

Type Certificate Data Sheet

No. 96

This data sheet which is a part of Type Certificate No. 96 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Japan Civil Aeronautics Law and Regulations.

Type Certificate Holder Honda Aircraft Company LLC
6430 Ballinger Road
Greensboro, North Carolina 27410
U.S.A.

1. Model HA-420 (Normal Category), Approved December 7, 2018

Engine Two (2) GE Honda Aero Engines HF120-H1A turbofan engines
(JCAB Engine Type Approval No. 770).

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 JCAB Approved Airplane Flight Manual (see NOTE 7)

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

Engine Limits

Thrust Setting	N1 Fan RPM	ITT(1)	N2 Turbine RPM
Takeoff	100.0% (19,055RPM)	860 °C(2)	100.9% (49,200RPM)
Max Continuous	100.0% (19,055RPM)	860 °C(2)	100.9% (49,200RPM)

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	2,037 lbs thrust
Max Continuous	1,922 lbs thrust

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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 Weight

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
42000012 thru 42000125 with SB-420-55-001 installed	10,780 lbs	10,700 lbs	9,960 lbs	8,900 lbs
42000126 thru 42000206				
42000126 thru 42000206 with SB-420-32-013 and SB-420-42-017 installed				
42000126 thru 42000206 with SB-420-42-016 installed	10,980 lbs	10,900 lbs	10,160 lbs	9,100 lbs
42000126 thru 42000206 with SB-420-32-013, SB-420-42-018, and SB-420-11-001 installed				
42000207 thru 42000234				
42000235 and up	11,180 lbs	11,100 lbs	10,360 lbs	9,300 lbs

Maximum 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)
42000012 thru 42000125 with SB-420-55-001 installed, 42000126 thru 42000234			
42000235 and up	200 lbs (F-Sta 54.5)	550 lbs (F-Sta 328.4)	50 lbs (F-Sta 162.6)

For Aft Compartment loading distribution, refer to the latest JCAB 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 JCAB 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 42000126 thru 42000234	446.73 US gal TOTAL (F-Sta. 264.08) 439.37 US gal Usable 7.36 US gal Unusable
For 42000235 and up	479.09 US gal TOTAL (F-Sta 265.66) 471.62 US gal Usage 7.59 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
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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°
Ground Spoilers	50° + 3.0°, -2.0°	N/A

Manufacturer's Serial Numbers	42000012 and up
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PERTINENT DATA

Minimum Crew	One (1) pilot (left seat) -or- Two (2) pilots
Number of Seats	
For 42000012 thru 42000125	7 Max (includes pilot(s) and passengers). Refer to the latest JCAB Approved Airplane Flight Manual Section 6 (see NOTE 7) for seat configurations and moment arms.
For 42000126 and up	8 Max (includes pilot(s) and passengers). Refer to the latest JCAB 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 Limitations	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 JCAB Approved Airplane Flight Manual (see NOTE 7)		
Certification Basis	Airworthiness Requirements: Japanese Civil Aeronautics Regulations Annex 1 Part II of the TAIKUSEI-SHINSA-YORYO [JCAB Airworthiness Inspection Manual] (established October 20, 1966 by Ku-Ken-381, including amendments of KOKU-KU-KI-1512 dated April 1, 2014, equivalent to 14 CFR Part 23 (effective February 1, 1965), as amended by 23-1 through 23-62),		
Exemption	14 CFR Part 23 section 23.181(b) during takeoff and landing (Exemption No. 11123 dated, December 16, 2014).		
Equivalent Safety Findings	Subject	ELOS No., date	Regulation modified by ELOS
	a Use of 1-g stall speeds in lieu of Minimum Speed in the Stall as a Basis for Determining Compliance	ACE-15-08, dated June 5, 2015	§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
	b 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-15-09, dated March 26, 2015	§23.1305, §23.1337, §23.1549, §23.1553
	c Storage Battery Design and Installation	ACE-15-10, dated March 25, 2015	§23.1353(h)
	d Airspeed Indicator (ASI) Flap Markings	ACE-15-11, dated September 14, 2015	§23.1545(b)(4)
	e Amendment 23-62 Corrections	ACE-15-15, dated September 1, 2015	§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

	f	(Reserved)		
	g	Material Design Values	AT16447AT-A-A-1, §23.613 dated October 12, 2022	
Special Conditions		Subject	Special Condition No., Date	Regulation modified by Special Condition
	a	Dynamic Test Requirements for Single Place Side-Facing Seats	23-263-SC, dated March 25, 2015	§23.562, §23.785
	b	Electronic Engine Control System	23-264-SC, dated March 25, 2015	§23.1309
	c	Fire Extinguishing Note: This special condition supersedes the ELOS finding of ELOS Memo ACE-15-15	23-265-SC, dated June 9, 2015	§23.1195, §23.1197, 23.1199, §23.1201
	d	Lithium-Ion Battery Installation	23-269-SC, dated September 14, 2015	§23.1353
	e	High Altitude Operations	23-270-SC, dated August 3, 2015	§23.831
	f	Cruise Speed Control	23-271-SC, dated October 26, 2015	§23.1329
	g	Type Certification of the Side Facing Belted Lavatory Seat to meet the modified requirements of 14 CFR Part 23.562, 23.785, 23.791, and 23.1581 for an area bounded by privacy pocket door and a bulkhead (This special condition is applicable to S/N 42000011, 42000126 and up)	23-287-SC, dated March 7, 2018	§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 42000012 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 42000012 and up meet the Reduced Vertical Separation Minimum (RVSM) technical requirements. Each operator must obtain operational approval for flight in RVSM airspace from their cognizant JCAB Office.				
(Reserved)				
Model HA-420 is defined by drawing, HJ1-10000-000, Rev. G or later FAA approved revision.				
Environmental Requirements	Japanese Civil Aeronautics Regulations Annex 2 Chapter 2-2 (Equivalent to ICAO Annex 16, Volume 1 Chapter 4) for Noise Requirements. Japanese Civil Aeronautics Regulations Annex 3 Chapter 1 and 2 (Equivalent to ICAO Annex 16, Volume 2, Part 2 and Part 3 Chapter 2) for Fuel Venting and Exhaust emission (Smoke)			

Additional JCAB special Requirements	Requirements for markings and placards as shown in JCAB Circular No.1-008, "Marking which shall be indicated in Japanese for Emergency Exit, Safety Equipment, etc." Requirement for contents of Airplane Flight Manual as shown in JCAB Circular No.1-001
Production Basis	FAA 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. JCAB 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 HA-420 Quick Reference Handbook (see NOTE 7)
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	Reserved
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 JCAB 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 section 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 section 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 42000012 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 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 section 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
42000012 thru 42000125 with SB-420-55-001 installed	HJ1-29001-003-001	HJ1-29001-007-001
42000126 thru 42000206		
42000126 thru 42000206 with SB-420-32-013 and SB-420-42-017 installed	HJ1-29003-003-001	HJ1-29003-007-001
42000126 thru 42000206 with SB-420-42-016 installed	HJ1-29004-003-001	HJ1-29004-007-001
42000126 thru 42000206 with SB-420-32-013, SB-420-42-018, and SB-420-11-001 installed		
42000207 thru 42000234		
42000235 and up	HJ1-29002-003-001	HJ1-29002-007-001

NOTE J1

Import Requirements

To be considered eligible for operation in Japan, each aircraft manufactured under this Type Certificate must be accompanied by a Certificate of Airworthiness for Export or certifying statement endorsed by the exporting foreign civil authority which states the following (in the English language)

“The aircraft covered by this certificate has been examined, tested and found to conform to the type design approved under JCAB Type Certificate No.96-3 and to be in a condition for safe operation”.

NOTE J2

Airplane operation must be in accordance with the JCAB Approved Airplane Flight Manual (see NOTE 7) and JCAB Approved Airplane Flight Manual Supplement (see NOTE J3).

All placards required by the Flight Manual, the applicable operating rules, and the Certification Basis must be installed in the airplane.

All required Japanese Placards and markings are defined in drawings listed in Section 2 of the JCAB Approved Airplane Flight Manual Supplement (See NOTE J3) and the following document.

HA-013-25005 Rev. A or later JCAB approved revision. (Placards and Markings for Aircraft Registered in Japan)

NOTE J3

Applicable Flight Manual Supplements

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

- HJ1-29000-003-033 for 42000012 thru 42000125, or
- HJ1-29001-003-031 for 42000012 thru 42000125 with SB-420-42-004 and SB-420-55-001 installed, 42000126 thru 42000234, or

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- HJ1-29003-003-035 for 42000126 through 42000206 with SB-420-42-017 installed, or
 - HJ1-29004-003-035 for 42000126 through 42000234 with SB-420-42-018 installed, or
 - HJ1-29002-003-035 for 42000235 and up.

NOTE J4 The JCAB has not validated the Steep Approach operation.

NOTE J5 This Type Certificate Data Sheet (TCDS) is based on FAA TCDS No. A00018AT Revision 10, dated November 02, 2022.

NOTE J6 Dates of application for FAA and JCAB Type Certificate are as follows.

Model HA-420	FAA TC No. A00018AT	JCAB TC No. 96
	October 11, 2006	May 17, 2018

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