TYPE-CERTIFICATE

DATA SHEET

No. EASA.A.026

for

L-410

Type Certificate Holder:

Aircraft Industries, a.s.
Na Záhonech 1177
686 04 Kunovice
CZECH REPUBLIC

For models:
L-410 M Turbolet
L-410 UVP - Turbolet
L-410 UVP-E
L 410 UVP-E9
L 410 UVP-LW
L 410 UVP-E-LW
L 410 UVP-E20
L 410 UVP-E20 CARGO
L-420
L 410 NG

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I. Acronyms
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III. Change Record

SECTION A: L-410 M Turbolet Type Design

A I. General

1. Data Sheet No: EASA.A.026

2. Type /Model / Variant

- Type:	L-410
- Model:	L-410 M Turbolet
- Variant:	L-410 MA (see note 4)L-410 MU (see note 4)

3. Airworthiness Category:	Commuter
4. Type Certificate Holder:	Aircraft Industries, a.s.Na Záhonech 1177, 686 04 Kunovice CZECH REPUBLIC
5. Manufacturer:	LET, n.p. 686 04 Kunovice 1177CZECHOSLOVAKIA
6. National Certification Date:	August 28, 1975
7. CAA Application Date:	---
8. CAA Recommendation Date:	---
9. EASA Type Certification Date**:**	28 March, 2007

A II. Certification Basis

1. Reference Date for determining the applicable requirements:

2. CAA CZ Type Certificate Data Sheet No	71-04
3. CAA CZ Certification Basis:	---
4. Airworthiness Requirements:	- British Civil Airworthiness Requirements, BCAR Section K, Issue 5, 16.10.1972, - British Civil Airworthiness Requirements, BCAR Section R, Issue 4, 10.04.1974 - British Civil Airworthiness Requirements, BCAR Section J, Issue 3, 15.09.1966
5. Requirements elected to comply	None
6. EASA Special Conditions:	None
7. EASA Exemptions:	Refer to A.V Notes, paragraph 3

8. EASA Equivalent Safety Findings: For those exemptions specified in item 3 above appropriate measures were accepted showing, as a minimum, the same level of safety. These measures form parts of the certification data.

9. EASA Environmental Standards: L16/I, Part II, Chapter 5

A III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Specification sheet B 001 001 N - L-410 M Turbolet

2. Description:

Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists of main and nose landing gear.

3. Equipment: The list of approved equipment is shown in the Maintenance Manual.

4. Dimensions:

Wingspan	17.478 m
Length	13.605 m
Height	5.646 m
Wing Area	32.865 m^2

5. Engines: 2

5.1. Model: WALTER M 601 A

5.1.1. Type Certificate: 75 - 03, CAA CZ issued

5.1.2. Engine Limits

Maximum take-off for 5 minutes power rating	
Gas generator speed	101.5 %
Propeller speed	2080 rpm
Maximum torque	100 %
Equivalent power	544 kW
Intermediate contingency power rating	
Gas generator speed	100.5 %
Propeller speed	1950 - 2080 rpm
Maximum torque	100 %
Equivalent power	507.5 kW
Maximum continuous power rating	
Gas generator speed	99 %
Propeller speed	1800 - 2080 rpm
Maximum torque	100 %
Equivalent power	478 kW

6. Propellers: 2

6.1. Model: V508

6.1.1. Type Certificate: EASA.P.028 (replacing 91-01, CAA CZ issued)

6.1.2. Number of blades: 3

6.1.3. Sense of Rotation: Clockwise in view of flight direction

6.1.4. Diameter: 2500 mm

7. Fluids:

7.1. Fuel
T1 according to ST SEV 5024-85, or GOST 10227-86
TS 1 according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
RT according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
PL 6 according to PND 25005-76
PL 7 according to PND 25005-92
JET A according to ASTMD 1655-89
JET A-1 according to ASTMD 1655-89, or DERD 2494
PSM 2 according to PN-86/C-96026

7.2. Oil
Aero Shell Turbo Oil 500
Aero Shell Turbo Oil 555
Aero Shell Turbo Oil 560
Mobil Jet 0 II
B3V (Russian production)
Exon TO 2380
Castrol 599

8. Fluid capacities:

8.1. Fuel:	Standard Tank	Total:	1020	kg
		Usable:	986	kg
8.2. Oil:	Engine	Maximum:	11	Litre
		Minimum:	5,5	Litre

9. Air Speeds:

Never exceeding speed	v_{NE}	405 km/h IAS
Normal operating limit speed	v_{NO}	350 km/h IAS
Design manoeuvering speed	v_{A}	255 km/h IAS
Wing - flaps extended speed	v_{FE}	230 km/h IAS
Landing gear extended speed	v_{LE}	255 km/h IAS
Maximum speed at gusts of 15 m/s		350 km/h IAS
Minimum control speed, take-off climb	v_{MCA}	153 km/h IAS

10. Maximum Operating Altitude: 6000 m

11. All-weather Capability:
- The aircraft is approved for Day and Night VFR and IFR flights.
- Flights in icing conditions, with leading edge deicing system continuously ON, are permitted.

12. Maximum Weight:

Maximum take-off weight	5700 kg
Maximum landing weight	5500 kg
Maximum zero-fuel weight	5290 kg

13. Centre of Gravity Range:

Forward c.g. limit	17 % MAC
Aft c.g. limit	30 % MAC
Aft c.g. limit for MA and MU variants	28.5 % MAC

14. Datum: Datum point is the levelling point No. 2 on the fuselage, located 2.730 m aft of the fuselage nose tip.

15. (reserved)

16. Levelling Means: In longitudinal direction, the levelling plane is defined by levelling points No. 3, 5, 6, in lateral direction by levelling points No. 19L and 19P.

17. Minimum Flight Crew: 2

18. Number of seats: 17 pax

19. (reserved)

20. Baggage / Cargo Compartments

Maximum baggage load
- front baggage compartment 140 kg
- rear baggage compartment 150 kg

21. Wheels and Tyres

Nose wheel K21-6000-7
with tyre 9.00-6(550 x 225) M4

Main wheel K20-6100-7
with tyre12.50-10(720 x 310) M4

A IV. Operating and Service Instructions

Flight Manual (Czech versions)

Do-L410.1018.2	Letová příručka pro letoun L - 410 M Turbolet
Do-L410.1018.3	Letová příručka pro letoun L - 410 M Turbolet
Do-L410.1018.6	Letová příručka pro letoun L - 410 MA Turbolet
Do-L410.1018.7	Letová příručka pro letoun L - 410 MA Turbolet
Do-L410.1018.5	Letová příručka pro letoun L - 410 MU

Instructions for continued airworthiness (Czech versions)

1. Maintenance Schedule:

Do-L410.1052.1	Předpis pro údržbu letounu L 410 M
Do-L410.1052.3	Předpis pro údržbu letounu L 410 MA (Pro letouny v experimentálním provozu bez generální opravy)
Do-L410.1052.4	Předpis pro údržbu letounu L 410 MA

2. Maintenance Manual:

Do-L410.1037.1	Technická příručka letounu L - 410 M Turbolet
Do-L410.1039.1	Technická příručka letounu L 410 MA

3. Album of Production, Operation and Repair Tolerances

Do-L410.2030.0	Album výrobních a přípustných provozních tolerancí letounůL410 A, L 410 AS, L 410 M, L 410 MA TURBOLET

4. Aging aircraft program

English version:

Do-L410-1229.2	Aging aircraft program for the L 410 M aeroplane, L 410 UVP aeroplane,L 410 UVP-E aeroplane, L 410 UVP-E9 aeroplane, L 410 UVP-E20 aeroplane, L-420 aeroplane

Czech version:

Do-L410-1229.0	Příručka pro kontrolu letounů starších 20 let pro typy L 410 M, L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L-420

5. Structural Repair Manual

Do-L410-2021.2	Příručka pro opravu draku letounu L 410

Others Manuals (Czech versions):

1. Wiring Manual

Do-L410.1061.1	Album elektroschemat letounu L 410 M
Do-L410.1069.1	Album elektroschemat letounu L - 410 MA
Do-L410.1068.1	Album elektroschemat letounu L 410 MU

2. Illustrated Parts Catalogue

Do-L410.1043.1	Kusovník letounu L 410 A/ L 410 AS Turbolet

Eligible Serial Numbers

730206, 730207, 750401 through 750405, 750410, 750501 through 750515, 760601, 760602, 770603, 770605, 770606, 770609, 770610, 770701 through 770715, 770801 through 770815, 780901 through 780910, 781001 through 781020, 781101 through 781120.

A V. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 75-04 on August 28, 1975.

2. List of BCAR requirements for which exemptions were approved:
   - K2-4, 2.4 Final take-off climb
   - K2-9, 2.1.3(a) Ability to trim
   - K2-10, 5.1 Static lateral stability
   - K4-3, 6.1.2 Use of flame resistant materials
   - K4-8, 2.2.3(d) Indication of trim tab position
   - K-1, 8.5 Assembly of non-return valves in
   - K5-4, 1.1 to 4.2.5 Powerplant installation
   - K5-5, 2.2.2 De-icing and anti-icing precautions
   - K5-5, 2.2.3 Continuous and heavy icing
   - K5-8, 1.1, 7.2, 8, 9.1, 9.2, 11 Fire precautions
   - K6-1, 2.1 Equipment installation
   - K6-1, 2.2 Equipment approval
   - R1-1, 3.2 MESIT equipment stability
   - R1-1, 4.1 Flammability of radio equipment components
   - J2-3, 4.3.3 Types of circuit breakers used
   - J3-2, 5.1 Types of cables

3. The permission for continuous operation of those aircraft within EU member states after 1 July 2010will be granted based on condition that essential safety modifications are carried out on the aircraft in accordance with the Service Bulletin L410M/095b, as mandated by EASA Airworthiness Directive 2008-0102

   Aircraft that comply with Part A and Part B of Service Bulletin L410M/095b will be without anyadditional operation limitations.
   Aircraft that only comply with Part B of Service Bulletin L410M/095b will be restricted to transport ofmaximum 9 passengers or to Para trooping purposes.

4. Duly performance of the Service Bulletin L410M/246a (recorded to the Aircraft Log Book) converts theL-410 M model to the L-410 MA variant.

   Duly performance of the Service Bulletin L410MU/291a (recorded to the Aircraft Log Book) of the L-410M and L-410 MA to the L-410 MU variant.

SECTION B: L-410 UVP – Turbolet Type Design

B I. General

1. Data Sheet No: EASA.A.026

2. Type / Model / Variant

- Type:	L-410
- Models:	L-410 UVP - Turbolet L 410 UVP-LW (see note no.8)
- Variant	
	L 410 FG (see note no.9)

3. Airworthiness Category:	Commuter
4. Type Certificate Holder:	Aircraft Industries, a.s.Na Záhonech 1177, 686 04 Kunovice CZECH REPUBLIC
5. Manufacturer:	LET, n.p. 686 04 Kunovice 1177 CZECHOSLOVAKIA
6. National Certification Date:	July 10, 1979
7. CAA Application Date:	1974
8. CAA Recommendation Date:	---
9. EASA Type Certification Date**:**	28 March, 2007

B II. Certification Basis

1. Reference Date for determining the applicable requirements:	
2. CAA CZ Type Certificate Data Sheet No	71-04
3. CAA CZ Certification Basis:	---
4. Airworthiness Requirements:	- NLGS-2 Regulations, Issue 2, 1974, Chapters 2, 3, 4, 5 and 7, including Changes 1 to 6 - L8/C dated 29.03.1973 - L8/R dated 10.04.1974 - L8/J dated 01.01.1974 - L/16 dated 05.01.1972
5. Requirements elected to comply	None
6. EASA Special Conditions:	None
7. EASA Exemptions:	Refer to B V. Notes, paragraph 3

8. EASA Equivalent Safety Findings:	For those exemptions specified in item 3 above appropriate measures were accepted showing, as a minimum, the same level of safety. These measures form parts of the certification data.
9. EASA Environmental Standards:	L16/I, Part II, Chapter 5

B III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Specification sheet B 001 101 N – L 410 UVP – Turbolet
2. Description:	Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists of main and nose landing gear.
3. Equipment:	The list of approved equipment is shown in the Maintenance Manual.

4. Dimensions:

Wingspan	19.479 m
Length	14.467 m
Height	5.829 m
Wing Area	35.18 m^2

5. Engines: 2

5.1. Model: WALTER M – 601 B

5.1.1. Type Certificate: 75-03, CAA CZ issued

5.1.2. Engine Limits

Maximum continuous power rating:	
Maximum power	515 kW
Max. gas generator speed	99 %
Max. propeller speed	2080 rpm
Max. ITT	690°C
Take-off power rating:	
Maximum power	515 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C
Take-off power rating with water injection:	
Maximum power	515 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	735°C
Contingency power rating:	
Maximum power	559 kW
Max. gas generator speed	104 %
Max. propeller speed	2080 rpm
Max. ITT	780° C

or

5.2. Model: WALTER M – 601D

5.2.1. Type Certificate: EASA.E.070 (replacing 90-04, CAA CZ issued)

5.2.2. Engine Limits

Standard L 410 UVP – Turbolet aircraft:

Maximum continuous power rating:	
Maximum power	515 kW
Max. gas generator speed	99 %
Max. propeller speed	2080 rpm
Max. ITT	690°C
Take-off power rating:	
Maximum power	515 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	735°C
Take-off power rating with water injection:	
Maximum power	515 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C

L 410 UVP – Turbolet aircraft after Bull. IB L410UVP/084b performance – maximum take-off weight increase to 6000 kg:

Maximum continuous power rating:	
Maximum power	515 kW
Max. gas generator speed	99 %
Max. propeller speed	2080 rpm
Max. ITT	690°C
Take-off power rating:	
Maximum power	540 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	735°C
Take-off power rating with water injection:	
Maximum power	540 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C

6. Propellers:	2
6.1. Model:	V 508B
6.1.1.Type Certificate:	EASA.P.028 (replacing 91-01, CAA CZ issued)
6.1.2.Number of blades:	3
6.1.3.Sense of Rotation:	Clockwise in view of flight direction
6.1.4.Diameter:	2500 mm
	or
6.2. Model:	V 508D
6.2.1.Type Certificate:	EASA.P.028 (replacing 91-01, CAA CZ issued)
6.2.2.Number of blades:	3
6.2.3.Sense of Rotation:	Clockwise in view of flight direction
6.2.4.Diameter:	2500 mm maximum, 2498 mm minimum

7. Fluids:

7.1. Fuel
T1 according to ST SEV 5024-85, or GOST 10227-86
TS 1 according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
RT according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
PL 6 according to PND 25005-76
PL 7 according to PND 25005-92
JET A according to ASTMD 1655-89
JET A-1 according to ASTMD 1655-89, or DERD 2494
PSM 2 according to PN-86/C-96026

7.2. Oil
Aero Shell Turbo Oil 500
Aero Shell Turbo Oil 555
Aero Shell Turbo Oil 560
Mobil Jet 0 II
B3V (Russian production)
Exon TO 2380
Castrol 599

8. Fluid capacities:

8.1. Fuel:	Standard Tank	Total:	1000	kg
		Usable:	991	kg
8.2. Oil:	Engine	Maximum:	11	Litre
		Minimum:	5,5	Litre

9. Air Speeds:

Maximum speed	v_D	410 km/h IAS
Maximum operating speed	v_{MO}	355 km/h IAS
Maximum flaps extended speed, landing configuration 35°	v_{FE}	205 km/h IAS
Maximum flaps extended speed, take-off configuration 15°	v_{FE}	250 km/h IAS
Maximum landing gear operating speed	v_{LO}	250 km/h IAS
Maximum landing gear extended speed	v_{LE}	250 km/h IAS
Maximum spoiler operating speed	v_{SP}	
- for MTOW 5700 kg (see note no.4)		230 km/h IAS
- for MTOW 5800 kg (see note no.7)		180 km/h IAS
Minimum control speed on ground	$v_{min\ ER}$	125 km/h IAS
Minimum control speed, take-off	$v_{min\ EV}$	130 km/h IAS
Minimum control speed, balked landing	$v_{min\ EK}$	125 km/h IAS
Minimum control speed, landing	$v_{min\ EP}$	120 km/h IAS

10. Maximum Operating Altitude 4200 m

11. All-weather Capability:
- The aircraft is approved for Day and Night VFR and IFR flights.

12. Maximum Weight:

Maximum take-off weight (VSP= 230 km/h) – (see note no.5)	5700 kg
Maximum take-off weight (VSP= 180 km/h) – (see note no.6)	5800 kg
Maximum take-off weight- (see note no.8)	6000 kg
Maximum take-off weight for L 410 UVP-LW - (see note no.9)	5700kg
Maximum landing weight	5500 kg
Maximum zero-fuel weight	5300 kg

13. Centre of Gravity Range:

Forward c.g. limit	17% MAC
Aft c.g. limit	28% MAC

14. Datum:	Datum point is the levelling point No. 2 on the fuselage, located 2.730 m aft of the fuselage nose tip.
15. (reserved)	
16. Levelling Means:	In longitudinal direction, the levelling plane is defined by levelling points No. 3, 5, 6, in lateral direction by levelling points No. 19L and 19P.
17. Minimum Flight Crew:	2
18. Number of seats:	15 pax
19. (reserved)	
20. Baggage / Cargo Compartments	Maximum baggage load - forward baggage compartment 140 kg - aft baggage compartment 150 kg - Cargo kit 1000 kg
21. Wheels and Tyres	Nose wheel K21-6000-7 with tyre 9.00-6(550 x 225) M4 or 9.00-6/906 TO6 - Good Year Main wheel K20-6100-7 with tyre 12.50-10(720 x 310) M4 or 29x11,0-10/11OTO1-1 Good Year

B IV. Operating and Service Instructions

Flight Manual

English version:
Do-L410-1019.2 Flight Manual for the L 410 UVP Aeroplane

Czech version:
Do-L410-1019.2 Letová příručka letounu L-410 UVP

Instructions for continued airworthiness:

1. Maintenance Schedule:

English version:
For aircraft in overhaul-free maintenance system:
Do-L410-1053.5 Maintenance Schedule for the L 410 UVP Aeroplane without overhaul.

For aircraft converted to overhaul-free maintenance system after 30.6.1998:
Do-L410-1053.6 Maintenance Schedule for the L 410 UVP Aeroplanewithout overhaul

Czech version:
For aircraft in overhaul maintenance system:
Do-L410-1053.2 Předpis pro údržbu letounu L-410 UVP

For aircraft in overhaul-free maintenance system:
Do-L410-1053.4 Předpis pro údržbu letounu L-410 UVP bez GO

2. Maintenance Manual:

English version:
Do-L410-1131.0 Maintenance Manual for the L 410 UVP Aeroplane
Czech version:
Do-L410-1131.1 Provozně technická příručka pro letouny L-410 UVP

3. Album of Production, Operation and Repair Tolerances

English version:
Do-L410-2032.2 Album of Production, Operation and Repair Tolerancesof the L 410 UVP Aeroplane

Czech version:
Do-L410-2032.0 Album výrobních, provozních a opravárenských tolerancí

4. Aging aircraft program

English version:
Do-L410-1229.2 Aging aircraft program for the L 410 M aeroplane, L 410 UVP aeroplane,L 410 UVP-E aeroplane, L 410 UVP-E9 aeroplane, L 410 UVP-E20 aeroplane, L-420 aeroplane

Czech version:
Do-L410-1229.0 Příručka pro kontrolu letounů starších 20 let pro typy L 410 M, L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L-420

5. Structural Repair Manual

English version:
Do-L410-2021.2 Airframe Repair Manual L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20 Aeroplane

Czech version:
Do-L410-2021.1 Příručka pro opravu draku letounu L-410 v polních podmínkách

6. Inspection Manual

English version:
Do-L410-2012.2 Inspection Manual for the L 410 UVP Aeroplane

Czech version:
Do-L410-2012.0 Příručka pro revizi letounů L-410 UVP

Others Manuals:

1. Wiring Manual

English version:
Do-L410-1064.0 Wiring Manual for the L 410 UVP Aeroplane

Czech version:
Do-L410-1064.1 Album elektroschemat pro letouny L-410 UVP

2. Illustrated Parts Catalogue

English version:
Do-L410-2052.2 Illustrated Parts Catalogue for the L 410 UVP Aeroplane

Czech version:
Do-L410-1044.1 Illustrated Parts Catalogue for the L-410 UVP

Eligible Serial Numbers

L410 UVP
770001, 770003, 770101, 770102, 770103, 790201 through 790220, 790301 through 790325, 800326 through 800330, 800401 through 800430, 800501 through 800530, 810601 through 810640, 810701 through 810732, 820733 through 820740, 820801 through 820840, 820901 through 820925, 830921, 830922, 830935 through 830940, 831001 through 831040, 831101 through 831125, 831135 through 831138, 841139, 841140, 841201 through 841240, 841301 through 841322, 841325, 841327 through 841333, 841338, 851335 through 851340, 851401 through 851427, 851431 through 851440, 851501 through 851520, 851527.

L 410 FG:
851521 through 851526, 851528

B V. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 79- 02 on July 10, 1979.
2. List of NLGS-2 requirements for which exemptions have been approved:
   - 3.1.5., 3.1.8., 3.18.2., 3.4.3.6, 3.4.3.7., 3.4.3.8, 3.4.3.9 3.4.3.10, 3.4.3.11, 3.6.3.9, 3.6.3.10, 3.4.1.2, 3.4.1.11, 3.4.2.3, 3.6.1.1, 3.6.1.13, 3.6.3.5 Various conditions of runway surface
   - 3.4.3.5, 3.6.3.8, 3.7.4.5 Aeroplane movement at cross wind
   - 3.6.1.5, 3.6.3.1 Landing distance from a height of 15 m
   - 3.7.3 Wheel control forces
   - 3.7.3.7 Ability to trim the aeroplane longitudinally
   - 3.7.4.2 Spiral motion of the aeroplane
   - 3.7.5.5 Flight performance in icing conditions
   - 4.2.6, 3.1.2 Windshield strength
   - 5.4.6, 5.4.8 Brake control system
   - 5.1.11 Cabin noise
   - 5.4.17 Brake system warning indication
   - 5.5.5 Use of non-combustible hydraulic fluid
   - 5.5.9 Hydraulic system backup
   - 5.6.11, 5.11.12.5, 5.11.12.6, 7.5.3.1.2a, 7.5.1.2.2 Incombustibility of padding materials
   - 5.7.2 Heating in pilot and passenger compartments
   - 5.7.6 Air temperature in pilot compartment
   - 5.7.8 Air-conditioning system
   - 5.7.24 Automatic temperature control in pilot and passenger compartments
   - 5.7.28 Maximum temperature of mixed air
   - 5.7.32 Hot air temperature measurement
   - 5.7.33 Air-conditioning system mode indication
   - 5.9.6 Engine air intake icing indication
   - 5.10.1.1, 5.10.3, 8.4.1.2, 8.4.2.1, 8.4.3.3, 8.4.3.5 Cockpit noise recorder
   - 5.10.1.2 Flight data recorder
   - 5.10.2.2 Flight data recording duration
   - 5.11.8.2 Windows in emergency exits
   - 5.11.10.1 Minimum width of aisle
   - 5.12.6 Single-point fuelling
   - 6.6.4 Clearance between propeller blade tips and airframe parts
   - 7.1.1.11 Fuel transfer
   - 7.1.2.9 Continuous fuelling
   - 7.1.3.9 Impossibility of installation of non-return valves in reverse sense
   - 7.1.3.11 Fuel system markings
   - 7.17.1, 7.2.2.12, 7.2.6.1, 8.2.3.1, 7.1.7.2 Fuel flowmeter
   - 7.1.7.3, 7.1.8.8.1 Fuel quantity measurement accuracy
   - 7.1.8.8.3 Calibration of fuel level indicator
   - 7.2.1.5 Overfilling of engine with oil
   - 7.2.3.2 Oil system marking
   - 7.5.1.3 Fire resistance of cable bundles

- 8.4.1.2, 8.4.3.3 Passenger address system
- 8.4.2.1, 8.4.3.6, 2.2.21, 2.2.2 Emergency locator transmitter
- 8.5.3.1, 8.5.3.2, 8.5.4.9 Power supply of category 1 and 2 electrical services
- 8.5.4.2, 8.5.8.1 Generator characteristics
- 8.5.4.4, 8.5.8.1, 8.1.2.9 Auxiliary power supply characteristics
- 8.5.5.5, 8.5.8.1 Standby power supply characteristics
- 8.5.5.11, 8.5.8.1 Characteristics of ground power supply connectors
- 8.5.6.1, 8.5.8.2, 8.1.2.9 Characteristics of electrical loads
- 8.5.7.1 Self-extinguishing properties of electrical conductors
- 8.5.7.2 Location, attachment, binding, and protection of cable bundles
- 8.5.7.7 Security of cable attachment in connectors
- 8.6.2.17 Flash frequency of anti-collision beacon
- 8.7.1.9 Cockpit control knobs
- 7.5.1.3.5 Fire warning sensors
- 7.5.1.4.6, 7.5.1.4.8, 7.5.1.2.7, 7.5.4.3.2 Automatic operation of fire extinguishing system
- 7.5.1.4.7 Inadvertent actuation of fire extinguishing system
- 7.5.1.4.11 Fire extinguishing system marking
- 7.5.2.1.7 Compressor air bleed
- 7.5.2.3.2 Fire extinguishing in engine inside cavities
- 7.5.3.2.3 Front baggage compartment fire warning system
- 8.1.2.14 Electromagnetic compatibility of equipment
- 8.2.2.1.1.b Limit angle of bank warning Autopilot
- 8.2.2.1.7, 8.2.2.1.9 Warning of pitch-angle, bank-angle and heading indication malfunction
- - 8.3.2.1, 8.3.3.4, 2.2.2, 2.2.21 ATC transponder

3. Previous maximum spoiler operating speed was provided by TC 79-02.

4. Previous maximum take-off weight was provided by TC 79-02

5. Realisation of Service Bulletin L-410 UVP/052a Bulletin provides increasing of MTOW to 5800 kg.

6. Service Bulletin L-410 UVP/052a Bulletin provides reducing of maximum spoiler operating speed to 180 km/h IAS.

7. Realisation of Service Bulletin L-410 UVP/084b Bulletin provides increasing of MTOW to 6000 kg.

8. Duly performance of the L410UVP/140b Service Bulletin (recorded to the Aircraft Log Book) converts the L-410 UVP – Turbolet model to the L-410 UVP-LW model with lower MTOW 5700kg.

9. L 410 FG variant is designed for photogrammetric works only.

~~2.~~ The permission for continuous operation of each listed S/N aircraft within EU member states after 1 July 2010 will be granted based on condition that essential safety modifications are carried out on the aircraft in accordance with the Service Bulletin L410 UVP/149b as mandated by EASA Airworthiness Directive No. 2008-0103.
Aircraft that comply with Part A and Part B of Service Bulletin L410 UVP/149b will be without any additional operation limitations.
Aircraft that only comply with Part B of Service Bulletin L410 UVP/149b will be restricted to transport of maximum 9 passengers or to Para trooping purposes.

SECTION C: L-410 UVP–E Type Design

C I. General

1. Data Sheet No: EASA.A.026

2. Type / Model / Variant

- Type:	L-410
- Models:	L-410 UVP-E L 410 UVP-E-LW (see note no.4)
- Variant:	

3. Airworthiness Category:	Commuter
4. Type Certificate Holder:	Aircraft Industries, a.s.Na Záhonech 1177, 686 04 Kunovice CZECH REPUBLIC
5. Manufacturer:	LET, n.p. 686 04 Kunovice 1177 CZECHOSLOVAKIA / CZECH REPUBLIC LET, a.s. 686 04 Kunovice 1177 CZECHOSLOVAKIA / CZECH REPUBLIC
6. National Certification Date:	January 30, 1986
7. CAA Application Date:	1981
8. CAA Recommendation Date:	---
9. EASA Type Certification Date**:**	28 March, 2007

C II. Certification Basis

1. Reference Date for determining the applicable requirements:	
2. CAA CZ Type Certificate Data Sheet No	71-04
3. CAA CZ Certification Basis:	---
4. Airworthiness Requirements:	- NLGS-2, Issue 2, 1974, Chapters 2, 3, 4, 5, 6 7, 8 including Changes 1 to 21, temporary changes applicable to airplanes having a weight of less than 10 000 kg, and select requirements of ENLGS. - Refer to Supplement No. 3 for list of NLGS-2 requirements having been replaced by the requirements of ENLGS.
5. Requirements elected to comply	None

6. EASA Special Conditions:	None
7. EASA Exemptions:	Refer to C VI. Notes, paragraph 4
8. EASA Equivalent Safety Findings:	For those exemptions specified in item 3 above appropriate measures were accepted showing, as a minimum, the same level of safety. These measures form parts of the certification data.
9. EASA Environmental Standards:	L16/I, Part II, Chapter 5
3. Operational Suitability Certification Basis:	MMEL: CS-MMEL, Initial Issue

C III. Technical Characteristics and Operational Limitations

4. Type Design Definition:	Specification Sheet B 500 200 N - L - 410 UVP - E
5. Description:	Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists of main and nose landing gear. L410 UVP-E with Ambulance Kit installation is determined for transport of 9 patients.
6. Equipment:	The list of approved equipment is shown in the Maintenance Manual.

7. Dimensions:

Wingspan	19.980 m	with wing tips tanks
	19.479 m	without wing tip tanks
Length	14.467 m	
Height	5.829 m	
Wing Area	35.18 m^2	with wing tips tanks
	34.86 m^2	without wing tip tanks

8. Engines: 2

8.1. Model: WALTER M 601 E

8.1.1. Type Certificate: EASA.E.070 (replacing 89-03, CAA CZ issued)

8.1.2. Engine Limits

Maximum continuous power rating:	
Maximum power	560 kW
Max. gas generator speed	100.5 %
Max. propeller speed	2080 rpm
Max. ITT	760 °C
Take-off power rating:	
Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Take-off power rating with water injection:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C

Contingency power rating:

Maximum power	595 kW
Max. gas generator speed	102 %
Max. propeller speed	2080 rpm
Max. ITT	780 °C

or

8.2. Model: WALTER M 601E-21

8.2.1. Type Certificate: EASA.E.070 (replacing 89-03, CAA CZ issued)

8.2.2. Engine Limits

Maximum continuous power rating:

Maximum power	560 kW
Max. gas generator speed	100.5 %
Max. propeller speed	2080 rpm
Max. ITT	760°C

Take-off power rating:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Take-off power rating with water injection:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Contingency power rating:

Maximum power	595 kW
Max. gas generator speed	102 %
Max. propeller speed	2080 rpm
Max. ITT	780 °C

9. Propellers: 2

9.1. Model: V510

9.1.1. Type Certificate: EASA.P.029 (replacing 89-04, CAA CZ issued)

9.1.2. Number of blades: 5

9.1.3. Sense of Rotation: Clockwise in view of flight direction

9.1.4. Diameter: 2300 mm

10. Fluids:

10.1. Fuel

T1 according to ST SEV 5024-85, or GOST 10227-86
TS 1 according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
RT according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
PL 6 according to PND 25005-76
PL 7 according to PND 25005-92
JET A according to ASTMD 1655-89
JET A-1 according to ASTMD 1655-89, or DERD 2494
PSM 2 according to PN-86/C-96026

10.2. Oil

Aero Shell Turbo Oil 500
Aero Shell Turbo Oil 555
Aero Shell Turbo Oil 560
Mobil Jet 0 II
B3V (Russian production)
Exon TO 2380
Castrol 599

11. Fluid capacities:

11.1. Fuel:	Standard Tank	Total:	1000	kg
		Usable:	991	kg
	Wing Tips Tank	Total:	314	kg
		Usable:	310	kg
11.2. Oil:	Engine	Maximum:	11	Litre
		Minimum:	5,5	Litre

12. Air Speeds:

Maximum 22 manoeuvring speed	v_A	260 km/h IAS
Maximum operating speed	v_{MO}	350 km/h IAS
Maximum flaps extended speed, landing configuration 42°	v_{FE}	220 km/h IAS
Maximum flaps extended speed, take-off configuration 18°	V_{FE}	250 km/h IAS
Maximum landing gear operating speed	v_{LO}	250 km/h IAS
Maximum landing gear extended speed	v_{LE}	250 km/h IAS
Maximum spoiler operating speed	V_{SP}	190 km/h IAS
Minimum control speed on ground	$V_{min\ ER}$	130 km/h IAS
Minimum control speed, take-off	$V_{min\ EV}$	135 km/h IAS
Minimum control speed, balked landing	$V_{min\ EK}$	130 km/h IAS
Minimum control speed, landing	$V_{min\ EP}$	120 km/h IAS

13. Maximum Operating Altitude: 4250 m

14. All-weather Capability:
- The aircraft is approved for Day and Night VFR and IFR flights.
- The aircraft is approved for flights in condition of low and mean icing conditions at temperatures not lower than – 20 °C.

15. Maximum Weight:

Maximum taxiing weight	6420 kg
Maximum take-off weight	6400 kg
Maximum take-off weight for L 410 UVP-E-LW - (see note no.5)	5700kg
Maximum landing weight	6200 kg
Maximum landing weight in exceptional cases	6400 kg
Maximum zero-fuel weight	5870 kg

16. Centre of Gravity Range:

Forward c.g. limit	17 % MAC
Aft c.g. limit	28 % MAC

17. Datum: Datum point is the levelling point No. 2 on the fuselage, located 2.730 m aft of the fuselage nose tip.

18. (reserved)

19. Levelling Means: In longitudinal direction, the levelling plane is defined by levelling points No. 3, 5, 6, in lateral direction by levelling points No. 19L and 19P.

20. Minimum Flight Crew: 2

21. Number of seats: 19 pax
9 pax. (L410UVP-E with Ambulance)

22. (reserved)

23. Baggage / Cargo Compartments

Maximum baggage load

- forward baggage compartment 140 kg
- aft baggage compartment 150 kg
- Cargo kit 1000 kg

24. Wheels and Tyres

Nose wheel K39-1100-7 with tyre
9.00-6 (550 x 225) M4 or
9.00-6/906 TO6-1 - Good Year

Main wheel K38-1100-7 with tyre
12.50-10 (720 x 310) M3 or M4 or
29x11,0-10/11OTO1-1 Good Year

C IV. Operating and Service Instructions

Flight Manual

English version:
Do-L410-1215.2 Airplane Flight Manual for the L 410 UVP-E Aeroplane

Czech version:
Do-L410-1215.0 Letová příručka letounu L - 410 UVP - E

Instructions for continued airworthiness:

1. Maintenance Schedule:

English version:

For aircraft in overhaul maintenance system:
Do-L410-1221.1 Maintenance Schedule for the L 410 UVP-E Aeroplane

For aircraft in overhaul-free maintenance system:
Do-L410-1222.1 Maintenance Schedule for the L 410 UVP-E Aeroplane without overhaul

Czech version:

For aircraft in overhaul maintenance system:
Do-L410-1221.1 Předpis pro údržbu letounu L - 410 UVP - E

For aircraft in overhaul-free maintenance system:
Do-L410-1222.1 Předpis pro údržbu letounu L - 410 UVP - E bez GO

2. Maintenance Manual:

English version:
Do-L410-1232.2 Maintenance Manual for the L 410 UVP-E Aeroplane,
L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:
Do-L410-1232.0 Provozně technická příručka pro letouny L - 410 UVP - E,
L - 410 UVP - E9, L - 410 UVP - E20

3. Album of Production, Operation and Repair Tolerances

English version:
Do-L410-2031.2 Album of Production, Operation and Repair Tolerances of the
L 410 UVP-E, E9, E20 Aeroplane

Czech version:

Do-L410-2031.0 Album výrobních, provozních a opravárenských toleranceL – 410 UVP – E, E9, E20

4. Aging aircraft program

English version:

Do-L410-1229.2 Aging aircraft program for the L 410 M aeroplane, L 410 UVP aeroplane, L 410 UVP-E aeroplane, L 410 UVP-E9 aeroplane, L 410 UVP-E20 aeroplane, L-420 aeroplane

Czech version:

Do-L410-1229.0 Příručka pro kontrolu letounů starších 20 let pro typy L 410 M, L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L-420

5. Structural Repair Manual

English version:

Do-L410-2021.2 Airframe Repair Manual L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-2021.1 Příručka pro opravu draku letounu L-410 v polních podmínkách

6. Inspection Manual

English version:

Do-L410-2011.2 Inspection Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-2011.0 Příručka pro revizi letounů L – 410 UVP - E, L – 410 UVP - E9,L – 410 UVP – E20

Others Manuals:

1. Wiring Manual

English version:

Do-L410-1242.2 Wiring Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Do-L410-1241.4 Wiring Manual for the L 410 UVP-E Aeroplane

Czech version:

Do-L410-1242.0 Album elektroschemat pro letouny L – 410 UVP – E, L – 410 UVP – E9, L – 410 UVP – E20

Do-L410-1241.1 Album elektroschemat letounu L – 410 UVP - E

2. Illustrated Parts Catalogue

English version:

Do-L410-2051.2 Illustrated Parts Catalogue for the L 410 UVP-E Aeroplane,L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-2051.0 Katalog dílů a montážních jednotek pro letouny L – 410 UVP – E, L – 410 UVP – E9, L – 410 UVP – E20

Eligible Serial Numbers

Serial Numbers of L-410 UVP-E aircraft since production:

851321, 851324, 851334, 851428 through 851430, 861601 through 861620, 861701 through 861730, 861801 through 861810, 861813, 871811 through 871812, 871923, 871924, 872006 through 872038, 882207, 892214 through 892216, 892228, 892229, 892301, 892311 through 892324, 892329, 892334 through 892343, 892401 through 902406, 902414, 902418 through 902440, 902501 through 902521, 902525 through 902527, 912528 through 912540, 912601, 912602, 912605 through 912609, 912612, 912614, 912615, 912616, 912618, 952624 through 952626

Other Serial Numbers are eligible as L-410 UVP-E model after rebuilding according to Service Bulletin L410UVP-E/108b recorded in an Airplane Log Book.

C V. Operational Suitability Data

Master Minimum Equipment List (MMEL)

Do-L410-3000.2 Master Minimum Equipment List L410 UVP-E, E9, E20

C VI. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 86-01 on January 30, 1986.

25. List of NLGS-2 requirements having been replaced by ENLGS requirements:
    - NLGS-2 para 3.6.1.5 replaced by ENLGS para 3.6.2.1 Actual landing distances
    - NLGS-2 para 5.2.8.4 replaced by ENLGS para 5.2.8.4 Remote electric control of wing flaps and spoilers
    - NLGS-2 para 5.4.2 replaced by ENLGS para 5.4.2 Brake fluid leakage
    - NLGS-2 para 5.4.6 replaced by ENLGS para 5.4.6 Landing with braked wheels
    - NLGS-2 para 5.4.8 replaced by ENLGS para 5.4.6 Skidding with braked wheels
    - NLGS-2 para 5.5.5 replaced by ENLGS para 5.5.5 Incombustible hydraulic fluid
    - NLGS-2 para 5.5.10 replaced by ENLGS para 5.5.9 Automatic change-over of primary hydraulic systems
    - NLGS-2 para 5.5.13 replaced by ENLGS para 5.5.5 Fire resistance and explosion resistance of hydraulic system
    - NLGS-2 para 5.7.6 replaced by ENLGS para 5.7.4 Control of air temperature in cabin
    - NLGS-2 para 5.11.8.2 replaced by ENLGS para 5.11.7.16 Windows in emergency exits
    - NLGS-2 para 7.1.2.9 replaced by ENLGS para 7.1.2.8 Part only: Fuelling time
    - NLGS-2 para 7.5.1.2.7 replaced by ENLGS para 7.5.1.2.5 Automatic operation of fire extinguishing system during emergency landing
    - NLGS-2 para 7.5.1.4.8 replaced by ENLGS para 7.5.1.2.5 Actuation of fare extinguishing system during emergency landing
    - NLGS-2 para 8.5.5.11 replaced by ENLGS para 8.5.2.13

26. List of NLGS-2 requirements for which exemptions have been approved:
- 3.6.1.3 Landing distances required
- 3.7.5.2 Transient process characteristics during critical engine failure
- 5.4.2 Brake fluid leakage
- 5.4.17 Brake system warning indication
- 5.7.2 Independence of air-conditioning system
- 5.12.6 Single-point fuelling
- 5.11.10.1 Width of aisle
- 7.1.1.11 Overfilling of fuel tanks
- 7.1.7.1 Fuel system instruments
- 7.1.7.2 Fuel quantity checking
- 7.1.7.3 Fuel reserve checking error
- 7.1.8.8.1 Reserve fuel quantity indicator error
- 7.2.6.1 Oil system instruments
- 7.5.1.1.1a Fire precautions
- 7.5.1.4.6 Automatic actuation of fire extinguishing system
- 7.5.1.4.7 Inadvertent actuation of fire extinguishing system
- 8.2.2.1.7 Pitch-angle, bank-angle, and heading indication after a failure
- 8.2.2.1.9 Indication of correct operation of pitch-angle, bank-angle, and headingindicators
- 8.2.3.1 Engine instruments
- 8.5.4.2 Generator characteristics
- 8.5.5.5 Characteristics of protective derives
- 8.5.6.1 Electrical loads-compliance with the requirements of P8.5
- 8.5.7 Self-extinguishing properties of electrical conductors
- 8.5.8.1 Electrical loads-compliance with the requirements of P8.5
- 8.7.1.9 Cockpit control knobs-colour contrast

4. Duly performance of the Service Bulletin L410UVP-E/192b (recorded to the Aircraft Log Book) converts the L-410 UVP-E model to the L-410 UVP-E-LW model with lower MTOW 5700kg.

5. The permission for continuous operation of each listed S/N aircraft within EU member states after 1 July 2010 will be granted based on condition that essential safety modifications are carried out onthe aircraft in accordance with the Service Bulletin L-410 UVP-E/230b as mandated by EASA Airworthiness Directive 2008-0104.
Aircraft that comply with Part A and Part B of Service Bulletin L-410 UVP-E/230b will be without any additional operation limitations.
Aircraft that only comply with Part B of Service Bulletin L-410 UVP-E/230b will be restricted to transport of maximum 9 passengers or to Para trooping purposes.

SECTION D: L 410 UVP – E9 Type Design

D I. General

1. Data Sheet No: EASA.A.026

2. Type / Model / Variant
   - Type: L-410
   - Model: L 410 UVP - E9
   - Variant:

3. Airworthiness Category: Commuter

4. Type Certificate Holder: Aircraft Industries, a.s.
   Na Záhonech 1177,
   686 04 Kunovice
   CZECH REPUBLIC

5. Manufacturer: LET, n.p.
   Na Záhonech 1177
   686 04 Kunovice
   CZECHOSLOVAKIA

   LET, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECHOSLOVAKIA / CZECH REPUBLIC

   LETECKÉ ZÁVODY, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC

   Aircraft Industries, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC

6. National Certification Date: March 22, 1988

7. CAA Application Date: ---

8. CAA Recommendation Date: ---

9. EASA Type Certification Date**:** 28 March, 2007

D II. Certification Basis

1. Reference Date for determining the applicable requirements:

2. CAA CZ Type Certificate Data Sheet No 71-04

3. CAA CZ Certification Basis: ---

4. Airworthiness Requirements: JAR 25, Change 11, dated 17.03.1986

5. Requirements elected to comply	None
6. EASA Special Conditions:	None
7. EASA Exemptions:	Refer to D VI. Notes, paragraph 3
8. EASA Equivalent Safety Findings:	For those exemptions specified in item 3 above appropriate measures were accepted showing, as a minimum, the same level of safety. These measures form parts of the certification data.
9. EASA Environmental Standards:	L16/I, Part II, Chapter 10
10. Operational Suitability Certification Basis:	MMEL: CS-MMEL, Initial Issue

D III. Technical Characteristics and Operational Limitations

1. Type Design Definition:		Specification sheet B 500 202 N - L 410 UVP - E9	
2. Description:		Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists of main and nose landing gear. L410 UVP-E9 with Ambulance Kit installation is determined for transport of 9 patients.	
3. Equipment:		The list of approved equipment is shown in the Maintenance Manual.	
4. Dimensions:			
	Wingspan	19.980 m	with wing tips tanks
		19.479 m	without wing tip tanks
	Length	14.467 m	
	Height	5.829 m	
	Wing Area	35.18 m^2	with wing tips tanks
		34.86 m^2	without wing tip tanks
5. Engines:		2	
5.1. Model:		WALTER M 601 E	
5.1.1.Type Certificate:		EASA.E.070 (replacing 89-03, CAA CZ issued	

5.1.2.Engine Limits

Maximum continuous power rating:	
Maximum power	560 kW
Max. gas generator speed	100.5 %
Max. propeller speed	2080 rpm
Max. ITT	760 °C
Take-off power rating:	
Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Take-off power rating with water injection:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C

Contingency power rating:

Maximum power	595 kW
Max. gas generator speed	102 %
Max. propeller speed	2080 rpm
Max. ITT	780 °C

or

5.2. Model: WALTER M 601E-21

5.2.1. Type Certificate: EASA.E.070 (replacing 89-03, CAA CZ issued)

5.2.2. Engine Limits

Maximum continuous power rating:

Maximum power	560 kW
Max. gas generator speed	100.5 %
Max. propeller speed	2080 rpm
Max. ITT	760°C

Take-off power rating:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Take-off power rating with water injection:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Contingency power rating:

Maximum power	595 kW
Max. gas generator speed	102 %
Max. propeller speed	2080 rpm
Max. ITT	780 °C

6. Propellers: 2

6.1. Model: V510

6.1.1. Type Certificate: EASA.P.029 (replacing 89-04, CAA CZ issued)

6.1.2. Number of blades: 5

6.1.3. Sense of Rotation: Clockwise in view of flight direction

6.1.4. Diameter: 2300 mm

7. Fluids:

7.1. Fuel T1 according to ST SEV 5024-85, or GOST 10227-86
TS 1 according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
RT according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
PL 6 according to PND 25005-76
PL 7 according to PND 25005-92
JET A according to ASTMD 1655-89
JET A-1 according to ASTMD 1655-89, or DERD 2494
PSM 2 according to PN-86/C-96026

7.2. Oil
Aero Shell Turbo Oil 500
Aero Shell Turbo Oil 555
Aero Shell Turbo Oil 560
Mobil Jet 0 II
B3V (Russian production)
Exon TO 2380
Castrol 599

8. Fluid capacities:

8.1. Fuel:	Standard Tank	Total:	1000	kg
		Usable:	991	kg
	Wing Tips Tank	Total:	314	kg
		Usable:	310	kg
8.2. Oil:	Engine	Maximum:	11	Litre
		Minimum:	5,5	Litre

9. Air Speeds:

Maximum operating speed	v_{MO}	335 km/h IAS
Maximum flaps extended speed, landing configuration 42°	v_{FE}	220 km/h IAS
Maximum flaps extended speed, take-off configuration 18°	v_{FE}	250 km/h IAS
Maneuvering speed	v_A	260 km/h IAS
Maximum landing gear operating speed	v_{LO}	250 km/h IAS
Maximum landing gear extended speed	v_{LE}	250 km/h IAS
Maximum spoiler operating speed	v_{SP}	190 km/h IAS
Minimum control speed on ground	v_{MCG}	130 km/h IAS
Minimum control speed, take-off	v_{MCA}	135 km/h IAS
Minimum control speed during landing approach	v_{MCL}	135 km/h IAS

10. Maximum Operating Altitude: 4250 m

11. All-weather Capability:
- The aircraft is approved for Day and Night VFR and IFR flights.
- The aircraft is approved for flights in condition of low and mean icing conditions at temperatures not lower than -20 °C

12. Maximum Weight:

Maximum taxiing weight	6620 kg
Maximum take-off weight	6600 kg
Maximum landing weight	6400 kg
Maximum landing weight in exceptional cases	6600 kg
Maximum zero-fuel weight	5870 kg

13. Centre of Gravity Range:

Forward c.g. limit	17 % MAC
Aft c.g. limit	30 % MAC

14. Datum: Datum point is the levelling point No. 2 (LP 2) on the fuselage, located 2.730 m aft of the fuselage nose tip

15. (reserved)

16. Levelling Means: In longitudinal direction, the levelling plane is defined by levelling points No. 3, 5, 6, in lateral direction by levelling points No. 19L and 19P.

17. Minimum Flight Crew: 2

18. Number of seats: 19 pax
9 pax. (L410UVP-E9 with Ambulance)

19. (reserved)

20. Baggage / Cargo Compartments

Maximum baggage load

- forward baggage compartment 140 kg
- aft baggage compartment 150 kg
- Cargo kit 1000 kg

21. Wheels and Tyres

Nose wheel K39-1100-7 with tyre 9.00-6 (550 x 225) M4 or 9.00-6/906 TO6-1 - Good Year

Main wheel K38-1100-7 with tyre 12.50-10 (720 x 310) M3 or M4 or 29x11,0-10/11OTO1-1 Good Year

D IV. Operating and Service Instructions

Flight Manual

English version:

Do-L410-1211.2 Airplane Flight Manual for the L-410 UVP-E Aeroplane

Do-L410-1213.2 Airplane Flight Manual for the L-410 UVP-E9 Aeroplane

Instructions for continued airworthiness:

1. Maintenance Schedule:

English version:

Do-L410-1225.2 Maintenance Schedule for the L 410 UVP-E9 Aeroplanewithout overhaul

Czech version:

Do-L410-1225.0 Předpis pro údržbu letounu L-410 UVP-E9 bez GO

2. Maintenance Manual:

English version:

Do-L410-1232.2 Maintenance Manual for the L 410 UVP-E Aeroplane,L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-1232.0 Provozně technická příručka pro letouny L - 410 UVP - E, L - 410 UVP - E9, L - 410 UVP - E20

3. Album of Production, Operation and Repair Tolerances

English version:

Do-L410-2031.2 Album of Production, Operation and Repair Tolerancesof the L 410 UVP-E, E9, E20 Aeroplane

Czech version:

Do-L410-2031.0 Album výrobních, provozních a opravárenských tolerancí L-410 UVP-E, E9, E20

4. Aging aircraft program

English version:

Do-L410-1229.2	Aging aircraft program for the L 410 M aeroplane, L 410 UVP aeroplane,L 410 UVP-E aeroplane, L 410 UVP-E9 aeroplane, L 410 UVP-E20 aeroplane, L-420 aeroplane

Czech version:

Do-L410-1229.0	Příručka pro kontrolu letounů starších 20 let pro typy L 410 M, L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L-420

5. Airframe Repair Manual

English version:

Do-L410-2021.2	Airframe Repair Manual L 410 UVP-E, E9, E20 Aeroplane

Czech version:

Do-L410-2021.1	Příručka pro opravu draku letounu L-410

6. Inspection Manual

English version:

Do-L410-2011.2	Inspection Manual for the L 410 UVP Aeroplane, L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane and L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-2011.0	Příručka pro revizi letounů L-410 UVP-E, L-410 UVP-E9,L-410 UVP-E20

Others Manuals:

1. Wiring Manual

English version:

Do-L410-1242.2	Wiring Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-1242.0	Album elektroschemat pro letouny L - 410 UVP - E,L - 410 UVP - E9, L - 410 UVP - E20

2. Illustrated Parts Catalogue

English version:

Do-L410-2051.2	Illustrated Parts Catalogue for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-2051.0	Katalog dílů a montážních jednotek pro letouny L-410UVP-E, L-410 UVP-E9, L-410 UVP-E20

Eligible Serial Numbers

Serial Numbers of L 410 UVP-E9 since production
882039, 882040, 912619, 912620, 912627, 922701, 922702, 942703, 952623, 962632, 962633, 962704, 962715, 012638, 022634,

Other Serial Numbers are eligible as L 410 UVP-E9 model after rebuilding according to Service Bulletin L410UVP-E/095b recorded in an Airplane Log Book.

D V. Operational Suitability Data

Master Minimum Equipment List (MMEL)

Do-L410-3000.2 Master Minimum Equipment List L410 UVP-E, E9, E20

D VI. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 88- 01 on March 22, 1988.

2. List of JAR-25 requirements for which exemptions have been approved:
   - JAR 25.607 (a) Some removable fasteners in those systems specified in (1) and (2) of this paragraph do not incorporate two separate locking devices. They are secured by means of slotted nuts and split pins.
   - JAR 25.672 (a) Only the condition of automatic bank control circuit is enunciated on the central warning display. Drop of pressure in the hydraulic system is indicated by a pressure gauge. Correct function of electrical circuit is checked before take-off by means of a TEST pushbutton.
   - JAR 25.677 (b) For the aileron trim tab the neutral position is only enunciated. The Aeroplane Flight Manual requires that the neutral position must be checked before taxiing-out for take-off.
   - JAR 25.679 The control surfaces can only be locked on the ground, by means of clamps. These locking devices are conspicuously marked by red flags.
   - JAR 25.703 A yellow light on the central warning display annunciates that the wing flaps are not in the take-off position. Parking brake release is indicated by the position of the control lever and a change in pressure gauge reading.
   - JAR 25.777 (e) The wing-flap control is located level with the landing gear control.
   - JAR 25.777 (f) The landing gear control is not located of the throttles, but aft of the throttles.
   - JAR 25.853 (c) The test in compliance with this requirement was not conducted.
   - JAR 25.1305 (c) A fuel flow meter indicator is not included in the fuel system for each engine. The engine power setting is sufficiently characterized by the indicated engine parameters.
   - JAR 25.1305-(c) (8) There is no indication of proper functioning of the fuel heater. Warm oil passes through the heater continuously.
     Note: Fuel heater was removed from type design by TDC ZTN 001, TDC ZKB 53 210 and TDC ZKB 53 689 for the airplanes manufactured after August 12/2009.
   - JAR 25.1305 (e) (3) Each propeller blade position below the minimum flight pitch is indicated.
   - JAR 25.1326 (a)Operation of the pitot heating system is indicates by a green light. When the system is not operating, for any reason, the green light extinguishes.
   - JAR 25.1337 (a) (2) Instrument lines and hoses have 4 mm inner diameter, which reduces therisk of escape of excessive fluid if the line fails.
   - JAR 25.1435 (a) (2)A means to indicate hydraulic fluid quantity is not installed. The hydraulic system is a closed circuit, which is not connected with the atmosphere. Hydraulic fluid leakage could only occur in the event of a failure of some system component. In such a case a separate emergency system can be used.
3. The permission for continuous operation of each listed S/N aircraft within EU member states after 1 July 2010 will be granted based on condition that essential safety modifications are carried out on the aircraft in accordance with the Service Bulletin L-410 UVP-E/231b as mandated by EASA Airworthiness Directive 2008-0105.
   Aircraft that comply with Part A and Part B of Service Bulletin L-410 UVP-E/231b will be without any additional operation limitations.
   Aircraft that only comply with Part B of Service Bulletin L-410 UVP-E/231b will be restricted to transport of maximum 9 passengers or to Para trooping purposes.

SECTION E: L 410 UVP-E20 Type Design

E I. General

1. Data Sheet No:	EASA.A.026
2. Type and models	
- Type:	L-410
- Models:	L 410 UVP-E20 L 410 UVP-E20 CARGO
3. Airworthiness Category:	Commuter
4. Type Certificate Holder:	Aircraft Industries, a.s. Na Záhonech 1177, 686 04 Kunovice CZECH REPUBLIC
5. Manufacturer:	LET, n.p. Na Záhonech 1177 686 04 Kunovice CZECHOSLOVAKIA LET, a.s. Na Záhonech 1177 686 04 Kunovice CZECHOSLOVAKIA/ CZECH REPUBLIC LETECKÉ ZÁVODY, a.s. Na Záhonech 1177 686 04 Kunovice CZECH REPUBLIC Aircraft Industries, a.s. Na Záhonech 1177 686 04 Kunovice CZECH REPUBLIC
6. National Certification Date:	October 30, 1990
7. CAA Application Date:	February 1, 1988
8. CAA Recommendation Date:	---
9. EASA Type Certification Date**:**	February 4, 2005

E II. Certification Basis

1. Reference Date for determining the applicable requirements:	February 1, 1988
2. CAA CZ Type Certificate Data Sheet No	71-04
3. CAA CZ Certification Basis:	14 CFR Part 23 at Amdt. 34

4. Airworthiness Requirements:	14 CFR Part 23 at Amdt. 34
5. Requirements elected to comply	None
6. EASA Special Conditions:	None
7. EASA Exemptions:	Refer to E.VI. Notes, paragraph 3
8. EASA Equivalent Safety Findings:	For those exemptions specified in item 3 above appropriate measures were accepted showing, as a minimum, the same level of safety. These measures form parts of the certification data.
9. EASA Environmental Standards:	L16/I, Part II, Chapter 10
10. Operational Suitability Certification Basis:	MMEL: CS-MMEL, Initial Issue Flight Crew Data (FCD) Flight Crew Data (CS-FCD Initial Issue 31 January 2014).

E III. Technical Characteristics and Operational Limitations

1. Type Design Definition:	Specification sheet B 500 245 N - L 410 UVP-E20
2. Description:	Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists ofmain and nose landing gear. L 410 UVP-E20 is determined for transport of 15 -19 passengers. L 410 UVP-E20 with Sport Parachuting kit installedis determined for parachute droppings. L 410 UVP-E20 with Ambulance kit installed isdetermined for transport of 9 patients and 3 additional passengers. L 410 UVP-E20 with Cargo kit installed is determinedfor transport of 1700 kg of cargo in two containers. L 410 UVP-E20 with the rear VIP saloon with foldingdouble seats with armrests. L 410 UVP-E20 with passenger to cargo quickchange configuration with foldable seats. L 410 UVP-E20 CARGO is determined exclusivelyfor transport of cargo in the cabin equipped with cargo restrain system, 13 lb fire extinguisher and protective breathing equipment. L 410 UVP-E20 CARGO fuselage is not equippedwith two underwing emergency exits. Standard – without wing tip tanks.Optional – with wing tip tanks.
3. Equipment:	The list of approved equipment is shown inthe Maintenance Manual.
4. Dimensions:	
Wingspan	19.980 m with wing tips tanks

	19.479	m	without wing tip tanks
Length	14.424	m	
Height	5.829	m	
Wing Area	35.18	m^2	with wing tips tanks
	34.86	m^2	without wing tip tanks

5. Engines: 2

5.1. Model: WALTER M601E

5.1.1.Type Certificate: EASA.E.070 (replacing 89-03, CAA CZ issued)

5.1.2.Engine Limits

Maximum continuous power rating:

Maximum power	560 kW
Max. gas generator speed	100.5 %
Max. propeller speed	2080 rpm
Max. ITT	760 °C

Take-off power rating:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Take-off power rating with water injection:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C

Contingency power rating:

Maximum power	595 kW
Max. gas generator speed	102 %
Max. propeller speed	2080 rpm
Max. ITT	780 °C

or

5.2. Model: WALTER M601E-21

5.2.1. Type Certificate: EASA.E.070 (replacing CAA CZ TC No 89-03)

5.2.2. Engine Limits

Maximum continuous power rating:

Maximum power	560 kW
Max. gas generator speed	100.5 %
Max. propeller speed	2080 rpm
Max. ITT	760°C

Take-off power rating:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Take-off power rating with water injection:

Maximum power	560 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735°C

Contingency power rating:

Maximum power	595 kW
Max. gas generator speed	102 %
Max. propeller speed	2080 rpm
Max. ITT	780 °C

or

5.3. Model: GE H80-200

5.3.1. Type Certificate: EASA.E.070

5.3.2. Engine Limits

Maximum continuous power rating:

Maximum power	522 kW
Max. gas generator speed	98.4 %
Max. propeller speed	1700 - 2080 rpm
Max. ITT	720°C

Take-off power rating:

Maximum power	597 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	780°C

Continuous OEI power rating:

Maximum power	597 kW
Max. gas generator speed	101.5 %
Max. propeller speed	2080 rpm
Max. ITT	780 °C

6. Propellers: 2

6.1. Model: V510

6.1.1. Type Certificate: EASA.P.029 (replacing 89-04, CAA CZ issued)

6.1.2. Number of blades: 5

6.1.3. Sense of Rotation: Clockwise in view of flight direction

6.1.4. Diameter: 2300 mm

or

6.2. Model: AV-725-1-E-C-F-R(W)/CFR230-433
(for GE H80-200 engines only)

6.2.1. Type Certificate: EASA P.031

6.2.2. Number of blades: 5

6.2.3. Sense of Rotation: Clockwise in view of flight direction

6.2.4. Diameter: 2300 mm

7. Fluids:

7.1. Fuel T1 according to ST SEV 5024 or GOST 10227-86
TS 1 according to ST SEV 5024 or GOST 10227 or ČSN 656 520
RT according to ST SEV 5024 or GOST 10227 or ČSN 656 520
PL 6 according to PND 25-005
PL 7 according to PND 25-005
JET A according to ASTM D 1655
JET A-1 according to ASTMD 1655 or DERD 2494
PSM 2 according to PN-86/C-96026
No. 3 Jet Fuel according to PRC National Standard GB 6537-2018

7.2. Oil
Aero Shell Turbo Oil 500
Aero Shell Turbo Oil 555
Aero Shell Turbo Oil 560
Mobil Jet 0 II
B3V (Russian production)
Exon TO 2380
Castrol 599

8. Fluid capacities:

8.1. Fuel:	Standard Tank	Total:	1290	Litre
		Usable:	1278	Litre
	Wing Tips Tank	Total:	400	Litre
		Usable:	395.2	Litre
8.2. Oil:	Engine	Maximum:	11.00	Litre
		Minimum:	5.50	Litre

9. Air Speeds:

Maximum operating speed	v_{MO}	181 KIAS (335 km/h IAS)
Maximum flaps extended speed, landing configuration 42°	v_{FE}	119 KIAS (220 km/h IAS)
Maximum flaps extended speed, take-off configuration 18°	v_{FE}	135 KIAS (250 km/h IAS)
Design maneuvering speed	v_A	143 KIAS (265 km/h IAS)
Maximum landing gear operating speed	v_{LO}	135 KIAS (250 km/h IAS)
Maximum landing gear extended speed	v_{LE}	135 KIAS (250 km/h IAS)
Maximum spoiler operating speed	v_{SP}	102 KIAS (190 km/h IAS)
Minimum control speed for take-off run	v_{MCG}	70 KIAS (130 km/h IAS)
Minimum control speed for take-off	v_{MCA}	73 KIAS (135 km/h IAS)
Minimum control speed for landing	v_{MCL}	73 KIAS (135 km/h IAS)
Maximum permissible spoiler extension speed	v_{MCL}	102 KIAS (190 km/hr IAS)
<u>Airplane with GE H80-200 engines and AV-725 propellers:</u>		
Operating maneuvering speed	v_o	143 KIAS (265 km/h IAS)
Minimum control speed on ground take-off run	v_{MCG}	60 KIAS (111 km/h IAS)
Minimum control speed, take-off for flaps 18°	v_{MCA}	65 KIAS (121 km/h IAS)
Minimum control speed, take-off for flaps 18°	v_{MCA}	77 KIAS (143 km/hr IAS)
Minimum control speed for landing	v_{MCL}	65 KIAS (121 km/hr IAS)

10. Maximum Operating Altitude 4250 m

11. All-weather Capability:
- The aircraft is approved for Day and Night VFR and IFR flights.
- And for intended flights in icing conditions.

12. Maximum Weight:

Maximum taxiing weight	6620 kg
Maximum take-off weight	6600 kg
Maximum landing weight	6400 kg
Maximum landing weight in exceptional cases	6600 kg
Maximum zero-fuel weight	
- without wing-tip tanks	6000 kg
- with wing-tip tanks	6060 kg

13. Centre of Gravity Range:

Forward c.g. limit	19 % MAC
Aft c.g. limit	30 % MAC

14. Datum: Datum point is the levelling point No. 2 (LP 2) on the fuselage, located 2.730 m aft of the fuselage nose tip

15. (reserved)

16. Levelling Means: In longitudinal direction, the levelling plane is defined by levelling points No. 3, 5, 6 in spanwise direction by levelling points No. 19L and 19P.

17. Minimum Flight Crew: 2

18. Number of occupants:

19	(L 410 UVP-E20)
18	(L410UVP-E20 with Sport Parachuting Kit installation)
9	(L410UVP-E20 with Ambulance Kit installation)
0	(L 410 UVP-E20 CARGO)

19. (reserved)

20. Baggage / Cargo Compartments

Maximum loading of baggage compartments for L 410 UVP-E20 with passengers:

forward baggage compartment	100 kg
aft baggage compartment	150 kg
additional aft baggage compartment	330 kg

Maximum loading of baggage/cargo compartments for L 410 UVP-E20 with cargo kit

forward baggage compartment	100 kg
aft baggage compartment	150 kg
Cargo in cargo kit container	1700 kg

Maximum loading of baggage/cargo compartments for L 410 UVP-E20 CARGO:

forward baggage compartment	100 kg
aft baggage compartment	150 kg
Cargo compartment	1700 kg

21. Wheels and Tyres

Nose wheel K39-1100-7 with tyre
9.00-6 (550 x 225) M4 or
9.00-6/906 TO6-1 - Good Year

Main wheel K38-1100-7 with tyre
12.50-10 (720 x 310) M3 or M4 or
29x11,0-10/11OTO1-1 Good Year

E IV. Operating and Service Instructions

Flight Manual

English version:

For aircraft with M601E or M601E-21 engines and V510 propellers

Do-L410-1211.2 Approved Flight manual for the L 410 UVP-E20 Aeroplane

Do-L410-1214.2 Airplane Flight manual for the L 410 UVP-E20

For aircraft with H80-200 engines and AV-725 propellers:

Do-L410-1218.2 Airplane Flight Manual for the L-410 UVP-E20 with H80-200 Engines and AV-725 Propellers

Instructions for continued airworthiness:

1. Maintenance Schedule:

English version:

Do-L410-1223.2 Maintenance Schedule for the L410 UVP-E20 Aeroplane without overhaul

The supplement No. 59 to the Maintenance Schedule Do-L410-1223.2 is issued for L410 UVP-E20 with GE H80-200 engines and AV-725 propellers.

Czech version:

Do-L410-1223.0 Předpis pro údržbu letounu L-410 UVP-E20 bez GO

2. Maintenance Manual:

English version:

Do-L410-1232.2 Maintenance Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Supplement No. 210 to the Maintenance Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane Do-L410-1232.2 is issued for L 410 UVP-E20 with GE H80-200 engines and AV-725 propellers

Czech version:

Do-L410-1232.0 Provozně technická příručka pro letouny L-410 UVP-E,L-410 UVP-E9, L-410 UVP-E20 (valid)

Do-L410-1231.1 Provozně technická příručka pro letoun L - 410 UVP - E

3. Album of Production, Operation and Repair Tolerances

English version:

Do-L410-2031.2 Album of Production, Operation and Repair Tolerancesof the L 410 UVP-E, E9, E20 Aeroplane

Czech version:

Do-L410-2031.0 Album výrobních, provozních a opravárenských tolerancíL-410 UVP-E, E9, E20

4. Aging aircraft program

English version:

Do-L410-1229.2 Aging aircraft program for the L 410 M aeroplane, L 410 UVP aeroplane, L 410 UVP-E aeroplane, L 410 UVP-E9 aeroplane, L 410 UVP-E20 aeroplane, L-420 aeroplane

Czech version:

Do-L410-1229.0 Příručka pro kontrolu letounů starších 20 let pro typy L 410 M, L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L-420

5. Structural Repair Manual

English version:

Do-L410-2021.2 Airframe Repair Manual L 410 UVP, E, E9, E20 Aeroplane

Czech version:

Do-L410-2021.1 Příručka pro opravu draku letounu L-410

6 Inspection Manual

English version:

Do-L410-2011.2 Inspection Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-2011.0 Příručka pro revizi letounů L-410 UVP-E, L-410 UVP-E9, L-410 UVP-E20

7. Supplemental Structural Inspection Document (SSID)

English version:

Do-L410-1224.2 Supplemental Structural Inspection Document (SSID)

Others Manuals:

8. Wiring Manual

English version:

Do-L410-1242.2 Wiring Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

The supplement No. 210 to the Wiring Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane Do-L410-1242.2 is issued for L 410 UVP-E20 with GE H80-200 engines and AV-725 propellers.

Czech version:

Do-L410-1242.0 Album elektroschemat pro letouny L-410 UVP-E, L-410 UVP-E9, L-410 UVP-E20

Do-L410-1241.1 Album elektroschemat letounu L - 410 UVP – E

9. Illustrated Parts Catalogue

English version:

Do-L410-2051.2 Illustrated Parts Catalogue for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

Czech version:

Do-L410-2051.0 Katalog dílů a montážních jednotek pro letouny L-410 UVP-E, L-410 UVP-E9, L-410 UVP-E20

Eligible Serial Numbers

Designation of Serial Numbers: YY-BB-NN (Year of production, Batch number, Number of the airplane in the batch) or since production year 2010: BB-NN.

Serial Numbers of L 410 UVP-E20 aircraft since production:

912603, 912604, 912611, 912613, 912617, 922710, 922711, 922726, 922728, 942705 through 942707, 952708, 962709, 972730, 972731, 982631, 982727, 992736, 062636, 062637, 072621, 072639, 072640, 082629, 082630, 082712, 082714, 092628, 092610, 092622, 092635, 092713, 092716 through 092718, 2719 through 2725, 2732 through 2734, 2737 through 2740, 2801 through 2819, 2901 through 2920, 3001 through 3015 and subsequent higher Serial Numbers in the 30-NN batch and next batches except S/N in format RBBNN, see note 5.

Other Serial Numbers are eligible for the L410 UVP-E20 model after rebuilding according to Service Bulletin L410UVP-E/094b recorded in an Aircraft Log Book.

Other Serial Numbers are eligible for the L410 UVP-E20 CARGO model after rebuilding according to Service Bulletin L410UVP-E/221b recorded in an Aircraft Log Book

E V . Operational Suitability Data

Master Minimum Equipment List (MMEL)	
Do-L410-3000.2	Master Minimum Equipment List L410 UVP-E, E9, E20
Flight Crew Data	
Do-L410- 1290.2	Minimum Syllabus for Pilot Type Rating Training for the L 410 UVP-E20 airplane

E VI. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 90- 03 on October30, 1990.

2. List of FAR-23 requirements for which exemptions have been approved:

   - FAR 23.677 (a) For the aileron trim tab the neutral position is only enunciated. The Aeroplane Flight Manual requires that the neutral position must be checked before taxiing-out for take-off.

   - FAR 23.1305 (v) There is no indication of proper functioning of the fuel heater. The heater operates automatically, there are no pilot-operated controls. A malfunction of the heater will not result in an emergency. A check of correct functioning of the fuel heater is required by theMaintenance Schedule after 300 flight hours.
     Note: Fuel heater was removed from type design by TDC ZTN 001, TDC ZKB 53 210 andTDC ZKB 53 689 for the airplanes manufactured after August 12/2009.

   - FAR 23.1307 (b) (1) There is a separate switch for each electrical power source (2 storage batteries, 4 generators). These 6 switches are located next to each other on the overhead panel. This arrangement allows the switches to be switched off almost simultaneously. Thisarrangement prevents the possibility of a loss of all electrical power sources in the event of one master switch failure.
     Note: This exemption does not apply for aircraft since s/n 3011 inclusive and for the aircraftwith the Master Switch arrangement installed iaw. Aircraft Industries Information Bulletin L410UVP-E/413b.

3. The data in this TCDS where there is no reference to the specific model of the aircraft stated, referto both L 410 UVP-E20 and L 410 UVP-E20 CARGO.

4. Certification Basis for Type Design Changes

4.1 TDC-001-E20: Cargo kit with cargo restrain system for 1700 kg:FAR 23 Amdt. 41 plus Amdt. 23-45: 23.23, 23.305, 23.851, 23.1557; Amdt. 23-46: 23.803; Amdt. 23-48: 23.301, 23.337, 23.341, 23.561; Amdt. 23-49: 23.787, 23.855; Amdt. 23-50: 23.25, 23.1581, 23.1583, 23.1585, 23.1589; Amdt. 25-115: 25.1439.

4.2 TDC-063-E20-420: Installation of Universal EFI-890R Electronic Flight Displays, FA 2200 MADRAS FDR and integrated systems:
KFC 325 Autopilot, GNS 430W NAV/COM/GPS, RDR 2000 Weather radar, KMR 675 Marker,KDM 706A DME, KR 87 ADF, AHS-1000A AHRS, KRA 405B Radar altimeter, CAS 67A
TCAS II, MARK VI EGPWS, AC32 Digital Air Data Computer, 4300-412 Stand-by attitudeindicator and 5A16 stand-by air speed indicator.
FAR 23 Amdt. 41 plus
Amdt. 23-43: 23.1322, 23.1331, 23.1357; Amdt. 23-45: 23.1525; Amdt. 23-49: 23.1303, 23.1309, 23.1311, 23.1321, 23.1323, 23.1329, 23.1351, 23.1359, 23.1365, 23.1431; Amdt. 23-50: 23.1325, 23.1543, 23.1545, 23.1563, 23.1581, 23.1583, 23.1585; Amdt. 23-57: 23.1308.

4.3 TDC-070-E-E9-E20-420: Installation of the HF KHF1050 radioFAR 23 Amdt. 41 plus
Amdt. 23-43: 23.1322, 23.1331, 23.1357; Amdt. 23-45: 23.1525; Amdt. 23-49: 23.1303, 23.1309, 23.1311, 23.1321, 23.1323, 23.1329, 23.1351, 23.1359, 23.1365, 23.1431; Amdt. 23-50: 23.1325, 23.1543, 23.1545, 23.1563, 23.1581, 23.1583, 23.1585; Amdt. 23-57: 23.1308.

4.4 TDC-078-E-E9-E20-420: Installation of Portable Toilet Porta Potti on Airplanes L410/L-420FAR 23 Amdt. 41

4.5 TDC-092-E-E9-E20-420: Ambulance kitFAR 23 Amdt. 41 plus
Amdt. 23-45: 23.23, 23.613; Amdt. 23-46: 23.807, 23.813, 23.815; Amdt. 23-48: 23.301, 23.337, 23.341, 23.561, 23.607, 23.611; Amdt. 23-49: 23.785, 23.853; Amdt. 23-50: 23.25, 23.1585, 23.1589.

4.6 TDC-094-E20-420: Conversion of toilet area in rear passenger cabin into baggage compartment:FAR 23 Amdt. 41 plus Amdt. 23-45: 23.23, 23.305, 23.613; Amdt. 23-48: 23.301, 23.337, 23.341, 23.561, 23.607, 23.611; Amdt. 23-49: 23.787; Amdt. 23-50: 23.25, 23.1585, 23.1589.

4.7 TDC-106-E20: Installation of GE H80-200 engines and AV-725 propellers:FAR 23 Amdt. 41 plus
Amdt. 23-42: 23.831, 23.939; Amdt. 23-43: 23.961, 23.1011, 23.1357, 23.1365; Amdt. 23-45: 23.23, 23.181, 23.361, 23.613, 23.655, 23.1527, 23.1549; Amdt. 23-48: 23.371, 23.393, 23.415, 23.607, 23.611, 23.657, 23.865; Amdt. 23-49: 23.1309, 23.1329, 23.1351; Amdt. 23-50: 23.25, 23.51, 23.55, 23.57, 23.59, 23.67, 23.77, 23.145, 23.147, 23.149, 23.177, 23.201, 23.203, 23.1521, 23.1543, 23.1545, 23.1563, 23.1587, 23.1589; Amdt. 23-51: 23.925, 23.929, 23.933, 23.937, 23.955, 23.1041, 23.1043, 23.1045; Amdt. 23-52: 23.1305; Amdt. 23-53: 23.901; Amdt. 23-54: 23.903; Amdt. 23-59: 23.905, 23.907.

4.8 TDC-108-E-E9-E20-420: Passenger to cargo quick change configuration with foldable seats:FAR 23 Amdt. 41 plus
Amdt. 23-45: 23.23, 23.305, 23.613; Amdt: 23-46: 23.803, 23.813, 23.815; Amdt. 23-48: 23.301, 23.337, 23.341, 23.561, 23.607, 23.611; Amdt. 23-49: 23.785, 23.787; 23.807, 23.853, 23.855; Amdt. 23-50: 23.25, 23.161, 23.1585, 23.1589.

4.9 TDC-133-E20-420: Sport Parachuting Kit:FAR 23 Amdt. 41 plus Amdt. 23-43: 23.1357, 23.1441; Amdt. 23-45: 23.23, 23.305, 23.613, 23.851; Amdt. 23-48: 23.301, 23.337, 23.341, 23.607, 23.611; Amdt. 23-49: 23.853, 23.1359, 23.1365; Amdt. 23-50: 23.25, 23.161, 23.1585, 23.1589

4.10 TDC-139-E-E9-E20-420 Flight attendant's folding seat installationFAR 23 Amdt. 41 plus
Amdt. 23-45: 23.23, 23.25, 23.305, 23.613; Amdt. 23-46: 23.815; Amdt. 23-48: 23.301, 23.337, 23.341, 23.561, 23.607, 23.611; Amdt. 23-50: 23.3, 23.1589.

4.11 TDC-199-E20 Type design changes resulting from the FAA validation of the L 410 UVP-E20and L 410 UVP-E20 CARGO models FAR 23 Amdt. 41 plus Amdt. 23-43: 23.1322, Amdt. 23-49: 23.1307, 23.1323, 23.1361, Amdt. 23-50: 23.1325, 23.1545(a), (b)(1), (b)(2), (b)(3), (b)(4) and (d).

5. L 410 UVP-E20 model with the “R” included in the Serial number, i.e. RBBNN, where BB is a batch number and NN is a number of an aircraft in the batch, are manufactured in Russian Federation. Those Serial Numbers are not eligible for registration in the EU Member States.

SECTION F: L-420 Type Design

F I. General

1. Data Sheet No: EASA.A.026

2. Type / Model / Variant
   - Type: L-410
   - Model: L-420
   - Variant:

3. Airworthiness Category: Commuter

4. Type Certificate Holder: Aircraft Industries, a.s.
   Na Záhonech 1177
   686 04 Kunovice CZECH
   REPUBLIC

5. Manufacturer:

   S/N 922729A:
   LET, n.p.
   686 04 Kunovice 1177
   CZECHOSLOVAKIA

   S/N 012735A:
   LETECKÉ ZÁVODY a.s.
   686 04 Kunovice 1177
   CZECH REPUBLIC

   Aircraft Industries, a.s.
   Na Záhonech 1177, Kunovice, PSČ: 686 04
   CZECH REPUBLIC

6. National Certification Date: March 11, 1998

7. CAA Application Date: ---

8. CAA Recommendation Date: ---

9. EASA Type Certification Date**:** 19 August 2005

F II. Certification Basis

1. Reference Date for determining the applicable requirements:

2. CAA CZ Type Certificate Data Sheet No 71-04

3. CAA CZ Certification Basis: ---

4. Airworthiness Requirements: FAR-23, including Amendment 41

5. Requirements elected to comply None

6. EASA Special Conditions: None

7. EASA Exemptions: None

8. EASA Equivalent Safety Findings: None

9. EASA Environmental Standards:
   - L16/I, Part II, Chapter 10
   - FAR Part 36

F III. Technical Characteristics and Operational Limitations

1. Type Design Definition: B 500 300 N (top specification sheet) L-420

2. Description: Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists of main and nose landing gear.
L-420 with Sport Parachuting Kit installation is determined for parachute droppings.
L-420 with Ambulance Kit installation is determined for transport of 9 patients.

3. Equipment: The list of approved equipment is shown in the Maintenance Manual.

4. Dimensions:

Wingspan	19.980 m	with wing tips tanks
	19.479 m	without wing tip tanks
Length	14.424 m	
Height	5.829 m	
Wing Area	35.18 m^2	with wing tips tanks
	34.86 m^2	without wing tip tanks

5. Engines: 2

5.1. Model: WALTER M 601 F

5.1.1. Type Certificate: EASA.E.070 (replacing CAA CZ TC No 89-03)

5.1.2. Engine Limits

Maximum continuous power rating:	
Maximum power	580 kW
Max. gas generator speed	100.5 %
Max. propeller speed	2080 rpm
Max. ITT	760°C
Take-off power rating:	
Maximum power	580 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C
Take-off power rating with water injection:	
Maximum power	580 kW
Max. gas generator speed	100 %
Max. propeller speed	2080 rpm
Max. ITT	735 °C

Maximum take-off power rating:

Maximum power	595 kW
Max. gas generator speed	102 %
Max. propeller speed	2080 rpm
Max. ITT	780°C

6. Propellers: 2
   - 6.1. Model: V510
     - 6.1.1. Type Certificate: EASA.P.029 (replacing 89-04, CAA CZ issued)
     - 6.1.2. Number of blades: 5
     - 6.1.3. Sense of Rotation: Clockwise in view of flight direction
     - 6.1.4. Diameter: 2300 mm

7. Fluids:
   - 7.1. Fuel: T1 according to ST SEV 5024-85, or GOST 10227-86
     TS 1 according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
     RT according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
     PL 6 according to PND 25005-76
     PL 7 according to PND 25005-92
     JET A according to ASTMD 1655-89
     JET A-1 according to ASTMD 1655-89, or DERD 2494
     PSM 2 according to PN-86/C-96026
   - 7.2. Oil: Aero Shell Turbo Oil 500
     Aero Shell Turbo Oil 555
     Aero Shell Turbo Oil 560
     Mobil Jet 0 II
     B3V (Russian production)
     Exon TO 2380
     Castrol 599

8. Fluid capacities:

8.1. Fuel:	Standard Tank	Total:	1000	kg
		Usable:	991	kg
	Wing Tips Tank	Total:	313.8	kg
		Usable:	305.8	kg
8.2. Oil:	Engine	Maximum:	11,00	Litre
		Minimum:	5.50	Litre

9. Air Speeds:

Maximum operating limit speed	v_{MO}	375 km/h IAS
Maximum flaps extended speed, landing configuration 42°	v_{FE}	210 km/h IAS
Maximum flaps extended speed, take-off configuration 18°	v_{FE}	297 km/h IAS
Maneuvering speed	v_A	273 km/h IAS
Maximum landing gear operating speed	v_{LO}	297 km/h IAS
Maximum landing gear extended speed	v_{LE}	297 km/h IAS

10. Maximum Operating Altitude 6100 m

11. All-weather Capability:
    - The aircraft is approved for Day and Night VFR and IFR flights.
    - And for intended flights in icing conditions

12. Maximum Weight:

Maximum taxiing weight	6620 kg
Maximum take-off weight	6600 kg
Maximum landing weight	6400 kg
Maximum landing weight in exceptional cases	5950 kg

13. Centre of Gravity Range:

Forward c.g. limit 19 % MAC
Aft c.g. limit 30 % MAC

14. Datum:

Datum point is the levelling point No. 2 (LP 2) on the fuselage, located 2.730 m aft of the fuselage nose tip

15. (reserved)

16. Levelling Means:

In longitudinal direction, the levelling plane is defined by levelling points No. 3, 5, 6 in spanwise direction by levelling points No. 19L and 19P.

17. Minimum Flight Crew:

2

18. Number of seats:

19 pax
18 pax (L-420 with Sport Parachuting Kit installation)
9 pax. (L-420 with Ambulance Kit installation)

19. (reserved)

20. Baggage / Cargo Compartments

Maximum baggage load

- forward baggage compartment 140 kg
- aft baggage compartment 150 kg
- Cargo kit 1000 kg

21. Wheels and Tyres

Nose wheel K39-1100-7 with tyre
9.00-6 (550 x 225) M4 or
9.00-6/906 TO6-1 - Good Year

Main wheel K38-1100-7 with tyre
12.50-10 (720 x 310) M3 or M4 or
29x11,0-10/11OTO1-1 Good Year

F IV. Operating and Service Instructions

Flight Manual

English version:

Do-L410-1311.2 Airplane Flight Manual for the Airplane Model L-420

Czech version:

Do-L410-1311.0 Letová příručka pro letoun L 420

Instructions for continued airworthiness:

1. Maintenance Schedule:

English version:

Do-L420-1224.2 Maintenance Schedule for the L-420 Aeroplane

Czech version:

Do-L420-1224.0 Předpis pro údržbu letounu L-420

2. Maintenance Manual:

English version:

Do-L410-1233.2 Maintenance Manual for the L-420 Aeroplane

Czech version:

Do-L410-1233.0 Provozně technická příručka pro letoun L-420

3. Album of Production, Operation and Repair Tolerances

English version:

Do-L420-1231.0 Album of Production, Operation and Repair Tolerancesof the L-420 Aeroplane

Czech version:

Do-L420-1231.0 Album výrobních, provozních a opravárenských tolerancí L-420

4. Aging aircraft program

English version:

Do-L410-1229.2 Aging aircraft program for the L 410 M aeroplane, L 410 UVP aeroplane, L 410 UVP-E aeroplane, L 410 UVP-E9 aeroplane, L 410 UVP-E20 aeroplane, L-420 aeroplane

Czech version:

Do-L410-1229.0 Příručka pro kontrolu letounů starších 20 let pro typy L 410 M, L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L-420

5. Structural Repair Manual

English version:

Do-L410-2021.2 Airframe Repair Manual L 410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L-420 Aeroplane

Czech version:

Do-L410-2021.1 Příručka pro opravu draku letounu L-410 UVP, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-E20, L -420

Others Manuals:

1. Wiring Manual

English version:

Do-L410-1243.2 Wiring Manual for the L-420 Aerplane

Czech version:

Do-L410-1243.0 Album elektroschemat pro letoun L-420

2. Illustrated Parts Catalogue

English version:

Do-L420-2052.2 Illustrated Parts Catalogue for the L-420 Aeroplane

Czech version:

Do-L420-2052.0 Katalog dílů a montážních jednotek letounu L-420

Operational Suitability Data:

Master Minimum Equipment List (MMEL)

English version:

Do-L410-1312.2 Master Minimum Equipment List and Configuration Deviation List forthe Airplane Model L-420

Czech version:

Do-L420-1224.0 Předpis pro údržbu letounu L-420

Eligible Serial Numbers: 922729A, 012735A

F V. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 98-01 on March 11, 1998.
2. EASA TC No. EASA.A.026 for the L-420 model was issued on August 19, 2005.

SECTION G: L 410 NG Type Design

G I. General

1. Data Sheet No:	EASA.A.026
2. Type / Model / Variant	
- Type:	L-410
- Model:	L 410 NG
3. Airworthiness Category:	Commuter
4. Type Certificate Holder:	Aircraft Industries, a.s.Na Záhonech 1177 686 04 Kunovice CZECH REPUBLIC
5. Manufacturer:	Aircraft Industries, a.s.Na Záhonech 1177 686 04 Kunovice CZECH REPUBLIC
6. EASA Type Certification Date**:**	19 December 2017

G II. Certification Basis

1. Reference Date for determining the applicable requirements:	December 30, 2014
2. Airworthiness Requirements:	CS-23, incl. Amdt. 4 (see Note G VI. 1)
3. Requirements elected to comply	CS-MCSD-001, Certification Memoranda, Issue 01
4. EASA Special Conditions:	SC 23.0901-01, issue 2: Rate of Water Ingestion
5. EASA Equivalent Safety Findings:	ELOS-CS23.0777-01-Iss. 1: Cockpit Controls ELOS-CS23.0777-02-Iss. 1 Landing Gear Control Handle Position ELOS-CS23.1545-01-Iss. 1: Airspeed Indicator ELOS-CS23.1305-01-Iss. 1: Powerplant instruments ELOS-CS23.1303-01-Iss. 1: Magnetic compass
6. EASA Environmental Standards:	CS-36, Amendment3 CS-34, Amendment 1
7. Operational Suitability Certification Basis:	MMEL: CS-MMEL, Initial Issue Flight Crew Data (FCD) Flight Crew Data (CS-FCD Initial Issue 31 January 2014).

G III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Refer to TDC-150-E20-CRI-A-05-TR-01

   L 410 NG Prototype, S/N 2820 – top drawing No. Y000001N
   L 410 NG Type design - top drawing No. Y005000N,
   The Top Drawing number specifies a configuration of the L 410 NG aircraft produced through Y00xxxxN, where xxxx is the Serial Number of the particular aircraft produced starting with 5001.

2. Description: Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists of main and nose landing gear.
   L 410 NG is determined for transport of 15 –19 passengers.
   L 410 NG with Sport Parachuting kit installed is determined for parachute droppings.
   L 410 NG with Ambulance kit installed is determined for transport of 9 patients and 3 additional passengers.
   L 410 NG with Cargo kit installed is determined for transport of 1700 kg of cargo in two containers.
   L 410 NG with the rear VIP saloon with folding double seats with armrests.
   L 410 NG with passenger to cargo quick change configuration with foldable seats.
   Standard – without wing tip tanks.
   Optional – with wing tip tanks.

3. Equipment: The list of approved equipment is shown in the Maintenance Manual.

4. Dimensions:

Wingspan	19.980 m	with wing tips tanks
	19.479 m	without wing tip tanks
Length	15.074 m	
Height	5.969 m	
Wing Area	35.18 m^2	with wing tips tanks
	34.86 m^2	without wing tip tanks

5. Engines: 2
   5.1. Model: H85-200 BC04
   5.1.1. Type Certificate: EASA.E.070
   5.1.2. Engine Limits

Take-off power rating:	
Maximum power	634 kW
Max. gas generator speed	101.5 %
Max. propeller speed	1950 rpm
Max. ITT	780 °C

Maximum continuous power rating:	634 kW
Maximum power	101.2 %
Max. gas generator speed	1950 rpm
Max. propeller speed	770 °C
Max. ITT	

6. Propeller 2

6.1. Model: AV-725-1-E-C-F-R(W)-A/CFR230-433

6.1.1. Type Certificate: EASA.P.031

6.1.2. Number of blades: 5

6.1.3. Sense of Rotation: Clockwise in view of flight direction

6.1.4. Diameter: 2300 mm

7. Fluids:

7.1. Fuel

JET A1	according to ASTM D 1655 or DERD 2494
RT	according to ST SEV 5024 or GOST 10227 or CSN 65 6520
TS−1	according to ST SEV 5024 or GOST 10227 or CSN 65 6520
PSM 2	according to PN 86/C 96026
T−1	according to ST SEV 5024 or GOST 10227
PL−6	according to PND 25-005 76
PL−7	according to PND 25-005 92
JET A	according to ASTM D 1655
No. 3 Jet Fuel	according to PRC National Standard GB 6537-2018

Mixing of the above shown fuels is permitted.

7.2. Oil

a. AEROSHELL TURBINE OIL 500	according to MIL L 23699C
AEROSHELL TURBINE OIL 560	according to MIL L 23699C
b. MOBILE JET OIL II	according to MIL L 23699C
BPTO 2380	
CASTROL 599	
ROYCO TURBINE OIL	
c. B3V	according to TU 38 101295 85

Mixing of the above oils of different groups a, b and c is not permitted.

8. Fuel capacities:

Wing Tank	Total capacity (gravity fuelling)	1870 kg
	Total capacity (pressure fuelling)	1700 kg
	Total usable fuel (gravity fuelling)	1854 kg
	Total usable fuel (pressure fuelling)	1684 kg
	Total unusable:	16 kg
Wing Tips Tank	Total wing tip tanks capacity	394 kg
	Total usable fuel	390 kg
	Total unusable:	4 kg

9. Air Speeds:

Max. operating speed (14,000 ft)	VMO	389 km/h IAS (210 KIAS)
Operating maneuvering speed (7,000 kg)	VO	285 km/h IAS (154 KIAS)
Maximum speed in turbulence (7,000 kg)	VB	292 km/h IAS (157 KIAS)
Max. landing gear operating (extended) speed	VLO, VLE	304 km/h IAS (164 KIAS)
Max. flap operating (extended) speed (flaps 18°)	VFO, VFE	278 km/h IAS (150 KIAS)
Max. flap operating (extended) speed (flaps 42°)	VFO, VFE	230 km/h IAS (124 KIAS)
Max. spoilers extended speed	VSPOIL	201 km/h IAS (108 KIAS)
Min. control speed for take-off run, flaps 18°	VMCG	122 km/h IAS (66 KIAS)
Min. control speed for take-off run, flaps 0°	VMCG	122 km/h IAS (66 KIAS)
Minimum control speed for take-off, flaps 18°	VMCA	143 km/h IAS (77 KIAS)
Minimum control speed for take-off, flaps 0°	VMCA	161 km/h IAS (87 KIAS)
Minimum control speed for landing	VMCL	134 km/h IAS (73 KIAS)

10. Maximum Operating Altitude: 6100 m (20,000 ft)

11. All-weather Capability:
- The aircraft is approved for day and night VFR and IFR flights.
- The aircraft is approved for intended flights into icing conditions.

12. Maximum Weight:

Maximum ramp weight	7,020 kg (15,476 lb)
Maximum take-off weight	7,000 kg (15,432 lb)
Maximum landing weight	6,800 kg (14,991 lb)
Maximum zero fuel weight - without wing tip tanks	6,600 kg (14,550 lb)
Maximum zero fuel weight - with wing tip tanks	6,660 kg (14,683 lb)

13. Centre of Gravity Range:

Forward c.g. limit	19 % MAC
Aft c.g. limit	30 % MAC

14. Datum: Datum point is the levelling point No. 2 (LP 2) on the fuselage, located 2.880 m from the frame No. 1.

15. (reserved)

16. Levelling Means: In longitudinal direction, the plane levelling is defined by levelling points No. 3, 5, 6. In Lateral direction by levelling points No. 19LH and 19RH.

17. Minimum Flight Crew: 2

18. Number of passengers: 19

19. (reserved)

20. Baggage / Cargo Compartments: Maximum baggage load
- Front baggage compartment 300 kg (661 lb)
- Rear baggage compartment 150 kg (331 lb)

21. Wheels and Tyres:

Nose wheels and tyres:	550x225 Model 5 Tubeless
Main wheels and tyres	720x310 Model 5 Tubeless

G IV. Operating and Service Instructions

Flight Manual

Do-L410NG-1210.2 Airplane Flight Manual for the Airplane Model L 410 NG

Instructions for continued airworthiness:

1. Maintenance Schedule:

Do-L410NG-1220.2 Maintenance Schedule for the L410 NG Aeroplane

2. Maintenance Manual:

Do-L410NG-1230.2 Maintenance Manual for the L 410 NG

3. Album of Production, Operation and Repair Tolerances

Do-L410NG-2030.2 Album of Production, Operation and Repair Tolerances of the L 410 NG

4. Structural Repair Manual

Do-L410NG-2020.2 Airframe Repair Manual L 410 NG

5 Inspection Manual

Do-L410NG-2010.2 Inspection Manual for the L 410 NG

Others Manuals:

1. Wiring Manual

Do-L410NG-1240.2 Wiring Manual for the L 410 NG

2. Illustrated Parts Catalogue

Do-L410NG-1250.2 Illustrated Parts Catalogue for the L 410 NG

G V. Operational Suitability Data

Master Minimum Equipment List (MMEL)

Do-L410NG-3000.2 Master Minimum Equipment List (MMEL)

Flight Crew Data

Do-L410NG-1215.2 Differential Pilot Training Minimum Syllabus for L 410 NG from the L 410 UVP-E20 airplane and ODR and MDR tables.

G VI. Notes

1. The L 410 NG model is developed as a derivative of the L 410 UVP-E20.
   Certification Basis for changed areas has been upgraded to CS 23 / Amdt. 4, effective July 16, 2015. Based on Part 21.A.101, the following sections of FAR-23 / amendment 41, effective November 26, 1990, have been used: 23.143, 23.345, 23.391, 23.397, 23.399, 23.457, 23.1093 and 23.1419.
2. List of EASA approved Flight Manual Supplements for the following kits:
   a. Cargo kit with cargo restrain system for 1700 kg (Do-L410NG-1210.2 AFM Supplement No. 1, IR, or later approved revisions);
   b. Ambulance kit (9 lying patients) (Do-L410NG-1210.2 AFM Supplement No. 2, IR, or later approved revisions);
   c. Sport parachuting kit (Do-L410NG-1210.2 AFM Supplement No. 3, IR, or later approved revisions);
   d. Passenger to cargo quick change configuration with foldable seats (Do-L410NG-1210.2 AFM Supplement No. 4, IR, or later approved revisions).
   e. Rear Saloon (Do-L410NG-1210.2 AFM Supplement No. 9, IR, or later approved revisions).

ADMINISTRATIVE SECTION

I. Acronyms;
N/A

II. Type Certificate Holder Record (most recent first);

Aircraft Industries, a.s
Na Záhonech 1177
686 04 Kunovice
CZECH REPUBLIC

LETECKÉ ZÁVODY a.s.
686 04 Kunovice 1177
CZECH REPUBLIC

LET, a.s.
686 04 Kunovice 1177
CZECH REPUBLIC

LET, n.p.
686 04 Kunovice 1177
CZECH REPUBLIC

III. Change Record:

Issue	Date	Changes
1	February 4, 2005	Initial Issue
2	August 19, 2005	Editorial changes
3	September 2005	Editorial changes
4	October 24, 2005	Editorial changes
5	May 17, 2006	Change in address of TC holder
6	February 22, 2007	Incorporation of L 410 UVP-E20 CARGO
7	March 28, 2007	Addition of L - 410 M Turbolet, L - 410 UVP - Turbolet, L - 410 UVP-E, L 410 UVP-E9, L 410 UVP-LW, L 410 UVP-E-LW
8	June 22, 2007	Clarification of approved type design for L-410 M Turbolet, L-410 UVP Turbolet, L - 410 UVP-E, L 410 UVP-E9, L 410 UVP-LW and L 410 UVP-E-LW by reference to Serial number and date
9	November 23, 2007	Removal of L - 410 UVP-LW - 810726; 810727 from SECTION B V. Notes, Paragraph 11, these aircraft being declared as government aircraft under Commission Regulation (EC) 1592/2002 Article 1.2.
10	30 May 2008	Updated requirements concerning safety modifications of the L- 410 M Turbolet, L-410 UVP-Turbolet, L- 410 UVP-E , L 410 UVP-E9, L-410 UVP-LW and L 410 UVP-E-LW models
11	May 7 2009	Addition of Notes about Installation Approval of Universal EFI-890R Dual Electronic Flight Displays and Madras FA 2200 Flight Data Recorder on L 410 UVP-E20 and L 420 aircraft models
12	June 8, 2010	Addition of L410 UVP-E s/n 902507 to list of aircraft meeting the TCDS design standard. Removal of table of effective pages and repetition of issue Numbers
13	June 28, 2010	Addition of L410 UVP-E s/n 902506 to list of aircraft meeting the TCDS design standard. Reformatting in new standard EASA TCDS style
14	March 1, 2011	Addition of ageing aircraft programme details.
15	September 12, 2012	Correction of the marking error of nose and main wheel. Addition of Sport Parachuting kit. Removal of fuel heater from type design of the airplane L410UVP-E20 and L-420 manufactured after August 12/09. Addition of Aging aircraft program in Czech and Russian language. Addition of L410 UVP-E20 Flight Manual with Russian marking and placards.
16	June 5, 2013	Addition of the GE H80-200 engine with AV-725 propeller for L410UVP-E20 airplane; Addition of Ambulance kit. Editorial changes
17	May 12, 2014	Certification Basis of Major Changes added in E.V.5, S/N updated in all sections.
18	May 13, 2015	Refer to sections ()III.5. and ()III.6: References to EASA Engine Type Certificate Data Sheets corrected. TDC-199-E20 and appropriate document Numbers added.
19	October 22, 2015	Range of Serial Numbers in section E IV. Updated
20	December 18, 2015	OSD (MMEL) data added to Sections C, D, E; renumbering.
21	February 7, 2017	Addition of L410 UVP-E20 s/n 882101 to list of aircraft meeting the TCDS design standard (Section E IV. Point 11).
22	August 11, 2017	Eligible s/n updated, Service Bulletins for aircraft conversion listed, List of manuals updated. Section E. IV point 3 deleted, Editorial changes
23	September 26, 2017	Editorial changes; Production outside EU (Russia) mentioned in Section E VI.
24	December 19, 2017	Model L 410 NG added in section G. Note to eligible Serial Numbers for L 410 UVP-E20 was added.
25	May 7, 2018	Eligible s/n updated in Section E. IV point 11
26	August 22, 2018	Editorial changes in sections B V.6, B V.8, E VI., G II.6 and G VI.
27	February 25, 2019	Editorial changes, correction of typos in sections A V., B V., C IV, V, D IV., E IV, VI, G IV., V.
28	May 25, 2019	Editorial change in section G VI, item 3
29	July 15 2019	Information added to L410 UVP E20 Section E. Section 3.Equipment for all aircraft updated to read “The list of approved equipment is shown in the Maintenance Manual”
30	September 25 2019	Section G.VI note 3 text revised.

31	28 August 2020	EIII Section 2 VIP and Pax cargo quick change added GIII Section 2 L 410 NG with Sport Parachuting kit L 410 NG with Ambulance kit. L 410 NG with Cargo kit L 410 NG with the rear VIP saloon. L 410 NG with passenger to cargo quick change. Standard – without wing tip tanks. Optional – with wing tip tanks. Are added. G.VI Notes note e added.
32	24 September 2020	OSD – FCD certification basis and FCD syllabuses for L 410 UVP-E20 and L 410 NG added
33	19 November 2020	Page 17 item 1 eligible Serial numbers Serial 811240 corrected to 841240 in line 5
34	14 October 2022	1. Add new fuel type (No. 3 Jet Fuel) for L 410 UVP-E20 and L 410 NG. 2. Manuals in Operating and Service Instructions sections were divided to ICA and others manuals for all models. 3. Editorial corrections.

