DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A47CE
Revision 17
DIAMOND
DA 40
DA 40 F
DA 40 NG

July 14, 2021

TYPE CERTIFICATE DATA SHEET NO. A47CE

This data sheet which is part of Type Certificate No. A47CE prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Revision no.16: Change in Type Certificate Holder and serial number eligibilities.

Type Certificate Holder

Diamond Aircraft Industries Inc.
1560 Crumlin Sideroad
London, Ontario, Canada
N5V 1S2

Type Certificate Holder Record: Type Certificate A47CE was transferred to Diamond Aircraft Industries Inc. (Canada) from Diamond Aircraft Industries GmbH (Austria) on November 15, 2017.

I. Model DA 40 (Normal and Utility Category), approved August 15, 2001

Engine

Textron Lycoming IO-360 M1A, TCDS 1E10

Fuel

AVGAS 100LL, 100 (ASTM D910), see Note 14

Engine Limits

Maximum Take-Off, 2700 rpm
Continuous Operation, 2400 rpm

Propeller

(a) MT Propeller Co. MTV-12-B/180-17( ), TCDS P25NE
( ) – designations: none or f

Propeller Limits

Diameter	70.9 in., +0.0 in., -2.0 in; (1800 mm, +0.0mm, -50mm)
Low Pitch	10.5º
High Pitch	30º

Airspeed Limits

Maximum Never Exceed Speed V_{NE}	173 KCAS, 199 mph
Maximum Structural Cruising Speed V_{NO}	128 KCAS, 147 mph
Design Cruising Speed V_C	128 KCAS, 147 mph
Maneuvering Speed V_A (up to 2161 lbs / 980 kg)	97 KCAS, 112 mph
V_A (up to 2535 lbs / 1150 kg)	109 KCAS, 125 mph
Maximum Flap Extending Speed $V_{FE\ Full\ Flaps}$	94 KCAS, 108 mph
$V_{FE\ Take\text{-}off\ Flaps}$	109 KCAS, 125 mph

Maximum Weight

Takeoff (Utility Category)	2161 lbs. (980 kgs)
Takeoff (Normal Category)	2535 lbs. (1150 kgs)
Takeoff (Normal Category)	2646 lbs. (1200 kgs) see Note 13
Landing	2407 lbs. (1092 kgs)
	2535 lbs. (1150 kgs) see Note 10

C.G. Range

Forward c/g position (aft of datum):

up to 2161 lbs.	94.5 in. (2.4 meter)
at 2535 lbs.	96.8 in. (2.46 meter)
at 2646 lbs.	97.6 in. (2.48 meter) see Note 13

Varying Linearly with weight in between

Rearward c/g position (aft of datum):
With Standard Fuel Tank 102.0 in. (2.59 meter)
With Long Range Fuel Tank 100.4 in (2.55 meter)

Empty Wt. C.G. Range: None

Reference Datum: 86.4 in. (2.194 meter) in front of leading edge of stub-wing at the wing joint

Leveling Means: Wedge 600:31 top surface of fuselage tube in front of dorsal fin.

Minimum Crew: 1

No. of Seats: 4

Maximum Baggage:
Behind Rear Seats 66.14 lbs (30 kgs)
Baggage Tube 11.02 lbs (5 kgs)
With Baggage Extension 100 lbs (45kgs); see Note 8

Fuel Capacity:
With Standard Fuel Tank 41.2 gallons (156 liters) total. 40.2 gallons (152 liters) usable.
With Long Range Fuel Tank 51.0 gallons (193 liters) total. 50.0 gallons (189.2 liters) usable.

Oil Capacity:
Maximum - 8 qts (7.7 liters).
Minimum – 4 qts (3.785 liters)
See Note 1.

Maximum Operating Altitude: 16,404 feet. (5000 meters)

All weather capability:
Day- VFR
Night VFR See Note 11
IFR See Note 12
Flight into known icing conditions is prohibited

Control Surface Movements:
Aileron trailing edge up 20º, ± 2º, trailing edge down 13º, +2/-0º

Elevator
With Standard Fuel Tank: trailing edge up 23º, ± 1º, trailing edge down 15º, ± 1º
With Long Range Fuel Tank: trailing edge up 23º, +0/-1º, trailing edge down 16º, +1/-0º
With Standard or Long Range Fuel Tank (see Note 13): trailing edge up 18°, +0/-1°, trailing edge down 16º, +1/-0º

Trim tab Serial Numbers 40.006 to 40.044 (except 40.030):
+ 18º, ± 2º (nose up) / - 33º, ± 2º (nose down)
Serial Numbers 40.030 and 40.045 and subsequent:
+ 12º, ± 2º (nose up) / - 39º, ± 2º (nose down)

Rudder
With Standard Fuel Tank: left 29º, ± 1º / right 31º, ± 1º
With Long Range Fuel Tank: left 24º, ± 1º / right 26º, ± 1º
MÄM 40-113 installed: left 24º, ± 1º / right 26º, ± 1º
(see NOTE 9)

Take off flap setting 20º, ± 2º
Landing flap setting 42º, ± 1º

Manufacturer's Serial Numbers

a) For aircraft produced at Diamond Aircraft Industries GmbH, N.A. Otto-Str. 5, A-2700 Wiener-Neustadt Austria, eligible serial numbers are 40.006 to 40.083 (except 40.010 and 40.080).

b) For aircraft produced at Diamond Aircraft Industries Inc., 1560 Crumlin Sideroad, London, Ontario, N5V 1S2 Canada, eligible serial numbers are 40.201 and subsequent (except 40.213).

Certification Basis

Type Certification under 14 CFR Section 21.29 including the following requirements:

Airplanes produced under the design responsibility of Diamond Aircraft Industries GmbH (Austria), serial numbers 40.006 through 40.083 (excluding 40.010 and 40.080), 40.201 through 40.1208 (excluding 40.213), the following is the certification basis:

- Joint Aviation Requirements (JAR) 23, Initial Issue, dated March 11, 1994.
- NOTE: The DA 40 was certificated using the FAA/JAA validation certification procedures. A list of Significant Regulatory Differences was addressed. Therefore, the certification basis is equivalent to 14 CFR Part 23 effective February 1, 1965, including Amendments 23-1 through Amendment 23-51.
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1through Amendment 36-21.
- Special Condition 23-107-SC applicable to the Model DA 40 for Protection of Systems for High Intensity Radiated Fields, published on June 7, 2001.
- Equivalent Level of Safety ACE-03-01 to 14 CFR Part 23, § 23.1337(b), for auxiliary fuel level indication system is applicable to the Model DA40 equipped with long range fuel tanks per Optional Design Change OÄM 40-071c (ref. Note 7).

Airplanes produced under the design responsibility of Diamond Aircraft Industries Inc. (Canada), serial numbers 40.1209, following is the certification basis:

- 14 Part 23, effective September 14, 1969, including Amendment 23-7 through 23-51.
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1through Amendment 36-21.
- Special Condition 23-107-SC applicable to the Model DA 40 for Protection of Systems for High Intensity Radiated Fields, published on June 7, 2001.
- Equivalent Level of Safety ACE-03-01 to 14 CFR Part 23, § 23.1337(b), for auxiliary fuel level indication system is applicable to the Model DA40 equipped with long range fuel tanks per Optional Design Change OÄM 40-071c (ref. Note 7).

- The Austro Control Group (ACG) originally type certificated this aircraft under its Type Certificate Number FZ021-JAA. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product under their Type Certificate Number A.022 on behalf of Austria. Effective November 15th, 2017 this type certificate was transferred to Diamond Aircraft Industries in Canada under the oversight of Transport Canada Civil Aviation (TCCA).

  The FAA originally validated the model DA 40 airplane on August 15, 2001. Subsequent to the transfer of the models DA 40, DA 40 F, and DA 40 NG from Diamond Aircraft Industries GmbH (Austria) to Diamond Aircraft Industries Inc. (Canada), the FAA has reissued Type Certificate A47CE on November 15, 2017.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

In addition, the following items of equipment are required:
DA 40 Airplane Flight Manual, Document No. 6.01.01-E, dated July 15, 2006.
Maintenance Manual (including Airworthiness Limitation), Document No. 6.02.01, dated January 9, 2003.

Import requirements

a) For new aircraft produced in Austria, The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Austro Control Group (ACG) on behalf of the European Community. The Export C of A should contain the following statement “The aircraft covered by this certificate has been examined, tested, and found to comply with Code of Federal Regulations Part 23 approved under U.S. Type Certificate No. A 47CE and to be in a condition for safe operation”.

b) For new aircraft produced in Canada, a United States airworthiness certificate may be issued on the basis of a Canadian Certificate of Airworthiness for Export signed by a representative of the Transport Canada Civil Aviation (TCCA), containing the following statement (in the English language): 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. type certificate No. A47CE and to be in a condition for safe operation.'

c) For used aircraft a United States airworthiness certificate may be issued based on a Certificate of Airworthiness for Export from a country for which the FAA has entered into an agreement or under procedures acceptable to the FAA.

d) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).

e) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g., third party country) is FAR Section 21.183(b) or 21.183(d).

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Service Information

Each of the documents listed below must state that it is approved by TCCA or – for approvals made before September 28, 2003- by Austro Control Group or for approvals made before November 15th, 2017 by European Aviation Safety Agency.

- Service bulletins
- Structural Repair Manuals
- Vendor Manuals
- Aircraft Flight Manuals, and
- Overhaul and Maintenance Manuals

The FAA accepts such documents and considers them FAA-approved unless one of the following condition exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals; or

- The documents make an acoustical or emissions changes to this product's U.S.type certificate as defined in 14 CFR § 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to TCCA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

NOTE 1: Weight and Balance:

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

The certificated empty weight and corresponding center of gravity location must include full oil, coolant and unusable fuel.

NOTE 2: The placards specified in the TCCA approved Airplane Flight Manual must be displayed.

NOTE 3: Instructions for Continued Airworthiness and Service Life Limited components is included in the Maintenance Manual Document No. 6.02.01. Revisions to Airworthiness Limitations must beTCCA approved for the FAA.

NOTE 4: Exterior color is limited to that specified in Document No. 6.02.01.

NOTE 5: Major structural repair must be accomplished at a FAA certified repair stations rated for composite aircraft structure work, in accordance with Diamond repair methods approved by TCCA and accepted by FAA or by other means acceptable to the FAA.

NOTE 6: This NOTE was removed under Revision 1.

NOTE 7: Optional design change OÄM 40-071c, Long Range Fuel Tank, approved for Serial Number 40.030 and subsequent.

NOTE 8: The increased baggage load is applicable if the baggage extension, Optional Design Change OÄM 40-163, is installed.

NOTE 9: If Mandatory Design Change MÄM 40-113 has been accomplished, the rudder and rudder deflections are the same as those listed for the Long Range Fuel Tank.

NOTE 10: The landing mass of 2535 lbs (1150 kg) is only approved with Mandatory Design Change MÄM 40-123 installed.

NOTE 11: For Night VFR Operation the optional design change OÄM 40-064 must be incorporated.

NOTE 12: For IFR Operation the optional design change OÄM 40-067 must be incorporated.

NOTE 13: The maximum takeoff mass of 2646 lbs (1200 kgs) is only approved if Mandatory Design Change MÄM 40-227 2646 lbs. (1200 kgs) Maximum Takeoff Mass and MÄM 40-123 2535 lbs. (1150 kgs) Maximum Landing Mass are installed. Flight Manual Temporary Revision TR-MÄM-40-227 or later approved revision of DA 40 Airplane Flight Manual, Document No. 6.01.01-E where this TR has been incorporated is required.

NOTE 14: AVGAS 100 and 100LL also designated as 100/130 or 100/130LL, for additional approved fuel grades see AFM Section 2.

II. Model DA 40 F (Normal and Utility Category), approved July 15, 2005

Engine	Textron Lycoming O-360-A4M, TCDS E286	
Engine Limits	Maximum Take-Off, 2700 rpm Continuous Operation, 2700 rpm	
Propeller	(a) Sensenich Propeller 76EM8S10-0-63, TCDS P4EA (b) MT Propeller MT188R135-4G, TCDS P19BO	
Fuel	AVGAS 100LL, 100 (ASTM D910), see Note 9	
Maximum Weight	Takeoff (Utility Category) Takeoff (Normal Category) Landing	2161 lbs. (980 kgs) 2535 lbs. (1150 kgs) 2535 lbs. (1150 kgs)
Airspeed Limits	Maximum Never Exceed Speed V_{NE} Maximum Structural Cruising Speed V_{NO} Design Cruising Speed V_C Maneuvering Speed V_A (up to 2161 lbs / 980 kg) V_A (up to 2535 lbs / 1150 kg) Maximum Flap Extending Speed $V_{FE\ Full\ Flaps}$ $V_{FE\ Take\text{-}off\ Flaps}$	173 KCAS, 199 mph 128 KCAS, 147 mph 128 KCAS, 147 mph 97 KCAS, 112 mph 109 KCAS, 125 mph 94 KCAS, 108 mph 109 KCAS, 125 mph
C.G. Range	Forward c/g position (aft of datum): up to 2161 lbs.	 94.5 in. (2.4 meter)

	at 2535 lbs.	96.8 in. (2.46 meter)
	Varying Linearly with weight in between	
	Rearward c/g position (aft of datum):	
	With Standard Fuel Tank	102.0 in. (2.59 meter)
	With Long Range Fuel Tank	100.4 in (2.55 meter)
Empty Wt. C.G. Range	None	
Reference Datum	86.4 in. (2.194 meter) in front of leading edge of stub-wing at the wing joint	
Leveling Means	Wedge 600:31 top surface of fuselage tube in front of dorsal fin.	
Minimum Crew	1	
No. of Seats	4	
Maximum Baggage	Behind Rear Seats	66.14 lbs (30 kgs)
	Baggage Tube	11.02 lbs (5 kgs)
	With Baggage Extension	100 lbs (45kgs); see Note 8
Fuel Capacity	With Standard Fuel Tank	41.2 gallons (156 liters) total. 40.2 gallons (152 liters) usable.
	With Long Range Fuel Tank	51.0 gallons (193 liters) total. 50.0 gallons (189.2 liters) usable.
Oil Capacity	Maximum - 8 qts (7.7 liters). Minimum – 4 qts (3.785 liters) See Note 1.	
Maximum Operating Altitude	16,404 feet. (5000 meters)	
All weather capability	Day- VFR Night VFR IFR Flight into known icing is prohibited	
Control Surface Movements	Aileron	trailing edge up 20º, ± 2º, trailing edge down 13º, +2/-0º
	Elevator	
	With Standard Fuel Tank:	trailing edge up 23º, ± 1º, trailing edge down 15º, ± 1º
	With Standard Fuel Tank for intentional spinning (see Note 8):	trailing edge up 21°,±0.5°, trailing edge down 18°, ±0.5°
	With Long Range Fuel Tank:	trailing edge up 23º, +0/-1º, trailing edge down 16º, +1/-0º
	Trim tab	+ 12º, ± 2º (nose up) / - 39º, ± 2º (nose down)
	Rudder	left 24º, ± 1º / right 26º, ± 1º
	Take off flap setting	20º, ± 2º
	Landing flap setting	42º, ± 1º

Manufacturer's Serial Numbers

b) For aircraft produced at Diamond Aircraft Industries Inc., 1560 Crumlin Sideroad, London, Ontario, N5V 1S2 Canada, eligible serial numbers are 40.FC001 and subsequent.

Certification Basis	Type Certification under 14 CFR Section 21.29 including the following requirements:

Airplanes produced under the design responsibility of Diamond Aircraft Industries GmbH (Austria), serial numbers 40.FC001 through 40.FC029, the following is the certification basis:

- Joint Aviation Requirements (JAR) 23, Initial Issue, dated March 11, 1994.
- NOTE: The DA 40 was certificated using the FAA/JAA validation certification procedures. A list of Significant Regulatory Differences was addressed. Therefore, the certification basis is equivalent to 14 CFR Part 23 effective February 1, 1965, including Amendments 23-1 through Amendment 23-51.
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1through Amendment 36-21.
- Special Condition 23-107-SC applicable to the Model DA 40 for Protection of Systems for High Intensity Radiated Fields, published on June 7, 2001.
- Equivalent Level of Safety ACE-03-01 to 14 CFR Part 23, § 23.1337(b), for auxiliary fuel level indication system is applicable to the Model DA40 equipped with long range fuel tanks per Optional Design Change OÄM 40-071c (ref. Note 7).

Airplanes produced under the design responsibility of Diamond Aircraft Industries Inc. (Canada), serial numbers 40.FC030 and subsequent, following is the certification basis:

- 14 Part 23, effective September 14, 1969, including Amendment 23-7 through 23-51.
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1through Amendment 36-21.
- Special Condition 23-107-SC applicable to the Model DA 40 for Protection of Systems for High Intensity Radiated Fields, published on June 7, 2001.
- Equivalent Level of Safety ACE-03-01 to 14 CFR Part 23, § 23.1337(b), for auxiliary fuel level indication system is applicable to the Model DA40 equipped with long range fuel tanks per Optional Design Change OÄM 40-071c (ref. Note 7).

The FAA originally validated the model DA 40 F airplane on July 15, 2005. Subsequent to the transfer of the models DA 40, DA 40 F, and DA 40 NG from Diamond Aircraft Industries GmbH (Austria) to Diamond Aircraft Industries Inc. (Canada), the FAA has reissued Type Certificate A47CE on November 15, 2017 to Diamond Aircraft Industries Inc. (Canada).

- The Austro Control Group (ACG) originally type certificated this aircraft under its Type Certificate Number FZ021-JAA. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product under their Type Certificate Number A.022 on behalf of Austria. Effective November 15th, 2017 this type certificate was transferred to Diamond Aircraft Industries in Canada under the oversight of Transport Canada Civil Aviation (TCCA).

  The FAA originally validated the model DA 40 F airplane on July 15, 2005. Subsequent to the transfer of the models DA 40, DA 40 F, and DA 40 NG from Diamond Aircraft Industries GmbH (Austria) to Diamond Aircraft Industries Inc. (Canada), the FAA has reissued Type Certificate A47CE on November 15, 2017 to Diamond Aircraft Industries Inc. (Canada).

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

In addition, the following items of equipment are required:
DA 40 F Airplane Flight Manual, Document No. 6.01.02-E, August 22, 2005.
Maintenance Manual (including Airworthiness Limitation), Document No. 6.02.01, dated January 9, 2003 and including Temporary Revision TR-VÄM-40-002a, dated December 10, 2006.

Import requirements

a) For new aircraft produced in Austria, The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Austro Control Group (ACG) on behalf of the European Community. The Export C of A should contain the following statement “The aircraft covered by this certificate has been examined, tested, and found to comply with Code of Federal Regulations Part 23 approved under U.S. Type Certificate No. A 47CE and to be in a condition for safe operation”.

b) For new aircraft produced in Canada, a United States airworthiness certificate may be issued on the basis of a Canadian Certificate of Airworthiness for Export signed by a representative of the Transport Canada Civil Aviation (TCCA), containing the following statement (in the English language): 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. type certificate No. A47CE and to be in a condition for safe operation.'

c) For used aircraft a United States airworthiness certificate may be issued based on a Certificate of Airworthiness for Export from a country for which the FAA has entered into an agreement or under procedures acceptable to the FAA.

d) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).

e) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g., third party country) is FAR Section 21.183(b) or 21.183(d).

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Service Information

Each of the documents listed below must state that it is approved by TCCA or – for approvals made before September 28, 2003- by Austro Control Group or for approvals made before November 15th, 2017 by European Aviation Safety Agency.

- Service bulletins
- Structural Repair Manuals
- Vendor Manuals
- Aircraft Flight Manuals, and
- Overhaul and Maintenance Manuals

The FAA accepts such documents and considers them FAA-approved unless one of the following condition exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals; or

- The documents make an acoustical or emissions changes to this product's U.S.type certificate as defined in 14 CFR § 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to TCCA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

NOTE 1: Weight and Balance:

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

The certificated empty weight and corresponding center of gravity location must include full oil, coolant and unusable fuel.

NOTE 2: The placards specified in the TCCA approved Airplane Flight Manual must be displayed.

NOTE 3: Instructions for Continued Airworthiness and Service Life Limited components is included in the Maintenance Manual Document No. 6.02.01. Revisions to Airworthiness Limitations must be TCCA approved for the FAA.

NOTE 4: Exterior color is limited to that specified in Document No. 6.02.01.

NOTE 5: Major structural repair must be accomplished at a FAA certified repair stations rated for composite aircraft structure work, in accordance with Diamond repair methods approved by TCCA and accepted by FAA or by other means acceptable to the FAA.

NOTE 6: Optional design change OÄM 40-071c, Long Range Fuel Tank, approved for Serial Number 40.F001 and subsequent and 40.FC001 and subsequent.

NOTE 7: The increased baggage load is applicable if the baggage extension, Optional Design Change OÄM 40-163, is installed.

NOTE 8: For intentional spinning, OÄM 40-201 Intentional Spinning for DA 40 F, OÄM 40-203 MT188R135-4G Propeller and OÄM 40-232 Canopy Jettison System must be incorporated. Intentional spinning not allowed with OÄM 40-071 Long Range Fuel Tanks. Intentional spinning not allowed with wheel fairings installed. Flight Manual Temporary Revision TR-OÄM-40-201 or later approved revision of DA 40 F Airplane Flight Manual, Document No. 6.01.02-E where this TR has been incorporated is required.

NOTE 9: AVGAS 100 and 100LL also designated as 100/130 or 100/130LL, for additional approved fuel grades see AFM Section 2.

III. Model DA 40 NG (Normal Category), approved November 16, 2011

Engine	Austro Engine E4, TCDS E00081EN			
Engine Limits	Maximum Take-Off, 2300 rpm Continuous Operation, 2100 rpm (Propeller shaft r.p.m.)			
Propeller	MT Propeller MTV-6-R/190-69 TCDS P19NE			
Fuel	Jet A, Jet A-1 (ASTM 1655)			
Maximum Weight	Takeoff	2822 lbs. (1280 kgs) 2888 lbs. (1310 kgs) see Note 9		
	Landing	2681 lbs. (1216 kgs) 2822 lbs. (1280 kgs) see Note 9		
Airspeed Limits	Maximum Never Exceed Speed V_{NE}		173 KCAS	199 mph
	Maximum Structural Cruising Speed V_{NO}		128 KCAS	147 mph
	Design Cruising Speed V_C		128 KCAS	147 mph
	Maneuvering Speed V_A			
	(up to 2381 lbs / 1080kgs)		99 KCAS	114 mph
	(from 2381 lbs / 1080 kgs to 2602 lbs / 1180 kgs)		106 KCAS	122 mph
	(above 2602 lbs / 1180 kgs)		111 KCAS	127 mph
	Maximum Flap Extending Speed $V_{FE\ Full\ Flaps}$		97 KCAS	111 mph
	$V_{FE\ Take\text{-}off\ Flaps}$		109 KCAS	125 mph
C.G. Range	Forward c/g position (aft of datum): From 2072 lbs up to 2381 lbs. at 2888 lbs. Varying Linearly with weight in between	 94.5 in. (2.4 meter) 97.2 in. (2.469 meter)		
	Rearward c/g position (aft of datum):	99,6 in. (2.53 meter)		
Empty Wt. C.G. Range	None			
Reference Datum	86.4 in. (2.194 meter) in front of leading edge of stub-wing at the wing joint			
Leveling Means	Wedge 600:31 top surface of fuselage tube in front of dorsal fin.			
Minimum Crew	1			
No. of Seats	4			
Maximum Baggage	Behind Rear Seats	66.14 lbs (30 kgs)		
	Baggage Tube	11.02 lbs (5 kgs)		
	With Short Baggae Extension	33 lbs (15kgs)		
	With Baggage Extension	100 lbs (45kgs);		
Fuel Capacity	With Standard Fuel Tank	30 gallons (113.6 liters) total. 28 gallons (106 liters) usable.		
	With Long Range Fuel Tank	41 gallons (155.2 liters) total. 39 gallons (147.6 liters) usable.		
Oil Capacity	Maximum – 7.4 qts (7 liters). Minimum – 5.3 qts (5 liters) See Note 1.			
Maximum Operating Altitude	16,404 feet. (5000 meters)			
All weather capability	Day- VFR Night VFR IFR Flight into known icing is prohibited			

Control Surface Movements	Aileron	trailing edge up 20º, ± 2º, trailing edge down 13º, +2/-2º
	Elevator	trailing edge up 21º, + 0º/-1º, trailing edge down 17º, + 1º/-0º
	Trim tab	+ 12º, ± 2º (nose up) / - 39º, ± 2º (nose down)
	Rudder	left 24º, ± 1º / right 26º, ± 1º
	Take off flap setting	20º, ± 2º
	Landing flap setting	42º, ± 1º

Manufacturer's Serial Numbers

a) For aircraft produced at Diamond Aircraft Industries GmbH, N.A. Otto-Str. 5, A-2700 Wiener-Neustadt Austria, eligible serial numbers are D4.111, D4.365, 40.N001 and subsequent (except 40.N183 through 40.N187, 40.N189 through 40.N211, 40.N213 through 40.N223, 40N228 through 40.N234 and 40.N340 through 40.N344). DA 40 D aircraft with Serial Numbers 40.080, 40.084, D4.001 and subsequent manufactured in Ausria may be converted to DA 40 NG via Service Bulletin OSB D4-080.
b) For aircraft produced at Shandong Bin Ao Aircraft Industries Co., Ltd, Dagao, Zhanhua County, Binzhou, People's Republic of China, eligible serial numbers are 40.NS001 and subsequent.
c) For aircraft produced at Diamond Aircraft Industries Inc., 1560 Crumlin Sideroad, London, Ontario, N5V 1S2 Canada, eligible serial numbers are 40.NC001 and subsequent.

Certification Basis

Type Certification under 14 CFR Section 21.29 including the following requirements:
Airplanes produced under the design responsibility of Diamond Aircraft Industries GmbH (Austria), that include serial numbers D4.111, D4.365, 40.N011 through 40.N366 (excluding 40.N183 through 40.N187, 40.N189 through 40.N211, 40.N213 through 40.N223, 40.N228 through 40.N234 and 40.N340 through 40.N344), and 40.NC001 and 40.NC002, the following is the certification basis:

- Joint Aviation Requirements (JAR) 23, Initial Issue, dated March 11, 1994.
- NOTE: The DA 40 was certificated using the FAA/EASA validation certification procedures. A list of Significant Regulatory Differences were addressed. Therefore, the certification basis is equivalent to 14 CFR Part 23 effective February 1, 1965, including Amendments 23-1 through Amendment 23-51.
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1through Amendment 36-21.
- Special Condition 23-250-SC applicable to the Model DA 40 NG, Diesel Cycle Engine, published on April 1, 2011.
- Special Condition 23-253-SC applicable to the Model DA 40 NG, Electronic Engine Control System published on October 28, 2011.
- Special Condition 23-107-SC applicable to the Model DA 40 for Protection of Systems for High Intensity Radiated Fields, published on June 7, 2001
- Equivalent Level of Safety ACE-11-04 to 14 CFR Part 23, § 23.777(d) for cockpit controls and 23.779(b) for Motion and Effect of cockpit controls for the Diamond Aircraft Industries Model DA 40 NG airplane.
- Equivalent Level of Safety ACE-11-05 to 14 CFR Part 23, § 23.1145 Ignition Switches for the Diamond Aircraft Industries Model DA 40 NG airplanes with Austro E-4 Aircraft Diesel Engine.
- Equivalent Level of Safety ACE-11-06 to 14 CFR Part 23, § 23.1061 Liquid Cooling Installation for the Diamond Aircraft Industries Model DA 40 NG airplanes with Austro E-4 Aircraft Diesel Engine.
- Equivalent Level of Safety ACE-11-08 to 14 CFR Part 23, § 23.991(a)(1) and § 23.991(b) Fuel Pumps for the Diamond Aircraft Industries Model DA 40 NG airplanes with Austro E-4 Aircraft Diesel Engine.

Airplanes produced under the design responsibility of Diamond Aircraft Industries Inc. (Canada), serial numbers 40.NC003 and subsequent, the following is the certification basis:

- 14 Part 23, effective September 14, 1969, including Amendment 23-7 through 23-51.
- 14 CFR Part 36 effective December 1, 1969, including Amendments 36-1through Amendment 36-21.

- Special Condition 23-250-SC applicable to the Model DA 40 NG, Diesel Cycle Engine, published on April 1, 2011.
- Special Condition 23-253-SC applicable to the Model DA 40 NG, Electronic Engine Control System published on October 28, 2011.
- Special Condition 23-107-SC applicable to the Model DA 40 for Protection of Systems for High Intensity Radiated Fields, published on June 7, 2001
- Equivalent Level of Safety ACE-11-04 to 14 CFR Part 23, § 23.777(d) for cockpit controls and 23.779(b) for Motion and Effect of cockpit controls for the Diamond Aircraft Industries Model DA 40 NG airplane.
- Equivalent Level of Safety ACE-11-05 to 14 CFR Part 23, § 23.1145 Ignition Switches for the Diamond Aircraft Industries Model DA 40 NG airplanes with Austro E-4 Aircraft Diesel Engine.
- Equivalent Level of Safety ACE-11-06 to 14 CFR Part 23, § 23.1061 Liquid Cooling Installation for the Diamond Aircraft Industries Model DA 40 NG airplanes with Austro E-4 Aircraft Diesel Engine.
- Equivalent Level of Safety ACE-11-08 to 14 CFR Part 23, § 23.991(a)(1) and § 23.991(b) Fuel Pumps for the Diamond Aircraft Industries Model DA 40 NG airplanes with Austro E-4 Aircraft Diesel Engine.

The Austro Control (ACG) originally type certificated this aircraft under its Type Certificate Number FZ021-JAA. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product under their Type Certificate Number A.022 on behalf of Austria. Effective November 15th, 2017 this type certificate was transferred to Diamond Aircraft Industries in Canada under the oversight of Transport Canada Civil Aviation (TCCA).

The FAA originally validated the model DA 40 NG airplane on November 16, 2011. Subsequent to the transfer of the models DA 40, DA 40 F, and DA 40 NG from Diamond Aircraft Industries GmbH (Austria) to Diamond Aircraft Industries Inc. (Canada), the FAA has reissued Type Certificate A47CE on November 15, 2017.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

In addition, the following items of equipment are required:
DA 40 NG Airplane Flight Manual, Document No. 6.01.15-E, revision 1 dated June 15, 2011.
Maintenance Manual (including Airworthiness Limitation), Document No. 6.02.15 revision 1 dated June 15, 2011.

Import requirements

a) For new aircraft produced in Austria, The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Austro Control (ACG) on behalf of the European Community. The Export C of A should contain the following statement “The aircraft covered by this certificate has been examined, tested, and found to comply with Code of Federal Regulations Part 23 approved under U.S. Type Certificate No. A 47CE and to be in a condition for safe operation”.

b) For new aircraft produced in Canada, a United States airworthiness certificate may be issued on the basis of a Canadian Certificate of Airworthiness for Export signed by a representative of the Transport Canada Civil Aviation (TCCA), containing the following statement (in the English language): ‘The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. type certificate No. A47CE and to be in a condition for safe operation.’
c) For used aircraft a United States airworthiness certificate may be issued based on a Certificate of Airworthiness for Export from a country for which the FAA has entered into an agreement or under procedures acceptable to the FAA

d) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).

e) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g., third party country) is FAR Section 21.183(b) or 21.183(d).

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Service Information

Each of the documents listed below must state that it is approved by TCCA or – for approvals made before September 28, 2003- by Austro Control Group or for approvals made before November 15th, 2017 by European Aviation Safety Agency.

- Service bulletins
- Structural Repair Manuals
- Vendor Manuals
- Aircraft Flight Manuals, and
- Overhaul and Maintenance Manuals

The FAA accepts such documents and considers them FAA-approved unless one of the following condition exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals; or
- The documents make an acoustical or emissions changes to this product's U.S.type certificate as defined in 14 CFR § 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to TCCA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

NOTE 1: Weight and Balance:

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

The certificated empty weight and corresponding center of gravity location must include full oil, coolant and unusable fuel.

NOTE 2: The placards specified in the TCCA approved Airplane Flight Manual must be displayed.

NOTE 3: Instructions for Continued Airworthiness and Service Life Limited components is included in the Maintenance Manual Document No. 6.02.15. Revisions to Airworthiness Limitations must be TCCA approved for the FAA.

NOTE 4: Exterior color is limited to that specified in Document No. 6.02.15.

NOTE 5: Major structural repair must be accomplished at a FAA certified repair stations rated for composite aircraft structure work, in accordance with Diamond repair methods approved by TCCA and accepted by FAA or by other means acceptable to the FAA.

NOTE 6: For approved Software version of Garmin G1000 Integrated Avionic System see DAI Service Bulletin MSB 40NG-003, always latest revision.

NOTE 7: Approved engine model configuration for installation in the DA 40 NG: E4-A.

NOTE 8: For approved E4 engine software version see DAI Service Bulletin MSB 40NG-002, latest issue.

NOTE 9: The following Design Mass Combinations are approved:

Installed Design Changes	Standard	MÄM 40-574 or OÄM 40-334	MÄM 40-662
MTOM	2822 lb (1280 kg)	2822 lb (1280 kg)	2888 lb (1310 kg)
MZFM	2646 Ib (1200 kg)	2789 Ib (1265 kg)	2789 Ib (1265 kg)
MLM	2681 lb (1216 kg)	2822 lb (1280 kg)	2822 lb (1280 kg)

MTOM – Maximum Take-Off Mass MZFM – Maximum Zero Fuel Mass MLM – Maximum Landing Mass

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