DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R00002RD
Agusta
AB139

December 20, 2004

TYPE CERTIFICATE DATA SHEET NO. R00002RD

This data sheet which is a part of Type Certificate No.R00002RD 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 — AGUSTA S.p.A.
Via Giovanni Agusta, 520
21017 – Cascina Costa di Samarate Varese ITALY

I. Model AB139 (Transport Category) Helicopter, Approved December 20, 2004

Engine. — Two (2) Pratt and Whitney Canada Inc. PW PT6C-67C, Type Certificate No. E00068EN Free turbine turboshaft engines with FADEC.

Fuel. — For all temperatures:
Jet A-1

Oil. — For all temperatures:

MIL-PRF-83282 Hydraulic Oil
Alternative for low temperatures MIL-PRF-5606

MIL-PRF-23699 Transmission Oil

For engine oils see Engine Maintenance Manual

For detailed information see Section I of the AB139 Rotorcraft Flight Manual

Installed Engine Limits.

	Max torque	Max ITT	Max gen Speed	Max Output Shaft speed
	% (Lbft)	°C	rpm	Rpm
OEI 2 ½ min	160% (400)	835	40500	21000
OEI Continuous	140% (350)	775	39100	21000
Take Off 5 min	110% (275)	775	39100	21000
Maximum continuous	100% (250)	735	38200	21000

Transmission limits.

	Power @ 100% NR hp
MCP Max Continuous OEI	1400
2.5 min OEI	1600
MCP Max Continuous AEO	1000 (x 2)
TOP Take-Off AEO	1100 (x 2)

Rotor Limits.

Power OFF 90%<Nr<116%
Power ON 95%<Nr<106%

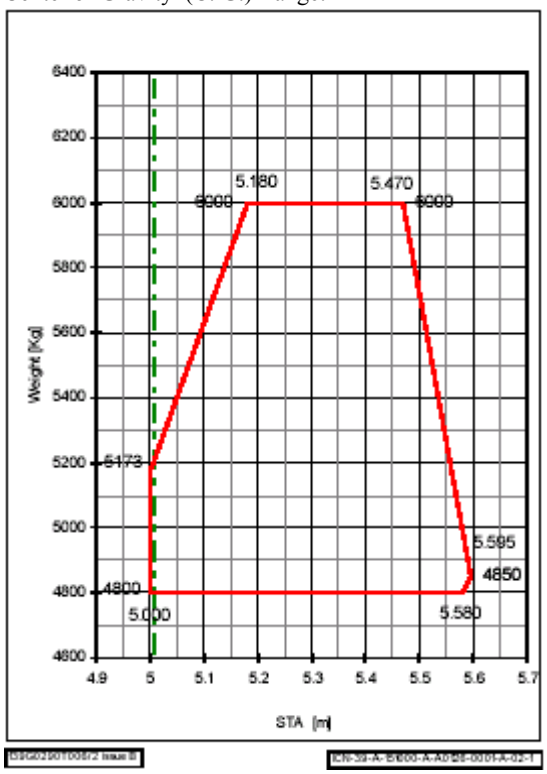
Air Speed Limits.

Vne Power On = 167 KIAS see approved Flight Manual for variations with density altitude

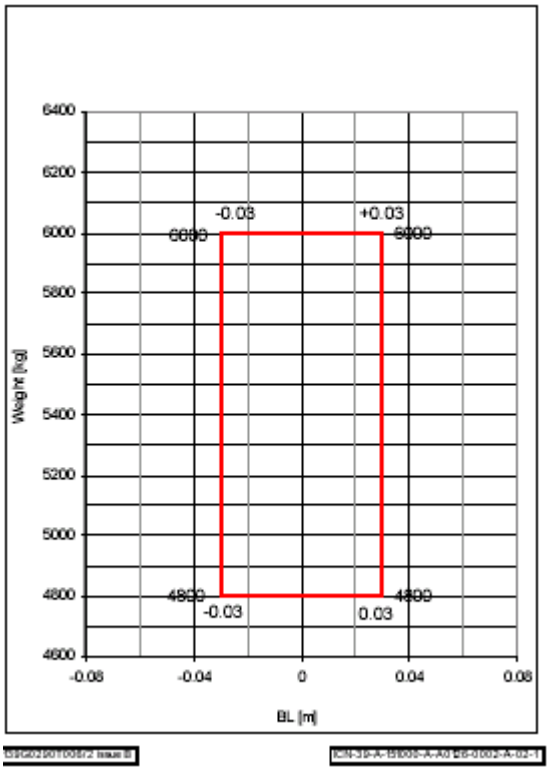
VLE/VLO (gear extended/gear operating) = 150 KIAS/150 KIAS

OEI/Power Off = 147 KIAS see approved Flight Manual for variations with density altitude

Center of Gravity (C. G.) Range:



Weight And Longitudinal Cg Envelope

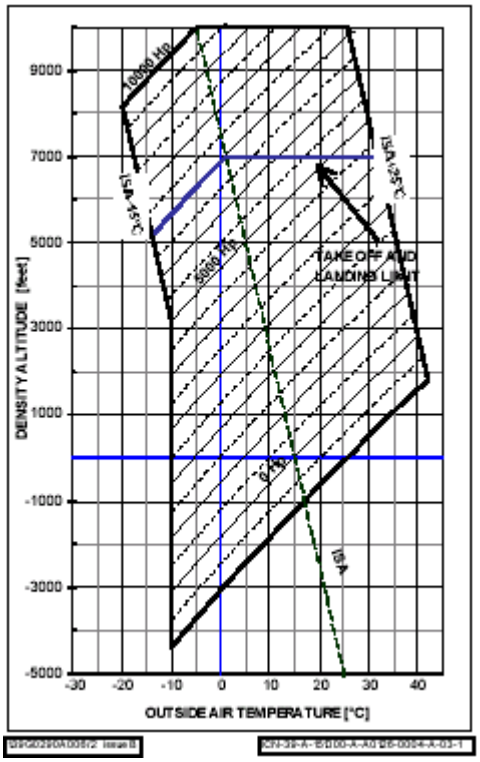


Weight And Lateral Cg Envelope

Empty weight Center of Gravity Range.

None

Ambient Temperature Limitations



Datum.	Longitudinal station 0 (datum) is 3160 mm forward of the front jack point. Lateral station 0 (datum) is ± 905 mm inboard of each main jack point and coincides with the rotorcraft longitudinal plane of symmetry.
Levelling Means.	Plumb line from ceiling reference point to index plate on floor of passenger cabin located at STA=5055 mm and BL=750 mm (LHS).
Maximum weights. - (Taxi and ramp) - (Take-off) - (Landing)	6000 kg 6000 kg 6000 kg 6000 kg
Minimum Crew.	Two (2) for VFR/IFR (See Note 5)
Number of Seats.	17 (2 crew – 15 passenger maximum)
Maximum Baggage.	200 kg (440 lb)
Baggage compartment max pressure load	300 kg/m^2 (61 lb/sq.ft)
Baggage compartment max tied up load	200 kg (440 lb)
Fuel Capacity.	Total: 1588 liters Unusable: 10 liters
Engine Oil Capacity (single).	8.45 U.S. Quarts (8.0 liters)

Maximum Altitude for take off and landing.	7000 ft
Maximum Operating Altitude.	10000 ft
Rotor Blades and Control Movements.	For rigging information, refer to the AB139 Maintenance Manual.
Import Requirements.	To be considered eligible for operation in the United States, 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 airworthiness authority which states the following (in the English language): "The rotorcraft covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate No. R00002RD and to be in condition for safe operation." The only aircraft eligible for import into the United States are those aircraft with the 4-displays configuration defined in Agusta report No. 139G0000P005/02, "AB139 Type Design Definition – 4 Displays Configuration," Rev. B, dated Nov. 15, 2004, or later approved revision. Agusta report 139G0000P005/02 is section 2 of the basic Agusta report 139G0000P005, "AB139- Type Design Definition," Rev. D, dated November 15, 2004. (See NOTE 5)

Certification Basis:

(1) FAR Part 21.29 and FAR Part 29, Amendment 29-1 through 29-45.

(2) Appendix B to Part 29 of Amendment 29-40

(3) FAR 36, Appendix H, Amendment 36-1 through Amendment 36-25

(4) Special Condition made in accordance with FAR part 21.16 is as follows:
   (a) Special Condition No. 29-0010-SC, High Intensity Radiated Fields (HIRF), dated Feb. 19, 2004.

(5) Equivalent Level of Safety Findings issued against:
   (a) FAR 29.1305 as documented in AB139 FAA Memo dated Dec. 20, 2004.
   (b) FAR 29.1321 as documented in AB139 FAA Memo dated Dec. 20, 2004.

Equipment.	The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the helicopter for certification. See Agusta Report139G040W002- Equipment List
Service information.	Agusta Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is (ENAC/EASA) approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the approved type design only.
Flight Manual.	ENAC/EASA approved Rotorcraft Flight Manual (4-Display Configuration), 139G0290X002, dated November 25, 2004, or later approved revision (See NOTE 5)
Maintenance Manual.	Maintenance Planning Information 39-A-AMPI-00-P Maintenance Publication 39-A-AMP-00-P

NOTES

NOTE 1 Current weight and balance report including loading instructions and list of equipment included in the certificated empty weight, must be provided for each helicopter at the time of original airworthiness certification.

NOTE 2 All placards indicated in the Rotorcraft Flight Manual must be installed in the appropriate location.

NOTE 3 Information essential to the proper maintenance of the helicopter is contained in the Manufacturer's AB139 Maintenance Manual provided with each helicopter. Life limited components and associated retirement times are presented in Chapter 4 and must be replaced in accordance therewith.

NOTE 4 The model AB139 rotorcraft employs electronic engine controls, commonly named Full authority Digital Engine Controls (FADEC), that are recognized to be more susceptible to Electromagnetic Interference (EMI) than rotorcraft that have non-electronic controls. (EMI may be the result of radiated or conducted interference.)
For this reason modifications that add or change systems that have the potential for EMI, must either be qualified to a standard acceptable to the FAA or tested at the time of installation for interference with the FADEC. This type of testing must employ the particular FADEC's diagnostic techniques and external diagnostic techniques. The test procedure must be FAA approved.

NOTE 5 The FAA Rotorcraft Flight Manual (RFM) is identical to the ENAC/EASA approved AB139 RFM with exceptions for Minimum Flight Crew limitations and identification of Noise Characteristics. Unique FAA approved pages are marked as "FAA Approved" and must be included in the FAA manual to reflect the differences noted below:

1. Section 1, LIMITATIONS, MINIMUM FLIGHT CREW:
   a. Requires Two pilots for VFR and Two pilots for IFR
   b. Take Off and Landing must be carried out from the right hand seat.

2. Section 4, Performance Data, NOISE CHARACTERISTICS:

Model: AB139 Engine Pratt and Whitney PT6C-67C Gross Weight 6000 kg			
Configuration	Level Flyover EPNL (EPNdB)	Take Off EPNL (EPNdB)	Approach EPNL (EPNdB)
Clean aircraft No external kits Installed	FAA 89.3	FAA 90.1	FAA 92.4

NOTE 6 The Agusta Model AB139 incorporates an integrated avionics system using software-based line replaceable units (LRU) which share a digital signal transmission bus. The software configuration of the AB139, as delivered from production, is critical to the proper operation of the avionics and cockpit instrumentation system. Modification to the LRU software supplied with the AB139, replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface could adversely affect the airworthiness of the certified software. No changes to the integrated avionics system should be made without coordination with the FAA Aircraft Certification Office (ACO) having jurisdiction over the modifier.

NOTE 7 The hydraulic fluids must conform to MIL-PRF-83282 or MIL-PRF-5606 which is an alternate for low Temperature operation - see LIMITATION Section of AB139 Rotorcraft Flight Manual. The Landing Gear Shock Absorber must be filled only with MIL-PRF-5606.

NOTE 8 Any alteration to the type design of the model AB139 may require instructions for continued airworthiness. These instructions must be submitted to and accepted by the Fort Worth Aircraft Evaluation Group prior to approval for return to service.

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