



TYPE-CERTIFICATE DATA SHEET

NO. EASA.A.056

for
AIRPLANE

Type Certificate Holder
Polskie Zaklady Lotnicze Sp. Z o.o.

Wojska Polskiego 3
39-300 Mielec
POLAND

For models: PZL M18
PZL M18A
PZL M18AS
PZL M18B
PZL M18BS



Intentionally left blank



SECTION A: PZL M18	9
A.I. General	9
1. Type/ Model/ Variant	9
2. Airworthiness Category	9
3. Manufacturer	9
4. EASA Type Certification Application Date	9
5. State of Design Authority	9
6. State of Design Authority Type Certificate Date	9
7. EASA Type Certification Date	9
A.II. EASA Certification Basis	9
1. Reference Date for determining the applicable requirements	9
2. Airworthiness Requirements	9
3. Special Conditions	9
4. Exemptions	9
5. (Reserved) Deviations	9
6. Equivalent Safety Findings	10
7. Environmental Protection	10
A.III. Technical Characteristics and Operational Limitations	10
1. Type Design Definition	10
2. Description	10
3. Equipment	10
4. Dimensions	10
5. Engine	10
6. Load factors	10
7. Propeller	10
8. Fluids	10
9. Fluid capacities	11
10. Air Speeds	11
11. Flight Envelope	11
12. Approved Operations Capability	12
13. Maximum Masses	12
14. Centre of Gravity Range	12
15. Datum	12
16. Control surface deflections	12
17. Levelling Means	12
18. Minimum Flight Crew	12
19. Maximum Passenger Seating Capacity	12
20. Baggage/ Cargo Compartments	12
21. Wheels and Tyres	12
22. (Reserved)	12
A.IV. Operating and Service Instructions	13
1. Flight Manual	13
2. Maintenance Manual	13
3. Structural Repair Manual	13
4. Weight and Balance Manual	13
5. Illustrated Parts Catalogue	13



A.V. Notes	13
SECTION B: PZL M18A.....	14
B.I. General	14
1. Type/ Model/ Variant	14
2. Airworthiness Category	14
3. Manufacturer	14
4. EASA Type Certification Application Date	14
5. State of Design Authority.....	14
6. State of Design Authority Type Certificate Date.....	14
7. EASA Type Certification Date.....	14
B.II. EASA Certification Basis	14
1. Reference Date for determining the applicable requirements	14
2. Airworthiness Requirements	14
3. Special Conditions.....	14
4. Exemptions	14
5. (Reserved) Deviations.....	14
6. Equivalent Safety Findings.....	15
7. Environmental Protection.....	15
B.III. Technical Characteristics and Operational Limitations.....	15
1. Type Design Definition.....	15
2. Description.....	15
3. Equipment.....	15
4. Dimensions	15
5. Engine	15
6. Load factors	15
7. Propeller	15
8. Fluids.....	16
9. Fluid capacities.....	16
10. Air Speeds	16
11. Flight Envelope	16
12. Approved Operations Capability.....	16
13. Maximum Masses.....	17
14. Centre of Gravity Range.....	17
15. Datum	17
16. Control surface deflections.....	17
17. Levelling Means	17
18. Minimum Flight Crew	17
19. Maximum Passenger Seating Capacity	17
20. Baggage/ Cargo Compartments.....	17
21. Wheels and Tyres.....	17
22. (Reserved).....	18
B.IV. Operating and Service Instructions.....	18
1. Flight Manual	18
2. Maintenance Manual.....	18
3. Structural Repair Manual.....	18
4. Weight and Balance Manual.....	18
5. Illustrated Parts Catalogue	18



B.V. Notes	18
SECTION C: PZL M18AS	20
(a) Trainer – dual control version (with instructor’s cockpit installed)	
C.I(a). General	20
1. Type/ Model/ Variant	20
2. Airworthiness Category	20
3. Manufacturer	20
4. EASA Type Certification Application Date	20
5. State of Design Authority.....	20
6. State of Design Authority Type Certificate Date.....	20
7. EASA Type Certification Date.....	20
C.II(a). EASA Certification Basis	20
1. Reference Date for determining the applicable requirements	20
2. Airworthiness Requirements	20
3. Special Conditions.....	20
4. Exemptions	20
5. (Reserved) Deviations.....	20
6. Equivalent Safety Findings.....	20
7. Environmental Protection.....	20
C.III(a). Technical Characteristics and Operational Limitations.....	20
1. Type Design Definition.....	20
2. Description.....	20
3. Equipment.....	21
4. Dimensions	21
5. Engine	21
6. Load factors	21
7. Propeller	21
8. Fluids.....	21
9. Fluid capacities.....	21
10. Air Speeds	22
11. Flight Envelope	22
12. Approved Operations Capability.....	22
13. Maximum Masses.....	22
14. Centre of Gravity Range.....	22
15. Datum	22
16. Control surface deflections.....	22
17. Levelling Means	23
18. Minimum Flight Crew	23
19. Maximum Passenger Seating Capacity	23
20. Baggage/ Cargo Compartments.....	23
21. Wheels and Tyres.....	23
22. (Reserved).....	23
C.IV(a). Operating and Service Instructions.....	23
1. Flight Manual	23
2. Maintenance Manual.....	23
3. Structural Repair Manual.....	23
4. Weight and Balance Manual.....	23
5. Illustrated Parts Catalogue	23



C.V(a). Notes	24
(b) Trainer – Operational, single-control version (standard hopper installed)	
C.I(b). General	25
1. Type/ Model/ Variant	25
2. Airworthiness Category	25
3. Manufacturer	25
4. EASA Type Certification Application Date	25
5. State of Design Authority.....	25
6. State of Design Authority Type Certificate Date.....	25
7. EASA Type Certification Date.....	25
C.II(b). EASA Certification Basis	25
1. Reference Date for determining the applicable requirements	25
2. Airworthiness Requirements	25
3. Special Conditions.....	25
4. Exemptions	25
5. (Reserved) Deviations	25
6. Equivalent Safety Findings	26
7. Environmental Protection.....	26
C.III(b). Technical Characteristics and Operational Limitations.....	26
1. Type Design Definition.....	26
2. Description.....	26
3. Equipment.....	26
4. Dimensions	26
5. Engine	26
6. Load factors	26
7. Propeller	26
8. Fluids.....	27
9. Fluid capacities.....	27
10. Air Speeds	27
11. Flight Envelope	27
12. Approved Operations Capability.....	27
13. Maximum Masses.....	27
14. Centre of Gravity Range.....	28
15. Datum	28
16. Control surface deflections.....	28
17. Levelling Means	28
18. Minimum Flight Crew	28
19. Maximum Passenger Seating Capacity	28
20. Baggage/ Cargo Compartments.....	28
21. Wheels and Tyres.....	28
22. (Reserved).....	28
C.IV(b). Operating and Service Instructions.....	29
1. Flight Manual	29
2. Maintenance Manual.....	29
3. Structural Repair Manual.....	29
4. Weight and Balance Manual.....	29
5. Illustrated Parts Catalogue	29
C.V(b). Notes	29
SECTION D: PZL M18B.....	30



D.I. General	30
1. Type/ Model/ Variant	30
2. Airworthiness Category	30
3. Manufacturer	30
4. EASA Type Certification Application Date	30
5. State of Design Authority	30
6. State of Design Authority Type Certificate Date	30
7. EASA Type Certification Date	30
D.II. EASA Certification Basis	30
1. Reference Date for determining the applicable requirements	30
2. Airworthiness Requirements	30
3. Special Conditions	30
4. Exemptions	31
5. (Reserved) Deviations	31
6. Equivalent Safety Findings	31
7. Environmental Protection	31
D.III. Technical Characteristics and Operational Limitations	31
1. Type Design Definition	31
2. Description	31
3. Equipment	31
4. Dimensions	31
5. Engine	31
6. Load factors	31
7. Propeller	32
8. Fluids	32
9. Fluid capacities	32
10. Air Speeds	32
11. Flight Envelope	32
12. Approved Operations Capability	33
13. Maximum Masses	33
14. Centre of Gravity Range	33
15. Datum	33
16. Control surface deflections	33
17. Levelling Means	33
18. Minimum Flight Crew	33
19. Maximum Passenger Seating Capacity	33
20. Baggage/ Cargo Compartments	33
21. Wheels and Tyres	34
22. (Reserved)	34
D.IV. Operating and Service Instructions	34
1. Flight Manual	34
2. Maintenance Manual	34
3. Structural Repair Manual	34
4. Weight and Balance Manual	34
5. Illustrated Parts Catalogue	34
D.V. Notes	34
SECTION E: PZL M18BS	36
E.I. General	36
1. Type/ Model/ Variant	36
2. Airworthiness Category	36



3. Manufacturer	36
4. EASA Type Certification Application Date	36
5. State of Design Authority.....	36
6. State of Design Authority Type Certificate Date.....	36
7. EASA Type Certification Date.....	36
E.II. EASA Certification Basis	36
1. Reference Date for determining the applicable requirements	36
2. Airworthiness Requirements	36
3. Special Conditions.....	36
4. Exemptions	36
5. (Reserved) Deviations	36
6. Equivalent Safety Findings	36
7. Environmental Protection.....	36
E.III. Technical Characteristics and Operational Limitations.....	36
1. Type Design Definition.....	36
2. Description.....	36
3. Equipment.....	37
4. Dimensions	37
5. Engine	37
6. Load factors	37
7. Propeller	37
8. Fluids.....	37
9. Fluid capacities.....	37
10. Air Speeds	38
11. Flight Envelope	38
12. Approved Operations Capability.....	38
13. Maximum Masses	38
14. Centre of Gravity Range.....	38
15. Datum	38
16. Control surface deflections.....	38
17. Levelling Means	39
18. Minimum Flight Crew	39
19. Maximum Passenger Seating Capacity	39
20. Baggage/ Cargo Compartments.....	39
21. Wheels and Tyres.....	39
22. (Reserved).....	39
E.IV. Operating and Service Instructions	
1. Flight Manual	39
2. Maintenance Manual.....	39
3. Structural Repair Manual.....	39
4. Weight and Balance Manual.....	39
5. Illustrated Parts Catalogue	39
E.V. Notes	40
SECTION ADMINISTRATIVE	41
I. Acronyms & Abbreviations	41
II. Type Certificate Holder Record	41
III. Change Record	41



SECTION A: PZL M18

A.I. General

1. Type/ Model/ Variant

- 1.1 Type: PZL M18
- 1.2 Model: PZL M18
- 1.3 Variant: agricultural, fire fighting

2. Airworthiness Category:

- Normal
- Restricted (overload)
- Restricted (fire-fighting overload)

3. Manufacturer: Polskie Zaklady Lotnicze Sp. z o.o.

Wojska Polskiego 3
39-300 Mielec
POLAND

4. EASA Type Certification Application Date:

- Normal: 8 April 1975
- Restricted (overload): 5 May 1980
- Restricted (fire-fighting overload): 14 January 1991

Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority: Polish CAO

6. State of Design Authority Type Certificate Date

- Normal: 27 September 1978
- Restricted (overload): 13 July 1981
- Restricted (fire-fighting overload): 20 August 1993

7. EASA Type Certification Date: 24 October 2005

A.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:

8 April 1975

2. Airworthiness Requirements:

- Normal: 14 CFR Part 23, including Amdt. 23-16
- Restricted (overload): Civil Aeronautics Manual 8, Second Edition, on the basis of the Type Certificate in Normal Category under 14 CFR Part 23, including Amdt. 23-16

3. Special Conditions: None

4. Exemptions: None

5. (Reserved) Deviations: None



6. Equivalent Safety Findings: None
7. Environmental Protection: 14 CFR Part 36

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing No. M18, Sheet No. 8
2. Description: All metal, low wing, with non retractable tailwheel landing gear, single piston agricultural and fire-fighting airplane
3. Equipment: Approved equipment list is stated in document "Airplane Description and Service Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine"
4. Dimensions: Span: 17,7 m
Length: 9,5 m
Height: 3,7 m (parking)
Wing area: 40 m²

5. Engine

5.1. Model: ASz-62IR-M18

5.2 Type Certificate: EASA.E.140

5.3 Limitations:

	HP	RPM	Manifold Pressure (mm Hg)	Altitude
T-O Power (5 minutes), minimum	980	2200	1050	S.L.
Max. Continuous Power, minimum	823	2100	900	1500 m
Max. Continuous Power, minimum	804	2100	900	S.L.

6. Load factors:

- Normal: +3.4 g, -1.4 g
Restricted (overload): +3.0 g, -1.2 g
Restricted (fire-fighting overload): +2.8 g, -1.1 g

7. Propeller

- 7.1 Model: AW-2-30
7.2 Type Certificate: PL DB-122
7.3 Number of blades: 4
7.4 Diameter: 3.3 m
7.5 Sense of Rotation: clockwise in flight direction

8. Fluids

- 8.1 Fuel: Minimum grade 91 aviation gasoline with tetraethyl lead content of max. 3.3 g per 1 kg of fuel, in accordance to:
- GOST 1012-72
- D.Eng. RD 2485



- ASTM - D910-75
- MIL-G-5572F
- RH-95/130

8.2 Oil: Mineral oil with or without detergents, min. viscosity 20 cSt at 100°C,
min. viscosity index 80

8.3 Coolant: N/A

9. Fluid capacities

- 9.1 Fuel:
- 414 l (usable fuel 400 l) with outer wings installed in accordance with Dwg. No. D22.000.00.1K L/R
 - 726 l (usable fuel 712 l) with outer wings installed in accordance with Dwg. No. D22.000.00.5K L/R

9.2 Oil: 70 l (usable oil 35 l)

9.3 Coolant system capacity: N/A

10. Air Speeds:

Never Exceed Speed Limit V_{NE}

Normal: 280 km/h CAS

Restricted (overload): 230 km/h CAS

Restricted (fire-fighting overload): 230 km/h CAS

Design Manoeuvring Speed Limit V_A 228 km/h CAS

Normal Operating Speed V_{NO}

Normal: 230 km/h CAS

Restricted (overload): 200 km/h CAS

Restricted (fire-fighting overload): 200 km/h CAS

Maximum Flaps Extended Speed Limit V_{FE} 200 km/h CAS

11. Flight Envelope:

Maximum Operating Altitude: 4000 m

Ambient Air Temperature Operating Limits:

(a) +45° C to +15° C without engine cylinder winterization shields

(b) +15° C to -10° C with or without engine cylinder shields, optional

(c) -10° C to -30° C with engine cylinder shields installed

12. Approved Operations Capability:

Day and night operation under VFR conditions.

Flight in icing conditions is prohibited.

13. Maximum Masses:

Maximum Takeoff Weight MTOW

Normal: 4200 kg

Restricted (overload): 4700 kg

Restricted (fire-fighting overload): 5300 kg



Maximum Landing Weight	4200 kg
Maximum Hopper Load	
Normal:	1500 kg
Restricted (overload):	2000 kg
Restricted (fire-fighting overload):	2200 kg

14. Centre of Gravity Range:

Normal:	from 23% to 31% MAC
Restricted (overload):	from 28% to 31% MAC at MTOW
Restricted (fire-fighting overload):	from 29.2% to 31% MAC at MTOW

Mean Aerodynamic Chord (MAC) is 2.261 m. 0% MAC is 0.004 m aft of wing leading edge.

15. Datum: Wing leading edge

16. Control surface deflections:

Aileron:	Up $21^{\circ} \pm 1^{\circ}$ Down $17^{\circ} \pm 1^{\circ}$
Rudder:	Left $23^{\circ} \pm 1^{\circ}$ Right $23^{\circ} \pm 1^{\circ}$
Elevator:	Up $27^{\circ} \pm 1^{\circ}$ Down $17^{\circ} \pm 1^{\circ}$
Aileron Trim Tab:	Up $7^{\circ}30' \pm 2^{\circ}$ Down $7^{\circ}30' \pm 2^{\circ}$
Rudder Trim Tab:	Left $13^{\circ} \pm 2^{\circ}$ Right $13^{\circ} \pm 2^{\circ}$
Elevator Trim Tab:	Up $10^{\circ} \pm 1^{\circ}$ Down $17^{\circ} \pm 1^{\circ}$

17. Levelling Means: Levelling points are shown on Fig. 4.1 of Aircraft Description and Service Manual.

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity: 1 (Pilot)

20. Baggage/ Cargo Compartments: Max. 30 kg

21. Wheels and Tyres: Main Wheel Dwg. No. D41.500.00.1 with tire 800x260W3 with inner tube
Tail Wheel Dwg. No. D43.500.00.1 or D43.500.00.3 with tire 380x150
with inner tube

22. (Reserved)



A.IV. Operating and Service Instructions

1. Flight Manual: "Aircraft Flight Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine"
2. Maintenance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine"
3. Structural Repair Manual: "PZL M18 "DROMADER". Aircraft Repair Manual"
4. Weight and Balance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5.
5. Illustrated Parts Catalogue: "M18 Parts and Assemblies Catalog"

A.V. Notes

- NOTE 1: All inscriptions and placards as required in the approved Aircraft Flight Manual of PZL M18 "DROMADER" must be installed on each airplane in the specified configuration and at appropriate location.
Limitations specified on the placards must read in the same units (knots, MPH, km/h) as the airspeed indicator.
- NOTE 2: The airplane in restricted category and with optional equipment (such as: auxiliary fuel system, ARL-1601 ADF, KR-85 ADF, engine cylinder shields, cockpit heating system, etc.) installed, shall be operated in accordance with Section 9 of the Aircraft Flight Manual of PZL M18 "DROMADER"
- NOTE 3: The aircraft may be operated in the fire-fighting overload version with the weight of 5300 kg upon installation of the partition with air containers in the hopper acc. to Dwg. No. D99.300.00.0.



SECTION B: PZL M18A

B.I. General

1. Type/ Model/ Variant

- 1.1 Type: PZL M18
- 1.2 Model: PZL M18A
- 1.3 Variant: agricultural, fire fighting

2. Airworthiness Category:

- Normal
- Restricted (overload)
- Restricted (fire-fighting overload)

3. Manufacturer: Polskie Zaklady Lotnicze Sp. z o.o.

Wojska Polskiego 3
39-300 Mielec
POLAND

4. EASA Type Certification Application Date:

- Normal: 12 November 1981
- Restricted (overload): 12 November 1981
- Restricted (fire-fighting overload): 14 January 1991

Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority: Polish CAO

6. State of Design Authority Type Certificate Date

- Normal: 14 February 1984
- Restricted (overload): 14 February 1984
- Restricted (fire-fighting overload): 20 August 1993

7. EASA Type Certification Date: 24 October 2005

B.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:

8 April 1975

2. Airworthiness Requirements:

- Normal: 14 CFR Part 23, including Amdt. 23-16
- Restricted (overload): Civil Aeronautics Manual 8, Second Edition, on the basis of the Type Certificate in Normal Category under 14 CFR Part 23, including Amdt. 23-16

3. Special Conditions: None

4. Exemptions: None

5. (Reserved) Deviations: None



6. Equivalent Safety Findings: None
7. Environmental Protection: 14 CFR Part 36

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing No. M18, Sheet No. 8
2. Description: All metal, low wing, with non retractable tailwheel landing gear, single piston agricultural and fire-fighting airplane, equipped with additional mechanic cabin
3. Equipment: Approved equipment list is stated in document "Airplane Description and Service Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine"
4. Dimensions: Span: 17,7 m
Length: 9,5 m
Height: 3,7 m (parking)
Wing area: 40 m²

5. Engine

- 5.1. Model: ASz-62IR-M18
5.2 Type Certificate: EASA.E.140
5.3 Limitations:

	HP	RPM	Manifold Pressure (mm Hg)	Altitude
T-O Power (5 minutes), minimum	980	2200	1050	S.L.
Max. Continuous Power, minimum	823	2100	900	1500 m
Max. Continuous Power, minimum	804	2100	900	S.L.

6. Load factors:

- Normal: +3.4 g, -1.4 g
Restricted (overload): +3.0 g, -1.2 g
Restricted (fire-fighting overload): +2.8 g, -1.1 g

7. Propeller

- 7.1 Model: AW-2-30
7.2 Type Certificate: PL DB-122
7.3 Number of blades: 4
7.4 Diameter: 3.3 m
7.5 Sense of Rotation: clockwise in flight direction



8. Fluids

- 8.1 Fuel: Minimum grade 91 aviation gasoline with tetraethyl load content of max. 3.3 g per 1 kg of fuel, in accordance to:
- GOST 1012-72
 - D.Eng. RD 2485
 - ASTM - D910-75
 - MIL-G-5572F
 - RH-95/130
- 8.2 Oil: Mineral oil with or without detergents, min. viscosity 20 cSt at 100°C, min. viscosity index 80
- 8.3 Coolant: N/A

9. Fluid capacities

- 9.1 Fuel:
- 414 l (usable fuel 400 l) with outer wings installed in accordance with Dwg. No. D22.000.00.1K L/R
 - 726 l (usable fuel 712 l) with outer wings installed in accordance with Dwg. No. D22.000.00.5K L/R
- 9.2 Oil: 70 l (usable oil 35 l)
- 9.3 Coolant system capacity: N/A

10. Air Speeds:

Never Exceed Speed Limit V_{NE}

- Normal: 280 km/h CAS
- Restricted (overload): 230 km/h CAS
- Restricted (fire-fighting overload): 230 km/h CAS

Design Manoeuvring Speed Limit V_A 228 km/h CAS

Normal Operating Speed V_{NO}

- Normal: 230 km/h CAS
- Restricted (overload): 200 km/h CAS
- Restricted (fire-fighting overload): 200 km/h CAS

Maximum Flaps Extended Speed Limit V_{FE} 200 km/h CAS

11. Flight Envelope:

Maximum Operating Altitude: 4000 m

Ambient Air Temperature Operating Limits:

- (a) +45° C to +15° C without engine cylinder winterization shields
- (b) +15° C to -10° C with or without engine cylinder shields, optional
- (c) -10° C to -30° C with engine cylinder shields installed

12. Approved Operations Capability:

- Day and night operation under VFR conditions.
- Flight in icing conditions is prohibited.



13. Maximum Masses:

Maximum Takeoff Weight MTOW

Normal:	4200 kg
Restricted (overload):	4700 kg
Restricted (fire-fighting overload):	5300 kg

Maximum Landing Weight 4200 kg

Maximum Hopper Load*

Normal:	1500 kg
Restricted (overload):	2000 kg
Restricted (fire-fighting overload):	2200 kg

)* - Max. hopper load limitations with occupant in mechanic cabin in acc. with NOTE 3

14. Centre of Gravity Range:

Normal:	from 23% to 31% MAC
Restricted (overload):	from 28% to 31% MAC at MTOW
Restricted (fire-fighting overload):	from 29.2% to 31% MAC at MTOW

Mean Aerodynamic Chord (MAC) is 2.261 m. 0% MAC is 0.004 m aft of wing leading edge.

15. Datum: Wing leading edge

16. Control surface deflections:

Aileron:	Up $21^{\circ} \pm 1^{\circ}$ Down $17^{\circ} \pm 1^{\circ}$
Rudder:	Left $23^{\circ} \pm 1^{\circ}$ Right $23^{\circ} \pm 1^{\circ}$
Elevator:	Up $27^{\circ} \pm 1^{\circ}$ Down $17^{\circ} \pm 1^{\circ}$
Aileron Trim Tab:	Up $7^{\circ}30' \pm 2^{\circ}$ Down $7^{\circ}30' \pm 2^{\circ}$
Rudder Trim Tab:	Left $13^{\circ} \pm 2^{\circ}$ Right $13^{\circ} \pm 2^{\circ}$
Elevator Trim Tab:	Up $10^{\circ} \pm 1^{\circ}$ Down $17^{\circ} \pm 1^{\circ}$

17. Levelling Means: Levelling points are shown on Fig. 4.1 of Aircraft Description and Service Manual.

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity: 2 (including pilot)

20. Baggage/ Cargo Compartments: Max. 30 kg

21. Wheels and Tyres: Main Wheel Dwg. No. D41.500.00.1 with tire 800x260W3 with inner tube
Tail Wheel Dwg. No. D43.500.00.1 or D43.500.00.3 with tire 380x150 with inner tube



22. (Reserved)

B.IV. Operating and Service Instructions

1. Flight Manual: "Aircraft Flight Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine" together with mandatory supplements as contained in Section 9 thereof including Supplement No 8 effective on the PZL M18A "DROMADER" model
2. Maintenance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" with supplement 7.3 effective on the PZL M18A "DROMADER" model
3. Structural Repair Manual: "PZL M18 "DROMADER". Aircraft Repair Manual"
4. Weight and Balance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5.
5. Illustrated Parts Catalogue: "M18 Parts and Assemblies Catalog"

B.V. Notes

- NOTE 1: All inscriptions and placards as required in the approved Aircraft Flight Manual of PZL M18 "DROMADER" (including Supplement No. 8, effective on PZL M18A "DROMADER" model) must be installed on each airplane in the specified configuration and at appropriate location. Limitations specified on the placards must read in the same units (knots, MPH, km/h) as the airspeed indicator.
- NOTE 2: The airplane in restricted category and with optional equipment (such as: auxiliary fuel system, ARL-1601 ADF, KR-85 ADF, engine cylinder shields, cockpit heating system, etc.) installed, shall be operated in accordance with Section 9 of the Aircraft Flight Manual of PZL M18 "DROMADER".
- NOTE 3: To prevent exceeding the airplane C.G. range limits with an occupant in mechanic's cabin, the following max. hopper load limitations apply:
- (a) Fire fighting version:
 - with full fuel tanks of 414 l total capacity - 700 kg
 - with full fuel tanks of 726 l total capacity - 400 kg
 - (b) Dusting version with "TRANSLAND" spreader:
 - with full fuel tanks of 414 l total capacity - 600 kg
 - with full fuel tanks of 726 l total capacity - 200 kg
 - (c) Dusting version with D98.670.00.1 spreader:
 - with full fuel tanks of 414 l total capacity - 400 kg
 - with full fuel tanks of 726 l total capacity - 100 kg
 - (d) Medium and coarse droplet spraying version:
 - with full fuel tanks of 414 l total capacity - 400 kg



- with full fuel tanks of 726 l total capacity - 100 kg
- (e) Spraying atomizer version:
 - it is prohibited to carry load in the hopper with fuel amount exceeding 350 l.

NOTE 4: It is prohibited to perform operational flight with an occupant in mechanic's cabin.

NOTE 5: The aircraft may be operated in the fire-fighting overload version with the weight of 5300 kg upon installation of the partition with air containers in the hopper acc.to Dwg. No. D99.300.00.0.



SECTION C: PZL M18AS

(a) Trainer – dual control version (with instructor’s cockpit installed)

C.I(a). General

1. Type/ Model/ Variant

1.1 Type: PZL M18

1.2 Model: PZL M18AS

1.3 Variant: agricultural, fire fighting

2. Airworthiness Category: Normal

3. Manufacturer: Polskie Zaklady Lotnicze Sp. z o.o.

Wojska Polskiego 3

39-300 Mielec

POLAND

4. EASA Type Certification Application Date: 25 June 1987

Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority: Polish CAO

6. State of Design Authority Type Certificate Date: 26 March 1990

7. EASA Type Certification Date: 24 October 2005

C.II(a). EASA Certification Basis

1. Reference Date for determining the applicable requirements:

8 April 1975

2. Airworthiness Requirements:

14 CFR Part 23, including Amdt. 23-16

3. Special Conditions: None

4. Exemptions: None

5. (Reserved) Deviations: None

6. Equivalent Safety Findings: None

7. Environmental Protection: 14 CFR Part 36

C.III(a). Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing No. M18AS, Sheet No. 2

2. Description: All metal, low wing, with non retractable tailwheel landing gear, single piston agricultural and fire-fighting airplane, equipped with additional mechanic cabin and instructor’s cockpit for training



3. Equipment: Approved equipment list is stated in document "Airplane Description and Service Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine"

4. Dimensions: Span: 17,7 m
Length: 9,5 m
Height: 3,7 m (parking)
Wing area: 40 m²

5. Engine

5.1. Model: ASz-62IR-M18

5.2 Type Certificate: EASA.E.140

5.3 Limitations:

	HP	RPM	Manifold Pressure (mm Hg)	Altitude
T-O Power (5 minutes), minimum	980	2200	1050	S.L.
Max. Continuous Power, minimum	823	2100	900	1500 m
Max. Continuous Power, minimum	804	2100	900	S.L.

6. Load factors: +3.4 g, -1.4 g

7. Propeller

7.1 Model: AW-2-30

7.2 Type Certificate: PL DB-122

7.3 Number of blades: 4

7.4 Diameter: 3.3 m

7.5 Sense of Rotation: clockwise in flight direction

8. Fluids

8.1 Fuel: Minimum grade 91 aviation gasoline with tetraethyl load content of max. 3.3 g per 1 kg of fuel, in accordance to:
- GOST 1012-72
- D.Eng. RD 2485
- ASTM - D910-75
- MIL-G-5572F
- RH-95/130

8.2 Oil: Mineral oil with or without detergents, min. viscosity 20 cSt at 100°C, min. viscosity index 80

8.3 Coolant: N/A

9. Fluid capacities

9.1 Fuel: - 726 l (usable fuel 712 l) with outer wings installed in accordance with Dwg. No. D22.000.00.5K L/R



9.2 Oil: 70 l (usable oil 35 l)

9.3 Coolant system capacity: N/A

10. Air Speeds:

Never Exceed Speed Limit V_{NE}

Normal: 280 km/h CAS

Restricted (overload): 230 km/h CAS

Restricted (fire-fighting overload): 230 km/h CAS

Design Manoeuvring Speed Limit V_A 228 km/h CAS

Normal Operating Speed V_{NO}

Normal: 230 km/h CAS

Restricted (overload): 200 km/h CAS

Restricted (fire-fighting overload): 200 km/h CAS

Maximum Flaps Extended Speed Limit V_{FE} 200 km/h CAS

11. Flight Envelope:

Maximum Operating Altitude: 4000 m

Ambient Air Temperature Operating Limits:

(a) +45° C to +15° C without engine cylinder winterization shields

(b) +15° C to -10° C with or without engine cylinder shields, optional

(c) -10° C to -30° C with engine cylinder shields installed

12. Approved Operations Capability:

Day and night operation under VFR conditions.

Flight in icing conditions is prohibited.

13. Maximum Masses:

Maximum Takeoff Weight MTOW: 4200 kg

Maximum Landing Weight 4200 kg

Maximum Hopper Load* 800 kg

)* - For applicable load limitations depending on the number of occupants on board, see NOTES 3 and 5

14. Centre of Gravity Range: from 23% to 31% MAC

Mean Aerodynamic Chord (MAC) is 2.261 m. 0% MAC is 0.004 m aft of wing leading edge.

15. Datum: Wing leading edge

16. Control surface deflections:

Aileron: Up 21° ±1°

Down 17° ±1°

Rudder: Left 23° ±1°



- | | |
|-----------------------|--|
| | Right $23^{\circ} \pm 1^{\circ}$ |
| Elevator: | Up $27^{\circ} \pm 1^{\circ}$
Down $17^{\circ} \pm 1^{\circ}$ |
| Aileron Trim
Tab: | Up $7^{\circ}30' \pm 2^{\circ}$
Down $7^{\circ}30' \pm 2^{\circ}$ |
| Rudder Trim
Tab: | Left $13^{\circ} \pm 2^{\circ}$
Right $13^{\circ} \pm 2^{\circ}$ |
| Elevator Trim
Tab: | Up $10^{\circ} \pm 1^{\circ}$
Down $17^{\circ} \pm 1^{\circ}$ |
17. Levelling Means: Levelling points are shown on Fig. 4.1 of Aircraft Description and Service Manual.
18. Minimum Flight Crew: 1 (Pilot)
19. Maximum Passenger Seating Capacity: 2 (instructor-pilot and student-pilot)
20. Baggage/ Cargo Compartments: None
21. Wheels and Tyres: Main Wheel Dwg. No. D41.500.00.1 with tire 800x260W3 with inner tube
Tail Wheel Dwg. No. D43.500.00.1 or D43.500.00.3 with tire 380x150 with inner tube
22. (Reserved)

C.IV(a). Operating and Service Instructions

1. Flight Manual: "Aircraft Flight Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine" together with mandatory supplements as contained in Section 9 thereof including Supplement No 14 effective on the PZL M18AS Trainer model
2. Maintenance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" with Supplement 7.8 effective on the PZL M18AS "DROMADER" Trainer model
3. Structural Repair Manual: "PZL M18 "DROMADER". Aircraft Repair Manual"
4. Weight and Balance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5.
5. Illustrated Parts Catalogue: "M18 Parts and Assemblies Catalog"



C.V(a). Notes

- NOTE 1: All inscriptions and placards as required in the approved Aircraft Flight Manual of PZL M18 "DROMADER" (including Supplement No. 14, effective on PZL M18AS "DROMADER" Trainer model) must be installed on each airplane in the specified configuration and at appropriate location.
Limitations specified on the placards must read in the same units (knots, MPH, km/h) as the airspeed indicator.
- NOTE 2: The airplane with optional equipment (such as: ARL-1601 ADF, KR-85 ADF, engine cylinder shields, cockpit heating system, etc.) installed, shall be operated in accordance with Section 9 of the Aircraft Flight Manual of PZL M18 "DROMADER".
- NOTE 3: It is prohibited to perform flights with an occupant in mechanic's cabin and with luggage in the baggage compartment. Mechanic's cabin equipment (seat and fire extinguisher) and baggage compartment should be removed.
Note: Any other possible loading and equipment configurations should be checked to be within C.G. range limits (Fig. 9.14.7 in Supplement No. 14 of the Aircraft Flight Manual).
- NOTE 4: It is prohibited to perform solo flights with a pilot only in the instructor's (front) cockpit.
- NOTE 5: M18AS "DROMADER" Trainer model is approved to perform agricultural training flights in spraying version only.
- NOTE 6: M18AS "DROMADER" Trainer model with dual control system is approved to perform training flights in fire fighting version with the liquid load of max 500 l (bottom part of hopper filled).



(b) Trainer – Operational, single-control version (standard hopper installed)

C.I(b). General

1. Type/ Model/ Variant

- 1.1 Type: PZL M18
- 1.2 Model: PZL M18AS
- 1.3 Variant: agricultural, fire fighting

2. Airworthiness Category:

- Normal
- Restricted (overload)
- Restricted (fire-fighting overload)

3. Manufacturer: Polskie Zaklady Lotnicze Sp. z o.o.

Wojska Polskiego 3
39-300 Mielec
POLAND

4. EASA Type Certification Application Date:

- Normal: 25 June 1987
- Restricted (overload): 25 June 1987
- Restricted (fire-fighting overload): 14 January 1991

Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority: Polish CAO

6. State of Design Authority Type Certificate Date

- Normal: 26 March 1990
- Restricted (overload): 26 March 1990
- Restricted (fire-fighting overload): 20 August 1993

7. EASA Type Certification Date: 24 October 2005

C.II(b). EASA Certification Basis

1. Reference Date for determining the applicable requirements:

8 April 1975

2. Airworthiness Requirements:

- Normal: 14 CFR Part 23, including Amdt. 23-16
- Restricted (overload): Civil Aeronautics Manual 8, Second Edition, on the basis of the Type Certificate in Normal Category under 14 CFR Part 23, including Amdt. 23-16

3. Special Conditions: None

4. Exemptions: None

5. (Reserved) Deviations: None



6. Equivalent Safety Findings: None
7. Environmental Protection: 14 CFR Part 36

C.III(b). Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing No. M18AS, Sheet No. 2
2. Description: All metal, low wing, with non retractable tailwheel landing gear, single piston agricultural and fire-fighting airplane, equipped with additional mechanic cabin and standard hopper installed
3. Equipment: Approved equipment list is stated in document "Airplane Description and Service Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine"
4. Dimensions: Span: 17,7 m
Length: 9,5 m
Height: 3,7 m (parking)
Wing area: 40 m²

5. Engine

- 5.1. Model: ASz-62IR-M18
5.2 Type Certificate: EASA.E.140
5.3 Limitations:

	HP	RPM	Manifold Pressure (mm Hg)	Altitude
T-O Power (5 minutes), minimum	980	2200	1050	S.L.
Max. Continuous Power, minimum	823	2100	900	1500 m
Max. Continuous Power, minimum	804	2100	900	S.L.

6. Load factors:

- Normal: +3.4 g, -1.4 g
Restricted (overload): +3.0 g, -1.2 g
Restricted (fire-fighting overload): +2.8 g, -1.1 g

7. Propeller

- 7.1 Model: AW-2-30
7.2 Type Certificate: PL DB-122
7.3 Number of blades: 4
7.4 Diameter: 3.3 m
7.5 Sense of Rotation: clockwise in flight direction



8. Fluids

8.1 Fuel: Minimum grade 91 aviation gasoline with tetraethyl load content of max. 3.3 g per 1 kg of fuel, in accordance to:
- GOST 1012-72
- D.Eng. RD 2485
- ASTM - D910-75
- MIL-G-5572F
- RH-95/130

8.2 Oil: Mineral oil with or without detergents, min. viscosity 20 cSt at 100°C, min. viscosity index 80

8.3 Coolant: N/A

9. Fluid capacities

9.1 Fuel: 726 l (usable fuel 712 l) with outer wings installed in accordance with Dwg. No. D22.000.00.5K L/R

9.2 Oil: 70 l (usable oil 35 l)

9.3 Coolant system capacity: N/A

10. Air Speeds:

Never Exceed Speed Limit V_{NE}

Normal: 280 km/h CAS

Restricted (overload): 230 km/h CAS

Restricted (fire-fighting overload): 230 km/h CAS

Design Manoeuvring Speed Limit V_A 228 km/h CAS

Normal Operating Speed V_{NO}

Normal: 230 km/h CAS

Restricted (overload): 200 km/h CAS

Restricted (fire-fighting overload): 200 km/h CAS

Maximum Flaps Extended Speed Limit V_{FE} 200 km/h CAS

11. Flight Envelope:

Maximum Operating Altitude: 4000 m

Ambient Air Temperature Operating Limits:

(a) +45° C to +15° C without engine cylinder winterization shields

(b) +15° C to -10° C with or without engine cylinder shields, optional

(c) -10° C to -30° C with engine cylinder shields installed

12. Approved Operations Capability:

Day and night operation under VFR conditions.

Flight in icing conditions is prohibited.

13. Maximum Masses:

Maximum Takeoff Weight MTOW

Normal: 4200 kg



Restricted (overload): 4700 kg
Restricted (fire-fighting overload): 5300 kg

Maximum Landing Weight 4200 kg
Maximum Hopper Load*
Normal: 1500 kg
Restricted (overload): 2000 kg
Restricted (fire-fighting overload): 2200 kg

)* - Max. hopper load limitations with occupant in mechanic cabin in acc. with NOTE 3

14. Centre of Gravity Range:

Normal: from 23% to 31% MAC
Restricted (overload): from 28% to 31% MAC at MTOW
Restricted (fire-fighting overload): from 29.2% to 31% MAC at MTOW
Mean Aerodynamic Chord (MAC) is 2.261 m. 0% MAC is 0.004 m aft of wing leading edge.

15. Datum: Wing leading edge

16. Control surface deflections:

Aileron: Up $21^{\circ} \pm 1^{\circ}$
Down $17^{\circ} \pm 1^{\circ}$
Rudder: Left $23^{\circ} \pm 1^{\circ}$
Right $23^{\circ} \pm 1^{\circ}$
Elevator: Up $27^{\circ} \pm 1^{\circ}$
Down $17^{\circ} \pm 1^{\circ}$
Aileron Trim
Tab: Up $7^{\circ}30' \pm 2^{\circ}$
Down $7^{\circ}30' \pm 2^{\circ}$
Rudder Trim
Tab: Left $13^{\circ} \pm 2^{\circ}$
Right $13^{\circ} \pm 2^{\circ}$
Elevator Trim
Tab: Up $10^{\circ} \pm 1^{\circ}$
Down $17^{\circ} \pm 1^{\circ}$

17. Levelling Means: Levelling points are shown on Fig. 4.1 of Aircraft Description and Service Manual.

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity: 2 (including pilot)

20. Baggage/ Cargo Compartments: Max. 30 kg

21. Wheels and Tyres: Main Wheel Dwg. No. D41.500.00.1 with tire 800x260W3 with inner tube
Tail Wheel Dwg. No. D43.500.00.1 or D43.500.00.3 with tire 380x150 with inner tube

22. (Reserved)



C.IV(b). Operating and Service Instructions

1. Flight Manual: "Aircraft Flight Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine" together with mandatory supplements as contained in Section 9 thereof including Supplement No 14 effective on the PZL M18AS "DROMADER" model
2. Maintenance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" with Supplement 7.8 effective on the PZL M18AS "DROMADER" Trainer model
3. Structural Repair Manual: "PZL M18 "DROMADER". Aircraft Repair Manual"
4. Weight and Balance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5.
5. Illustrated Parts Catalogue: "M18 Parts and Assemblies Catalog"

C.V(b). Notes

- NOTE 1: All inscriptions and placards as required in the approved Aircraft Flight Manual of PZL M18 "DROMADER" (including Supplement No. 14, effective on PZL M18AS "DROMADER" Trainer model) must be installed on each airplane in the specified configuration and at appropriate location.
Limitations specified on the placards must read in the same units (knots, MPH, km/h) as the airspeed indicator
- NOTE 2: The airplane in restricted category and with optional equipment (such as: RL-1601 ADF, KR-85 ADF, engine cylinder shields, cockpit heating system, etc.) installed, shall be operated in accordance with Section 9 of the Aircraft Flight Manual of PZL M18 "DROMADER".
- NOTE 3: To prevent exceeding the airplane C.G. range limits with an occupant in mechanic's cabin, the following max. hopper load limitations apply:
(a) Fire fighting version: 400 kg
(b) Dusting version with "TRANSLAND" spreader: 200 kg
(c) Dusting version with D98.670.00.1 spreader: 100 kg
(d) Medium and coarse droplet spraying version: 100 kg
(e) Spraying atomizer version:
- It is prohibited to carry load in the hopper with fuel amount exceeding 350 l.
- NOTE 4: It is prohibited to perform operational flight with an occupant in mechanic's cabin.
- NOTE 5: The aircraft may be operated in the fire-fighting overload version with the weight of 5300 kg upon installation of the partition with air containers in the hopper acc.to Dwg. No. D99.300.00.0.



SECTION D: PZL M18B

D.I. General

1. Type/ Model/ Variant

- 1.1 Type: PZL M18
- 1.2 Model: PZL M18B
- 1.3 Variant: agricultural, fire fighting

2. Airworthiness Category:

- Normal
- Restricted

3. Manufacturer: Polskie Zaklady Lotnicze Sp. z o.o.

Wojska Polskiego 3
39-300 Mielec
POLAND

4. EASA Type Certification Application Date:

- Normal: 7 November 1991
- Restricted: 7 November 1991
- For M18B with Asz-62IR-M18/k9-BB or K9-BB engine:
5 September 2002

Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority: Polish CAO

6. State of Design Authority Type Certificate Date

- Normal: 27 January 1994
- Restricted: 27 January 1994
- M18B with Asz-62IR-M18/k9-BB or K9-BB engine:
23 March 2005

7. EASA Type Certification Date: 24 October 2005

D.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:

8 April 1975

2. Airworthiness Requirements:

- Normal: 14 CFR Part 23, including Amdt. 23-16
- Restricted (overload): Civil Aeronautics Manual 8, Second Edition, on the basis of the Type Certificate in Normal Category under 14 CFR Part 23, including Amdt. 23-16

3. Special Conditions: None



- 4. Exemptions: None
- 5. (Reserved) Deviations: None
- 6. Equivalent Safety Findings: None
- 7. Environmental Protection: 14 CFR Part 36

D.III. Technical Characteristics and Operational Limitations

- 1. Type Design Definition: Drawing No. M18, Sheet No. 10
- 2. Description: All metal, low wing, with non retractable tailwheel landing gear, single piston agricultural and fire-fighting airplane, equipped with additional mechanic cabin, with modified horizontal tail elevator, rudder, flap control system
- 3. Equipment: Approved equipment list is stated in document "Airplane Description and Service Manual. PZL M18B "DROMADER" equipped with ASz-62IRm18 engine"
- 4. Dimensions:
 - Span: 17,7 m
 - Length: 9,5 m
 - Height: 3,7 m (parking)
 - Wing area: 40 m²

5. Engine

- 5.1. Model: ASz-62IR-M18 or Asz-62IR-M18/K9-BB
- 5.2 Type Certificate: EASA.E.140
- 5.3 Limitations:

Asz-62IR-M18:	HP	RPM	Manifold Pressure (mm Hg)	Altitude
T-O Power (5 minutes), minimum	980	2200	1050	S.L.
Max. Continuous Power, minimum	823	2100	900	1500 m
Max. Continuous Power, minimum	804	2100	900	S.L.

Asz-62IR-M18/K9-BB:	HP	RPM	Manifold Pressure (mm Hg)	Altitude
T-O Power (5 minutes), minimum	1000	2200	1120	S.L.
Max. Continuous Power, minimum	967	2150	1050	1500 m
Max. Continuous Power, minimum	930	2150	1050	S.L.

6. Load factors:

- Normal: +3.4 g, -1.4 g
- Restricted: +2.8 g, -1.1 g



7. Propeller

- 7.1 Model: AW-2-30
7.2 Type Certificate: PL DB-122
7.3 Number of blades: 4
7.4 Diameter: 3.3 m
7.5 Sense of Rotation: clockwise in flight direction

8. Fluids

- 8.1 Fuel: Minimum grade 91 aviation gasoline with tetraethyl lead content of max. 3.3 g per 1 kg of fuel, in accordance to:
- GOST 1012-72
- D.Eng. RD 2485
- ASTM - D910-75
- MIL-G-5572F
- RH-95/130
- 8.2 Oil: Mineral oil with or without detergents, min. viscosity 20 cSt at 100°C, min. viscosity index 80
- 8.3 Coolant: N/A

9. Fluid capacities

- 9.1 Fuel: 726 l (usable fuel 712 l)
9.2 Oil: 70 l (usable oil 35 l)
9.3 Coolant system capacity: N/A

10. Air Speeds:

- Never Exceed Speed Limit V_{NE}
- | | |
|-------------|--------------|
| Normal: | 280 km/h CAS |
| Restricted: | 230 km/h CAS |
- Design Manoeuvring Speed Limit V_A 228 km/h CAS
- Normal Operating Speed V_{NO}
- | | |
|-------------|--------------|
| Normal: | 230 km/h CAS |
| Restricted: | 200 km/h CAS |
- Maximum Flaps Extended Speed Limit V_{FE} 200 km/h CAS

11. Flight Envelope:

- Maximum Operating Altitude: 4000 m
- Ambient Air Temperature Operating Limits:
- (a) +45° C to +15° C without engine cylinder winterization shields
 - (b) +15° C to -10° C with or without engine cylinder shields, optional
 - (c) -10° C to -30° C with engine cylinder shields installed



12. Approved Operations Capability:

Day and night operation under VFR conditions.

Flight in icing conditions is prohibited.

13. Maximum Masses:

Maximum Takeoff Weight MTOW*

Normal: 4200 kg

Restricted: 5300 kg

)* - See NOTE 6

Maximum Landing Weight 4200 kg

Maximum Hopper Load**

Normal: 1500 kg

Restricted: 2200 kg

)** - See NOTES 3, 6

14. Centre of Gravity Range***:

Normal: from 23% to 31% MAC

Restricted: from 29.2% to 31% MAC at MTOW

Mean Aerodynamic Chord (MAC) is 2.261 m. 0% MAC is 0.004 m aft of wing leading edge.

)*** - See NOTE 5

15. Datum: Wing leading edge

16. Control surface deflections:

Aileron: Up $21^{\circ} \pm 1^{\circ}$
Down $17^{\circ} \pm 1^{\circ}$

Rudder: Left $23^{\circ} \pm 1^{\circ}$
Right $23^{\circ} \pm 1^{\circ}$

Elevator: Up $27^{\circ} \pm 1^{\circ}$
Down $17^{\circ} \pm 1^{\circ}$

Aileron Trim Up $7^{\circ}30' \pm 2^{\circ}$
Tab: Down $7^{\circ}30' \pm 2^{\circ}$

Rudder Trim Left $13^{\circ} \pm 2^{\circ}$
Tab: Right $13^{\circ} \pm 2^{\circ}$

Elevator Trim Up $10^{\circ} \pm 1^{\circ}$
Tab: Down $17^{\circ} \pm 1^{\circ}$

Flaps for Takeoff: 15°

Flaps for Landing: 30°

17. Levelling Means: Levelling points are shown on Fig. 4.1 of Aircraft Description and Service Manual.

18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity: 2 (including pilot)

20. Baggage/ Cargo Compartments: Max. 30 kg



21. Wheels and Tyres: Main Wheel Dwg. No. D41.500.00.1 with tire 800x260W3 with inner tube
Tail Wheel Dwg. No. D43.500.00.1 or D43.500.00.3 with tire 380x150 with inner tube

22. (Reserved)

D.IV. Operating and Service Instructions

1. Flight Manual*: "Aircraft Flight Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine" together with mandatory supplements as contained in Section 9 thereof including Supplement No 17 effective on the PZL M18B "DROMADER" model or "Aircraft Flight Manual. PZL M18B "DROMADER" equipped with ASz-62IRm18 engine"
-)* - For airplane with ASz-62IR-M18/K9-BB engine: "Aircraft Flight Manual. PZL M18B "DROMADER" equipped with ASz-62IRm18 engine" with Supplement 31
2. Maintenance Manual**: "Airplane Description and Service Manual. PZL M18B "DROMADER" Equipped with ASz-62IRm18 engine" with Supplement 7.9 effective on the PZL M18B "DROMADER" model or "Airplane Description and Service Manual. PZL M18B "DROMADER" Equipped with ASz-62IRm18 engine"
-)** - For airplane with ASz-62IR-M18/K9-BB engine: "Airplane Description and Service Manual. PZL M18B "DROMADER" equipped with ASz-62IRm18 engine" with Supplement 7.31
3. Structural Repair Manual: "PZL M18 "DROMADER". Aircraft Repair Manual"
4. Weight and Balance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5. or "Airplane Description and Service Manual. PZL M18B "DROMADER" Equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5.
5. Illustrated Parts Catalogue: "M18 Parts and Assemblies Catalog"

D.V. Notes

NOTE 1: All inscriptions and placards as required in the approved Aircraft Flight Manual of PZL M18 "DROMADER" (including Supplement No. 17, effective on PZL M18B "DROMADER" model) must be installed on each airplane in the specified configuration and at appropriate location. Limitations specified on the placards must read in the same units (knots, MPH, km/h) as the airspeed indicator.

NOTE 2: The airplane in restricted category and with optional equipment (such as: auxiliary fuel system, ARL-1601 ADF, KR-85 ADF, engine cylinder shields, cockpit heating



system, etc.) installed, shall be operated in accordance with Section 9 of the Aircraft Flight Manual of PZL M18 "DROMADER".

- NOTE 3: To prevent exceeding the airplane C.G. range limits with in occupant in mechanic's cabin, hopper load shall be limited, as follows:
Fire fighting version:
- With max. fuel load - 50 kg
- With 400 l of fuel - 200 kg
- NOTE 4: It is prohibited to perform operational flight with an occupant in mechanic's cabin.
- NOTE 5: For the spraying version with AU-3000 and AU-5000 atomizers, the rearmost C.G. position in 32% MAC is permitted within the whole range of weights.
- NOTE 6: To maintain safe rate of climb not less than 1.5 m/s at the rated power, the maximum takeoff weight is limited to 4800 kg in dusting version with big spreader (Dwg. No. D98.670.00.1). Maximum hopper load results from calculations of the airplane takeoff weight.



SECTION E: PZL M18BS

Trainer – dual control version (with instructor’s cockpit installed)

E.I. General

1. Type/ Model/ Variant

1.1 Type: PZL M18

1.2 Model: PZL M18BS

1.3 Variant: agricultural, fire fighting

2. Airworthiness Category: Normal

3. Manufacturer: Polskie Zaklady Lotnicze Sp. z o.o.

Wojska Polskiego 3

39-300 Mielec

POLAND

4. EASA Type Certification Application Date: 25 June 1987

Note: State of Design Authority certification application date for grandfathered products

5. State of Design Authority: Polish CAO

6. State of Design Authority Type Certificate Date: 15 March 1997

7. EASA Type Certification Date: 5 February 1998

E.II. EASA Certification Basis

1. Reference Date for determining the applicable requirements:

8 April 1975

2. Airworthiness Requirements:

14 CFR Part 23, including Amdt. 23-16

3. Special Conditions: None

4. Exemptions: None

5. (Reserved) Deviations: None

6. Equivalent Safety Findings: None

7. Environmental Protection: 14 CFR Part 36

E.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Drawing No. M18BS, Sheet No. 3

2. Description: Trainer – dual control airplane for training in agricultural and fire-fighting flight. All metal, low wing, with non retractable tailwheel landing gear, single piston airplane



3. Equipment: Approved equipment list is stated in document "Airplane Description and Service Manual. PZL M18B "DROMADER" equipped with ASz-62IRm18 engine"

4. Dimensions: Span: 17,7 m
Length: 9,5 m
Height: 3,7 m (parking)
Wing area: 40 m²

5. Engine

5.1. Model: ASz-62IR-M18

5.2 Type Certificate: EASA.E.140

5.3 Limitations:

	HP	RPM	Manifold Pressure (mm Hg)	Altitude
T-O Power (5 minutes), minimum	980	2200	1050	S.L.
Max. Continuous Power, minimum	823	2100	900	1500 m
Max. Continuous Power, minimum	804	2100	900	S.L.

6. Load factors: +3.4 g, -1.4 g

7. Propeller

7.1 Model: AW-2-30

7.2 Type Certificate: PL DB-122

7.3 Number of blades: 4

7.4 Diameter: 3.3 m

7.5 Sense of Rotation: clockwise in flight direction

8. Fluids

8.1 Fuel: Minimum grade 91 aviation gasoline with tetraethyl load content of max. 3.3 g per 1 kg of fuel, in accordance to:
- GOST 1012-72
- D.Eng. RD 2485
- ASTM - D910-75
- MIL-G-5572F
- RH-95/130

8.2 Oil: Mineral oil with or without detergents, min. viscosity 20 cSt at 100°C, min. viscosity index 80

8.3 Coolant: N/A

9. Fluid capacities

9.1 Fuel: 726 l (usable fuel 712 l)



9.2 Oil: 70 l (usable oil 35 l)

9.3 Coolant system capacity: N/A

10. Air Speeds:

Never Exceed Speed Limit V_{NE} : 280 km/h CAS

Design Manoeuvring Speed Limit V_A : 228 km/h CAS

Normal Operating Speed V_{NO} : 230 km/h CAS

Maximum Flaps Extended Speed Limit V_{FE} : 200 km/h CAS

11. Flight Envelope:

Maximum Operating Altitude: 4000 m

Ambient Air Temperature Operating Limits:

(a) +45° C to +15° C without engine cylinder winterization shields

(b) +15° C to -10° C with or without engine cylinder shields, optional

(c) -10° C to -30° C with engine cylinder shields installed

12. Approved Operations Capability:

Day and night operation under VFR conditions.

Flight in icing conditions is prohibited.

13. Maximum Masses:

Maximum Takeoff Weight MTOW: 4200 kg

Maximum Landing Weight: 4200 kg

Maximum Hopper Load: 500 kg (bottom part of hopper filled)

14. Centre of Gravity Range: from 23% to 31% MAC

Mean Aerodynamic Chord (MAC) is 2.261 m. 0% MAC is 0.004 m aft of wing leading edge.

15. Datum: Wing leading edge

16. Control surface deflections:

Aileron: Up 21° ±1°
Down 17° ±1°

Rudder: Left 23° ±1°
Right 23° ±1°

Elevator: Up 27° ±1°
Down 17° ±1°

Aileron Trim Tab: Up 7°30' ±2°
Down 7°30' ±2°

Rudder Trim Tab: Left 13° ±2°
Right 13° ±2°

Elevator Trim Tab: Up 10° ±1°
Down 17° ±1°

Flaps for Takeoff: 15°



Flaps for Landing: 30°

17. Levelling Means: Levelling points are shown on Fig. 4.1 of Aircraft Description and Service Manual.
18. Minimum Flight Crew: 1 (Pilot)
19. Maximum Passenger Seating Capacity: 2 (instructor-pilot and student-pilot)
20. Baggage/ Cargo Compartments: None
21. Wheels and Tyres: Main Wheel Dwg. No. D41.500.00.1 with tire 800x260W3 with inner tube
Tail Wheel Dwg. No. D43.500.00.1 or D43.500.00.3 with tire 380x150 with inner tube
22. (Reserved)

E.IV. Operating and Service Instructions

1. Flight Manual: "Aircraft Flight Manual. PZL M18 "DROMADER" equipped with ASz-62IRm18 engine" together with mandatory supplements as contained in Section 9 thereof including Supplement No 20 effective on the PZL M18BS Trainer model or "Aircraft Flight Manual. PZL M18B "DROMADER" equipped with ASz-62IRm18 engine" together with mandatory supplements as contained in Section 9 thereof including Supplement No 8 effective on the PZL M18BS Trainer model
2. Maintenance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" with Supplement 7.12 effective on the PZL M18BS "DROMADER" Trainer model or "Airplane Description and Service Manual. PZL M18B "DROMADER" Equipped with ASz-62IRm18 engine" with Supplement 7.2 effective on the PZL M18BS "DROMADER" Trainer model
3. Structural Repair Manual: "PZL M18 "DROMADER". Aircraft Repair Manual"
4. Weight and Balance Manual: "Airplane Description and Service Manual. PZL M18 "DROMADER" Equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5 or "Airplane Description and Service Manual. PZL M18B "DROMADER" Equipped with ASz-62IRm18 engine" Sections 4.4 and 4.5.
5. Illustrated Parts Catalogue: "M18 Parts and Assemblies Catalog"



E.V. Notes

- NOTE 1: All inscriptions and placards as required in the approved Aircraft Flight Manual of PZL M18B "DROMADER", including Supplement No. 8, effective on PZL M18BS "DROMADER" Trainer model, must be installed on each airplane in the specified configuration and at appropriate location. Limitations specified on the placards must read in the same units (knots, MPH, km/h) as the airspeed indicator.
- NOTE 2: The airplane with operational-optional equipment (such as: engine cylinder shields, KR-85 ADF, etc.) installed, shall be operated in accordance with Section 9 of the Aircraft Flight Manual of PZL M18B "DROMADER".
- NOTE 3: To eliminate possible exceedance of the aft center-of-gravity position limit for the airplane fitted with spraying equipment, and in particular with long spray booms installed, the airplane takeoff weight is hereby limited to 4100 kg for the spraying configuration.
- NOTE 4: It is prohibited to perform flights with an occupant in mechanic's cabin and with luggage in the baggage compartment. Mechanic's cabin equipment (seat and fire extinguisher) and baggage compartment should be removed.
- NOTE 5: Solo flights of student-pilot shall be performed on the PZL M18B model.
- NOTE 6: It is prohibited to perform solo flights with a pilot only in the instructor's (front) cockpit.
- NOTE 7: M18BS "DROMADER" Trainer model is approved for training flights with fire-fighting and agricultural equipment in spraying configuration only.



SECTION ADMINISTRATIVE

I. Acronyms & Abbreviations

None

II. Type Certificate Holder Record

Current:

Polskie Zaklady Lotnicze Sp. z o.o.

Wojska Polskiego 3

39-300 Mielec

POLAND

III. Change Record

Issue	Date	Changes	TC Issue No. & Date
Issue 01	24 October 2005	Initial Issue	Initial Issue, 24 October 2005
Issue 02	24 June 2008	Editorial corrections	Initial Issue, 24 October 2005
Issue 03	01 October 2008	Editorial corrections	Initial Issue, 24 October 2005
Issue 04	2 September 2020	Implementation of current template	Initial Issue, 24 October 2005

-END-

