



European Aviation Safety Agency

EASA

**TYPE-CERTIFICATE
DATA SHEET**

EASA TC NO.A513

DA 42 M

Diamond Aircraft Industries GmbH

N-A-Otto-Strasse 5
A-2700 Wiener Neustadt
Austria

For models: DA 42 M
DA 42 M-NG

Issue 19: 5 June 2014

CONTENT

SECTION A: DA 42 M

- A.I. General
- A.II. Certification Basis
- A.III. Technical Characteristics and Operational Limitations
- A.IV. Operating and Service Instructions
- A.V. Notes

SECTION B: DA 42 M-NG

- B.I. General
- B.II. Certification Basis
- B.III. Technical Characteristics and Operational Limitations
- B.IV. Operating and Service Instructions
- B.V. Notes

ADMINISTRATIVE SECTION

- I. Acronyms
- II. Type Certificate Holder Record
- III. Change Record

SECTION A: DA 42 M

A.I. General

- | | |
|------------------------------------|---|
| 1. Data Sheet No.: | EASA A.513 |
| 2. a) Type: | DA 42 M |
| b) Model: | DA 42 M |
| c) Variant: | -- |
| 3. Airworthiness Category: | Restricted |
| 4. Type Certificate Holder: | DIAMOND AIRCRAFT INDUSTRIES GMBH
N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA |
| 5. Manufacturer: | DIAMOND AIRCRAFT INDUSTRIES GMBH
N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA |
| 6. Certification Application Date: | 01-Jun-2006 |
| 7. (Reserved) | N/A |
| 8. (Reserved) | N/A |

A.II. EASA Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | 02-Apr-2002 |
| 2. Airworthiness Requirements: | JAR-23, Amendment 1, issued 01-Feb-2001
JAR-1, Change 5, issued 15-Jul-1996 |
| 3. Special Conditions: | CRI D-02 Variable Elevator Stop
CRI E-02 Use of Jet Fuel for Reciprocating Engines
CRI E-03 Use of Diesel Fuel for Reciprocating Engines
CRI E-06 Engine Vibration Level
CRI E-07 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-07	Human Factors in Integrated Avionic System
	CRI F-08	Equipment Qualification for Mission Equipment
	CRI F-09	Safety Provisions for Mission Equipment
3. Exemptions:	N/A	
4. Deviations:	N/A	
5. Equivalent Safety Findings:	CRI D-01	Single Lever Power Control
	CRI E-04	Liquid Cooling – Coolant Tank
	CRI E-05	Electronically-controlled Reciprocating Diesel Engine
	CRI E-08	Fuel System – Hot Fuel Temperature
	CRI F-04	Power plant Instruments
	CRI B-03	Stall Speed in Icing Conditions
	CRI F-10	Automatic Electric Load Shedding
6. Requirements elected to comply:	N/A	
7. Environmental Standards:	CS 36, ICAO, Annex 16, Volume 1, Fourth Edition, Chapter 10	
8. (Reserved)	N/A	
9. (Reserved)	N/A	

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Current issue of Doc. No. 7.07.00, Chapter V002/7
2. Description:	Twin engine, four-seated cantilever low wing airplane, composite construction, retractable tricycle landing gear, T-tail. The airplane is equipped with provisions for installation of various mission equipment.
3. Equipment:	Equipment list, AFM, Doc. No. 7.01.05 or 7.01.06, Section 6, and AFM Supplement M00 See Note 7
4. Dimensions:	Span 13.42 m (44 ft 0 in) Length 8.56 m (28 ft 1 in) Height 2.49 m (8 ft 2 in) Wing Area 16.29 m ² (175.3 sqft)
5. Engine:	
5.1.1 Model:	2 Technify Motors GmbH TAE 125-02-99
5.1.2 Type Certificate:	EASA Engine Type Certificate Data Sheet E.055

- 5.1.3 Limitations: 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. 7.01.05
or 7.01.06, Section 2
6. Load factors:
- | | at V_A | at V_{NE} | with flaps in T/O
or LDG position |
|-----------|----------|-------------|--------------------------------------|
| Positive: | 3.8 | 3.8 | 2.0 |
| Negative | -1.52 | 0 | |
7. Propeller:
- 7.1 Model: 2 MT-Propeller MTV-6-A-C-F/CF187-129
- 7.2 Type Certificate: EASA Propeller Type Certificate Data Sheet P.094
- 7.3 Number of blades: 3
- 7.4 Diameter: 1870 mm
- 7.5 Sense of Rotation: CW
- 7.5 Settings:
- | | |
|-------------------|------|
| Low pitch setting | 12 ° |
| Feather position | 81 ° |
| Start Lock | 15° |
8. Fluids:
- 8.1 Fuel: Jet A-1 (ASTM 1655) see Note 6
Diesel (EN 590) see Note 5
- 8.2 Oil: Engine Shell Helix Ultra 5W30 synthetic API SJ/CF
or see AFM, Doc. No. 7.01.05 or 7.01.06, Section 2
Gearbox Shell EP 75W90 API GL-4
or see AFM, Doc. No. 7.01.05 or 7.01.06, Section 2
- 8.3 Coolant: Water / Cooler Protection
for more details see AFM, 7.01.05 or 7.01.06, Section 2
- 8.4 Ice Protection Fluid: AL-5 (DTD 406B) or Aeroshell Compound 07
for more details see AFM, 7.01.05 or 7.01.06, Suppl. S03
9. Fluid capacities:
- 9.1 Fuel: Standard Fuel Tank
- | | | |
|---------|--------------|---------------|
| Total: | 196.8 liters | 52 US Gallons |
| Usable: | 189.2 liters | 50 US Gallons |
- Auxiliary Fuel Tank
- | | | |
|---------|------------|-----------------|
| Total: | 104 liters | 27,4 US Gallons |
| Usable: | 100 liters | 26,4 US Gallons |
- 9.2 Oil: each engine Maximum: 6.0 liters 6.3 qts

	Minimum:	4.5 liters	4.8 qts
9.3 Coolant system capacity:	Approx. 7 liters		
10. Air Speeds:	Design Manoeuvring Speed v_A :		
	up to 1542 kg		119 KEAS
	above 1542 kg		125 KEAS
	Flap Extended Speed v_{FE} :		
	Approach		135 KEAS
	Landing		110 KEAS
	Maximum Landing Gear Operation Speed v_{LO} :		155 KEAS
	Maximum Landing Gear Extended Speed v_{LE} :		192 KEAS
	Minimum Control Speed v_{MC} :		68 KEAS
	Maximum structural cruising speed v_{NO} (= Maximum structural design speed v_C):		155 KEAS
	Never exceed speed v_{NE} :		192 KEAS
11. Maximum Operating Altitude:	5486 m (18 000 ft)		
12. Allweather Operations Capability:	Day/Night-VFR, IFR Flights into known or forecast icing conditions See Note 4, 7		
13. Maximum Weights:	Take-off	1785 kg (3935 lb)	
	Zero Fuel	1650 kg (3638 lb)	
		1674 kg (3690 lb) OÄM 42-188 installed	
		1730 kg (3814 lb) OÄM 42-188 & -195 installed	
	Landing	1700 kg (3748 lb)	
		1785 kg (3935 lb) OÄM 42-195 installed	
	For approved Weight Configurations see Note 11		
14. Centre of Gravity Range:	Forward limit:		
	Up to 1468 kg		2.35 m behind Datum
	At 1785 kg		2.40 m behind Datum
	Varying linearly with mass in between		
	Rear limit:		
	At 1250 kg		2.42 m behind Datum
	At 1600 kg and above		2.49 m behind Datum
	Varying linearly with mass in between		
15. Datum:	2.196 m		in front of leading edge of stub-wing at the wing joint

16. Control surface deflections:

Aileron	trailing edge up	25°	± 2°
	trailing edge down	15°	+ 2/-0°
Elevator	railing edge up	15.5°	± 0.5°
	trailing edge down	13°	± 1°
Elevator Trim Tab	nose up at elevator 10° up	+ 17°	± 5°
	nose down at elevator 10° up	- 35°	± 5°
Rudder	left	27°	± 1°
	right	29°	± 1°
Rudder Trim Tab	trim RH at rudder 20° LH	+ 34°	± 5°
	trim LH at rudder 20° LH	+ 18°	± 5°
Flaps	Cruise flap setting	0°	+ 2° - 0°
	Approach flap setting	20°	+ 4° - 2°
	Landing flap setting	42°	+ 3° - 1°

17. Levelling Means: floor of front baggage compartment levelled

18. Minimum Flight Crew: 1 (Pilot) see Note 9

19. Maximum Passenger Seating Capacity: 3 see Note 9

20. Baggage/Cargo Compartments: see Note 8

Location	max. allowable Load
Front Baggage Compartment	30 kg (66 lb)
Behind Rear Seats	45 kg (100 lb)
Aft part of Baggage Extension	18 kg (40 lb)
Whole aft Baggage Compartment together	45 kg (100 lbs)

21. Wheels and Tyres: Nose Wheel Tyre Size 5.00 – 5
Main Wheel Tyre Size 15x6.0–6

22. (Reserved): N/A

A.IV. Operating and Service Instructions

1. Flight Manual: Document No. 7.01.05 or 7.01.06 (with OÄM 42-102, GFC 700 Autopilot), including AFM Supplement M00
2. Technical Manual: Airplane Maintenance Manual (AMM) Document No. 7.02.01 (incl. Airworthiness Limitations) Service Information and Service Bulletins
3. Spare Parts Catalogue: Document No. 7.03.01
4. Instruments and aggregates: refer to AMM Doc. No. 7.02.01 Chapter 1

A.V. Notes:

1. This certification applies to serial numbers 42.005, 42.008, 42.157, 42.177, 42.191, 42.234, 42.247, 42.255, 42.262, 42.272, 42.282, 42.286, 42.293, 42.304, 42.319, 42.328 and serial number 42.M001 and subsequent . All of these serial numbers initially delivered as a DA 42 must be modified with Optional Service Bulletin OSB42-056 to comply with the DA 42 M type design.
2. For approved software versions of Garmin G1000 Integrated Avionic System see DAI MSB 42-008, at latest issue. Garmin Software PNo. 010-00370-15 or later approved version is required.
3. Approved engine model for installation in the DA 42 M:
TAE 125-02-99 125-02-(0003)-()
The approved firmware and mapping is according to DAI MSB 42-007 at latest issue.
4. Flights into known or forecast icing conditions is approved if the liquid fluid ice protection system in accordance to Major Design Change OÄM 42-054 is installed. Additional Limitations apply with Mission Options or Mission Equipment installed, see Note 7
5. The use of Diesel fuel (EN 590) is approved if Major Design Change MÄM 42-037 is installed.
6. For additional approved Jet Fuel specifications see AFM Section 2.
7. The basic DA42 M does not include provisions for specific mission purposes. The following optional major design changes for specific missions as a provision for installation of mission equipment are approved.

OÄM 42-106 Belly Pod

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in the belly pod: 80 kg
- Minimum flight mass: 1430 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- AFM and AMM Supplement M01 must be furnished

OÄM 42-107 Universal Nose

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in Universal Nose: 31 kg
- Maximum load in Underfloor Pod: 20 kg
- Minimum flight mass: 1430 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- AFM and AMM Supplement M30 must be furnished
- Maximum operating speed with Universal Nose and/or Underfloor Pod installed
130KEAS

OÄM 42-107/c Universal Nose

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in Universal Nose: 65 kg
- Maximum load in Underfloor Pod: 20 kg
- Minimum flight mass: 1430 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- Most rearward flight CG:
2,436 m aft of Datum at 1430 kg
2,47 m aft of Datum at 1600 kg
2,47 m aft of Datum at 1785 kg
Linear variation in between
- AFM and AMM Supplement M130 must be furnished
- Maximum operating speed with Universal Nose and/or Underfloor Pod installed
160KEAS

OÄM 42-108 Nose Pod

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in Nose Pod: 85 kg
- The use load in the Nose Pod may lead to Trim Weight installations in the lower vertical tail
- Maximum load in rear equipment compartment: 93 kg

- Minimum flight mass: 1430 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- Most rearward flight CG: 2,426 m aft of Datum at 1430 kg
 2,46 m aft of Datum at 1600 kg
 2,46 m aft of Datum at 1785 kg
- Linear variation in between
- AFM and AMM Supplement M60 must be furnished
- Maximum operating speed with Equipment installed 160 KEAS

OÄM 42-208 Nose Pod with standard baggage compartment

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in Nose Pod: 85 kg
- The use load in the Nose Pod may lead to Trim Weight installations in the lower vertical tail
- Minimum flight mass: 1430 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- Most rearward flight CG: 2,426 m aft of Datum at 1430 kg
 2,46 m aft of Datum at 1600 kg
 2,46 m aft of Datum at 1785 kg
- Linear variation in between
- AFM and AMM Supplement M160 must be furnished
- Maximum operating speed with Equipment installed 160 KEAS

The specific mission equipment and its installations are not part of the DA 42 M certification. Installation must be approved using the relevant AMM Supplement and the qualification criteria of CRI F-08 "Equipment Qualification for mission equipment".

IFR Flights with mission master switch activated approved with OÄM 42-141 installed.

8. Additional Limitations to the Baggage Compartment payload may apply after installation of mission equipment, these are included in the relevant Flight Manual Supplement
9. Additional Limitations/Requirements for the Flight Crew/Operator or passenger may apply when the specific mission changes are installed. These Limitations are included in the relevant AFM Supplement. See Note 7
10. Compliance to ICAO Requirements (Annex 8) has been demonstrated for the basic DA 42 M and its approved provisions only. For the mission equipment itself and its installation, demonstration of compliance to ICAO Annex 8 must be part of the individual installation approval otherwise this airplane does not comply to ICAO requirements.
11. The following Design Mass Configurations are approved.

Design Changes installed	Standard	OÄM 42-188	OÄM 42-188 and OÄM 42-195
MTOM	1785 kg (3935 lb)	1785 kg (3935 lb)	1785 kg (3935 lb)
MZFM	1650 kg (3638 lb)	1674 kg (3690 lb)	1730 kg (3814 lb)
MLM	1700 kg (3748 lb)	1700 kg (3748 lb)	1785 kg (3935 lb)

MTOM – maximum take-off mass; MZFM – maximum zero fuel mass; MLM – maximum landing mass

The retrofit installation of the design changes is **only** approved per TC Holder Service Bulletins.

SECTION B: DA 42 M-NG

B.I. General

- | | |
|------------------------------------|---|
| 1. Data Sheet No.: | EASA A.513 |
| 2. a) Type: | DA 42 M |
| b) Model: | DA 42 M-NG |
| c) Variant: | -- |
| 3. Airworthiness Category: | Restricted |
| 4. Type Certificate Holder: | DIAMOND AIRCRAFT INDUSTRIES GMBH
N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA |
| 5. Manufacturer: | DIAMOND AIRCRAFT INDUSTRIES GMBH
N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA |
| 6. Certification Application Date: | 02-Jun-2009 |
| 7. (Reserved) | N/A |
| 8. (Reserved) | N/A |

B.II. EASA Certification Basis

- | | |
|--|--|
| 1. Reference Date for determining the applicable requirements: | 02-Apr-2002 |
| 2. Airworthiness Requirements: | JAR-23, Amendment 1, issued 01-Feb-2001
JAR-1, Change 5, issued 15-Jul-1996 |
| 3. Special Conditions: | CRI A-06 Overweight Operation
CRI D-02 Variable Elevator Stop
CRI E-02 Use of Jet Fuel for Reciprocating Engines
CRI E-03 Use of Diesel Fuel for Reciprocating Engines
CRI E-04 Liquid Cooling – Coolant Tank
CRI E-05 Electronically-controlled Reciprocating Diesel Engine
CRI E-06 Engine Vibration Level
CRI E-07 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-04	Power plant Instruments
	CRI F-07	Human Factors in Integrated Avionic System
	CRI F-08	Equipment Qualification for Mission Equipment
	CRI F-09	Safety Provisions for Mission Equipment
3. Exemptions:	N/A	
4. Deviations:	N/A	
5. Equivalent Safety Findings:	CRI E-10	Electrical Fuel Pump
	CRI F-10	Automatic Electric Load Shedding
6. Requirements elected to comply:	CS 23.1507	Manoeuvring Speed
	CS 23.49	Stalling Speed
	CS 23.562(d)	Emergency Landing Dynamic Conditions
7. Environmental Standards:	ICAO, Annex 16, Volume 1, Part II and as implemented in Decision No. 2003/4/RM amended by Decision 2007/007/R of The Executive Director of the Agency dated 2 April 2007, on certification specifications providing for acceptable means of compliance for aircraft noise CS-36, Amendment 1 see Note 2	
8. (Reserved)	N/A	
9. (Reserved)	N/A	

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Current issue of Doc. No. 7.07.00, Chapter V006/7 including Design Changes VÄM 42-004, VÄM 42-005 and VÄM 42-006		
2. Description:	Twin engine, four-seated cantilever low wing airplane, composite construction, retractable tricycle landing gear, T-tail. The airplane is equipped with provisions for installation of various mission equipment.		
3. Equipment:	Equipment list, AFM, Doc. No. 7.01.15, Section 6 and AFM Supplement M00 See Note 3 and 7		
4. Dimensions:	Span	13.42 m	(44 ft 0 in)
	Length	8.56 m	(28 ft 1 in)

Height 2.49 m (8 ft 2 in)
Wing Area 16.29 m² (175.3 sqft)

5. Engine:

- 5.1.1 Model: 2 E4 see Note 4
- 5.1.2 Type Certificate: EASA Engine Type Certificate Data Sheet E.200
- 5.1.3 Limitations: Max take-off rotational speed (5min) 2300 r.p.m.
Max continuous rotational speed 2100 r.p.m
(Propeller shaft r.p.m)
Max T/O Power (5min) 100%(123,5 kW)
Max. continuous Power 92% (114 kW)
For power-plants limits refer to AFM, Doc. No. 7.01.15, Section 2
- 5.1.4 Firmware: see DAI MSB 42NG-002 See Note 4
- 5.1.5 Mapping: see DAI MSB 42NG-002 See Note 4

6. Load factors: at v_A at v_{NE} with flaps in T/O or LDG position
- | | | | |
|-----------|-------|-----|-----|
| Positive: | 3.8 | 3.8 | 2.0 |
| Negative | -1.52 | 0 | |

7. Propeller:

- 7.1 Model: 2 MT-Propeller MTV-6-R-C-F/CF187-129
- 7.2 Type Certificate: EASA Propeller Type Certificate Data Sheet P.094
- 7.3 Number of blades: 3
- 7.4 Diameter: 1870 mm
- 7.5 Sense of Rotation: CW
- 7.5 Settings: Low pitch setting 12 °
Feather position 81 °
Start Lock 15°

8. Fluids:

- 8.1 Fuel: Jet A-1 (ASTM 1655) see Note 12
Diesel (EN590) see Note 15
- 8.2 Oil: Engine Shell Helix Ultra 5W30 or 5W40
or see AFM, Doc. No. 7.01.15, Section 2
Gearbox Shell SPIRAX GSX 75W-80
or see AFM, Doc. No. 7.01.15, Section 2
- 8.3 Coolant: Water / Cooler Protection
for more details see AFM, 7.01.15, Section 2
- 8.4 Ice Protection Fluid: AL-5 (DTD 406B) or Aeroshell Compound 07
for more details see AFM, 7.01.15, Suppl. S03

9. Fluid capacities:

9.1 Fuel:

Standard Fuel Tank

Total: 196.8 liters 52 US Gallons

Usable: 189.2 liters 50 US Gallons

Auxiliary Fuel Tank

Total: 104 liters 27,4 US Gallons

Usable: 100 liters 26,4 US Gallons

9.2 Oil: each engine

Maximum: 7 liters

Minimum: 5 liters

9.3 Coolant system capacity:

Approx. 7 liters

10. Air Speeds:

Design Manoeuvring Speed v_A

up to 1700 kg 114 KEAS

1701 to 1800 kg 121 KEAS

above 1800 kg 125 KEAS

Flap Extended Speed v_{FE}

Approach 135 KEAS

Landing 110 KEAS

Maximum Landing Gear Operation Speed v_{LO}

155 KEAS

Maximum Landing Gear Extended Speed v_{LE}

192 KEAS

Minimum Control Speed Airborne v_{MCA} 75 KEAS

Maximum structural cruising speed v_{NO}
(= Maximum structural design speed v_C)

155 KEAS

Never exceed speed v_{NE}

192 KEAS

11. Maximum Operating Altitude:

5486 m (18 000 ft)

12. Allweather Operations Capability:

Day/Night-VFR, IFR

Flights into known or forecast icing conditions

See Note 6, 7

13. Maximum Weights:

See Note 16

Take-off

1900 kg (4189 lb)

If MÄM 42-678 is installed

1999 kg (4407 lb)

Zero Fuel

1765 kg (3891 lb)

If MÄM 42-659 is installed

1835 kg (4045 lb)

Landing

1805 kg (3979 lb)

If MÄM 42-659 is installed

1999 kg (4407 lb)

14. Centre of Gravity Range:
- | | | |
|---|---------------------------------------|----------------------|
| Forward limit | | |
| At 1450 kg | | 2.350 m behind Datum |
| At 1468 kg | | 2.350 m behind Datum |
| At 1900 kg | | 2.418 m behind Datum |
| If MÄM 42-678 is installed | | |
| At 1999 kg | | 2.434 m behind Datum |
| | Varying linearly with mass in between | |
| Rear limit | | |
| At 1450 kg | | 2.454 m behind Datum |
| At 1700 kg and above | | 2.480 m behind Datum |
| | Varying linearly with mass in between | |
| If OÄM 42-199 is installed (see note 13): | | |
| For all weights | | 2.450 m behind Datum |
15. Datum: 2.196 m in front of leading edge of stub-wing at the wing joint
16. Control surface deflections:
- | | | | |
|-------------------|------------------------------|-------|-----------|
| Aileron | trailing edge up | 25° | ± 2° |
| | trailing edge down | 15° | + 2° - 0° |
| Elevator | railing edge up | 15.5° | ± 0.5° |
| | trailing edge down | 13° | ± 1° |
| Elevator Trim Tab | nose up at elevator 10° up | + 17° | ± 5° |
| | nose down at elevator 10° up | - 35° | ± 5° |
| Rudder | left | 27° | ± 1° |
| | right | 29° | ± 1° |
| Rudder Trim Tab | trim RH at rudder 20° LH | + 54° | ± 5° |
| | trim LH at rudder 20° LH | + 22° | ± 5° |
| Flaps | Cruise flap setting | 0° | + 2° - 0° |
| | Approach flap setting | 20° | + 4° - 2° |
| | Landing flap setting | 42° | + 3° - 1° |
17. Levelling Means: floor of front baggage compartment levelled
18. Minimum Flight Crew: 1 (Pilot)
19. Maximum Passenger Seating Capacity: 3
20. Baggage/Cargo Compartments:
- | | |
|--|---------------------|
| Location | max. allowable Load |
| Front Baggage Compartment | 30 kg (66 lb) |
| Behind Rear Seats | 45 kg (100 lb) |
| Aft part of Baggage Extension | 18 kg (40 lb) |
| Whole aft Baggage Compartment together | 45 kg (100 lbs) |
21. Wheels and Tyres:
- | | |
|----------------------|----------|
| Nose Wheel Tyre Size | 5.00 – 5 |
| Main Wheel Tyre Size | 15x6.0–6 |

22. (Reserved): N/A

B.IV. Operating and Service Instructions

1. Flight Manual: Document No. 7.01.15, including AFM Supplement M00
2. Technical Manual: Airplane Maintenance Manual (AMM) Document No. 7.02.15 (incl. Airworthiness Limitations) Service Information and Service Bulletins
3. Spare Parts Catalogue: Document No. 7.03.15
4. Instruments and aggregates: refer to AMM Doc. No. 7.02.15 Chapter 1

B.V. Notes:

1. This certification applies to serial numbers 42.339, 42.MN001 and subsequent for production at Diamond-Austria. DA 42 M may be converted to Model DA 42 M-NG by DAI approved SB OSB 42-081
2. Approved Noise Levels in accordance to the EASA data sheet for noise TCDSN A.513, Mission Configurations as listed in Note 7 are part of the TCDSN.
3. For approved software versions of Gamin G1000 Integrated Avionic System see DAI MSB 42NG-003, at latest issue. Garmin Software Pno. 010-00670-01 or later approved version is required.
4. Approved engine model for installation in the DA 42 M-NG: E4-B
The approved firmware and mapping is according to DAI MSB 42NG-002 at latest issue.
5. Propeller Equipment : Governor: P-877-16
6. Flights into known or forecast icing conditions is prohibited if provisions for additional mission equipment (Note 7) are installed.
7. The basic DA42 M-NG does not include provisions for specific mission purposes. The following optional major design changes for specific missions as a provision for installation of mission equipment are approved.

OÄM 42-168 Belly Pod

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in the belly pod: 80 kg
- Minimum flight mass: 1510 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- AFM and AMM Supplement M01 must be furnished

OÄM 42-169 Universal Nose

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in Universal Nose: 65 kg
- Maximum load in Underfloor Pod: 20 kg
- Minimum flight mass: 1510 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- Most rearward flight CG: 2,45 m aft of Datum at 1510 kg
2,47 m aft of Datum at 1700 kg and above
Linear variation in between

If OÄM 42-199 is installed (see note 13):

for all weights 2,45 m aft of Datum

- AFM and AMM Supplement M30 must be furnished
- Maximum operating speed with Equipment installed 156 KIAS

OÄM 42-170 Nose Pod

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in Nose Pod: 85 kg
- The use load in the Nose Pod may lead to Trim Weight installations in the lower vertical tail
- Maximum load in rear equipment compartment: 93 kg
- Minimum flight mass: 1510 kg
- Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
- Most rearward flight CG: 2,44 m aft of Datum at 1510 kg
2,46 m aft of Datum at 1700 kg and above
Linear variation in between

If OÄM 42-199 is installed (see note 13):

2,44 m aft of Datum at 1510 kg

2,45 m aft of Datum at 1605 kg and above

Linear variation in between

- AFM and AMM Supplement M60 must be furnished
- Maximum operating speed with Equipment installed 156 KIAS

OÄM 42-208 Nose Pod with standard baggage compartment

The following additional Limitations apply:

- Flights into known or forecast icing conditions prohibited
- Maximum load in Nose Pod: 85 kg

- The use load in the Nose Pod may lead to Trim Weight installations in the lower vertical tail
 - Minimum flight mass: 1510 kg
 - Minimum Crew for Mission Operations: 1 Pilot + 1 Operator
 - Most rearward flight CG: 2,44 m aft of Datum at 1510 kg
2,46 m aft of Datum at 1700 kg and above
Linear variation in between
- If OÄM 42-199 is installed (see note 13):
- 2,44 m aft of Datum at 1510 kg
 - 2,45 m aft of Datum at 1605 kg and above
Linear variation in between
- AFM and AMM Supplement M160 must be furnished
 - Maximum operating speed with Equipment installed 156 KIAS

OÄM 42-250 Geostar

This Design Change is approved only in combination with one of the following Mission Configurations:

- OÄM 42-170 Nose Pod
- OÄM 42-208 Nose Pod with standard baggage compartment

The following additional Limitations apply:

- Maximum load in Geostar Pod: 26 kg
- AFM and AMM Supplement M62 must be furnished

OÄM 42-255 Large Satellite Uplink

This Design Change is approved only in combination with one of the following Mission Configurations:

- OÄM 42-170 Nose Pod
- OÄM 42-208 Nose Pod with standard baggage compartment

The following additional Limitations apply:

- Maximum load in Radome: 11 kg
- AFM Supplement M62 and AMM Supplement M20 must be furnished

8. The specific mission equipment and its installations are not part of the DA 42 M-NG certification. Installation must be approved using the relevant AMM Supplement and the qualification criteria of CRI F-08 "Equipment Qualification for mission equipment"
9. Additional Limitations to the Baggage Compartment payload may apply after installation of mission equipment, these are included in the relevant Flight Manual Supplement
10. Additional Limitations/Requirements for the Flight Crew/Operator or passenger may apply when the specific mission changes are installed. These Limitations are included in the relevant AFM Supplement.

11. Compliance to ICAO Requirements (Annex 8) has been demonstrated for the basic DA 42 M-NG and its approved provisions only. For the mission equipment itself and its installation, demonstration of compliance to ICAO Annex 8 must be part of the individual installation approval otherwise this airplane does not comply with ICAO requirements.
12. For additional approved Jet Fuel specifications see AFM Section 2.
13. The Variable Elevator Stop is removed with OÄM 42-199 installed.
14. Overweight Operations
When Design Change OÄM 42-221 “Overweight Operations” is installed and MÄM 42-678 is not installed, certain types of missions are approved for the following Overweight Operations.
AFM Supplement M100, MTOM 2001 kg, MZFM 1835 kg
AFM Supplement M101, MTOM 1995 kg, MZFM 1835 kg
These Operations are subject to specific limitations such as OAT (Outside Air Temperature), Structural Temperature, Pilot’s Experience, Maneuver Limitations and only valid when Mission equipment as specified in Note 7 is installed. For details refer to AFM Supplement M100 or M101.
15. Operation with Diesel fuel is only approved, if OÄM 42-251 is installed.
16. The following Design Mass Configurations are approved:

Design Changes installed	Standard	OÄM 42-221		MÄM 42-659	MÄM 42-659 and MÄM 42-678	MÄM 42-659 and MÄM 42-678 and OÄM 42-260
		AFMS M100	AFMS M101			
MTOM	1900 kg (4189 lb)	2001 kg (4411 lb)	1995 kg (4398 lb)	1900 kg (4189 lb)	1999 kg (4407 lb)	2001 kg (4411 lb)
MZFM	1765 kg (3891 lb)	1835 kg (4045 lb)	1835 kg (4045 lb)	1835 kg (4045 lb)	1835 kg (4045 lb)	1835 kg (4045 lb)
MLM	1805 kg (3979 lb)	2001 kg (4411 lb)	1995 kg (4398 lb)	1900 kg (4189 lb)	1999 kg (4407 lb)	1999 kg (4407 lb)

MTOM – maximum take-off mass; MZFM – maximum zero fuel mass; MLM – maximum landing mass

The retrofit installation of the design changes is only approved per TC Holder Service Bulletins.

The Maximum Take Off Mass of 2001 kg (4411 lb) per OÄM 42-260 is intended only for cases were operationally more suitable to have an MTOM above 2000 kg. The forward Center of Gravity Limit at MTOM 2001 kg (4407 lb) is 2.434 m (95.83 in) aft of datum plane.

ADMINISTRATIVE SECTION

- I. Acronyms
N/A

II. Type Certificate Holder Record

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

III. Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 1	14-Dec-2007	Initial Issue	14-Dec-2007
Issue 2	02-Apr-2008	OÄM 42-102 Autopilot Garmin GFC700 Page 6, Section 1, AIV AFM	-
Issue 3	23-May-2008	OÄM 42-107 Universal Nose Page 7, Section 1, AV Note 7	-
Issue 4	06-Oct-2008	OÄM 42-141 IFR with Mission Master activated P-EASA.A.C.10811 Page 7, Section 1, AV Note 7	-
Issue 5	09-Jul-2009	OÄM 42-175 Fuel TS-1; P-EASA.A.C.12574 V Note 6	-
Issue 6	09-Oct-2009	New Model DA 42 M-NG VÄM 42-006; P-EASA.A.C.12413 OÄM 42-168, Belly Pod, EASA.A.C.12412 OÄM 42-169, Universal Nose, EASA.A.C.12411 ÖÄM 42-107/c, Universal Nose 65kg, EASA 0010001150-001 A.V. Note 7 Conformity status to ICAO Annex 8, A.V. Note 10	-
Issue 7	29-12-2009	Administrative Changes Cover page Page Change Record has been removed no longer required OÄM 42-170 Nose Pod; Project P-EASA.A.C.12410 B.V. Note 7 OÄM 42-170 added OÄM 42-108 Nose Pod; Project P-EASA.A.C.10129 A.V. Note 7 OÄM 42-108 added	-
Issue 8	13-Mar-2010	B.V. Note 1 Conversion SB added	-
Issue 9	16-Jul-2010	OÄM 42-188 Increase of the maximum Zero Fuel Weight , EASA Project Nr. 0010004589-001 including OÄM 42-195 maximum Landing mass 1785 kg AIII.13 weights changed AV. Note 11 added Format modified to standard EASA TCDS format.	-
Issue 10	01-Mar-2011	TS-1 fuels for model DA 42 M-NG, EASA Project Nr. 00100007250; OÄM 42-208 Nose Pod with standard baggage compartment, EASA Project Nr. 0010009315; Editorial Changes	-
Issue 11	26-April-2011	Section B.V, Note 12: Additional Fuel Grades added, EASA Project No. 0010010748-001	-
Issue 12	15-Sep-2011	Section B.V, Note 6; Section B.V, Note 12: General Ref. to AFM	-
Issue 13	06-Dec-2012	Editorial changes CRI F-05 deleted in accordance to CRI A-01	
Issue 14	18-Dec-2012	Section B: OÄM 42-199 Removal of Variable Elevator Stop – aft CG Limits EASA Project No. 0010007850-001	
Issue 15	06-Feb-2013	Conversion error corrected Section B.V, Note 1: S/N 42.339 included	
Issue 16	15-April-2013	Overweight Operations OÄM 42-221 BII.3.SC A-06 added BII.6 Elect to Comply 23.49, 23.562(d) BIII.13. Weight Limits Note BV Note 14 added	

Issue	Date	Changes	TC Issue No. & Date
Issue 17	19-Dec-2013	Section A.III., 5.1.1 Engine TC- Holder change Section B.III., 8.1 Diesel fuel Operation Section B.V., 7. OAM 42-251 EASA 0010026322	
Issue 18	25-Apr-2014	Section B.III 13 and 14: MTOM and MLM 1999 kg added, MZFM 1835 kg added, CG Limits updated. Section B.V Note 7 updated, Note 16 added. Note 14 updated EASA 0010018576	
Issue 19	5-June-2014	Section B.V.2 reference to Note 7 corrected Section B.V Note 7 updated, EASA 0010029104	