



TYPE CERTIFICATE DATA SHEET No. 2017T04

Type Certificate Holder:

HONDA AIRCRAFT COMPANY

6430 Ballinger Road
Greensboro, NC 27410
USA

EA-2017T04-00
Sheet 01

HONDA
HA-420

08 August 2017

This data sheet, which is part of Type Certificate No. 2017T04, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Civil Aviation Regulations.

HONDA HA-420 MODEL (Normal Category).

I – HA-420, approved on 08 August 2017.

ENGINE Two (2) GE Honda Aero Engines HF120-H1A turbofan engines (EM-2017T04-01)

FUEL Jet A, Jet A-1, JP-8, PRC No. 3

ENGINE LIMITS

<u>THRUST SETTING</u>	<u>N₁ FAN RPM</u>	<u>ITT (1)</u>	<u>N₂ TURBINE RPM</u>
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: 924 kgf (2037 lbs) Thrust

Max Continuous: 872 kgf (1922 lbs) Thrust

OIL For approved oils, refer to the Brazilian Approved Airplane Flight Manual.

AIRSPEED LIMITS

V _{MO} :	270 KIAS
M _{MO} :	0.72 Mach
V _A :	200 KIAS

AIRSPEED LIMITS (Cont.)

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

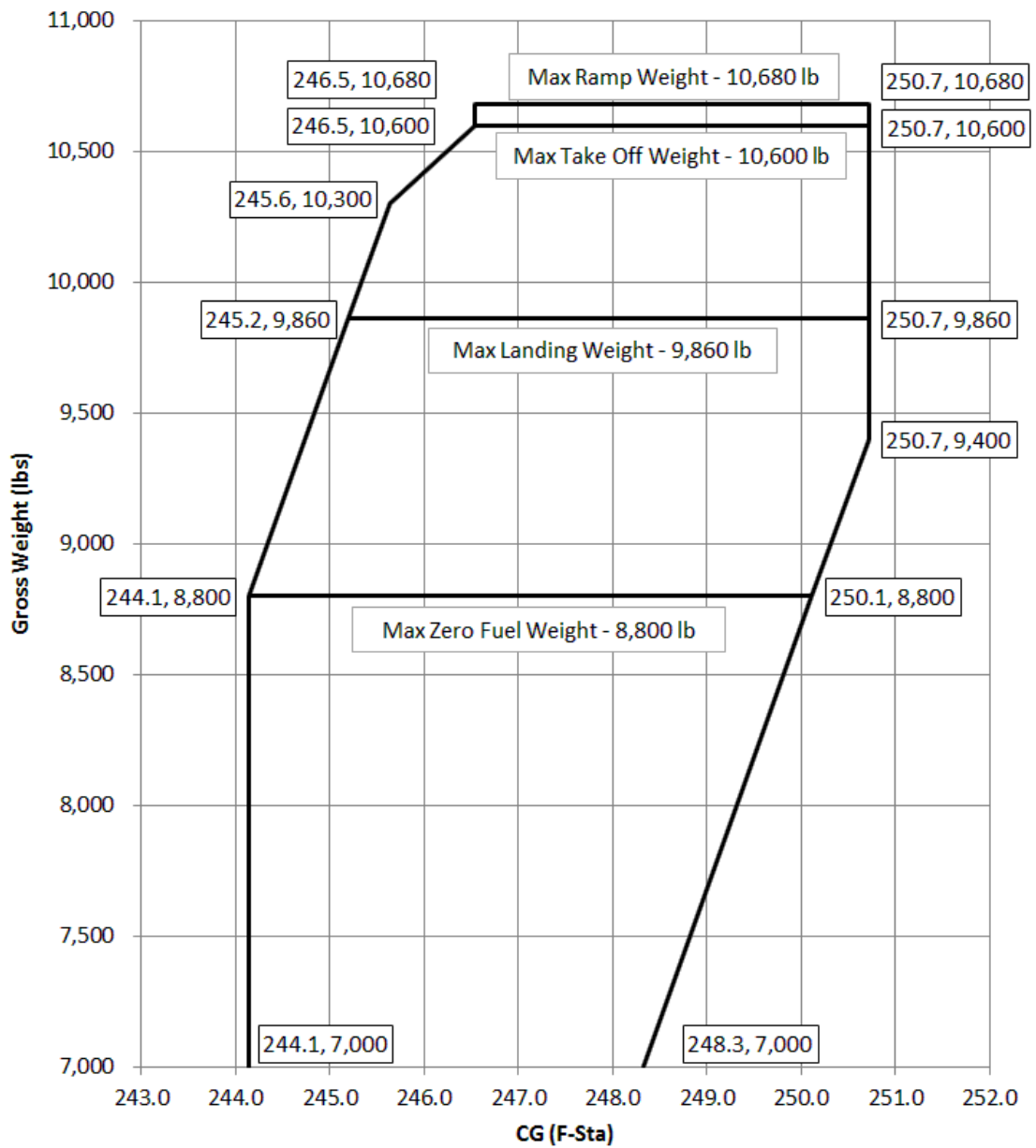
V_{LE/LO}:

200 KIAS

V_{TIRE}:

305.58 km/h (165 Knots) – Max Tire Ground Speed

CG Range



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

LEVELING MEANS

Left Hand floorboard inside Main entry way

MEAN AERODYNAMIC CHORD

59.72 inches (M.A.C. leading edge is 232.2 inches aft of datum)

MAXIMUM WEIGHTS

Max. Ramp:	4 844 Kg	(10 680 lbs)
Max Takeoff	4 808 Kg	(10 600 lbs)
Max Landing	4 472 Kg	(9 860 lbs)
Max Zero Fuel	3 992 Kg	(8 800 lbs)

MINIMUM CREW

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

NUMBER OF SEATS OR MAXIMUM PASSENGERS

7 Max (Includes pilot(s) and crew). Refer to the latest Brazilian Approved Airplane Flight Manual, Section 6 for seat configurations and moment arms.

MAX BAGGAGE LOADING

Fwd Compartment:	45 Kg	(100 lbs)	(F-Sta 54.5)
Aft Compartment:	181 Kg	(400 lbs)	(F-Sta 328.4)
Luggage Valet:	23 Kg	(50 lbs)	(F-Sta 162.6)

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

FUEL CAPACITY

TOTAL	1630.3 L	(430.7 US gal)	(F-Sta 263.5)
Usable	1604.6 L	(423.9 US gal)	
Unusable	25.7 L	(6.8 US gal)	

OIL TANK CAPACITY

Each engine tank:

MAX Oil Level (FULL line): 4.72 Liters (4.99 US quarts) (F-Sta 320.0)

2.50 Liters (2.64 US quarts) Usable and 2.22 Liters (2.35 US quarts) Unusable

HYDRAULIC FLUID CAPACITY

The hydraulic reservoir contains approximately 1.27 gallons of hydraulic fluid at maximum full level (all three accumulators depressurized and landing gear extended) and 1.13 gallons at minimum fill level (all three accumulators pressurized and landing gear retracted).

MAXIMUM OPERATING ALTITUDE

43 000 ft MSL

TAKEOFF AND LANDING MAXIMUM ALTITUDE

10 000 ft MSL

TEMPERATURE OPERATING LIMITS

55° C

– 40° C (Starting)

CONTROL SURFACE MOVEMENTS

<u>Control Surface</u>	<u>MAXIMUM DEFLECTION</u>	
	<u>Trailing Edge Up or Left</u>	<u>Trailing Edge Down or Right</u>
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°

SERIAL NUMBERS ELIGIBLE

42000011 and up

CERTIFICATION BASIS

The certification basis for the aircraft model is RBAC 21 Section 21.29, Brazilian Aeronautical Certification Regulations, including the following state of Design (FAA) airworthiness requirements:

– 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 Certification and Airworthiness Certification, effective March 11, 1994, as amended by Amendments 36-1, dated December 1, 1965, through Amendment 36-29, dated March 11, 2013.

– 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:

– *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*

– *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*

– *ACE-15-10, dated March 25, 2015: Storage Battery Design and Installation*

– *ACE-15-11, dated September 14, 2015: Airspeed Indicator (ASI) Flap Markings*

– *ACE-15-15, dated September 1, 2015: Amendment 23-62 Corrections*

CERTIFICATION BASIS (CONT.)

- The following Special Conditions (SC) in accordance with 14 CFR Part 11:
 - 23-263-SC, dated March 25, 2015, *Dynamic Test Requirements for Single Place Side-Facing Seats*
 - 23-264-SC, dated March 25, 2015, *Electronic Engine Control System*
 - 23-265-SC, dated June 9, 2015, *Fire Extinguishing (Note: This special condition supersedes the ELOS finding of ELOS Memo ACE-15-15).*
 - 23-269-SC, dated Sept 14, 2015, *Lithium-Ion Battery Installation*
 - 23-270-SC, dated August 3, 2015: *High Altitude Operations*
 - 23-271-SC, dated October 26, 2015, *Cruise Speed Control*

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-420-42-00 1, are eligible for flight into known or forecast icing. The following equipment is required:

- HA-420 Airplane Flight Manual HJ1-29000-003 -001, Rev B or later approved revision,
- HA-420 Quick Reference Handbook HJ1-29000-007-001 , Rev B or later approved revision, and
- HA-420 Electronic Checklist HJ1-29000-035, Rev B or later approved revision.

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.

Model HA-420 is defined by drawing, HJ1-10000-000-001, Rev H or later approved revision (see Honda Report HJS-3292, Rev D or later approved revision, for associated drawing list).

PRODUCTION CERTIFICATION

FAA Production Certificate No. 348, dated July 8, 2016

REQUIRED 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. Brazilian Approved Airplane Flight Manual

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

1. Autopilot
2. Quick Reference Handbook (HJ1-29000-007-001), Volumes 1 and 2

DATA PERTINENT TO ALL MODELS**IMPORT ELIGIBILITY**

"A Brazilian Certificate of Airworthiness must be issued based on the Exporting Authority and Primary Authority Export Certificate of Airworthiness (in case they are not the same), and they must include the following statement: "The aircraft covered by this Certificate has been inspected and found to be in conformity with the Brazilian approved type design as defined by the ANAC Type Certificate Nr 2017T04, and is in condition for safe operation""

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

Markings and placards: Airplane operation must be in accordance with the Brazilian Approved Airplane Flight Manual. All placards required by the Flight Manual, the applicable operating rules, and the Certification Basis must be installed in the airplane.

NOTE 3

Continuing airworthiness: 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 ANAC 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. This cabinet 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

The Approved Brazilian Airplane Flight Manual corresponds to the FAA Approved Flight Manual (HJ1-29000-003-001) plus the ANAC Aircraft Flight Manual Supplement (HJ1-29000-003-003).



MÁRIO IGAWA

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