Type: Z 42 series



TYPE-CERTIFICATE

DATA SHEET

NO. EASA.A.027

for ZLIN Z-42 Series

Type Certificate Holder

ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC

For models: Z 42, Z 42 M, Z 42 MU, Z 142, Z 142 C, Z 242 L



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SECTION A: Z 42

Al. <u>General</u>

1.	a) Type: b) Model:	Z 42	
2.	Airworthiness Category:	Aerobatic (A) Utility (U) Normal (N)	(see Note 2) (see Note 2) (see Note 2)
3.	Manufacturer:	ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC	
4.	EASA Type Application Date:		
5.	State of Design Authority	CAA Czech Republic	
6.	CAA CZ Type Certificate Date:	September 07, 1970	
7.	EASA Type Certificate Date:	22-Mar-2007 (reissue,	EASA)

The EASA Type Certificate replaces the CAA CZ Type Certificate No. 70 - 05.

All. EASA Certification Basis

Reference Date for determining the applicable requirements:	
Airworthiness Requirements:	FAR PART 23, Amdt 23-6 (including)
EASA Special Conditions:	None
EASA Exemptions:	None
EASA Deviation	None
EASA Equivalent Safety Findings:	§ 23.177(a)(2) – Good controllability around longitudinal axis of the aircraft.
	§ 23.613(c); § 23.615 – Used materials and results of calculation are sufficiently satisfactory (they are in compliance with ČSN and specifications effective for aeronautical industry).
	§ 23.955 – The fuel flow is closed with battery stopcock and is higher by 50 % than the consumption at start.
	§ 23.991(b) – Failure of low-pressure fuel pump is extremely improbable.
	the applicable requirements: Airworthiness Requirements: EASA Special Conditions: EASA Exemptions: EASA Deviation



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§ 23.1013(e); § 23.1019 – The screen area at oil tank outlet is several times larger than the outlet pipe union section.

§ 23.1183(-) - The hoses materials safety is proved by operation experience.

§ 23.1323 – Aerodynamical repair is on safe side; the speed reached at the cruising power of engine is lower than the speed at which already occurs undesirable distortion.

7. EASA Environmental Standards: ICAO Annex 16/I, Chapter 6

All. <u>Technical Characteristics and Operational Limitations</u>

Type Design Definition: TPF 01-0019-69
 Description: The Z 42 aircraft is two-seat, low wing, single-engine, cantilever monoplane.

Span:

Length:

Height:

Wing Area:

3. Equipment: Approved equipment list is stated in document Technický popis a návod k obsluze letounu Z 42, Chapter 5".

9.11 m

7.07 m

2.69 m

13.15 m²

- 4. Dimensions:
- 5. Engine:
 - 5.1 Model: M 137 A
 - 5.2 Type Certificate: EASA approved (CAA CZ TC No. 69-01) (see Note 3)
- 5.3 Limitations: Max. Take-off power (5 min.) max. Power 133 kW (180 HP) max. Engine speed 2 750 RPM max. Consumption 61 l/h max. Manifold pressure 100 ± 2 kPa Max. Continuous power max. Power 118 kW (160 HP) max. Engine speed 2 680 RPM max. Consumption 52 l/h max. Manifold pressure 95 ± 2 kPa Max. Cruising power max. Power 103 kW (140 HP) max. Engine speed 2 580 RPM max. Consumption 43 l/h max. Manifold pressure 87 kPa Load factors: 6. Category A +6.0 g, -3.5 g Category U +4.4 g, -2.5 g Category N +3.8 g, -1.5 g

7. Propellers:



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7.1.1 Model:	Z42.6411	
7.1.2 Type Certificate:	EASA approved (CAA CZ TC No. 70-0	6) (see Note 4)
7.1.3 Number of blades:	2	
7.1.4 Diameter:	2 050 mm	
7.1.5 Sense of Rotation:	Anticlockwise in flight direction	
or	U U	
7.2.1 Model:	Z42.6413 (towing)	
7.2.2 Type Certificate:	EASA approved (EASA.P.176 replacin 07) (see Note 5)	g CAA CZ TC No. 70-
7.2.3 Number of blades:	2	
7.2.4 Diameter:	2 050 mm	
7.2.5 Sense of Rotation:	Anticlockwise in flight direction	
Fluids:		
8.1 Fuel:	Non-ethylated aviation gasoline wit Application of ethylated fuels is only pe T.E.L. content does not exceed the val	rmitted in case that the
	LBZ 72	
	LBZ 78	
	LBE 80	
	LBE 87	
	Shell 80	
	ESSO 80	
	AVGAS 100 LL (DEFENCE STANDARD 91/90, ASTM	D910)
8.2 Oil:	Mineral oils are recommended for engi kinematic viscosity of 20 cSt at 100 carbon residue does not exceed the va	°C, whose percentual
	MS 20	
	Aeroshell W100	
	Aeroshell W120 (in tropical climates)	
8.3 Coolant:	None	
Fluid capacities:		
9.1 Fuel:	Total: Usable:	130 litres 127 litres



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9.

8.

		2 x 65 litres in main tanks		
	9.2 Oil:	Minimum 7 liters - Maximu	ım 12 liters	
	9.3 Coolant system capacity:	None		
10.	Air Speeds:	Never Exceed Speed Limit Normal Operating Speed	t VNE VNO	315 km/h CAS 226 km/h CAS
		Design Manoeuvring Spee Limit Category A Category U Category N	ed VA	260 km/h CAS 230 km/h CAS 227 km/h CAS
		Maximum Flaps Extended Speed Limit	VFE	185 km/h CAS
11.	Maximum Operating Altitude:	Category A Category U Category N		5 000 m 4 350 m 4 050 m
12.	Approved Operations Capability:	The aircraft is approved for	or VFR Day flig	ghts.
13.	Maximum Masses:	Max. Take-off and Landing Category A Category U Category N	g weight:	840 kg 920 kg 970 kg
		Max. Variable Load: Category A, U, N		200 kg
		Empty weight Category A, U, N		625 kg
14.	Centre of Gravity Range:	19,0 % – 27,0 % bMAC M.A.C. is 1 460 mm; 0 % M datum.	M.A.C. is 300	mm aft reference
15.	Datum:	The rear part of firewall; fro assignation of Gravity Cen		
16.	Control Surface Deflections:	Elevator deflection up do))wn	30° ± 1° 27° + 1°
		Rudder deflection rig	ght and left	30° ± 2°
		Ailerons deflection up do))wn	21° ± 1° 17° ± 1°
		tał	tracted ke-off nding	0° 14° ± 1° 37° ± 1°
17.	Levelling Means:	Levelling points on left and be levelled. Measurement		
18.	Minimum Flight Crew:	1 (Pilot)		



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19.	Maximum Passenger Seating Capacity:	2 (including crew)
20.	Baggage/Cargo Compartments:	Max. 20 kg.
21.	Wheels and Tyres:	Wheels of main gear K 22-0100-7 with tyre Barum 420 x 150 model 2 or Wheel of nose gear K 23-0000-7 with tyre Barum 350 x 135

22. Reserved



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AIV. Operating and Service Instructions

1.	Flight Manual: – In Czech language	Letová příručka letounu Z 42, Initial issue 1971 or later approved revisions
2.	Technical Manual: – In Czech language	Technický popis a návod k obsluze letounu ZLIN 42, Initial issue 1971 or later approved revisions
6.	Repair Manual: – In Czech language	Opravárenská příručka letounů Z 42, Z 42 M, Z 42 MU, Initial issue 1978 or later approved revisions
7.	Catalogue of Spare Parts: – In Russian, Czech, German and English language	Katalog ZLIN 42, Initial issue 1971 or later approved revisions

- 8. Table of Dimensions, Limits and Clearances:
 - In Czech, German and English language

Album rozměrů, tolerancí a vůlí Z 42, Z 42 M, Z 43 Album der Abmessungen, der Toleranz und Spielangaben Z 42, Z 42 M, Z 43 Table of Dimensions, Limits and Clearances Z 42, Z 42 M, Z 43, *Initial issue 1976 or later approved revisions*

AV. Notes

- Note 1:
 The Z 42 aircraft have been converted by the aircraft manufacturer to the models:

 Z 42 M
 S/N: 0006

 Z 42 MU
 S/N: 0003-0004; 0007-0008; 0010; 0015; 0017-0026; 0028-0045; 0047
- Note 2: For operation of the airplane in other than the Normal Category, compliance with the applicable parts of Mandatory Service Bulletins Z42/55a and Z42/56a or later revision of each is required.
- Note 3: The EASA type certification standard includes that of CAA Cz TCDS No. 69-01 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 4: The EASA type certification standard includes that of CAA Cz TCDS No. 70-06 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 5: The EASA type certification standard includes that of CAA Cz TCDS No. 70-07 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 6: The EASA TC EASA.P.176 issued to Ales Kremen on 19 August 2010 replaced the Czech TC.



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SECTION B: Z 42 M

BI. <u>General</u>

1.	a) Type: b) Model:	Z 42 Z 42 M	
2.	Airworthiness Category:	Aerobatic (A) Utility (U) Normal (N)	(see Note 2) (see Note 2) (see Note 2)
3.	Manufacturer:	ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC	
4.	EASA Type Application Date:		
5.	State of Design Authority	CAA Czech Republic	
5.	CAA CZ Type Certificate Date:	October 30, 1973	
7.	EASA Type Certificate Date:	21-Mar-2007 (reissue,	EASA)

The EASA Type Certificate replaces the CAA CZ Type Certificate No. 73-06.

BII. EASA Certification Basis

1. the	Reference Date for determining applicable requirements:	
2.	Airworthiness Requirements:	FAR PART 23, Amdt 23-13 (including)
3.	EASA Special Conditions:	None
4.	EASA Exemptions:	None
5.	EASA Deviation	None
6.	EASA Equivalent Safety Findings:	§ 23.33 – In the Flight manual is a notice – limitation of revolutions of the propeller is met in normal category at maximal flight weight up to a height of 600 m MSA.
		§ 23.177(a)(2) – Sufficient controllability in critical regimes of flight.
		§ 23.613I; § 23.615 – Used materials and calculation results are convenient.
		§ 23.955 – The fuel flow is higher than the consumption at take-off regime.



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§ 23.991(b) – The engine is equipped with a high-pressure pump connected with a low-pressure pump to one aggregate, the low-pressure pump breakdown is extremely improbable.

23.1013I; 23.1019 – The screen area at oil tank outlet is several times larger than the outlet pipe union section.

§ 23.1183(–) – The hoses material safety is verified by experiences from operation.

23.1323 – At the speeds over 200 km/h, there is made a correction on the safe side.

 $\$ 23.1389(b); $\$ 23.1391; $\$ 23.1393; $\$ 23.1395; $\$ 23.1397; $\$ 23.1401 – Landing lights, anti-collision lights are convenient with respect to the night flights exclusiveness.

7. EASA Environmental Standards: ICAO Annex 16/I, Chapter 6

BIII. Technical Characteristics and Operational Limitations

- 1. Type Design Definition: TPF 01-0034-73
- 2. Description: The Z 42 M aircraft is two-seat, low wing, single-engine, and cantilever monoplane.
- 3. Equipment: Approved equipment list is stated in document Technical manual of the ZLIN Z 42M Aircraft, Chapter 4.
- 4. Dimensions: Span: 9.11 m Length: 7.07 m Height: 2.69 m
- 5. Engine:
- 5.1. Model:
- 5.2. Type Certificate: EASA approved (CAA CZ TC No. 69-01) (see Note 3)

M137 AZ

Wing Area:

5.3 Limitations:

Max. Take-off power (5 min.) max. Power 133 kW (180 HP) max. Engine speed 2 750 RPM max. Consumption 61 l/h 100 ± 2 kPa max. Manifold pressure Max. Continuous power max. Power 118 kW (160 HP) max. Engine speed 2 680 RPM max. Consumption 52 l/h max. Manifold pressure 95 ± 2 kPa Max. Cruising power: max. Power 103 kW (140 HP) 2 580 RPM max. Engine speed

43 l/h

87 kPa

13.15 m²

**** * * ****

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max. Consumption

max. Manifold pressure

6.	Load factors:	Category A Category U Category N	+6.0 g, -3.5 g +5.0 g, -3.2 g +3.8 g, -1.5 g	
7.	Propeller:			
	7.1 Model:	V 503 A		
	7.2 Type Certificate:	EASA approved (CAA CZ TC N	o. 69-02) (see Note 4)	
	7.3 Number of blades:	2		
	7.4 Diameter:	2 000 mm		
	7.5 Sense of Rotation:	Anticlockwise in flight direction.		
8.	Fluids:			
	8.1 Fuel:	Non-ethylated aviation gasoline, with min. 72 octan Application of ethylated fuels is only permitted in case that T.E.L. content does not exceed the value of 0.06% vol.		
		LBZ 72		
		LBZ 78		
		LBE 80		
		LBE 87		
		Shell 80		
		ESSO 80		
		AVGAS 100 LL (DEFENCE STANDARD 91/90,	ASTM D910)	
	8.2 Oil:	AERO SHELL 100 (a mineral oi recommended for running-in (m		
		AERO SHELL W 100 or equivalent after-running-in operation in term		
		AERO SHELL W 120 or equivater-running-in operation in trop		
		AERO SHELL W 80 or AERO S is recommended for after-runnir or in polar area.		
	8.3 Coolant:	None		
9.	Fluid:			
	9.1 Fuel:	Total: Usable:	130 litres 127 litres	
	2 x 65 litres in main tanks			
	9.2 Oil:	Minimum 7 liters – Maximum 12 liters		



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	9.3 Coolant system capacity:	None				
10.	Air Speeds:	Never	Exceed Speed L	imit	VNE	315 km/h CAS
		Norma	Operating Spe	ed Limit	VNO	226 km/h CAS
		Design Limit	Manoeuvring S	peed	VA	
			Category A,U Category N		.,,	270 km/h CAS 220 km/h CAS
		Maxim Speed	um Flaps Extend Limit	ded	VFE	185 km/h CAS
		Maxim	um Speed Limit Category A	for flicke	ed figure	s 160 km/h CAS
11.	Maximum Operating Altitude:	Catego Catego	ory A, U ory N			4 250 m 3 800 m
12.	Approved Operations Capability:	The air	craft is approve	d for VFI	R Day fli	ghts.
13.	Maximum Masses:	Max. T	ake-off and Lan Category A, U Category N	ding wei	ght:	920 kg 970 kg
		Max. V	ariable Load: Category A, U,	N		200 kg
		Empty	weight Category A, U,	N		645 kg
14.	Centre of Gravity Range:		27 % bMAC is 1 460 mm; 0	% M.A.C	C. is 300	mm aft reference
15.	Datum:		ar part of firewal ation of Gravity (asured, for purpose of I dimensions.
16.	Control surface deflections:	Elevato	or deflection	up down		34º + 0°, -1º 27° + 1°
		Rudde	r deflection	right ar	nd left	30° ± 2°
		Aileron	s deflection	up down		21° ± 1° 17° ± 1°
		Wing fl	aps positions	retracte take-of landing	f	0° 14° ± 1° 37° ± 1°
17.	Levelling Means:					airplane fuselage to min. 600 mm below.
18.	Minimum Flight Crew:	1 (Pilot)			
19.	Maximum Passenger Seating Capacity:	2 (inclu	iding crew)			
20.	Baggage/Cargo Compartments:	Max. 2	0 kg			



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21.	Wheels and Tires:	Wheels of main gear K 22-0100-7 with tyre Barum 420 x 150 model 2 or Wheels of main gear K 22-3100-7 with tyre Mitas 420 x 150 model 2 or Goodyear 6.00-6.5.			
		Wheel of nose gear K 23-0000-7 with tyre Barum 350 x 135, or Wheel of nose gear K 51-1100-7 with tyre Mitas 350 x 135 or Goodyear 5.00-5.			
22.	Reserved				



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Z 43,

BIV. Operating and Service Instructions

1.	Flig	ht Manual:	
	-	In Czech language	Letová příručka Z 42 M, Initial issue September 1977 or later approved revisions
	-	In English language	Flight Manual of the ZLIN 42 M Aircraft, Initial issue 1978 or later approved revisions
	-	In German language	Flughandbuch ZLIN 42 M, Initial issue 1978 or later approved revisions
2	Tec	hnical Manual:	
	-	In Czech language	Technický popis a návod k obsluze letounu Z 42 M, Initial issue October 1977 or later approved revisions
	-	In English language	Technical Manual of the ZLIN 42 M Aircraft, Initial issue April 1973 or later approved revisions
3.	Rep	pair Manual:	
	-	In Czech language	Opravárenská příručka letounů Z 42, Z 42 M, Z 42 MU, <i>Initial issue 1978 or later approved revisions</i>
4.	Cat	alogue of Spare Parts: In Russian, Czech, German a	nd English language Katalog náhradních dílů Z 42 M, Initial issue or later approved revisions
5.	Tab _	le of Dimensions, Limits and Cl In Czech, German and Englisł	
6.	Mar _	nual for Operation: In Czech language Doc. No. 232.071	Příručka pro provoz letounů Z 42 M, Z 42 MU bez generálních oprav draku část 1 a 2, prohlídka A, B, C, <i>Initial issue 30.1.1997 or later approved revisions</i>
	_	In English language Doc. No. 232.071	Manual for operation of Z 42 M, Z 42 MU aircraft without airframe overhaul, Part 1, Part 2, revision A, B, C, <i>Initial issue 30.1.1997 or later approved revisions</i>

- 7. Instruments and Aggregates:
 - In Czech language
 Doc. No. PRA.081.1
 Z 142 a Z

Přístroje a agregáty, použité na letounech Z 42 M, Z 42 MU Z 142 a Z 43, *Initial issue 10.1.2012 or later approved revisions*



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BV. <u>Notes</u>

- Note 1: The Z 42 M aircraft have been converted by the manufacturer to the models: Z 42 MU S/N: 0048
- Note 2: For operation of the airplane in other than the Normal Category, compliance with the applicable parts of Mandatory Service Bulletins Z42/54a, Z42/55a and Z42/56a or later revision of each is required.
- Note 3: The EASA type certification standard includes that of CAA CZ TCDS No. 69-01 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 4: The EASA type certification standard includes that of CAA CZ TCDS No. 69-02 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 5: On the aircraft Z 42 M is permitted operation with BA95/98 automotive gasoline "MOGAS" under the conditions mentioned in Information Service Bulletin Z42/28b (in latest edition).



SECTION C: Z 42 MU

Cl. <u>General</u>

1.	a) Type: b) Model:	Z 42 Z 42 MU	
2.	Airworthiness category:	Utility (U) Normal (N)	(see Note 3) (see Note 3)
3.	Manufacturer:	ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC	
4.	EASA Type Application Date:		
5.	State of Design Authority	CAA Czech Republic	
6.	CAA CZ Type Certificate Date:	01-Feb-1974	
7.	EASA Type Certificate Date:	22-Mar-2007 (reissue,	EASA)

The EASA Type Certificate replaces the CAA CZ Type Certificate No. 73-06.

CII. Certification Basis

1.	Reference D	Date for	determining	

the applicable requirements:

- 2. Airworthiness Requirements: FAR PART 23, Amdt 23-13 (including)
- 3. EASA Special Conditions: None
- 4. EASA Exemptions: None
- 5. EASA Deviation None

 EASA Equivalent Safety Findings: § 23.33 – In the Flight manual is a notice – limitation of revolutions of the propeller is met in normal category at maximal flight weight up to a height of 600 m MSA.

§ 23.177(a)(2) – Sufficient controllability in critical regimes of flight.

§ 23.613(c); § 23.615 – Used materials and calculation results are convenient.

§ 23.955 – The fuel flow is higher than the consumption at take-off regime.

§ 23.991(b) – The engine is equipped with a high-pressure pump connected with a low-pressure pump to one aggregate, the low-pressure pump breakdown is extremely improbable.



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23.1013(e); 23.1019 – The screen area at oil tank outlet is several times larger than the outlet pipe union section.

§ 23.1183(–) - The hoses material safety is verified by experiences from operation.

23.1323 – At the speeds over 200 km/h, there is made a correction on the safe side.

 $\$ 23.1389(b); 23.1391; 23.1393; 23.1395; 23.1397; $\$ 23.1401 - Landing lights, anti-collision lights are convenient with respect to the night flights exclusiveness.

7. EASA Environmental Standards: ICAO Annex 16/I, Chapter 6

CIII. Technical Characteristics and Operational Limitations

1.	Type Design Definition:	TPF 01-0019-69		
2.	Description:	The Z 42 MU aircraft is two-seat, low wing, single-engine, and cantilever monoplane.		
3.	Equipment:	Approved equipment list is stated in FI ZLIN Z 42MU Aircraft, Chapter 4.	ight manual for the	
4.	Dimensions:	Span: 9.11 m Length: 7.07 m Height: 2.69 m Wing Area: 13.15 m ²		
5.	Engine:			
	5.1.1 Model:	M 137 A		
	5.1.2 Type Certificate:	EASA approved (CAA CZ TC No. 69-01) (see Note 4)		
	5.1.3 Limitations:	Max. Take-off power (5 min.) max. Power max. Engine speed max. Consumption max. Manifold pressure	133 kW (180 HP) 2 750 RPM 61 l/h 100 ± 2 kPa	
		Max. Continuous power max. Power max. Engine speed max. Consumption max. Manifold pressure	118 kW (160 HP) 2 680 RPM 52 l/h 95 ± 2 kPa	
		Max. Cruising power max. Power max. Engine speed max. Consumption max. Manifold pressure	103 kW (140 HP) 2 580 RPM 43 l/h 87 kPa	

or

5.2.1 Model:

M 137 AZ



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	5.2.2 Type Certificate:	EASA approved (CAA CZ TC No. 69-01) (see Note 4)	
	5.2.3 Limitations:	Max. Take-off power (5 min.) max. Power max. Engine speed max. Consumption max. Manifold pressure	133 kW (180 HP) 2 750 RPM 61 l/h 100 ± 2 kPa
		Max. Continuous power max. Power max. Engine speed max. Consumption max. Manifold pressure	118 kW (160 HP) 2 680 RPM 52 l/h 95 ± 2 kPa
		Max. Cruising power max. Power max. Engine speed max. Consumption max. Manifold pressure	103 kW (140 HP) 2 580 RPM 43 l/h 87 kPa
6.	Load factors:	Category U Category N	+5.0 g, -3.2 g +3.8 g, -1.5 g
7.	Propeller:		
	7.1 Model:	V 503 A	
	7.2 Type Certificate:	EASA approved (CAA CZ TC No. 69-	02) (see Note 5)
	7.3 Number of blades:	2	
	7.4 Diameter:	2 000 mm	
	7.5 Sense of Rotation:	Anticlockwise in flight direction.	
8.	Fluids:		
	8.1 Fuel:	Non-ethylated aviation gasoline, w Application of ethylated fuels is only T.E.L. content does not exceed the va	permitted in case the
		LBZ 72	
		LBZ 78	
		LBE 80	
		LBE 87	
		Shell 80	
		ESSO 80	
		AVGAS 100 LL (DEFENCE STANDARD 91/90, ASTM	1 D910)



				or opuluolopt in		
	8.2 Oil:	AERO SHELL 100 (a mineral oil) or equivalent – is recommended for running-in (max. up to 50 hours).				
		AERO SHELL W 100 or equivalent – is recommended for after-running-in operation in temperate climatic area.				
		AERO SHELL W 120 or equivalent – is recommended f after-running-in operation in tropical area.				
		AERO SHELL W 80 or AERO SHELL W 65 or equivalent – is recommended for after-running-in operation during winter or in polar area.				
	8.3 Coolant:	None				
9.	Fluid capacities:					
	9.1 Fuel:	Total: Usable:		130 litres 127 litres		
		2 x 65 litres in main tanks				
	9.2 Oil:	Minimum 7 litres – Maximum 1	2 litres			
	9.3 Coolant system capacity:	None				
10.	Air Speeds:	Never Exceed Speed Limit	VNE	315 km/h CAS		
		Normal Operating Speed Limit	VNO	226 km/h CAS		
		Design Manoeuvring Speed Limit Category U Category N	VA	270 km/h CAS 220 km/h CAS		
		Maximum Flaps Extended Speed Limit	VFE	185 km/h CAS		
11.	Maximum Operating Altitude:	Category U Category N		4 250 m 3 800 m		
12.	Approved Operations Capability:	The aircraft is approved for VF	R Day fli	ghts.		
13.	Maximum Masses:	Max. Take-off and Landing wei Category U Category N	ght:	920 kg 970 kg		
		Max. Variable Load: Category U, N		200 kg		
		Empty weight Category U, N		645 kg		
14.	Centre of Gravity Range:	19 % – 27 % bMAC M.A.C. is 1 460 mm; 0 % M.A.C. is 300 mm aft reference datum.				
15.	Datum:	The rear part of firewall; from it are measured, for purpose of assignation of Gravity Centre, all lateral dimensions.				



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16.	Control surface deflections:	Elevator deflection	up down	34º + 0°, -1º 27º + 1º
		Rudder deflection	right and left	30° ± 2°
		Ailerons deflection	up down	21° ± 1° 17° ± 1°
		Wing flaps positions	retracted take-off landing	0° 14° ± 1° 37° ± 1°
17.	Levelling Means:	Levelling points on left be levelled. Measurem		
18.	Minimum Flight Crew:	1 (Pilot)		
19.	Maximum Passenger Seating Capacity:	2 (including crew)		
20.	Baggage/Cargo Compartments:	Max. 20 kg		
21.	Wheels and Tires:	Wheels of main gear K Barum 420 x 150 mode Wheels of main gear K Mitas 420 x 150 model Wheel of nose gear K Barum 350 x 135, or Wheel of nose gear K Mitas 350 x 135 or God	el 2 or 22-3100-7 with 2 or Goodyear 23-0000-7 with t 51-1100-7 with t	tyre 6.00-6.5. yre

22. Reserved



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CIV. Operating and Service Instructions

1. Flight Manual:

2.

3.

-	In Czech language	Letová příručka Z 42 MU, Initial issue March 1975 or later approved revisions
	In English language	Flight Manual ZLIN 42 MU, Initial issue 1974 or later approved revisions
	In German language	Flugzeugbetriebshandbuch ZLIN 42 MU, Initial issue March 1974 or later approved revisions
Т	echnical Manual:	
_	In Czech language	Technický popis a návod k obsluze letounu Z 42 MU, Initial issue April 1975 or later approved revisions
_	In English language	Technical Manual ZLIN 42 MU, Initial issue April 1974 or later approved revisions
D	onair Manual:	
R	epair Manual:	Oprováropská příručka latounů Z 42, Z 42 M, Z 42 MI
_	In Czech language	Opravárenská příručka letounů Z 42, Z 42 M, Z 42 MU,

4. Catalogue Supplement:

- In Czech, German and English language

ZLIN 42 MU – Dodatek ke katalogu Z 42 ZLIN 42 MU – Nachtrag zum Katalog Z 42 ZLIN 42 MU – Supplement of the Z 42 Catalogue Initial issue January 1974 or later approved revisions

Initial issue 1978 or later approved revisions

5. Table of Dimensions, Limits and Clearances:

- In Czech, German and English language

Album rozměrů, tolerancí a vůlí Z 42, Z 42 M, Z 42 MU, Z 43, Album der Abmessungen, der Toleranz und Spielangaben Z 42, Z 42 M, Z 43, Table of Dimensions, Limits and Clearances Z 42, Z 42 M, Z 43, *Initial issue 1976 or later approved revisions*

6. Manual for Operation:

- In Czech language
 Doc. No. 232.071
 Příručka pro provoz letounů Z 42 M, Z 42 MU
 bez generálních oprav draku část 1 a 2, prohlídka A, B, C
 Initial issue 30.1.1997 or later approved revisions
- In English language Doc. No. 232.071
 Manual for operation of Z 42 M, Z 42 MU aircraft without airframe overhaul, Part 1, Part 2, revision A, B, C, *Initial issue 30.1.1997 or later approved revisions*
- Instruments and Aggregates:
 In Czech language Doc. No. PRA. 081.1

Přístroje a agregáty, použité na letounech Z 42 M, Z 42 MU, Z 142 a Z 43, *Initial issue 10.1.2012 or later approved revisions*



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CV. Notes

- Note 1: Model has been approved under original Czech CAA Type Certificate No. 73-06 dated November 30, 1973, Supplement No. 1 dated February 01, 1974.
- Note 2: The Z 42 MU aircraft have been converted by the aircraft manufacturer to the models: Z 42 M S/N: 0011; 0027
- Note 3: For operation of the airplane in other than the Normal Category, compliance with the applicable parts of Mandatory Service Bulletins Z42/54a, Z42/55a and Z42/56a or later revision of each is required.
- Note 4: The EASA type certification standard includes that of CAA Cz TCDS No. 69-01 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 5: The EASA type certification standard includes that of CAA Cz TCDS No. 69-02 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 6: On the aircraft Z 42 MU is permitted operation with BA95/98 automotive gasoline "MOGAS" under the conditions mentioned in Information Service Bulletin Z42/28b (in latest edition).



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SECTION D: Z 142

DI. <u>General</u>

1.	a) Type: b) Model	Z 42 Z 142	
2.	Airworthiness category:	Aerobatic (A) Utility (U)	(see Note 2) (see Note 2)
		Normal (N)	(see Note 2)
3.	Manufacturer:	ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC	
4.	EASA Type Application Date:	November 22, 1977	
5.	State of Design Authority	CAA Czech Republic	
6.	CAA CZ Type Certificate Date:	January 28, 1980	
7.	EASA Type Certificate Date	22-Mar-2007 (reissue,	EASA)

The EASA Type Certificate replaces the CAA CZ Type Certificate No. 80-01.

DII. EASA Certification Basis

1. the	Reference Date for determining applicable requirements:	
2.	Airworthiness Requirements:	FAR PART 23, Amdt 23-13 (including)
3.	EASA Special Conditions:	None
4.	EASA Exemptions:	None
5.	EASA Deviations	None
6.	EASA Equivalent Safety Findings:	§ 23.177 (a)(2), (3) – Ample controllability of the airplane in specified conditions.
		§ 23.1013(e) – The level of safety is retained with the multiple area of the strainer surface.
		§ 23.1183(a) – The safety of hose materials is proved by experience in operation.
		§ 23. 1323 – At the speeds above 240 km/hr, the accomplished correction is on the safe side.
		§ 23.1383(a); § 23.1389(b); § 23.1391; § 23.1393; § 23.1395; § 23.1401 – The measurement of light intensity and of colour shade of position and anti-collision lights has not been performed.



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It is permitted with respect to the fact that night flights are prevailingly of training character and are performed in a determined area.

 EASA Environmental Standards: ICAO Annex 16/I, Chapter 10 FAR PART 36, App. G

DIII. <u>Technical Characteristics and Operational Limitations</u>

- 1. Type Design Definition: TPF 01-0041-78
- 2. Description: The Z 142 aircraft is two-seat, single-engine, low wing cantilever monoplane.
- 3. Equipment:
 Approved equipment list is stated in document Flight manual of the ZLIN Z 142 aircraft, Chapter 6.
 - Dimensions:
 Span:
 9.160 m

 Length:
 7.330 m

 Height:
 2.750 m

 Wing Area:
 13.15 m²
- 5. Engine:

4.

- 5.1 Model: M 337 AK
- 5.2 Type Certificate: EASA approved (CAA CZ No. 94-06) (see Note 3)
- 5.3 Limitations: Max. Take-off power
- max. Power 154 kW (210 HP) max. Engine speed 2 750 RPM max. Consumption 61 l/h max. Manifold pressure 118 kPa Continuous power max. Power 125 kW (170 HP) max. Engine speed 2 600 RPM max. Consumption 56 l/h max. Manifold pressure 98 kPa Cruising power max. Power 103 kW (140 HP) max. Engine speed 2 400 RPM max. Consumption 42 l/h max. Manifold pressure 90 kPa Load factors: Category A +6.0 g -3.5 g Category U +5.0 g -3.0 g Category N +3.8 g -1.5 g Propeller: 7.1 Model: V 500 A
 - 7.2 Type Certificate: EASA approved (CAA CZ TC No. 73-03) (see Note 4)



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6.

7.

	7.3 Number of blades:	2		
	7.4 Diameter:	2 000 mm		
	7.5 Sense of Rotation:	Anticlockwise in flight	direction	
8.	Fluids:			
	8.1 Fuel:	LBZ 78		
		SHELL 80		
		ESSO 80 (TEO max.	0.06 % volume)	
		Grade 100/130 (TEO	max. 0.06 % vol	ume)
		AVGAS 100 LL (DEFENCE STANDA (gr. 100/130)	RD 91/90, ASTM	1 D910)AVGAS 100L
	8.2 Oil:	AERO SHELL 100 (a recommended for rur		
		AERO SHELL W 100 after-running-in opera		
		AERO SHELL W 120 after-running-in opera		
		AERO SHELL W 65 of after-running-in operation		
	8.3 Coolant:	None		
9.	Fluid capacities:			
	9.1 Fuel:	Total: Category A: Category N:	125 lit 225 lit	
		Usable: Category A: Category N:	122 lit 220 lit	
			n main tanks n auxiliary wing ti n aerobatic tank	p tanks
	9.2 Oil:	Minimum 7 litres – Ma	aximum 12 litres	
	9.3 Coolant system capacity:	None		
10.	Air Speeds:	Never Exceed Speed Category A, U Category N	Limit v _{NE}	333 km/h IAS 332 km/h IAS
		Normal Operating Sp Limit Category A, U Category N	eed _{VNO}	273 km/h IAS 272 km/h IAS



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	Design Manoeuvring S Limit	Speed v _A	284 km/b 145
	Category A Category U Category N		284 km/h IAS 264 km/h IAS 235 km/h IAS
	Maximum Flaps Exten Limit	nded Speed VFE	
	Category A, U Category N		189 km/h IAS 188 km/h IAS
11. Maximum Operating Altitude:	Category A Category U Category N		5 000 m 4 700 m 4 300 m
12. Approved Operations Capability:	The aircraft is approve	ed for VFR Day f	lights.
13. Maximum Masses:	Max. Take-off and Lar Category A Category U Category N – Take-off weight – Landing weight		970 kg 1 020 kg 1 090 kg 1 050 kg
	Max. Variable Load: Category A Category U Category N		240 kg 290 kg 360 kg
	Empty weight Category A, U, N		730 kg
14. Centre of Gravity Range:	20 % – 26 % bMAC M.A.C. is 1 460 mm; 0 datum.) % M.A.C. is 30	0 mm aft reference
15. Datum:	The rear part of firewa assignation of Gravity		easured, for purpose of al dimensions.
16. Control surface deflections:	Elevator deflection	up down	34° + 0°; - 1° 31° + 1°
	Rudder deflection	right and left	30° ± 2°
	Ailerons deflection	up down	21° ± 1° 17° ± 1°
	Wing flaps positions	retracted take-off landing	0° 14° ± 1° 37° ± 1°
17. Levelling Means:	Levelling points on left be levelled. Measurem		
18. Minimum Flight Crew:	1 (Pilot)		
19. Maximum Passenger Seating Capacity:	2 (including crew)		
20. Baggage/Cargo Compartments:	Max. 20 kg.		



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21.	Wheels and Tyres:	Wheels of main gear K 22-0100-7 with tyre Barum 420 x 150 model 2 or Wheels of main gear K 22-3100-7 with tyre Mitas 420 x 150 model 2 or Goodyear 6.00-6.5.
		Wheel of nose gear K 23-0000-7 with tyre Barum 350 x 135, or Wheel of nose gear K 51-1100-7 with tyre Mitas 350 x 135 or Goodyear 5.00-5.

22. Reserved



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DIV. Operating and Service Instructions

1.	Flight Manual: – In Czech language	Letová příručka Z 142, Initial issue 1982 or later approved revisions
	 In English language 	Flight Manual of the ZLIN 142 Aircraft, Initial issue 1989 or later approved revisions
	 In German language 	Flughandbuch ZLIN 142, Initial issue 1982 or later approved revisions
2.	Technical Manual: – In Czech language	Technický popis pro letoun ZLIN 142, Initial issue 1988 or later approved revisions
	 In English language 	Technical Manual Z 142, Initial issue 1990 or later approved revisions
3.	Repair Manual: – In Czech language	Opravárenská příručka letounu ZLIN 142, Initial issue 1988 or later approved revisions
4.	Catalogue of Spare Parts: – In Czech and English languag	e

Katalog náhradních dílů Z 142 Catalogue of Spare Parts Z 142 *Initial issue September 2010 or later approved revisions*

5. Table of Dimensions, Limits and Clearances:

– In Russian, Czech, German and English language

Album rozměrů, tolerancí a vůlí Z 142 Album der Abmessungen, der Toleranz und Spielangabe Z 142 Table of Dimensions, Limits and Clearance Z 142 *Initial issue 1982 or later approved revisions*

6. Manual for Operation:

 In Czech language 	Příručka pro provoz letounu Z 142 bez generálních
Doc. No. Z002.071	oprav draku část 1, část 2, prohlídka A, B, C
	Initial issue 1.6.1996 or later approved revisions

- In English language Doc. No. Z002.071
 Manual for Operation of Z 142 Aircraft without airframe overhaul Part 1, Part 2, Revision A, B, C *Initial issue 1.6.1996 or later approved revisions*
- 7. Instruments and Aggregates:
 - In Czech language Doc. No. PRA. 081.1

Přístroje a agregáty, použité na letounech Z 42 M, Z 42 MU Z 142 a Z 43, *Initial issue 10.1.2012 or later approved revisions*



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DV. Notes

- Note 1: Following Z 142 aircraft have been converted by the aircraft manufacturers to the models: Z 142 C S/N: 0524, 0535
- Note 2: For operation of the airplane in other than the Normal Category, compliance with the applicable parts of Mandatory Service Bulletins Z142/53a, Z142/54a and Z142/55a or later revision of each is required.
- Note 3: The EASA type certification standard includes that of CAA CZ TCDS No. 94-06 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 4: The EASA type certification standard includes that of CAA CZ TCDS No. 73-03 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 5: On the aircraft Z 142 is permitted operation with BA95/98 automotive gasoline "MOGAS" under the conditions mentioned in Information Service Bulletin Z142/21b (in latest edition).



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SECTION E: Z 142 C

El. <u>General</u>

1.	a) Type:	Z 42	
	b) Model:	Z 142 C	
2.	Airworthiness category:	Aerobatic (A)	(see Note 2)
		Utility (U)	(see Note 2)
		Normal (N)	(see Note 2)
3.	Manufacturer:	ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC	
4.	EASA Type Application Date:		
5.	State of Design Authority	CAA Czech Republic	
6.	CAA CZ Type Certificate Date:	July 18, 1991	
7.	EASA Type Certificate Date:	22-Mar-2007 (reissue,	EASA)

The EASA Type Certificate replaces the CAA CZ Type Certificate No. 80-01.

EII. EASA Certification Basis

1. the	Reference Date for determining applicable requirements:	
2.	Airworthiness Requirements:	FAR PART 23, Amdt 23-20 (including)
3.	EASA Special Conditions:	None
4.	EASA Exemptions:	None
5.	EASA Deviations:	None
6.	EASA Equivalent Safety Findings:	§ 23.177 (a)(2), (3) – Ample controllability of the airplane in specified conditions.
		§ 23.1013(e); § 23.1019(b) – The active strainer input area is thirty-times larger than the critical outlet section. The strainer blocking has never occured during operation. Dangerous blocking is prevented by scheduled inspection periods. The airplane is provided with a duplicate oil pressure checking system.
		§ 23.1323 – At the speeds above 240 km/h, the accomplished correction is on the safe side.
7.	EASA Environmental Standards:	ICAO Annex 16/I, Chapter 10
		FAR PART 36, App. G



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EIII. <u>Technical Characteristics and Operational Limitations</u>

1.	Type Design Definition:	TPF 01-0118-94		
2.	Description:	The Z 142 C aircraft is two-seat, single cantilever monoplane.	The Z 142 C aircraft is two-seat, single-engine, low wing cantilever monoplane.	
3.	Equipment:	Approval equipment list is stated in do of the ZLIN Z 142C aircraft, Chapter 6.		
4.	Dimensions:	Span: 9.160 m Length: 7.330 m Height: 2.750 m Wing Area: 13.15 m ²		
5.	Engine:			
	5.1 Model:	M 337 AK		
	5.2 Type Certificate:	EASA approved (CAA CZ TC No. 94-0	06) (see Note 3)	
	5.3 Limitations:	Max. Take-off power max. Power max. Engine speed max. Manifold pressure	154 kW, (210 HP) 2 750 RPM 118 kPa	
		Continuous power max. Power max. Engine speed max. Manifold pressure	125 kW, (170 HP) 2 600 RPM 98 kPa	
		Cruising power max. Power max. Engine speed max. Manifold pressure	103 kW, (140 HP) 2 400 RPM 90 kPa	
6.	Load factors:	Category A Category U Category N	+6.0 g, -3.5 g +5.0 g, -3.0 g +3.8 g, -1.5 g	
7.	Propeller:			
	7.1 Model:	V 500 A		
	7.2 Type Certificate:	EASA approved (CAA CZ TC No. 73-0	03) (see Note 4)	
	7.3 Number of blades:	2		
	7.4 Diameter:	2 000 mm		
	7.5 Sense of Rotation:	Anticlockwise in flight direction.		
8.	Fluids:			
	8.1 Fuel:	LBZ 78 SHELL 80		



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		ESSO 80 (TEO max. 0.06 % vo Grade 100/130 (TEO max. 0.06 AVGAS 100 LL (DEFENCE STANDARD 91/90	6 % volu	
	8.2 Oil:	AERO SHELL 100 (a mineral o recommended for running-in (n		
		AERO SHELL W 100 or equiva after-running-in operation in ter		
		AERO SHELL W 120 or equiva		
		after-running-in operation in tro AERO SHELL W 65 or equivale	-	
		after-running-in operation durin		
	8.3 Coolant:	None		
9.	Fluid capacities:			
	9.1 Fuel:	Total: for category A: for category N:		125 litres 225 litres
		Usable: for category A: for category N:		122 litres 220 litres
		2 x 60 litres in main tan 2 x 50 litres in auxiliary 1 x 5 litres in aerobation	wing tip	o tanks
	9.2 Oil:	Minimum 7 litres – Maximum 12	2 litres	
	9.3 Coolant system capacity:	None		
10.	Air Speeds:	Never Exceed Speed Limit Category A, U Category N	V _{NE}	333 km/h IAS 332 km/h IAS
		Normal Operating Speed Limit Category A, U Category N	VNO	273 km/h IAS 272 km/h IAS
		Design Manoeuvring Speed Limit	VA	
		Category A	VA	284 km/h IAS
		Category U Category N		264 km/h IAS 235 km/h IAS
		Maximum Flaps Extended Spec	ed VFE	
		Category A, U Category N	VI L	189 km/h IAS 188 km/h IAS
11.	Maximum Operating Altitude:	Category A		4 750 m
		Category U Category N		4 500 m 4 300 m
12.	Approved Operations Capability:	The aircraft is approved for VFI	R Day a	and Night flights.

IFR, not icing conditions.



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13.	Maximum Masses:	Max. Take-off and Lan Category A Category U Category N - Take-off weight - Landing weight Max. Variable Load: Category A Category U Category N Empty weight Category A, U, N	ding weight:	970 kg 1 020 kg 1 090 kg 1 050 kg 240 kg 290 kg 360 kg
14.	Centre of Gravity Range:	20 % – 26 % bMAC M.A.C. is 1 460 mm; 0 datum.	% M.A.C. is 300	-
15.	Datum:	The rear part of firewal assignation of Gravity		
16.	Control surface deflections:	Elevator deflection	up down	34° + 0°; - 1° 31° + 1°
		Rudder deflection	right and left	30° ± 2°
		Ailerons deflection	up down	21° ± 1° 17° ± 1°
		Wing flaps positions	retracted take-off landing	0° 14° ± 1° 37° ± 1°
17.	Levelling Means:	Levelling points on left be levelled. Measurem		
18.	Minimum Flight Crew:	1 (Pilot)		
19.	Maximum Passenger Seating Capacity:	2 (including crew)		
20.	Baggage/Cargo Compartments:	Max. 20 kg		
21.	Wheels and Tyres:	Wheels of main gear K 22-0100-7 with tyre Barum 420 x 150 model 2 or Wheels of main gear K 22-3100-7 with tyre Mitas 420 x 150 model 2 or Goodyear 6.00-6.5.		tyre
		Wheel of nose gear K Barum 350 x 135, or Wheel of nose gear K Mitas 350 x 135 or Goo	51-1100-7 with t	•

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EIV. Operating and Service Instructions

1.	Flight Manual: – In English language	Flight Manual of the Z 142 C Aircraft, Initial issue October 21, 1991 or later approved revisions
2.	Maintenance Manual: – In Czech language	Návod pro údržbu pro letoun ZLIN 142 C, část II, Initial issue 1.11.1993 or later approved revisions
	 In English language 	Maintenance Manual of the Z 142 C Aircraft Vol. I, Initial issue 15.7.1991 or later approved revisions
		Maintenance Manual of the Z 142 C Aircraft Vol. II, Initial issue November 1, 1993 or later approved revisions
3.	Catalogue of spare parts: – In Czech, English and German	n language

Katalog náhradních dílů Z 142 C Catalogue of spare parts Z 142 C Katalog der Ersatzteile Z 142 C Initial issue 1994 or later approved revisions

- 4. Table of dimensions, limits and clearances:
 - In Czech, English and German language

Album rozměrů, tolerancí a vůlí ZLIN 142 C - Z 142 C-AF Table of dimensions, limits and clearances ZLIN 142 C - Z 142 C-AF Album der Abmessungen, der Toleranz – und spielanlagen ZLIN 142 C - Z 142 C-AF *Initial issue or later approved revisions*

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EV. Notes

- Note 1: The Z 142 C aircraft have been converted by the aircraft manufacturer to the models: Z 242 L, S/N: 0541
- Note 2: For operation of the airplane in other than the Normal Category, compliance with the applicable parts of Mandatory Service Bulletins Z142C/30a, Z142C/31a and Z142C/32a or later revision of each is required.
- Note 3: The EASA type certification standard includes that of CAA CZ TCDS No. 94-06 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 4: The EASA type certification standard includes that of CAA CZ TCDS No. 73-03 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 5: On the aircraft Z 142 C is permitted operation with BA95/98 automotive gasoline "MOGAS" under the conditions mentioned in Information Service Bulletin Z142C/13b (in latest edition).



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(Ù)

(see Note 1)

(see Note 1)

SECTION F: Z 242 L

Fl. <u>General</u>

1.	a) Type: b) Model:	Z 42 Z 242 L
2.	Airworthiness category:	Aerobatic (A)

		Normal (N)	(see Note 1)
3.	Manufacturer:	ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC	
4.	EASA Type Application Date:		
5.	State of Design Authority	CAA Czech Republic	
6.	CAA CZ Type Certificate Date:	April 22, 1992	
7.	EASA Type Certificate Date:	01-Feb-2005 (reissue,	EASA)

Utility

The EASA Type Certificate replaces the CAA CZ Type Certificate No. 92-03

FII. EASA Certification Basis

1. the	Reference Date for determining applicable requirements:	February 13, 1989
2.	Airworthiness Requirement:	FAR PART 23, Amdt. 23-36 (including). See Note 5)
3.	EASA Special Conditions:	None
4.	EASA Exemptions:	None
5.	EASA Deviations:	None
6.	EASA Equivalent Safety Findings:	§ 23.177(a)(2), (3), Exception to verbal fulfilment. An equivalent safety is provided.
7.	EASA Environmental Standards:	ICAO Annex 16/I, Chapter 10 FAR PART 36, App. G (Amdt. 36-20)

FIII. <u>Technical Characteristics and Operational Limitations</u>

1.	Type Design Definition:	TPF 01-0088-89
		The list of principal structural elements is stated in TPF 01- 0088-89, Enclosure No. 10



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	9 No.: EASA.A.027 e: 9	Type: Z 42 series	Date: 18.08.2020
2.	Description:	The Z 242 L aircraft is two-seat, low v cantilever monoplane.	ving, single-engine,
3.	Equipment:	Master equipment list is stated in doc the ZLIN Z 242 L aircraft, Chapter 6.	ument Flight manual of
4.	Dimensions:	Span: 9.340 m Length: 6.940 m Height: 2.950 m Wing Area: 13.860 m ²	
5.	Engine:		
	5.1 Model:	TEXTRON Lycoming AEIO-360-A1B6	6
	5.2 Type Certificate:	EASA approved (FAA TC No. 1E10)	(see Note 2)
	5.3 Limitations:	Max. Continuous power (MT) max. Power max. Engine speed max. Consumption max. Manifold pressure	149 kW 2 700 RPM 61 l/h 101 kPa
		Cruising (75 % MC) max. Power max. Engine speed max. Consumption max. Manifold pressure	112 kW 2 450 RPM 46.5 l/h 82 kPa
		Cruising (65 % MC) max. Power max. Engine speed max. Consumption max. Manifold pressure	97 kW 2 350 RPM 36 l/h 78 kPa
6.	Load factors:	Category A Category U Category N	+6.0 g, -3.5 g +5.0 g, -3.0 g +3.8 g, -1.5 g
7.	Propellers:		
	7.1.1 Model:	MTV-9-B-C/C-188-18a	
	7.1.2 Type Certificate:	EASA approved (LBA TC No. 32.130/	(65) (see Note 3)
	7.1.3 Number of blades:	3	
	7.1.4 Diameter:	1 880 mm	
	7.1.5 Sense of Rotation: or	Clockwise in flight direction	
	7.2.1 Model:	HC-C3YR-4BF/FC6890	



 $\label{eq:certified_product} \end{tabular} TE.CERT.00048-001 \end{tabular} \end{tabular} \end{tabular} \end{tabular} \end{tabular} TE.CERT.00048-001 \end{tabular} \end{tabular} \end{tabular} \end{tabular} \end{tabular} TE.CERT.00048-001 \end{tabular} \$

	7.2.2 Type Certificate:	EASA approved (FAA TC No. P25EA)	(see Note 4)
	7.2.3 Number of blades:	3	
	7.2.4 Diameter:	1 780 mm	
	7.2.5 Sense of Rotation:	Clockwise in flight direction.	
8.	Fluids:		
	8.1 Fuel:	Aviation gasoline 100L, 100LL or BL 95 (see service instruction of Engine manu	
	8.2 Oil:	See Airplane Flight manual	
	8.3 Coolant:	None	
9.	Fluid capacities:		
	9.1 Fuel:	Total: Category A: Category N:	120 litres 230 litres
		Usable: Category A: Category N:	117 litres 225 litres
		2 x 60 litres in main tanks 2 x 55 litres in auxiliary wing tip	
	9.2 Oil:	Minimum 4 litres – Maximum 8 litres	
	9.3 Coolant system capacity:	None	
10.	Air Speeds:	Never Exceed Speed Limit v _{NE}	319 km/h IAS
		Normal Operating Speed Limit V_{NO}	250 km/h IAS
		Design Manoeuvring Speed Limit Category A Category U Category N	v _A 265 km/h IAS 248 km/h IAS 224 km/h IAS
		Maximum Flaps Extended Speed Limit VFE	184 km/h IAS
		Maximum Permissible Snap	
		Manoeuvre Speed Limit Category A	175 km/h IAS
11.	Maximum Operating Altitude:	Category A Category U Category N	4 800 m 4 600 m 4 500 m
12.	Approved Operations Capability:	VFR Day and Night, IFR, not in icing co	onditions
13.	Maximum Masses:	Maximum Take-off Weight Category A Category U Category N	970 kg 1 020 kg 1 090 kg



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		Maximu	um Landing We Category A Category U Category N	ight	970 kg 1 020 kg 1 050 kg
		Maximu	um Variable Loa Category A Category U Category N	ad	225 kg / 215 kg 275 kg / 265 kg 345 kg / 345 kg
		Empty	weight Category A, U, Category A, U,		745 kg (for MTV). 755 kg (for Hartzell
14.	Centre of Gravity Range:		26 % bMAC is 1 504 mm; 0	% M.A.C. is 368	3.4 mm aft reference
15.	Datum:			l; from it are mea Centre, all latera	asured, for purpose of I dimensions.
16.	Control Surface Deflections:	Elevato	or deflection	up down	34° + 0°; - 1° 31° + 1°; - 0°
		Rudder	r deflection	right and left	30° ± 2°
		Aileron	s deflection	up down	21° ± 1° 17° ± 1°
		Wing fl	aps positions	retracted take-off landing	0° 14° ± 1° 37° ± 1°
17.	Levelling Means:				f airplane fuselage to min. 600 mm below.
18.	Minimum Flight Crew:	1 (Pilot)		
19.	Maximum Passenger Seating Capacity:	2 (inclu	iding crew)		
20.	Baggage/Cargo Compartments:	Max. 20	0 kg (for catego	ry Normal)	
21.	Wheels and Tyres:	Wheels of main gear K 22-0100-7 with tyre Barum 420 x 150 model 2 or Wheels of main gear K 22-3100-7 with tyre Mitas 420 x 150 model 2 or Goodyear 6.00-6.5.			
		Barum Wheel	350 x 135, or	23-0000-7 with t 51-1100-7 with t odyear 5.00-5	-

22. Reserved



FIV. Operating and Service Instructions

1.	Flight Manual: – In Czech language Doc. No. 003.011.1	Letová příručka pro letoun ZLIN Z 242 L Initial issue 20.3.2011 or later approved revisions
	 In English language Doc. No. 003.012.1 	Flight Manual of the ZLIN Z 242 L Aircraft Initial issue 20.3.2011 or later approved revisions
2.	Maintenance Manual: – In Czech language Doc. No. 003.021.1	Návod pro údržbu letounu Z 242 L - část I, Initial issue 1.3.1996 or later approved revisions
	Doc. No. 003.031.1	Návod pro údržbu letounu Z 242 L - část II, Initial issue 1.5.1997 or later approved revisions
	 In English language Doc. No. 003.022.1 	Maintenance Manual of the Z 242 L Aircraft - Vol. I Initial issue Mar 1, 1996 or later approved revisions
	Doc. No. 003.032.1	Maintenance Manual of the Z 242 L Aircraft - Vol. II Initial issue May 1, 1998 or later approved revisions
 Table of dimensions, limits and clearances: In Czech English and German language 		ge
	Doc. No. 003.050	Album rozměrů, tolerancí a vůlí Z 242 L Table of dimensions, limits and clearances Z 242 L Album der abmessungen, der toleranz-und spielangaben Z 242 L, <i>Initial issue 1996 or later approved revisions</i>

- 4. Illustrated parts catalog:
 - In Czech and English language Doc. No. 003.040.5

Katalog náhradních dílů letounu Z 242 L Illustrated parts catalog Z 242 L, *Initial issue July 2019 or later approved revisions*



FV. Notes:

- Note 1: For operation of the airplane in other than the Normal Category, compliance with the applicable parts of Mandatory Service Bulletins Z242L/49a, Z242L/51a and Z242L/52a or later revision of each is required.
- Note 2: The EASA type certification standard includes that of FAA TCDS No. 1E10 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 3: The EASA type certification standard includes that of LBA TCDS No. 32.130/65 based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 4: The EASA type certification standard includes that of FAA TCDS No. P25EA based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards confirming to TC/TCDS standards certificated by individual EU member state prior to 28 September 2003 are also acceptable.
- Note 5: For below listed EASA Major Changes, the Certification Basis was amended as follows:
 - EASA Major Change Approval No. 10042932 Issue of a new version of Flight Manual of the Z 242 L - applicable Amdt. 23-41 for: §23.1581, §23.1583, §23.1585, §23.1587, §23.1589),
 - EASA Major Change Approval No. 10049740 Installation of avionics Garmin 500 applicable Amdt. 23-57 for: §23.1, §23.29, §23.303, §23.305, §23.307, §23.561, §23.575, §23.603, §23.605, §23.607, §23.611, §23.613, §23.771, §23.773, §23.777, §23.867, §23.1301, §23.1303, §23.1309, §23.1311, §23.1321, §23.1322, §23.1323, §23.1325, §23.1327, §23.1331, §23.1351, §23.1353, §23.1357, §23.1329, §23.1365, §23.1367, §23.1381, §23.1431, §23.1501, §23.1525, §23.1529, §23.1541, §23.1543, §23.1545, §23.1581, §23.1583, §23.1585, G23),
 - EASA Major Change Approval No. 10068085 Revision No. 4 of Flight Manual of the Z 242 L aircraft §23.1323 (Amdt. 23-42), §23.1525, §23.1583 (Amdt. 23-45).
- Note 6: Based on Service Letter No. 124, the Z 242 L aircraft "S/N 0840" has an installed engine model TEXTRON Lycoming AEIO-390-A1A6 with maximum certified take-off power 157 kW (210 HP) and approved for reduced power of 2500 R.P.M. operations.



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SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations N/A

II. Type Certificate Holder Record

Current: ZLIN AIRCRAFT a.s. Letiště 1887 765 02 Otrokovice CZECH REPUBLIC

Former: Moravan, n.p. Letiště 1578 765 81 Otrokovice CZECHOSLOVAKIA

Moravan, k.p. Letiště 1578 765 81 Otrokovice CZECHOSLOVAKIA

Moravan a.s. Letiště 1578 765 81 Otrokovice CZECH REPUBLIC

MORAVAN-AEROPLANES a.s. Letiště 1578 765 81 Otrokovice CZECH REPUBLIC

Moravan Aviation s.r.o. Letiště 1578 765 81 Otrokovice CZECH REPUBLIC

III. Change Record

Issue	Date	Changes
Issue 1	04-Feb-2005	Transfer of ZLIN Z 242 L Type Design to EASA
Issue 2	23-Mar-2007	Transfer of ZLIN Z 42 as basic Type Design under this TC / TCDS Transfer of ZLIN Z 42 M, Z 42 MU, Z 142, and Z 142 C
Issue 3	24-Aug-2009	Change of Company's Name
Issue 4	23-July 2010	Editorial corrections Revision into standard EASA TCDS format



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Issue 5	25-Aug-2010	Change to the reference to the TC of the Z-42.6413 propeller which =was issued with TC EASA.P.176 on 19 August 2010.
Issue 6	02-Nov-2010	Corrections to Section F, Z-242 L, serial numbers manufactured by each company and the removal of certain serial numbers of airframes that were used solely for testing purposes.
Issue 7	25-April-2016	Editorial and formal correction Revision of actual accompanying documentation
Issue 8	24-July-2020	Conversion of this TCDS into the EASA template for TCDS Implementation of approved alternative fuel for model Z 42M, Z 42MU, Z 142, Z 142 C Clarification of applicability of certification basis for Major Type Design Change beyond the original certification basis New engine model for Z 242 L S/N 0840
Issue 9	18-Aug-2020	Correction in Section FV, Note 6 – specification of engine operation

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