DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A00018AT
Revision 8

Honda Aircraft
Company LLC

HA-420
July 07, 2021

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

Fuel: Jet A, Jet A-1, JP-8, PRC No. 3 Jet Fuel, Russian TS-1, and Ukrainian TS-1

For approved and prohibited fuel additives, refer to the FAA Approved Airplane Flight Manual (see NOTE 7)

Oil: For approved oils, refer to the FAA Approved Airplane Flight Manual (see NOTE 7)

Engine Limits:

Thrust Setting	N_1 Fan RPM	ITT (1)	N_2 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:

Configuration	Max Ramp	Max Takeoff	Max Landing	Max Zero Fuel
42000012 thru 42000125	10,680 lbs	10,600 lbs	9,860 lbs	8,800 lbs
42000011, 42000012 thru 42000125 with SB-420-55-001 installed, 42000126 thru 42000206	10,780 lbs	10,700 lbs	9,960 lbs	8,900 lbs
42000126 thru 42000206 with SB-420-42-016 installed, 42000207 and up	10,980 lbs	10,900 lbs	10,160 lbs	9,100 lbs

Max Baggage Loading:

Configuration	Fwd Compartment	Aft Compartment	Luggage Valet
42000012 thru 42000125	100 lbs (F-Sta 54.5)	400 lbs (F-Sta 328.4)	50 lbs (F-Sta 162.6)
42000012 thru 42000125 with SB-420-52-002	200 lbs (F-Sta 54.5)	400 lbs (F-Sta 328.4)	50 lbs (F-Sta 162.6)
42000011, 42000012 thru 42000125 with SB-420-55-001 installed, 42000126 and up	200 lbs (F-Sta 54.5)	400 lbs (F-Sta 328.4)	50 lbs (F-Sta 162.6)

For Aft Compartment loading distribution, refer to the latest FAA Approved Airplane Flight Manual Section 6 (see NOTE 7).

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 7)

Fuel Capacity:

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

For 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:

Control Surface	Maximum Deflection	
	Trailing Edge Up or Left	Trailing Edge Down or Right
Elevator	20.5° ± 0.5°	6.5° ± 0.5°
Rudder	34.5° ± 0.5°	34.5° ± 0.5°
Aileron	21.1° + 0.5°,-1.5°	19.9° + 0.5°,-1.5°
Aileron Trim	15° ± 1.0°	15° ± 1.0°
Rudder Trim	25° ± 1.0°	25° ± 1.0°
Elevator Trim	10° ± 1.0°	15° ± 1.0°
Flaps	N/A	UP: 0.0° ± 0.25° TO/APPR:15.7° ± 0.8° LDG: 35° ± 1.3°

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 7) 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 7) 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 7).

Type Certificate Application: October 11, 2006

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

Certification Basis:

14 CFR Part 23, Airworthiness Standards: Normal, Utility, Acrobatic, and Commuter Airplanes, effective February 1, 1965, as amended by Amendments 23-1, dated July 29, 1965, through Amendment 23-62, dated December 2, 2011

14 CFR Part 34, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, effective September 10, 1990, as amended by Amendments 34-1, dated July 31, 1995 through Amendment 34-5, dated December 31, 2012

14 CFR Part 36, Noise Standards: Aircraft Type and Airworthiness Certification

- Serial numbers 42000012 thru 42000125 are compliant with Stage 4 noise requirements, as amended by Amendments 36-1 through Amendment 36-29, dated March 11, 2013.
- Serial numbers 42000012 thru 42000125 with SB-420-55-001 installed and 42000126 thru 42000206 are compliant with Stage 4 noise requirements, as amended by Amendments 36-1 through Amendment 36-30, dated March 4, 2014.
- Serial numbers 42000126 thru 42000206 with SB-420-42-016 installed and 42000207 and up are compliant with Stage 4 noise requirements, as amended by Amendments 36-1 through Amendment 36-31, dated October 4, 2017.

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:

ELOS No., date and Subject	**Regulation modified by ELOS**
ACE-15-08, dated June 5, 2015: Use of 1-g Stall Speeds in lieu of Minimum Speed in the Stall as a Basis for Determining Compliance	§1.1, §1.2, §23.49, §23.51, §23.65, §23.67, §23.69, §23.73, §23.143, §23.145, §23.147, §23.149, §23.157, §23.161, §23.175, §23.177, §23.201, §23.203, §23.207, §23.233, §23.729, §23.735, §23.1001, §23.1323, §23.1325, §23.1545, and §23.1587
ACE-15-09, dated March 26, 2015: Electronic Display of Engine Instruments N1, N2, ITT, Oil Pressure, Oil Temperature, Fuel Flow, and Fuel Quantity on a Garmin G3000 Integrated Flight Deck	§23.1305, §23.1337, §23.1549, §23.1553
ACE-15-10, dated March 25, 2015: Storage Battery Design and Installation	§23.1353(h)
ACE-15-11, dated September 14, 2015: Airspeed Indicator (ASI) Flap Markings	§23.1545(b)(4)
ACE-15-15, dated September 1, 2015: Amendment 23-62 Corrections	§23.45, §23.51, §23.63, §23.67, §23.73, §23.77, §23.161, §23.181, §23.221, §23.251, §23.253, §23.571, §23.1195, §23.1197, §23.1199, §23.1201, §23.1545, §23.1583
AT-15774AT-A-F-1, dated July 20, 2018: Steep Approach Operations	§23.45, §23.67, §23.75, §23.77,

The following Special Conditions (SC) in accordance with 14 CFR Part 11:

Special Condition No., Date and Subject	***Regulation modified by Special Condition***
Special Condition No. 23-263-SC, dated March 25, 2015, Dynamic Test Requirements for Single Place Side-Facing Seats	§23.562, §23.785
Special Condition No. 23-264-SC, dated March 25, 2015, Electronic Engine Control System	§23.1309
Special Condition 23-265-SC, dated June 9, 2015, Fire Extinguishing Note: This special condition supersedes the ELOS finding of ELOS Memo ACE-15-15.	§23.1195, §23.1197, §23.1199, §23.1201
Special Condition No. 23-269-SC, dated Sept 14, 2015, Lithium-Ion Battery Installation	§23.1353
Special Condition No. 23-270-SC, dated August 3, 2015: High Altitude Operations	§23.831
Special Condition Notice No. 23-271-SC, dated October 26, 2015, Cruise Speed Control	§23.1329
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)	§23.562, §23.785, §23.791, §23.1581

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

Production Basis: Production Certificate No. 348CE, dated July 8, 2016

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 7)

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 7)

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 7). 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

The Model HA-420 is approved for One Engine Inoperative 10 minutes thrust capability with the GE Honda Aero Engines HF120-H1A engine, per FAA Policy Memo Policy Statement on Approval for 10-Minute Rated Takeoff Thrust/Power during Takeoff with One-Engine Inoperative (OEI) under 14 CFR Part 23 and 14 CFR Part 33 [PS-ANE33-ACE23-2006-1], dated August 30, 2006.

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. Applicable Flight Manuals

Configuration	Airplane Flight Manual	Quick Reference Handbook
42000012 thru 42000125	HJ1-29000-003-001	HJ1-29000-007-001
42000011, 42000012 thru 42000125 with SB-420-55-001 installed, 42000126 thru 42000206	HJ1-29001-003-001	HJ1-29001-007-001
42000126 thru 42000206 with SB-420-42-016 installed, 42000207 and up	HJ1-29004-003-001	HJ1-29004-007-001

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