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Change Record

A: PZL-KOLIBER 150A

A.I. General

Data Sheet No.: EASA.A.091	Issue: 01	Date: 4 July 2006
1. a) Type: b) Variant:	PZL-KOLIBER PZL-KOLIBER 150A	
2. Airworthiness Category:	Normal and Utility	
3. Type Certificate Holder:	EADS PZL "Warszawa-Okęcie" S.A. Al. Krakowska 110/114 00-971 WARSAW POLAND	
4. Manufacturer:	EADS PZL "Warszawa-Okęcie" S.A. Al. Krakowska 110/114 00-971 WARSAW POLAND See Note 4	
5. Certification Application Date:	April 29, 1993	
6. GICA/CAIB Certification Date:	January 26, 1994	
7. EASA Certification Date:	4 July 2006	
8. This TCDS replaces CAO Poland TCDS BB-193		

A.II. Certification Basis

1. Reference Date for determining the applicable requirements:	See A.II.5.
2. (Reserved)	
3. (Reserved)	
4. Certification Basis:	As defined below
5. Airworthiness Requirements:	FAR 23 dated 1.02.1965 amended through Amendment 23-23 effective 1.12.1978; FAR 23.2 and FAR 23.561(b)(2) amended through Amendment 23-36 effective 14.09.1988; FAR 23 Subpart F amended through Amendment 23-30 effective 29.03.1984; FAR 23 Appendix G amended through Amendment 23-37 effective 18.08.1990; FAR 36 dated 1.12.1969 amended through Amendment 36-20 effective 16.09.1992.FAR
6. (reserved):	
7. EASA Special Conditions:	None
8. EASA Deviations:	None
9. EASA Equivalent Safety Findings:	None
10. EASA Environmental Standards:	FAR 36, Appendix G, Amdt. 36-20, September 16, 1992 See Note 3

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	List of Main Drawings of the PZL-KOLIBER 150A Airplane, Edition 2, October 19, 1998								
2. Description:	Four-seat, cantilever, low-wing monoplane with non retractable, nose wheel landing gear								
3. Equipment:	Master Equipment List of PZL-KOLIBER 150A, Edition 1, October 19, 1998								
4. Dimensions:									
Span	9.74 m [31 ft 11.5 in]								
Length	7.37 m [24 ft 2.2 in]								
Height [in flight position]	2.80 m [9 ft 2.2 in]								
Wing Area	12.68 m ² [136.5 sq. ft]								
5. Engine:	LYCOMING O-320 E2A								
5.1 Engine Limits:									
Maximum take-off and continuous rating	150 HP								
Maximum R.P.M. for take-off and continuous rating	2700 R.P.M. For other engine limits refer to AFM								
6. (Reserved)									
7. Propeller:	<ol style="list-style-type: none"> 1. SENSENICH 74DM6-0-58 two-bladed, fixed pitched Maximum diameter 1880 mm [74 in] 2. SENSENICH 74DM6-0-56 two-bladed, fixed pitched Maximum diameter 1880 mm [74 in] 3. SENSENICH 74DM6-0-54 two-bladed, fixed pitched Maximum diameter 1880 mm [74 in] For other propeller limits refer to AFM								
8. Fluids:									
8.1 Fuel:	80/87 minimum grade aviation gasoline								
8.2 Oil:	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">SAE 20</td> <td>below 10 °F [-12 °C]</td> </tr> <tr> <td>SAE 30</td> <td>0 ° to 70 °F [-17 ° to +21 °C]</td> </tr> <tr> <td>SAE 40</td> <td>30 ° to 90 °F [- 1 ° to +32 °C]</td> </tr> <tr> <td>SAE 50</td> <td>above 60 °F [15 °C]</td> </tr> </table>	SAE 20	below 10 °F [-12 °C]	SAE 30	0 ° to 70 °F [-17 ° to +21 °C]	SAE 40	30 ° to 90 °F [- 1 ° to +32 °C]	SAE 50	above 60 °F [15 °C]
SAE 20	below 10 °F [-12 °C]								
SAE 30	0 ° to 70 °F [-17 ° to +21 °C]								
SAE 40	30 ° to 90 °F [- 1 ° to +32 °C]								
SAE 50	above 60 °F [15 °C]								
9. Fluid capacities:									
9.1 Fuel:	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">full capacity</td> <td>177 l [46.7 US gal.]</td> </tr> <tr> <td>usable fuel</td> <td>161 l [42.5 U.S.gal.]</td> </tr> <tr> <td>unusable fuel</td> <td>16 l [4.2 US gal.]</td> </tr> </table> See Note 1 concerning unusable fuel	full capacity	177 l [46.7 US gal.]	usable fuel	161 l [42.5 U.S.gal.]	unusable fuel	16 l [4.2 US gal.]		
full capacity	177 l [46.7 US gal.]								
usable fuel	161 l [42.5 U.S.gal.]								
unusable fuel	16 l [4.2 US gal.]								
9.2 Oil:	7.6 l [8 U.S.qts.] (integrated with engine)								
10. Air Speeds:									
Never exceed -V _{NE}	<table border="0" style="width: 100%;"> <tr> <td style="width: 10%;"></td> <td style="width: 40%; text-align: center;">Category ⇒</td> <td style="width: 20%; text-align: center;">Normal</td> <td style="width: 30%; text-align: center;">Utility</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">251 km/h [156 m.p.h.]</td> <td style="text-align: center;">270 km/h [168 m.p.h.]</td> </tr> </table>		Category ⇒	Normal	Utility			251 km/h [156 m.p.h.]	270 km/h [168 m.p.h.]
	Category ⇒	Normal	Utility						
		251 km/h [156 m.p.h.]	270 km/h [168 m.p.h.]						
Maximum structural cruising - V _{NO}	200 km/h [124 m.p.h.] 200 km/h [124 m.p.h.]								
Maneuvering - V _A	164 km/h [102 m.p.h.] 168 km/h [104 m.p.h.]								
Flap extended - V _{FE}	140 km/h [87 m.p.h.] 140 km/h [87 m.p.h.]								
Stalling - V _{SO} :	87 km/h [54 m.p.h] for 850 kg [1874 lb]								

11. Maximum Operating Altitude:	Not defined					
12. All Weather Capability:	Day/Night-VFR/IFR Flight into known icing conditions - prohibited.					
13. Maximum Masses: Take-off and landing	Category ⇒	<table border="0"> <tr> <td>Normal</td> <td>Utility</td> </tr> <tr> <td>850 kg [1874 lb]</td> <td>770 kg [1698 lb]</td> </tr> </table>	Normal	Utility	850 kg [1874 lb]	770 kg [1698 lb]
Normal	Utility					
850 kg [1874 lb]	770 kg [1698 lb]					
14. Centre of Gravity Range:	<p>Normal Category</p> <p>Forward limit at 650 kg [1433 lb]: 0.792 m [31.2 in] aft of datum [10.4 % M.A.C.]</p> <p>Forward limit at 850 kg [1874 lb]: 0.830 m [32.7 in] aft of datum [13.3 % M.A.C.]</p> <p>Rear limit at 850 kg [1874 lb]: 1.021 m [40.2 in] aft of datum [28.0 % M.A.C.]</p> <p>Straight line variation between points given</p> <p>Utility Category</p> <p>Forward limit at 650 kg [1433 lb]: 0.792 m [31.2 in] aft of datum [10.4 % M.A.C.]</p> <p>Forward limit at 770 kg [1698 lb]: 0.817 m [32.2 in] aft of datum [12.3 % M.A.C.]</p> <p>Rear limit at 770 kg [1698 lb]: 0.956 m [37.7 in] aft of datum [23.0 % M.A.C.]</p> <p>Straight line variation between points given</p>					
15. Datum:	<p>Front face of the fire wall Position of M.A.C. nose aft of datum 0.657 m [+ 25.9 in] M.A.C. length 1.30 m [51.2 in]</p>					
16. (Reserved)						
17. Leveling Means:	Longitudinal fuselage longerons used as canopy rails (refer to AFM, Sect. 6.1.)					
18. Minimum Flight Crew:	1 (Pilot)					
19. Maximum Passenger Seating Capacity:	3 (See Note 2)					
20. (Reserved)						
21. Baggage	See Note 2					
22. Wheels and Tyres						
Main Wheel Tyre Size	15x600/6-4PR					
Nose Wheel Tyre Size	500x4-6PR					

A.IV. Operating and Service Instructions

Aeroplane Flight Manual (AFM)	PZL KOLIBER 150A Airplane Flight Manual Issued January,1994; Rev. 2 as per October 19, 1994
Aeroplane Maintenance Manual (AMM)	PZL KOLIBER 150A Airplane Maintenance Manual, Edition C, date of issue July 1994; Rev. 2 as per February 12, 2001
Service Information and Service Bulletins	

A.V. Notes

Note 1.

A current weight and balance report must be provided with each airplane at the time of original airworthiness certification and at all times thereafter.

The airplane weight and balance report must include:

- weight of the empty airplane,
- position of the C.G.
- unusable fuel 2x8 l [2x2.1 U.S.gal.] in certificated empty weight
- full amount of oil 7.6 l [8 U.S.qts] in certificated empty weight
- list of equipment in certificated empty weight

Note 2.

The rear seats may be occupied by two persons and/or luggage provided that:

- a) The total weight on the rear seats does not exceed 154,2 kg [340 lb]
- b) The airplane total weight and C.G. position do not exceed the limits.

Note 3.

Approved Noise Levels in accordance to:

FAR 36, Appendix G, Amdt. 36-20: 73,8 dB(A) (Noise Certificate No. HL-1/94)

Note 4.

Formerly: PZL "Warszawa-Okęcie",
Wytwórnia Sprzętu Komunikacyjnego "PZL-Warszawa-Okęcie".

B: **PZL-KOLIBER 160A**

B.I. **General**

Data Sheet No.: EASA.A.091	Issue: 01	Date: 4 July 2006
1. a) Type: b) Variant:	PZL-KOLIBER PZL-KOLIBER 160A	
2. Airworthiness Category:	Normal and Utility	
3. Type Certificate Holder:	EADS PZL "Warszawa-Okęcie" S.A. Al. Krakowska 110/114 00-971 WARSAW POLAND	
4. Manufacturer:	EADS PZL "Warszawa-Okęcie" S.A. Al. Krakowska 110/114 00-971 WARSAW POLAND See Note 5	
5. Certification Application Date:	September 18, 1997	
6. GICA/CAIB Certification Date:	May 18, 1998	
7. EASA Certification Date:	4 July 2006	
8. This TCDS replaces CAO Poland TCDS BB-193		

B.II. **Certification Basis**

1. Reference Date for determining the applicable requirements:	See B.II.5.
2. (Reserved)	
3. (Reserved)	
4. Certification Basis:	As defined below
5. Airworthiness Requirements:	FAR 23 dated 1.02.1965 amended through Amendment 23-23 effective 1.12.1978; FAR 23.2 and FAR 23.561(b)(2) amended through Amendment 23-36 effective 14.09.1988; FAR 23 Subpart F amended through Amendment 23-30 effective 29.03.1984; FAR 23 Appendix G amended through Amendment 23-37 effective 18.08.1990; FAR 36 dated 1.12.1969 amended through Amendment 36-20 effective 16.09.1992.
6. (reserved):	
7. EASA Special Conditions:	None
8. EASA Deviations:	None
9. EASA Equivalent Safety Findings:	None

10. EASA Environmental Standards: ICAO, Annex 16, Volume 1, Chapter 10; Edition 3, 1993
See Note 3

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Master Drawings List of the PZL-KOLIBER 160A Airplane, Edition 2, November 26, 2001	
2. Description:	Four-seat, cantilever, low-wing monoplane with non retractable, nose wheel landing gear	
3. Equipment:	Master Equipment List of the PZL-KOLIBER 160A Airplane, Issue 3, date of issue: April 13, 2001. Refer also to Airplane Flight Manual	
4. Dimensions:		
Span	9.74 m [31 ft 11.5 in]	
Length	7.37 m [24 ft 2.2 in]	
Height in flight position	2.80 m [9 ft 2.2 in]	
Wing Area	12.68 m ² [136.5 sq. ft]	
5. Engine:	LYCOMING O-320 D2A	
5.1 Engine Limits:		
Maximum take-off and continuous rating	160 HP	
Maximum R.P.M. for take-off and continuous rating	2700 R.P.M. For other engine limits refer to AFM	
6. (Reserved)		
7. Propeller:	SENENICH 74DM6-0-58 two-bladed, fixed pitched Diameter: maximum 1880 mm [74 in].	
	For other propeller limits refer to AFM	
8. Fluids:		
8.1 Fuel:	91/96 minimum grade aviation gasoline	
8.2 Oil:	SAE 20 below 10 °F [-12 °C] SAE 30 0 ° to 70 °F [-17 ° to +21 °C] SAE 40 30 ° to 90 °F [- 1 ° to +32 °C] SAE 50 above 60 °F [15 °C] SAE 60 above 80 °F [25°C]	
9. Fluid capacities:		
9.1 Fuel:	full capacity 177 l [46.7 US gal.] usable fuel 161 l [42.5 U.S.gal.] unusable fuel 16 l [4.2 US gal.] See Note 1 concerning unusable fuel	
9.2 Oil:	7.6 l [8 U.S.qts.] (integrated with engine)	
10. Air Speeds (CAS):	Category ⇒	
	Normal	Utility
	850 kg	770 kg
Never exceed -V _{NE}	251 km/h [156 m.p.h.]	270 km/h [168 m.p.h.]
Maximum structural cruising - V _{NO}	200 km/h [124 m.p.h.]	200 km/h [124 m.p.h.]
Maneuvering - V _A	164 km/h [102 m.p.h.]	168 km/h [104 m.p.h.]
Flap extended - V _{FE}	140 km/h [87 m.p.h.]	140 km/h [87 m.p.h.]
Stalling - V _{SO} :	87 km/h [54 m.p.h] for 850 kg [1874 lb]	

	Category ⇒	Normal 950 kg	Utility 770 kg
Never exceed -V _{NE}		230 km/h [143 m.p.h.]	230 km/h [143 m.p.h.]
Maximum structural cruising - V _{NO}		183 km/h [114 m.p.h.]	183 km/h [114 m.p.h.]
Maneuvering - V _A		165 km/h [103 m.p.h.]	161 km/h [100 m.p.h.]
Flap extended - V _{FE}		143 km/h [89 m.p.h.]	143 km/h [89 m.p.h.]
Stalling - V _{SO} :		85 km/h [53 m.p.h] for 950 kg [2094 lb]	
11. Maximum Operating Altitude:		Not defined	
12. All Weather Capability:		Day/Night-VFR/IFR Flight into known icing conditions - prohibited.	
13. Maximum Masses:	Category ⇒	Normal	Utility
Take-off & Landing:		850 kg [1874 lb]	770 kg [1698 lb]
		950 kg [2094 lb]	770 kg [1698 lb]
		See: Note 4.	
14. Centre of Gravity Range:		Normal Category	
		Forward limit at 650 kg [1433 lb]: 0.792 m [31.2 in] aft of datum [10.4 % M.A.C.]	
		Forward limit at 850 kg [1874 lb]: 0.830 m [32.7 in] aft of datum [13.3 % M.A.C.]	
		Forward limit at 950 kg [2094 lb]: 0.849 m [33.4 in] aft of datum [14.8 % M.A.C.]	
		Rear limit at 850 kg [1874 lb]: 1.021 m [40.2 in] aft of datum [28.0 % M.A.C.]	
		Rear limit at 950 kg [2094 lb]: 1.021 m [40.2 in] aft of datum [28.0 % M.A.C.]	
		Straight line variation between points given	
		Utility Category	
		Forward limit at 650 kg [1433 lb]: 0.792 m [31.2 in] aft of datum [10.4 % M.A.C.]	
		Forward limit at 770 kg [1698 lb]: 0.817 m [32.2 in] aft of datum [12.3 % M.A.C.]	
		Rear limit at 770 kg [1698 lb]: 0.956 m [37.7 in] aft of datum [23.0 % M.A.C.]	
		Straight line variation between points given	
15. Datum:		Front face of the fire wall Position of M.A.C. nose aft of datum 0.657 m [+ 25.9 in] M.A.C. length 1.30 m [51.2 in]	
16. (Reserved)			
17. Leveling Means:		Longitudinal fuselage longerons used as canopy rails (refer to AFM, Sect. 6.1.)	

18. Minimum Flight Crew:	1 (Pilot)
19. Maximum Passenger Seating Capacity:	3 (See Note 2)
20. (Reserved)	
21. Baggage	
Max. allowable load:	See Note 2
22. Wheels and Tyres	
Main Wheel Tyre Size	15x600/6-4PR
Tail Wheel Tyre Size	500x4-6PR

B.IV. Operating and Service Instructions

Aeroplane Flight Manual (AFM)	PZL-KOLIBER 160A Airplane Flight Manual, date of issue: April 1998; Revision 7, July 2002
Aeroplane Maintenance Manual (AMM)	PZL-KOLIBER 160A Airplane Maintenance Manual date of issue: April 1998; Revision 9, July 9, 2002
Service Information and Service Bulletins	Service Bulletin No. 11099048, dated May 19, 1999 Service Bulletin No. 11000053, dated June 07, 2000

B.V. Notes

Note 1.

A current weight and balance report must be provided with each airplane at the time of original airworthiness certification and at all times thereafter.

The airplane weight and balance report must include:

- weight of the empty airplane,
- position of the C.G.
- unusable fuel 2x8 l [2x2.1 U.S.gal.] in certificated empty weight
- full amount of oil 7.6 l [8 U.S.qts] in certificated empty weight
- list of equipment in certificated empty weight

Note 2.

The rear seats may be occupied by two persons and/or luggage provided that:

- a) The total weight on the rear seats does not exceed 154,2 kg [340 lb]
- b) The airplane total weight and C.G. position do not exceed the limits.

Note 3.

Approved Noise Levels in accordance to:

ICAO, Annex 16, Volume 1, Chapter 10: 75,1 dB(A) (Noise Certificate No. HL-9/98)

Note 4.

Increasing MTOW from 850 kg to 950kg according to Service Bulletins No. 11099048 and 11000053.

Note 5.

Formerly: PZL "Warszawa-Okęcie",
Wytwórnia Sprzętu Komunikacyjnego "PZL-Warszawa-Okęcie".

C.III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	LD-008 - List of Main Drawings of the PZL-110 KOLIBER airplane. Issued: December 15, 1977; Rev. b) March 26, 1979	
2. Description:	Three=four-seat, cantilever, low-wing monoplane with non-retractable, nose wheel landing gear	
3. Equipment:	LD-029 List of assemblies, aggregates and certificated instruments; Issued 1978 together with LD-043 Service life, Issued December 22, 1987, and LD-027 List of additional equipment of PZL-110 KOLIBER, Edition 1, March 11, 1978	
4. Dimensions:		
Span	9.74 m [31 ft 11.5 in]	
Length	7.10 m [23 ft 3.5 in]	
Height [in flight position]	2.80 m [9 ft 2.2 in]	
Wing Area	12.28 m ² [132.2 sq. ft]	
5. Engine:	PZL-Franklin 4A-235-B31 EASA TC No. E.087	
5.1 Engine Limits:		
Maximum R.P.M. for take-off and continuous rating	2800 R.P.M. For other engine limits refer to AFM	
6. (Reserved)		
7. Propeller:	US-135 000 two-blade, fixed-pitch propeller GICA/CAIB TC No. DB-128 Maximum diameter 1780 mm [70 in] For other propeller limits refer to AFM	
8. Fluids:		
8.1 Fuel:	100/130 grade aviation gasoline	
8.2 Oil:	SAE 30 over 5 ⁰ C SAE 40 below 5 ⁰ C	
9. Fluid capacities:		
9.1 Fuel:	full capacity 105 l [27.74 US gal.] usable fuel min. 96 l [25.36 US gal.] unusable fuel 4.2 l [1.11 US gal.] See Note 1 concerning unusable fuel	
9.2 Oil:	6.2 l [6.55 US qts] (integrated with engine)	
10. Air Speeds (CAS):	Category ⇒ Normal Utility	
Never exceed -V _{NE}	250 km/h [155 m.p.h.]	270 km/h [168 m.p.h.]
Maximum structural cruising - V _{NO}	200 km/h [124 m.p.h.]	200 km/h [124 m.p.h.]
Manoeuvring - V _A	160 km/h [99 m.p.h.]	160 km/h [99 m.p.h.]
Flap extended - V _{FE}	140 km/h [87 m.p.h.]	140 km/h [87 m.p.h.]
Stalling - V _{SO} :	80 km/h [54 m.p.h] for Q = 820 kg [1808 lb]	

11. Maximum Operating Altitude:	Not defined		
12. All Weather Capability:	VFR day Flight into icing conditions - prohibited.		
13. Maximum Masses:	Category ⇒	Normal	Utility
Take-off and landing		820 kg [1808 lb]	770 kg [1698 lb]
		Maximum T-O Mass in the Semi-Aerobatic category (BCAR) See Note 4	750 kg [1653 lb]
14. Centre of Gravity Range:	Normal Category		
	Forward limit: 0.878 m [34.6 in] aft of datum [17 % M.A.C.]		
	Rear limit at 820 kg [1808 lb]: 1.021 m [40.2 in] aft of datum [28.0 % M.A.C.]		
	Straight line variation between points given		
	Utility Category		
	Forward limit: 0.878 m [34.6 in] aft of datum [17 % M.A.C.]		
	Rear limit at 770 kg [1698 lb]: 1.021 m [40.2 in] aft of datum [28.0 % M.A.C.]		
	Rear limit at 750 kg [1653 lb] (Semi-Aerobatic): 0.898 m [35.3 lb] aft of datum [18.5 % MAC] (see Note 4)		
	Straight line variation between points given		
15. Datum:	Front face of the firewall Position of M.A.C. nose aft of datum 0.657 m [+ 25.9 in] M.A.C. length 1.30 m [51.2 in]		
16. (Reserved)			
17. Levelling Means:	Longitudinal fuselage longerons used as canopy rails (refer to AFM, Sect. 6.1.)		
18. Minimum Flight Crew:	1 (Pilot)		
19. Maximum Passenger Seating Capacity:	3	See Note 2	
20. (Reserved)			
21. Baggage	See Note 2		
22. Wheels and Tyres			
Main Wheel Tyre Size	GOODYEAR 15x600/6-4PR		
Nose Wheel Tyre Size	GOODYEAR 500x4-6PR		

C.IV. Operating and Service Instructions

Aeroplane Flight Manual (AFM)

PZL 110 KOLIBER Airplane Flight Manual
Issued Sept. 25, 1979; Rev. 16 as per November 28,
2002

Aeroplane Maintenance Manual (AMM)

PZL 110 KOLIBER Airplane Maintenance Manual,
Edition A, 1979; Rev. 9 as per May 13, 2002

C.V. Notes

Note 1.

A current weight and balance report must be provided with each airplane at the time of original airworthiness certification and at all times thereafter.

The airplane weight and balance report must include:

- weight of the empty airplane,
- position of the C.G.
- unusable fuel 4.2 l [1.11 US gal.] in certificated empty weight
- full amount of oil 6.2 l [6.55 US qts] in certificated empty weight
- list of equipment in certificated empty weight

Note 2.

The rear seats

a) In the NORMAL category may be occupied by two persons and/or luggage provided that:

- 1) The total weight on the rear seats does not exceed 115 kg [253.5 lb];
- 2) The airplane total weight and C.G. position do not exceed the limits.

b) In the UTILITY category - no person or luggage on the rear seats.

Note 3.

Approved Noise Level in accordance to:

ICAO, Annex 16, Volume I, Chapter 6, Edition 1978: 69,8 dB(A)

Note 4

The airplane is allowed to perform max. 2 turns of spin and for restricted aerobatics (BCAR Semi –Aerobatic category) at:

- max. take-off weight of 750 kg [1653 lb],
- max. rear centre of gravity limit of 18.5% MAC ,
- without any passengers on the rear seats and with rear seat cushions removed,
- fuel in the range of limit weight of 750 kg [1653 lb].

Inverted aerobatics forbidden!

Note 5.

Formerly:

- PZL “Warszawa-Okęcie”,
- Wytwórnia Sprzętu Komunikacyjnego “PZL-Warszawa-Okęcie”.

D: PZL-KOLIBER 150

D.I. General

Data Sheet No.: EASA.A.091	Issue: 02	Date: 8 January 2007
1. a) Type: b) Variant:	PZL-KOLIBER PZL-KOLIBER 150	See Note 6
2. Airworthiness Category:	Normal and Utility	
3. Type Certificate Holder:	EADS PZL "Warszawa-Okęcie" S.A. Al. Krakowska 110/114 00-971 WARSAW POLAND	
4. Manufacturer:	EADS PZL "Warszawa-Okęcie" S.A. Al. Krakowska 110/114 00-971 WARSAW POLAND See Note 5	
5. Certification Application Date:	May 08, 1988	
6. GICA/CAIB Certification Date:	January 31, 1989	
7. EASA Certification Date:	8 January 2007	
8. This TCDS replaces CAO Poland TCDS BB-136		

D.II. Certification Basis

1. Reference Date for determining the applicable requirements:	See D.II.5.
2. (Reserved)	
3. (Reserved)	
4. Certification Basis:	As defined below
5. Airworthiness Requirements:	AIR 2052A, Edition 2, 18 Sept. 1967 BCAR, Section K, K2-12, Issue 6, April 1974 See Note 4
6. (reserved):	
7. EASA Special Conditions:	None
8. EASA Deviations:	None
9. EASA Equivalent Safety Findings:	None
10. EASA Environmental Standards:	ICAO, Annex 16 Chapter 6, (1981) See Note 3

D.III. Technical Characteristics and Operational Limitations

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|---|--|--|
| 1. Type Design Definition: | Detail Specification for PZL-KOLIBER 150 Airplane
Issued: April 14, 1988
and: IC-10.000.00-0 Complete Aircraft "Koliber 150",
Issued: March 12, 1989 | |
| 2. Description: | Four-seat, cantilever, low-wing monoplane with non-retractable, nose wheel landing gear | |
| 3. Equipment: | LD-151 List of assemblies, aggregates and certificated instruments of PZL-Koliber 150; Edition A, Rev. e) May 22, 1991 and LD-027 List of additional equipment of PZL-110 KOLIBER and PZL-Koliber 150, Edition II, June 05, 1995. Refer also to Airplane Flight Manual | |
| 4. Dimensions: | | |
| Span | 9.75 m [31 ft 11.9 in] | |
| Length | 7.37 m [24 ft 2.2 in] | |
| Height in flight position | 2.80 m [9 ft 2.2 in] | |
| Wing Area | 12.68 m ² [136.5 sq. ft] | |
| 5. Engine: | LYCOMING O-320-E2A or
LYCOMING O-320-D2A | |
| 5.1 Engine Limits: | | |
| Maximum R.P.M. for take-off and continuous rating | 2700 R.P.M.
For other engine limits refer to AFM | |
| 6. (Reserved) | | |
| 7. Propeller: | two-bladed, fixed pitched
SENSENICH 74DM6-0-58
SENSENICH 74DM6-0-56
SENSENICH 74DM6-0-54
Diameter: maximum 1880 mm [74 in].
For other propeller limits refer to AFM | |
| 8. Fluids: | | |
| 8.1 Fuel: | aviation gasoline | for: O-320-E2A engine O-320--D2A engine
min. grade 80/87 91/97
100LL 100/130
100LL |
| 8.2 Oil: | SAE 20 below 10°F [-12°C]
SAE 30 0°F to 70°F [-17°C to +21 °C]
SAE 40 30°F to 90°F [-1°C to +32 °C]
SAE 50 above 60°F [15°C] | |
| 9. Fluid capacities: | | |
| 9.1 Fuel: | standard tanks:
full capacity 100.2 l [26.5 US gal.]
usable fuel 96 l [25.4 U.S.gal.]
unusable fuel 4.2 l [1.1 US gal.]

optional tanks:
full capacity 174.2 l [46.0 US gal.]
usable fuel 170 l [44.9 U.S.gal.]
unusable fuel 4.2 l [1.1 US gal.]
See Note 1 concerning unusable fuel | |
| 9.2 Oil: | 6.2 l [6.55 US qts] (integrated with engine) | |

10. Air Speeds (CAS):	Category ⇒	Normal 850 kg	Utility 770 kg
Never exceed -V _{NE}		250 km/h [155 m.p.h.]	270 km/h [168 m.p.h.]
Maximum structural cruising - V _{NO}		200 km/h [124 m.p.h.]	200 km/h [124 m.p.h.]
Manoeuvring - V _A		163 km/h [101 m.p.h.]	163 km/h [101 m.p.h.]
Flap extended - V _{FE}		140 km/h [87 m.p.h.]	140 km/h [87 m.p.h.]
Stalling - V _{SO} :		92 km/h [57.2 m.p.h.]	
11. Maximum Operating Altitude:		Not defined	
12. All Weather Capability:		VFR day Flight into icing conditions - prohibited.	
13. Maximum Masses:	Category ⇒	Normal	Utility
Take-off & Landing:		850 kg [1874 lb]	770 kg [1698 lb]
Maximum T-O Mass in the Semi-Aerobatic category (BCAR) See: Note 4.			750 kg [1698 lb]
14. Centre of Gravity Range:		Normal Category	
		Forward limit at 650 kg [1433 lb]: 0.800 m [31.5 in] aft of datum [11 % M.A.C.]	
		Forward limit at 850 kg [1874 lb]: 0.849 m [33.4 in] aft of datum [14.5 % M.A.C.]	
		Rear limit at 850 kg [1874 lb]: 1.021 m [40.2 in] aft of datum [28.0 % M.A.C.]	
		Straight line variation between points given	
		Utility Category	
		Forward limit at 650 kg [1433 lb]: 0.800 m [31.5 in] aft of datum [11 % M.A.C.]	
		Forward limit at 770 kg [1698 lb]: 0.833 m [32.8 in] aft of datum [13.5 % M.A.C.]	
		Rear limit at 770 kg [1698 lb]: 1.021 m [40.2 in] aft of datum [28 % M.A.C.]	
		Forward limit at 750 kg [1433 lb]: 0.826 m [32.5 in] aft of datum [13 % M.A.C.]	
		Rear limit at 750 kg [1653 lb] (Semi-Aerobatic): 0.898 m [35.3 lb] aft of datum [18.5 % MAC] (see Note 4)	
		Straight line variation between points given	
15. Datum:		Front face of the firewall Position of M.A.C. nose aft of datum 0.657 m [+ 25.9 in] M.A.C. length 1.30 m [51.2 in]	
16. (Reserved)			
17. Levelling Means:		Longitudinal fuselage longerons used as canopy rails (refer to AFM, Sect. 6.1.)	
18. Minimum Flight Crew:		1 (Pilot)	
19. Maximum Passenger Seating Capacity:		3 See Note 2	

20. (Reserved)

21. Baggage

Maximum allowable load:

See Note 2

22. Wheels and Tires

Main Wheel Tire Size

GOODYEAR 15x600/6-4PR

Tail Wheel Tire Size

GOODYEAR 500x4-6PR

D.IV. Operating and Service Instructions

Aeroplane Flight Manual (AFM)

Airplane Flight Manual of the PZL-KOLIBER 150

Date of issue: 1989, Revision A, February 15, 2001

Aeroplane Maintenance Manual (AMM)

Airplane Maintenance Manual and Scheduled Inspections
of the PZL-KOLIBER 150

Date of issue: 1989, Revision A, February 15, 2001

D.V. Notes

Note 1.

A current weight and balance report must be provided with each airplane at the time of original airworthiness certification and at all times thereafter.

The airplane weight and balance report must include:

- weight of the empty airplane,
- position of the C.G.,
- unusable fuel 4.2 l [1.1 U.S.gal.] in certificated empty weight,
- full amount of oil 6.2 l [6.55 U.S.qts] in certificated empty weight,
- list of equipment in certificated empty weight.

Note 2.

The rear seats may be occupied by two persons and/or luggage provided that:

- a) The total weight on the rear seats does not exceed 115 kg [253.5 lbs]
- b) The airplane total weight and C.G. position do not exceed the limits.

Note 3.

Approved Noise Level in accordance to:

ICAO, Annex 16, Chapter 6, (1981): 69,0 dB(A)

Note 4

The airplane is allowed to perform max. 2 turns of spin and for restricted aerobatics (BCAR Semi – Aerobatic category) at:

- max. take-off weight of 750 kg [1653 lb],
- max. rear centre of gravity limit of 18.5% MAC ,
- without any passengers on the rear seats and with rear seat cushions removed,
- fuel in the range of limit weight of 750 kg [1653 lb].

Inverted aerobatics forbidden!

Note 5.

Formerly:

- PZL “Warszawa-Okęcie”,
- Wytwórnia Sprzętu Komunikacyjnego “PZL-Warszawa-Okęcie”.

Note 6.

Variant PZL-KOLIBER 150 is also named KOLIBER 150.

Change Record

Issue 1 4 July 2006. Initial issue. Koliber 150A, 160A
Issue 2 8 January 2007. Addition of PZL-110 Koliber and Koliber 150. Editorial
 changes marked with marginal line.

END