following Quick Reference Handbooks are applicable to the indicated serial numbers:

- HJ1-29000-007-001 for S/N 42000012 thru 42000125, or
- HJ1-29001-007-001 for S/N 42000012 thru 42000125 with SB-420-42-004 and SB-420-55-001 installed, or
- HJ1-29001-007-001 for S/N 42000011, S/N 42000126 and up

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