

State Aviation Administration

SAA

TYPE CERTIFICATE DATA SHEET № TL 0044

DA 40

Type Certificate Holder:

Diamond Aircraft Industries GmbH
N.A. Otto-Str. 5
A-2700 Wiener Neustadt
Austria

Model:

DA 40D

Issue 1, 15 June 2010

This Data Sheet which is integral part of Type Certificate № TL 0044 prescribes the conditions and limitations under which the product(s) for which the Type Certificate was granted meet(s) the airworthiness requirements and environmental protection requirements, stated in Certification basis mentioned in this Data Sheet.

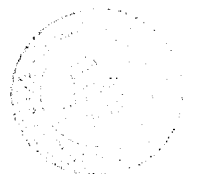
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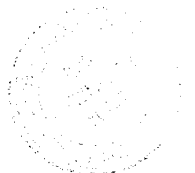


I. General

- Data Sheet No.: TL 0044
1. a) Type: DA 40
b) Variant: DA 40 D
2. Airworthiness Category:
a) Normal
b) Utility
3. Type Certificate Holder: Diamond Aircraft Industries GmbH
N.A. Otto-Str. 5
A-2700 Wiener Neustadt
Austria
EASA.21J.052
4. Manufacturer: Diamond Aircraft Industries GmbH
N.A. Otto-Str. 5
A-2700 Wiener Neustadt
Austria
AT.21G.001
- Shandong Bin Ao Aircraft Industries Co.,Ltd
Dagao, Zhanhua County, Binzhou
People's Republic of China
EASA .21G.0014
5. Certification Application Date: 20-Feb-1997
11-Jan-2002, for Major Change OÄM 40-100
- DA 40 D
6. JAA Recommendation Date: 24-Oct-2000
7. Austro Control Type certificate No. FZ 021-JAA
8. EASA Certification Date : 21. January 2005 (reissue for EASA)
9. SAA Certification Date : 15 June 2010

II. Certification Basis

1. Reference Date for determining 24-Oct-1998



the applicable requirements:

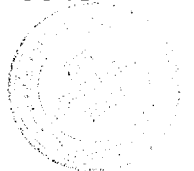
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|-------------------------------------|---|
| 2. SAA Application Date | 10-Oct-2006 |
| 3. (Reserved) | |
| 4. Certification Basis: | As defined in CRI A-01, latest Issue |
| 5. Airworthiness Requirements: | JAR-23, issued 11-Mar-1994, incl. Amdt. 1
JAR-1, Change 5, issued 15-Jul-1996 |
| 6. SAA Airworthiness Requirements: | AR-23 «Airworthiness Standards for Civil Light Airplane» |
| 7. EASA Special Conditions: | CRI E-05, Reciprocating Engine using Jet Fuel
CRI E-06, Use of Diesel Fuel and Diesel/Jet Fuel Blends for Reciprocating Engines
CRI E-09, Engine Vibration Level
CRI E-10, Engine Torque
CRI F-01, Protection from the Effects of HIRF
CRI F-03, Protection from the Effects of Lightning Strikes, Indirect Effects
CRI F-06, Installation of a FADEC Diesel Engine and Propeller
CRI F-07 Human Factors in Integrated Avionic Systems
CRI F-08 Software, Hardware Assurance Level and Highly, Integrated or Complex Aircraft Systems |
| 8. Reserved: | |
| 9. EASA Equivalent Safety Findings: | CRI D-01, Single Lever Power Control
CRI E-07, Coolant Tank
CRI E-08, Electronically-controlled Reciprocating Diesel Engine
CRI E-11, Fuel System – Hot Fuel Temperature
CRI F-05, Powerplant Instruments |
| 10. SAA Equivalent Safety Findings: | AR 23.1061(b); 23.1063 Liquid Cooling - Coolant Tank (ref. CRI E-5) |

AR 23.1141; 23.1143; 23.1145; 23.1165;
 23.1309 Electronically-controlled
 Reciprocating Diesel Engine (ref. CRI E-6)
 AR 23.961; 23.1309 Fuel System - Hot Fuel
 Temperature (ref. CRI E-7)
 AR 23.1305; 23.1521(b)(2), (c)(2) Powerplant
 Instruments (ref. CRI E-8)
 Д23F.8.4.2.3 for Intercom equipment (ref.
 CRI A-5)

11. Environmental Standards: ICAO, Annex 16, Volume 1, Third Edition,
 1993, Amdt. 7
 JAR 36, issued 23-May-1997
 CRI A-03 for additional national
 requirements
 See Note 2

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Current issue of Doc. No. 6.07.00, Chapter
 O100/7 including Design Changes MÄM 40-
 075 and following
2. Description: Single diesel engine, four-seated cantilever
 low wing airplane, composite construction,
 fixed tricycle landing gear, T-tail.
3. Equipment: Equipment list, AFM, Doc. No. 6.01.05,
 Section 6
 see Note 9
4. Dimensions: Span 11.94 m (39 ft 2 in)
 Length 8.01 m (26 ft 3 in)
 Height 1.97 m (6 ft 6 in)
 Wing Area 13.54 m² (146 sqft)
5. Engines: 1 Thielert TAE 125-01 or TAE 125-02-99
 see Note 10 and Note 11
 EASA Type Certificate Data Sheet E.055
 SAA Type Certificate Data Sheet TD 0048
- 5.1 Firmware: see Note 5
 5.2 Mapping: see Note 5



5.3 Engine Limits: Max take-off rotational speed 2300 r.p.m.
 Max continuous rotational speed 2300 r.p.m
 (Propeller shaft r.p.m)

For power-plants limits refer to AFM, Doc. No. 6.01.05, Section 2

6. (Reserved)

7. Propellers : 1 MT-Propeller MTV-6-A/187-129
 EASA Type Certificate Data Sheet P.094
 SAA Type Certificate Data Sheet TG 0011

7.1 Settings Low pitch setting: 12 °
 High pitch setting: 28 °

8. Fluids:

8.1 Fuel: Jet A-1 (ASTM 1655) see Note 12
 Diesel EN 590 see Note 6

8.2 Oil: engine Shell Helix Ultra 5W30 synthetic API SJ/CF
 or see AFM, Doc. No. 6.01.05, Section 2

gearbox Shell EP 75W90 API GL-4
 or see AFM, Doc. No. 6.01.05, Section 2

8.3 Coolant: Water / Cooler Protection-Mixture
 for more details see AFM, 6.01.05, Section 2

9. Fluid capacities:

9.1 Fuel: Standard Fuel Tank Total: 113.6 liters 30 US Gallons
 Usable: 106.0 liters 28 US Gallons

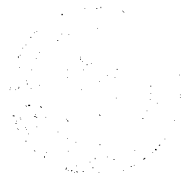
Long Range Fuel Tank Total: 155.2 liters 41 US Gallons
 Usable: 147.6 liters 39 US Gallons

9.2 Oil: Maximum: 6.0 liters 6.3 qts
 Minimum: 4.5 liters 4.8 qts

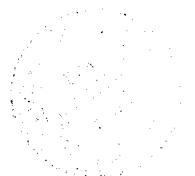
10. Air Speeds:

Design Manoeuvring Speed V_A : up to 980 kg 94 KIAS
 above 980 kg 108 KIAS

Flap Extended Speed V_{FE} : full flaps 91 KIAS
 take-off flaps 108 KIAS



Maximum cruising speed V_{NO} (= Maximum structural design speed V_C):	129 KIAS
Never exceed speed V_{NE} :	178 KIAS
11. Maximum Operating Altitude:	4200 m (13 779 ft)
12. All weather Capability:	Day-VFR Night VFR IFR, See Note 3 Flight into expected or actual icing conditions is prohibited
13. Maximum Masses:	
Take-off	Utility Category: 980 kg (2161 lb) Normal Category: 1150 kg (2535 lb)
Landing	1092 kg (2407 lb) or 1150kg (2535 lbs) see Note 8
14. Centre of Gravity Range:	
Forward limit	up to 980 kg 2.40 m behind Datum at 1150 kg 2.46 m behind Datum varying linearly with mass in between
Rear limit:	for all masses 2.59 m behind Datum with Long Range Fuel Tank 2.55 m behind Datum
15. Datum:	2.194 m in front of leading edge of stub-wing at the wing joint
16. (reserved)	
17. Levelling Means:	wedge 600 : 31 top surface of fuselage tube in front of dorsal fin
18. Minimum Flight Crew:	1 (Pilot)
19. Maximum Passenger Seating Capacity:	3
20. (Reserved)	



21. Baggage / Cargo**Compartments**

Location	Max. allowable Load
Behind Rear Seats	30 kg (66.14 lbs)
Baggage Tube	5 kg (11.02 lbs)
With Baggage Extension	45 kg (100 lbs) see Note 7

22. Wheels and Tyres

Nose Wheel Tyre Size	5.00 – 5
Main Wheel Tyre Size	6.00 – 6 or 15x6.0-6 see Note 4 for approved Types and rating see AMM, Doc. No. 6.02.01

IV. Operating and Service Instructions

Airplane Flight Manual (AFM) Document No. 6.01.05-E

Airplane Maintenance Manual
(AMM) (incl. Airworthiness
Limitations)
Service Informations and Service
Bulletins Document No. 6.02.01

Supplement N048 to the Airplane
Flight Manual for operation in
Ukraine Doc. No. 6.01.05-E

V. Notes

1. This certification applies to Serial Numbers 40.080, 40.084 and D4.001 and subsequent, with the exception of Serial Number D4.013, D4.111, D4.198, D4.199, D4.200 and D4.201 for the Production in Austria. Serial Numbers 40.DS001 and subsequent are applicable for the production in China.

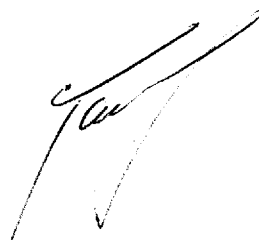
2. Approved Noise Levels are part of the EASA Noise TCDS.

3. For IFR operation the optional design change OÄM 40-136 or OÄM 40-193 must be incorporated.

4. The tire dimension 15x6.0-6 is only approved in conjunction with the 18 mm MLG strut in accordance with MÄM 40-123.

5. For approved engine software version (Firmware and Mapping) of TAE 125-01 or TAE 125-02-99 see DAI Service Bulletin MSB D4-044, latest issue.
6. Operation with Diesel fuel is only approved if MÄM 40-129 is incorporated.
7. The increased baggage load is applicable if the baggage extension, Optional Design Change OÄM 40-163 is installed.
8. The landing mass of 1150 kg (2535 lbs) is only approved with Mandatory Design Change MÄM 40-123 installed.
9. Installation of the G1000 Integrated Avionic System is only approved if OÄM 40-193 (IFR) or 40-224 (VFR) is incorporated. For approved software version see DAI Service Bulletin MSB D4-045, latest issue.
10. Approved engine model for installation in the DA 40D
TAE 125-01 125-01-(005)-()
TAE 125-02-99 125-02-(0001)-()
Engine TAE 125-02-99 was previously approved as TAE 125-02
11. Engine retrofit installation from engine TAE 125-01 to TAE 125-02-99 is approved by Design Change MÄM 40-256 with OSB D4-055
12. For detailed approved Jet Fuel Types see AFM Section 2.
JET A (ASTM D 1655), Jet Fuel 3 (GB6537-94) and TS-1 (GOST 10227-86) are approved fuel types.
13. For commercial operation a FDR must be installed.
14. In case of the crew consists of two pilots the installation of a CVR should be provided.
15. In case of the flights over difficult of access and sparsely populated regions and the big water spaces the installation of the emergency radio beacon "COSPAS-SARSAT" (406MHz) on the airplanes with s/n up to D4.185 should be provided according to Service Bulletin № OSB D4-051.

Head of aeronautical product
type certification department



Sergii Haidenko