

CIVIL AVIATION AUTHORITY OF THE CZECH REPUBLIC

69-04 Revision 6 MORAVAN-AEROPLANES a.s. Model Z 526 F 11.04.2007

TYPE CERTIFICATE DATA SHEET No. 69-04

This data sheet which is a part of Type Certificate No. 69-04 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Czech Republic.

Model	Application Date	Certification Date
Z 526 F	-	14.10.1969

Paeg No.	1	2	3	4	5	6	7	8	9
Revision No.	6	6	6	6	6	6	6	6	6

Model Z 526 F

I. General

- | | |
|-----------------------------|--|
| 1. Data Sheet No.: | 69-04 |
| 2. Model: | Z 526 F |
| 3. Airworthiness category: | Normal (N)
Acrobatic (A) |
| 4. Type Certificate Holder: | MORAVAN – AEROPLANES, a.s.
Letiště 1578, 765 81 Otrokovice. |
| 5. Manufacturer: | MORAVAN n. p. Otrokovice
Letiště 1578, 765 81 Otrokovice |
| 6. Application Date: | - |
| 7. Certificate Date: | 14.10.1969 |

II. Certification Basis

- | | |
|-------------------------|---|
| 1. Certification Basis: | FAR PART 23 effective to 14.03.1969 |
| 2. Special Conditions: | None |
| 3. Exemptions: | § 23.177(a)(2), (3) Static directional and lateral stability
§ 23.207 Stall warning
§ 23.613(c) Material strength properties and design values
§ 23.781 Cockpit control knob shape
§ 23.955 Fuel flow
§ 23.991(b) Fuel pumps
§ 23.1145 Ignition switches
§ 23.1183(a) Lines, fittings and components
§ 23.1191(g) Firewalls
§ 23.1337(b) Powerplant instruments
§ 23.1357(d) Circuit protective devices
§ 23.1389 Position light distribution and intensities
§ 23.1391 Minimum intensities in the horizontal plane of position lights
§ 23.1393 Minimum intensities in any vertical plane of position lights
§ 23.1395 Maximum intensities in overlapping beams of position lights
§ 23.1397 Color specifications |

4. Equivalent Safety Findings:

§ 23.177(a)(2), (3) – In acrobatic (without auxiliary wing tip tanks) there is no tendency to raise the low wing in a slip. This deviation is admitted with regard to the purpose of the aircraft (acrobatic flying) and to the operational experience. It is possible to ensure the fulfilment of the requirement by the installation of the spring device, which the manufacturer delivers on request. In normal category, there is no deviation the requirement is met.

§ 23.207 – The requirement of “clear and distinct stall warning” is not met in acrobatic category in level wing stalling with power and in turning flight stalls in normal category in all conditions. The deviation is admitted with regard to the operational experience.

§ 23.613(c) – In the design and the construction of the airplane the Czechoslovak material standards (ČSN) and the specifications being in force for the Czechoslovak aircraft industry have been used. The deviation is admitted because the intent of the requirement is fulfilled.

§ 23.781 – The shape of the flaps and landing gear control knobs does not meet the requirement. The deviation is admitted with regard to the location and the sense of movement of these controls, which ensure the same level of safety.

§ 23.955 – The requirement of the fuel flow rate delivered by the fuel pump system to the engine is not met. The deviation is admitted with regard to the fact that the fuel flow is throttled by the valve LUN 7520.02 and is by 50 % higher than the take-off consumption of the engine.

§ 23.991(b) – The aircraft is not equipped with emergency pump for fuel supply resume into the engine in case of main fuel pump failure. It is admitted with regard to the fact that: The engine is equipped with high-pressure injector, which is joined with low-pressure supply fuel pump into one aggregate. Any pertinent failure of this aggregate would cause contemporaneous breakdown of supply pump and injector. In that case, no emergency pump could ensure fuel supply and distribution to finish the flight without excessive efforts and attention distraction of the pilot. No failure of the low-pressure supply fuel pump has occurred yet and its occurrence is extremely improbable.

§ 23.1145 – The requirement of means to prevent the inadvertent operation of ignition switches is not met.

The deviation is admitted with regard to the location and the shape of the switch.

§ 23.1183(a) – The requirement of the fire resistancy of the lines (hoses) is not met.

§ 23.1191(g) – The requirement of the resistance of fittings against the flame penetration is not met. The deviation is admitted with regard to the operation experience.

§ 23.1337(b) – The LUN 1600 indicator does not meet the requirement of the calibration of the fuel quantity indicator in gallons or pounds, where the calibration in litres is used. The deviation is admitted because the intent of the requirement is fulfilled and safety level is not affected.

§ 23.1357(d) – The requirement of the battery circuit braker resetting is not met. The deviation is admitted with regard to the operational experience.

§ 23.1389, § 23.1391, § 23.1393, § 23.1395 and §23.1397 – Requirements concerning the location and intensities of position lights are not met. This is admitted because the airplane is certified for VFR-DAY flights and the position lights are fitted only for the facilitation of the maneuvering the plane on the ground.

5. Environmental Standards:

None

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: The specification list of Aircraft Z 526 F
No. S-F 526.000 (up to 22 series including)
No. S-F 526.000.1 (from 23 series)
2. Description: The Z 526 F aircraft is two-seat, low wing, single-engine, cantilever monoplane.
3. Equipment:

Speed indicator	LUN 1106
Altimeter	LUN 1121
Artificial horizon	LUN 1202
Turn and bank indicator	LUN 1214
Variometer	LUN 1147
Magnetic compass	LUN 1222
Tachometer	LUN 1312
Cylinder heads thermometer	LUN 1380
Four-scale indicator	LUN 1523
Three-scale indicator	LUN 1521
Landing gear position indicator	LUN 1692
Accelerometer	LUN 1722
4. Dimensions:

Span:	10.596 m
Length:	8.000 m
Height:	2.060 m
Wing Area:	15.450 m ²
5. Engine:
 - 5.1. Model: M 137 A
 - 5.2. Type Certificate: 69-01, issued by SLI
 - 5.3. Limitations:

Max. Take-off power	
Max. Power	132 kW, (180 k)
Max. Engine speed	2 750 RPM
Max. Consumption	59 l/h
Max. Manifold pressure	103 kPa
Max. Continuous power	
Max. Power	118 kW, (160 k)
Max. Engine speed	2 680 RPM
Max. Consumption	52 l/h
Max. Manifold pressure	98 kPa
Max. Cruising power	
Max. Power	103 kW, (140 k)
Max. Engine speed	2 580 RPM
Max. Consumption	44 l/h
Max. Manifold pressure	90 kPa

6. Propeller:

- 6.1. Model: V 503 A
6.2. Type Certificate: 69-02, issued by SLI
6.3. Number of blades: 2
6.4. Diameter: 2 000 mm
6.5. Sense of Rotation: Left

7. Fuel:

LBZ 78
SHELL 80
ESSO 80 (TEO max. 0.06 % objemu)
Grade 100/130 (TEO max. 0.06% objemu)
AVGAS 100 LL
(DEFENCE STANDARD 91/90ASTM D910).
AVGAS 100 L
AVGAS 80
(See service instruction of Engine manufacturer)

8. Oil:

AEROSHELL Oil W 100
AEROSHELL Oil W 120
ELF Aviation AD 100
MOBIL Aero Oil 100
BP Aero D 100
CASTROL Aero AD 100
TOTAL Aero D 100

9. Air Speeds:

Never exceed speed limit
(category A, N), v_{NE} 305 km/h IAS
Normal operating speed limit
(category A, N), v_{NO} 230 km/h IAS
Design manoeuvring speed limit
(category A, N), v_A 230 km/h IAS
Maximum flaps extended speed limit
(category A, N), v_{FE} 152 km/h IAS
Maximum open landing gear speed
(category A, N), v_{LE} 305 km/h IAS
Maximum landing gear operating speed
(category A, N), v_{LO} 140 km/h IAS
Maximum permissible Snap Maneuver Speed
160 km/h IAS

10. Load factors:	For category Acrobatic (A)	+6.0 g, -3.0 g
	For category Normal (N)	+3.8 g, -1.5 g
11. Maximum Operating Altitude:	5 200 m	
12. Weights:	Max. Take-off weight:	
	For category Acrobatic (A)	940 kg
	For category Normal (N)	975 kg
	Max. Variable Load:	
	For category Acrobatic (A)	275 kg
	For category Normal (N)	300 kg
	Standard empty weight:	
	For category Acrobatic (A)	665 kg \pm 3 %
	For category Normal (N)	675 kg \pm 3 %
13. Centre of Gravity Range:	20.4 % \div 27.4 % MAC	
14. Datum:	Reference point – top of the propeller hub spinner.	
15. Mean Aerodynamic Cord (MAC):	1 545 mm	
16. Leveling Means:	Is going through the axis of the upper stringer tubes of fuselage skeleton.	
17. Minimum Flight Crew:	1, (solo flying when only the front seat is occupied is not allowed)	
18. Number of seats:	2, (includes crew)	
19. Baggage/Cargo Compartments:	None	
20. Control surface deflections:	Elevator deflection	up $25^{\circ} \pm 1^{\circ}$ down $20^{\circ} \pm 1^{\circ}$
	Elevator trim tab	up $25^{\circ} \pm 2^{\circ}$ down $40^{\circ} \pm 2^{\circ}$
	Rudder deflection	right and left $28^{\circ} \pm 2^{\circ}$
	Rudder trim tab	left $5^{\circ} \pm 1^{\circ}$ right $30^{\circ} \pm 2^{\circ}$
	Ailerons deflection	up 108 mm (+ 5; - 3) mm down 98 mm (+ 5; - 3) mm
	Wing flaps positions	
		retracted 0° take-off 15° landing $40^{\circ} + 5^{\circ}, - 3^{\circ}$

21. Wheels and Tyres: Wheels of main gear landing K 12-0100.00 with tyre Barum 420 x 150 model 2, or with tyre Mitas 420 x 150 model 2.
- Tail wheel K 13-0000.00 with tyre Barum 260 x 85, or with tyre Mitas 260 x 85.
22. Other Limitations: The aircraft is approved for VFR Day flights.

IV. Operating and Service Instructions

1. Flight manual:

- In Czech
Letová příručka ZLÍN 526 F, date of issue 1971
- In English
Pilot's Handbook for the Z 526 F Aircraft, date of issue 1971
- In German
Z 526 F Flughandbuch, date of issue 1969

2. Description – Operation – Maintenance:

- In Czech
Popis – obsluha – údržba ZLIN 526 F, third issue January 1972
- In English
Description – Operation – Maintenance ZLIN 526 F, date of issue November 1971
- In German
Beschreibung – Bedienung – Instalhaltung ZLIN 526 F, date of issue January 1972

3. Overhaul Manual:

- In Czech
Oprávérenská příručka ZLIN 526 F, date of issue November 1971
- In English
Overhaul Manual ZLIN 526 F, date of issue November 1971
- In German
Reparatur Handbuch ZLIN 526 F, date of issue November 1971

4. Katalog ZLIN 526 F Trener, date of issue 1971

V. Notes:

1. EASA TC No. EASA.A.353 was issued for model Z 526 F aircraft on 28.3.2007.