



# ***European Aviation Safety Agency***

---

**EASA**

## **TYPE-CERTIFICATE DATA SHEET**

**EASA.A.026**

**L-410**

**Type Certificate Holder:**

**Aircraft Industries, a.s**

Na Záhonech 1177  
686 04 Kunovice  
CZECH REPUBLIC

For Variants:

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

Intentionally left blank

## **CONTENTS**

### **SECTION A: GENERAL, L – 410 M Turbolet Type Design**

- A I. General**
- A II. Certification Basis**
- A III. Technical Characteristics and Operating Limitations**
- A IV. Operating and Service Instructions**
- A V. Notes**

### **SECTION B: GENERAL, L-410 UVP- Turbolet Type Design**

- B I. General**
- B II. Certification Basis**
- B III. Technical Characteristics and Operating Limitations**
- B IV. Operating and Service Instructions**
- B V. Notes**

### **SECTION C: GENERAL, L - 410 UVP-E Type Design**

- C I. General**
- C II. Certification Basis**
- C III. Technical Characteristics and Operating Limitations**
- C IV. Operating and Service Instructions**
- C V. Notes**

### **SECTION D: GENERAL, L 410 UVP-E9 Type Design**

- D I. General**
- D II. Certification Basis**
- D III. Technical Characteristics and Operating Limitations**
- D IV. Operating and Service Instructions**
- D V. Notes**

### **SECTION E: GENERAL, L 410 UVP-E20 Type Design**

- E I. General**
- E II. Certification Basis**
- E III. Technical Characteristics and Operating Limitations**
- E IV. Operating and Service Instructions**
- E V. Notes**

### **SECTION F: GENERAL, L-420 Type Design**

- F I. General**
- F II. Certification Basis**
- F III. Technical Characteristics and Operating Limitations**
- F IV. Operating and Service Instructions**
- F V. Notes**

### **ADMINISTRATIVE SECTION**

- I. Acronyms**
- II. Type Certificate Holder Record**
- III. Change Record**

## **SECTION A: L - 410 M Turbolet Type Design**

### **A I. General**

1. Data Sheet No: EASA.A.026
2. Type / Variant or Model
  - Type: L-410
  - Variant or Model: L - 410 M Turbolet
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  
CZECH REPUBLIC
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 TC 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 document Do-L410-3200.0  
List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
4. Dimensions:
- |           |                       |
|-----------|-----------------------|
| Wingspan  | 17.478 m              |
| Length    | 13.605 m              |
| Height    | 5.646 m               |
| Wing Area | 32.865 m <sup>2</sup> |
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: 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 ASTM D 1655-89  
JET A-1 according to ASTM D 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 manoeuvring 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<br>with tyre 9.00-6(550 x 225) M4   |
|                                  | Main wheel K20-6100-7<br>with tyre 12.50-10(720 x 310) M4 |

#### **A IV. Operating and Service Instructions**

1. Flight Manual

- In Czech:

For S/N 750502 a 760503

Do-L410.1018.2 Letová příručka pro letoun L - 410 M Turbolet (not valid for L - 410 MA Turbolet and L - 410 MU Turbolet)

Do-L410.1018.3 Letová příručka pro letoun L - 410 M Turbolet (not valid for L - 410 MA Turbolet and L - 410 MU Turbolet)

For S/N 730207

Do-L410.1018.6 Letová příručka pro letoun L - 410 MA Turbolet

For S/N 7504020, 750403, 750404, 750405 and 750501

Do-L410.1018.7 Letová příručka pro letoun L - 410 MA Turbolet

Do-L410.1018.5 Letová příručka pro letoun L - 410 MU

- In Russian:

Do-L410.1018.3 Руководство по летной эксплуатации самолёта Л-410 М (not valid for L - 410 MA Turbolet and L - 410 MU Turbolet)

Do-L410.1018.4 Руководство по летной эксплуатации самолёта Л-410 МА

Do-L410.1018.5 Руководство по летной эксплуатации самолёта Л-410 МУ ТУРБОЛЕТ

2. Maintenance Schedule:

- In Czech:

Do-L410.1052.1 Předpis pro údržbu letounu L 410 M (not valid for L - 410 MA Turbolet and L - 410 MU Turbolet)

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

- In Russian:

Do-L410.1055.1 Единый регламент технического обслуживания самолёта Л 410 А, АС, Л 410 М, Л 410 МА, Л 410 МУ

3. Maintenance Manual:

- In Czech:

Do-L410.1037.1 Technická příručka letounu L - 410 M Turbolet (not valid for L - 410 MA Turbolet)

Do-L410.1039.1 Technická příručka letounu L 410 MA

- In Russian:
  - Do-L410.1036.2      Техническое руководство самолёта Л 410 М (not valid for L 410 MA Turbolet)
  - Do-L410.1039.2      Техническое руководство самолёта Л 410 МА
- 4. Wiring Manual
  - In Czech:
    - Do-L410.1061.1      Album elektroschemat letounu L 410 M (not valid for L - 410 MA Turbolet and L - 410 MU Turbolet)
    - Do-L410.1069.1      Album elektroschemat letounu L - 410 MA
    - Do-L410.1068.1      Album elektroschemat letounu L 410 MU
  - In Russian:
    - Do-L410.1061.2      Альбом электросхем самолёта Л-410 М (not valid for L - 410 MA Turbolet and L - 410 MU Turbolet)
    - Do-L410.1069.2      Альбом электросхем самолёта Л-410 МА
    - Do-L410.1068.2      Альбом электросхем самолёта Л-410 МУ
- 5. Album of production, operation and repair tolerances
  - In Czech:
    - Do-L410.2030.0      Album výrobních a přípustných provozních tolerancí letounů L 410 A, L 410 AS, L 410 M, L 410 MA TURBOLET
  - In Russian:
    - Do-L410.2030.1      Альбом основных сочленений и ремонтных допусков самолёта типа Л 410 А, Л 410 АS, Л 410 М
- 6. Structural Repair Manual
  - In Czech:
    - Do-L410-2021.1      Příručka pro opravu draku letounu L 410
  - In Russian:
    - Do-L410.2021.1      Руководство по ремонту планера самолёта Л 410 в полевых условиях
- 7. Illustrated Parts Catalogue
  - In Czech:
    - Do-L410.1043.1      Kusovník letounu L 410 A/ L 410 AS Turbolet
  - In Russian:
    - Do-L410.1043.1      Каталог деталей и сборочных единиц самолёта Л 410 М
- 8. List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment
  - In Czech:
    - Do-L410-3200.0      Přehled modelů a jejich variant, výrobních čísel letounů řady L410/ L420 a jejich schváleného vybavení.
  - In English:
    - Do-L410-3200.0      Survey of models, their variants, and serial numbers of the L 410/L 420 aircraft series and their approved equipment
- 9. 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
  - In English:
    - 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



– In Czech:

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

– in Russian:

Do-L410-1229.1 Руководство по проверке самолетов старше 20 лет для типов  
L 410 M,, L 410 UVP, L 410 UVP – E, L 410 UVP – E9,  
L 410 UVP – E20, L-420

### **A V. Notes**

1. The model was approval by the original Type Certificate 75-04 of 28.08.1975.
2. The list of models serial numbers and their variants is shown in the document Do-L410-3200.0. List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
3. 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
4. The approved Type Design of this variant is the design of L-410M Turbolet with the following serial numbers as configured at 28<sup>th</sup> March.2007:

730207  
750405

The permission for continuous operation of those 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 IB L410/095b, as mandated by EASA Airworthiness Directive 2008-0102

Aircraft that comply with Part A and Part B of IB L410/095b will be without any additional operation limitations.

Aircraft that only comply with Part B of IB L410/095b will be restricted to transport of maximum 9 passengers or to Para trooping purposes.

## **SECTION B: L 410 UVP – Turbolet Type Design**

### **B I. General**

1. Data Sheet No: EASA.A.026
2. Type / Variant or Model
  - Type: L-410
  - Variant or Model: L 410 UVP – Turbolet  
L 410 UVP – LW (see note no.9)  
L 410 FG (see note no.10)
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  
CZECH REPUBLIC
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 TC 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 document Do-L410-3200.0  
List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
4. Dimensions:
- |           |                      |
|-----------|----------------------|
| Wingspan  | 19.479 m             |
| Length    | 14.467 m             |
| Height    | 5.829 m              |
| Wing Area | 35.18 m <sup>2</sup> |
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: 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: 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: 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 ASTM D 1655-89  
JET A-1 according to ASTM D 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 <sub>D</sub>      | 410 km/h IAS |
| Maximum operating speed                                  | V <sub>MO</sub>     | 355 km/h IAS |
| Maximum flaps extended speed, landing configuration 35°  | V <sub>FE</sub>     | 205 km/h IAS |
| Maximum flaps extended speed, take-off configuration 15° | V <sub>FE</sub>     | 250 km/h IAS |
| Maximum landing gear operating speed                     | V <sub>LO</sub>     | 250 km/h IAS |
| Maximum landing gear extended speed                      | V <sub>LE</sub>     | 250 km/h IAS |
| Maximum spoiler operating speed                          | V <sub>SP</sub>     |              |
| - 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 <sub>min ER</sub> | 125 km/h IAS |
| Minimum control speed, take-off                          | V <sub>min EV</sub> | 130 km/h IAS |
| Minimum control speed, balked landing                    | V <sub>min EK</sub> | 125 km/h IAS |
| Minimum control speed, landing                           | V <sub>min EP</sub> | 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<br>(VSP= 230 km/h) - (see note no.5)  | 5700 kg |
| Maximum take-off weight<br>(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<br>- (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 variant 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**

1. Flight Manual
- In Czech:  
Do-L410-1019.2 Letová příručka letounu L-410 UVP
  - In English:  
Do-L410-1019.2 Flight Manual for the L 410 UVP Aeroplane
  - In Russian:  
Do-L410-1019.3 Руководство по летной эксплуатации самолёта Л 410 УВП
2. Maintenance Schedule:
- In Czech:  
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
  - In English:  
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 Aeroplane without overhaul

- In Russian:  
For aircraft in overhaul maintenance system:  
Do-L410-1053.2 Регламент технического обслуживания самолёта Л 410 УВП  
For aircraft in overhaul-free maintenance system:  
Do-L410-1053.4 Регламент технического обслуживания самолёта Л 410 УВП  
без капитального ремонта  
  
For Russia:  
Do-L410-1053.7 Регламент технического обслуживания самолёта Л 410 УВП  
без капитального ремонта
- 3. Maintenance Manual:
  - In Czech:  
Do-L410-1131.1 Provozně technická příručka pro letouny L-410 UVP
  - In English:  
Do-L410-1131.0 Maintenance Manual for the L 410 UVP Aeroplane
  - In Russian:  
Do-L410-1131.2 Руководство по технической эксплуатации самолёта Л 410 УВП
- 4. Wiring Manual
  - In Czech:  
Do-L410-1064.1 Album elektroschemat pro letouny L-410 UVP
  - In English:  
Do-L410-1064.0 Wiring Manual for the L 410 UVP Aeroplane
  - In Russian:  
Do-L410-1064.2 Альбом электросхем самолётов Л 410 УВП
- 5. Illustrated Parts Catalogue
  - In Czech:  
Do-L410-1044.1 Katalog dílů a montážních jednotek pro letouny L-410 UVP
  - In English:  
Do-L410-2052.2 Illustrated Parts Catalogue for the L 410 UVP Aeroplane
  - In Russian:  
Do-L410-1044.0 Каталог деталей и сборочных единиц самолёта Л 410 УВП
- 6. Album of production, operation and repair tolerances
  - In Czech:  
Do-L410-2032.0 Album výrobních, provozních a opravárenských tolerancí L-410 UVP
  - In English:  
Do-L410-2032.2 Album of Production, Operation and Repair Tolerances  
of the L 410 UVP Aeroplane
  - In Russian:  
Do-L410-2031.1 Альбом основных сочленений и ремонтных допусков самолёта  
Л 410 УВП, Л 410 УВП-Е
- 7. Inspection Manual:
  - In Czech:  
Do-L410-2012.0 Příručka pro revizi letounů L-410 UVP
  - In English:  
Do-L410-2012.2 Inspection Manual for the L 410 UVP Aeroplane
  - In Russian:  
Do-L410-2012.1 Руководство по профилактическому техническому обслуживанию  
самолёта Л 410 УВП
- 8. Structural Repair Manual
  - In Czech:  
Do-L410-2021.1 Příručka pro opravu draku letounu L-410 v polních podmínkách

- In English:  
Do-L410-2021.2 Airframe Repair Manual L 410 UVP, L 410 UVP-E, L 410 UVP-E9,  
L 410 UVP-E20 Aeroplane
  - In Russian:  
Do-L410-2021.1 Руководство по ремонту планера самолёта Л 410 УВП  
в полевых условиях
9. List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
- In Czech:  
Do-L410-3200.0 Přehled modelů a jejich variant, výrobních čísel letounů  
řady L410/ L420 a jejich schváleného vybavení.
  - In English:  
Do-L410-3200.0 Survey of models, their variants, and serial numbers of the L 410/L 420  
aircraft series and their approved equipment
10. 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
- In English:  
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
  - In Czech:  
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
  - in Russian:  
Do-L410-1229.1 Руководство по проверке самолетов старше 20 лет для типов  
L 410 M,, L 410 UVP, L 410 UVP – E, L 410 UVP – E9,  
L 410 UVP – E20, L-420

## **B V. Notes**

1. The model was approved by the original Type Certificate No. 79- 02 of 10.07.1979.
2. The list of models serial numbers and their variants is shown in the document Do-L410-3200.0 List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.



3. 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 fueling
  - 6.6.4 Clearance between propeller blade tips and airframe parts
  - 7.1.1.11 Fuel transfer
  - 7.1.2.9 Continuous fueling
  - 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
  - 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
  - 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 anticollision beacon
  - 8.7.1.9 Cockpit control knobs
4. Previous maximum spoiler operating speed was provided by TC-79-02.
5. Previous maximum take-off weight was provided by TC-79-02
6. Realisation of service bulletin ZB L-410 UVP/052a provides increasing of MTOW to 5800 kg.
7. Service bulletin ZB L-140 UVP/052a provides reducing of maximum spoiler operating speed to 180 km/h IAS.
8. Realisation of service bulletin ZB L-410 UVP/084b provides increasing of MTOW to 6000 kg.
9. Realisation of service bulletin IB L-410 UVP/140b provides possibility of modification L-410 – UVP to the type L 410UVP – LW with lower MTOW 5700 kg.
10. L 410 FG variant is designed for photogrammetric works only.
11. *The approved Type Design of this variant is the design of L-410 UVP Turbolet with the following serial numbers as configured at 28<sup>th</sup> March 2007:*
- L - 410 UVP - 831040; 831101; 831104; 831113; 831138; 841320; 841326; 841332; 851406;  
851411; 851413; 851418  
L 410 FG - 851524; 851528
12. 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 IB L410 UVP/149b as mandated by EASA Airworthiness Directive No. 2008-0103.  
Aircraft that comply with Part A and Part B of IB L410 UVP/149b will be without any additional operation limitations.  
Aircraft that only comply with Part B of IB 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 / Variant or Model
  - Type: L-410
  - Variant or Model: L 410 UVP – E  
L 410 UVP – E – LW (see note no.5)
3. Airworthiness Category: Commuter
4. Type Certificate Holder: Aircraft Industries, a.s.  
Na Záhonech 1177,  
686 04 Kunovice  
CZECH REPUBLIC
5. Manufacturer: Up to and including S/N 912626  
LET, a.s.  
686 04 Kunovice 1177  
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 TC 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 V. 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   |

### **C III. Technical Characteristics and Operational Limitations**

- |                            |  |                      |                        |
|----------------------------|--|----------------------|------------------------|
| 1. Type Design Definition: | Specification Sheet B 500 200 N - L - 410 UVP - E  |                      |                        |
| 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.<br>L410 UVP-E with Ambulance Kit installation is determined for transport of 9 patients. |                      |                        |
| 3. Equipment:              | The list of approved equipment is shown in the document Do-L410-3200.0<br>List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.   |                      |                        |
| 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 <sup>2</sup> | with wing tips tanks   |
|                            |  | 34.86 m <sup>2</sup> | without wing tip tanks |
| 5. Engines:                | 2  |                      |                        |
| 5.1. Model:                | WALTER M 601 E   |                      |                        |
| 5.1.1. Type Certificate:   | 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: 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: 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 ASTM D 1655-89  
JET A-1 according to ASTM D 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 manoeuvring speed                                   | $V_A$       | 260 km/h IAS |
| Maximum operating speed                                     | $V_{MO}$    | 350 km/h IAS |
| Maximum flaps extended speed,<br>landing configuration 42°  | $V_{FE}$    | 220 km/h IAS |
| Maximum flaps extended speed,<br>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                             | $V_{minER}$ | 130 km/h IAS |
| Minimum control speed, take-off                             | $V_{minEV}$ | 135 km/h IAS |
| Minimum control speed, balked landing                       | $V_{minEK}$ | 130 km/h IAS |
| Minimum control speed, landing                              | $V_{minEP}$ | 120 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  | 6420 kg |
| Maximum take-off weight   | 6400 kg |
| Maximum take-off weight for L 410 UVP-E-LW<br>- (see note no.5) | 5700kg  |
| Maximum landing weight  | 6200 kg |
| Maximum landing weight in exceptional cases                     | 6400 kg |
| Maximum zero-fuel weight  | 5870 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:

19 pax  
9 pax. (L410UVP-E with Ambulance)

19. (reserved)

20. Baggage / Cargo Compartments

Maximum baggage load

- forward baggage compartment 140 kg
- aft baggage compartment 150 kg
- Cargo variant 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

#### **C IV. Operating and Service Instructions**

1. Flight Manual

- In Czech:

Do-L410-1215.0 Letová příručka letounu L - 410 UVP - E

- In English:

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

The supplement No. 89 to the Airplane Flight Manual is issued for Ambulance Kit.

The supplement No. 125 to the Airplane Flight Manual is issued for Ambulance Kit for IAC AR certified airplanes.

- In Russian:

Do-L410-1211.1 Руководство по летной эксплуатации самолёта Л 410 УВП-Э

2. Master Minimum Equipment List

- In English:

Do-L410-3000.2 Master Minimum Equipment List L 410 UVP-E, E9, E20

3. Maintenance Schedule:

- In Czech:

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

- In English:

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

- In Russian:

For aircraft in overhaul maintenance system:

Do-L410-1221.1 Регламент технического обслуживания самолёта Л 410 УВП-Э

For aircraft in overhaul-free maintenance system:

Do-L410-1222.1 Регламент технического обслуживания самолёта Л 410 УВП-Э  
без капитального ремонта

For Russia:

Do-L410-1222.2 Регламент технического обслуживания самолёта Л 410 УВП-Э  
без капитального ремонта

4. Maintenance Manual:

- In Czech:

Do-L410-1232.0      Provozně technická příručka pro letouny L - 410 UVP - E,  
L - 410 UVP - E9, L - 410 UVP - E20  
For aircraft to S/N 912602  
Do-L410-1231.1      Provozně technická příručka pro letoun L - 410 UVP - E



- In English:
  - Do-L410-1232.2 Maintenance Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane  
For aircraft to S/N 912528
  - Do-L410-1231.4 Maintenance Manual for the L 410 UVP-E Aeroplane
- In Russian:
  - Do-L410-1231.1 Руководство по технической эксплуатации самолёта Л 410 УВП-Э
- 5. Wiring Manual
  - In Czech:
    - Do-L410-1242.0 Album elektroschemat pro letouny L - 410 UVP - E, L - 410 UVP - E9, L - 410 UVP - E20  
For aircraft to S/N 912602
    - Do-L410-1241.1 Album elektroschemat letounu L - 410 UVP – E
  - In English:
    - Do-L410-1242.2 Wiring Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane  
For aircraft to S/N 912528
    - Do-L410-1241.4 Wiring Manual for the L 410 UVP-E Aeroplane
  - In Russian:
    - Do-L410-1241.1 Альбом электросхем самолёта Л 410 УВП-Э
- 6. Illustrated Parts Catalogue
  - In Czech:
    - Do-L410-2051.0 Katalog dílů a montážních jednotek pro letouny L - 410 UVP - E, L - 410 UVP - E9, L - 410 UVP - E20
  - In English:
    - Do-L410-2051.2 Illustrated Parts Catalogue for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane
  - In Russian:
    - Do-L410-1251.1 Каталог деталей и сборочных единиц самолёта Л 410 УВП-Э
- 7. Album of production, operation and repair tolerances
  - In Czech:
    - Do-L410-2031.0 Album výrobních, provozních a opravárenských tolerance L - 410 UVP - E, E9, E20
  - In English:
    - Do-L410-2031.0 Album of Production, Operation and Repair Tolerances of the L 410 UVP-E, E9, E20 Aeroplane
  - In Russian:
    - Do-L410-2031.1 Альбом основных сочленений и ремонтных допусков самолётов типа Л 410 УВП и Л 410 УВП-Э
- 8. Inspection Manual:
  - In Czech:
    - Do-L410-2011.0 Příručka pro revizi letounů L - 410 UVP - E, L - 410 UVP - E9, L - 410 UVP - E20
  - In English:
    - Do-L410-2011.2 Inspection Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane
  - In Russian:
    - Do-L410-2011.1 Руководство по профилактическому техническому обслуживанию самолёта Л 410 УВП-Э, Э9, Э20

9. Structural Repair Manual

- In Czech:

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

- In English:

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

- In Russian:

Do-L410-2021.1 Руководство по ремонту планера самолёта Л 410 в полевых условиях

10. List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.

- In Czech:

Do-L410-3200.0 Přehled modelů a jejich variant, výrobních čísel letounů řady L410/ L420 a jejich schváleného vybavení.

- In English:

Do-L410-3200.0 Survey of models, their variants, and serial numbers of the L 410/L 420 aircraft series and their approved equipment

11. 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

- In English:

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

- In Czech:

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

- in Russian:

Do-L410-1229.1 Руководство по проверке самолетов старше 20 лет для типов L 410 M,, L 410 UVP, L 410 UVP – E, L 410 UVP – E9, L 410 UVP – E20, L-420

## **C V. Notes**

1. The original Type Certificate No. 86- 01 of 30.01.1986 approved the model.
2. The list of models serial numbers and their variants is shown in the document Do-L410-3200.0 List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.

3. 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: Fueling 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
4. 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 fueling
  - 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 heading indicators
  - 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-color contrast
  -
5. Realisation of service bulletin IB L-410 UVP-E/192b provides possibility of modification L-410-UVP-E to the type L 410UVP-E-LW with lower MTOW 5700 kg.

6. *The approved Type Design of this variant is the design of L-410 UVP-E with the following serial numbers as configured at 28<sup>th</sup> March 2007:*

L - 410 UVP-E - 861722; 861802; 861813; 871816; 871914; 871924; 872011; 872019; 882033; 882036; 882207; 892215; 892216; 892301; 892318; 892319; 892321; 892324; 892329; 892335; 892336; 902414; 902425; 902501; 902503; 902504; 902516; 902518; 912528; 912531; 912606; 912608; 912609; 912615; 912616.

L-410 UVP-E S/N 902507 added by virtue of Aircraft Industries confirmatory letter dated 3 March 2010 (issue 12)

L-410 UVP-E S/N 902506 added by virtue of Aircraft Industries confirmatory letter dated 3 March 2010 (Issue 14).

L - 410 UVP-E-LW - 861803; 902431; 902439

8. 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 IB L-410 UVP-E/230b as mandated by EASA Airworthiness Directive 2008-0104.

Aircraft that comply with Part A and Part B of IB L-410 UVP-E/230b will be without any additional operation limitations.

Aircraft that only comply with Part B of IB 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 / Variant or Model
  - Type: L-410
  - Variant or Model: L 410 UVP - E9
3. Airworthiness Category: Commuter
4. Type Certificate Holder: Aircraft Industries, a.s.  
Na Záhonech 1177,  
686 04 Kunovice  
CZECH REPUBLIC
5. Manufacturer:
  - Up to and including S/N 962715  
LET, n.p.  
686 04 Kunovice 1177  
CZECH REPUBLIC
  - From S/N 012638 onward  
LETECKÉ ZÁVODY a.s.  
686 04 Kunovice 1177  
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 TC 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 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 10

### **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 document Do-L410-3200.0  
List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
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 <sup>2</sup> | with wing tips tanks   |
|           | 34.86 m <sup>2</sup> | without wing tip tanks |
5. Engines: 2
- 5.1. Model: WALTER M 601 E
- 5.1.1. Type Certificate: 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: 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: 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 ASTM D 1655-89  
JET A-1 according to ASTM D 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 <sub>MO</sub>  | 335 km/h IAS |
| Maximum flaps extended speed, landing configuration 42°  | V <sub>FE</sub>  | 220 km/h IAS |
| Maximum flaps extended speed, take-off configuration 18° | V <sub>FE</sub>  | 250 km/h IAS |
| Maneuvering speed  | V <sub>A</sub>   | 260 km/h IAS |
| Maximum landing gear operating speed                     | V <sub>LO</sub>  | 250 km/h IAS |
| Maximum landing gear extended speed                      | V <sub>LE</sub>  | 250 km/h IAS |
| Maximum spoiler operating speed                          | V <sub>SP</sub>  | 190 km/h IAS |
| Minimum control speed on ground                          | V <sub>MCG</sub> | 130 km/h IAS |
| Minimum control speed, take-off                          | V <sub>MCA</sub> | 135 km/h IAS |
| Minimum control speed during landing approach            | V <sub>MCL</sub> | 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 variant 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**

1. Flight Manual
  - In English:  
For aircraft S/N 882039 and 882040  
Do-L410-1211.2 Airplane Flight Manual for the L-410 UVP-E Aeroplane  
For aircraft from and including S/N 861809  
Do-L410-1213.2 Airplane Flight Manual for the L-410 UVP-E9 Aeroplane  
The supplement No. 100 to the Airplane Flight Manual is issued for Ambulance Kit.
2. Master Minimum Equipment List
  - In English:  
Do-L410-3000.2 Master Minimum Equipment List L410 UVP-E, E9, E20
3. Maintenance Schedule:
  - In Czech:  
Do-L410-1225.0 Předpis pro údržbu letounu L-410 UVP-E9 bez GO
  - In English:  
Do-L410-1225.2 Maintenance Schedule for the L 410 UVP-E9 Aeroplane without overhaul
4. Maintenance Manual:
  - In Czech:  
Do-L410-1232.0 Provozně technická příručka pro letouny  
L - 410 UVP - E, L - 410 UVP - E9, L - 410 UVP - E20
  - In English:  
Do-L410-1232.2 Maintenance Manual for the L 410 UVP-E Aeroplane,  
L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane
5. Wiring Manual
  - In Czech:  
Do-L410-1242.0 Album elektroschemat pro letouny L - 410 UVP - E,  
L - 410 UVP - E9, - 410 UVP - E20
  - In English:  
Do-L410-1242.2 Wiring Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9  
Aeroplane, L 410 UVP-E20 Aeroplane
6. Illustrated Parts Catalogue
  - In Czech:  
Do-L410-2051.0 Katalog dílů a montážních jednotek pro letouny L-410  
UVP-E, L-410 UVP-E9, L-410 UVP-E20
  - In English:  
Do-L410-2051.2 Illustrated Parts Catalogue for the L 410 UVP-E Aeroplane,  
L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane

7. Album of Production, Operation and Repair Tolerances

- In Czech:

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

- In English:

Do-L410-2031.0 Album of Production, Operation and Repair Tolerances  
of the L 410 UVP-E, E9, E20 Aeroplane

8. Inspection Manual

- In Czech:

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

- In English:

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

9. Airframe Repair Manual

- In Czech:

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

- In English:

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

10. List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment

- In Czech:

Do-L410-3200.0 Přehled modelů a jejich variant, výrobních čísel letounů  
řady L410/ L420 a jejich schváleného vybavení.

- In English:

Do-L410-3200.0 Survey of models, their variants, and serial numbers of  
the L 410/L 420 aircraft series and their approved equipment.

11. 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

- In English:

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

- In Czech:

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

- in Russian:

Do-L410-1229.1 Руководство по проверке самолетов старше 20 лет для типов  
L 410 M,, L 410 UVP, L 410 UVP – E, L 410 UVP – E9,  
L 410 UVP – E20, L-420

## **D V. Notes**

1. The model was approved by the original Type Certificate No. 88- 01 of 22.03.1988.
2. The list of models serial numbers and their variants is shown in the document Do-L410-3200.0 List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
3. 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 flowmeter 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 the risk 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.
4. *The approved Type Design of this variant is the design of L-410 UVP-E9 with the following serial numbers as configured at 28<sup>th</sup> March 2007:*  
  
022634
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 on the aircraft in accordance with the IB L-410 UVP-E/231b as mandated by EASA Airworthiness Directive 2008-0105.  
Aircraft that comply with Part A and Part B of IB L-410 UVP-E/231b will be without any additional operation limitations.  
Aircraft that only comply with Part B of IB 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 / Variant or Model
  - Type: L-410
  - Variant or Model: 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:  
  
From S/N 851334 to S/N 992736:  
LET, n.p.  
686 04 Kunovice 1177  
CZECH REPUBLIC  
  
From S/N 062636 onwards:  
Aircraft Industries, a.s.  
Na Záhonech 1177  
686 04 Kunovice  
CZECH REPUBLIC
6. National Certification Date: October 30, 1990
7. CAA Application Date: ---
8. CAA Recommendation Date: ---
9. EASA Type Certification Date: 4 February, 2005

### **E II. Certification Basis**

1. Reference Date for determining the applicable requirements:
2. CAA CZ Type Certificate Data Sheet No TC 71-04
3. CAA CZ Certification Basis: ---
4. Airworthiness Requirements: FAR Part 23, including Amendment 23 - 34
5. Requirements elected to comply None
6. EASA Special Conditions: None
7. EASA Exemptions: Refer to E 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 10

### **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 of main and nose landing gear.  
L 410 UVP-E20 is determined for transport of 15 – 19 passengers.  
L410 UVP-E20 with Sport Parachuting Kit installation is determined for parachute droppings.  
L410 UVP-E20 with Ambulance Kit installation is determined for transport of 9 patients.  
L 410 UVP-E20 CARGO is determined exclusively for transport of cargo in the cabin equipped with cargo restrain system, 13 lb fire extinguisher and protective breathing equipment. The fuselage is not equipped with two underwing emergency exits.
3. Equipment: The list of approved equipment is shown in the document Do-L410-3200.0  
List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
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 <sup>2</sup> | with wing tips tanks   |
|           | 34.86 m <sup>2</sup> | without wing tip tanks |
5. Engines: 2
- 5.1. Model: WALTER M 601 E
- 5.1.1. Type Certificate: 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

Aircraft produced since the year 2004 according to Brazilian Type Certificate, or aircraft after the IB L410UVP-E/160b accomplishment:

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

Maximum take-off 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 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: 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 5024-85, 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 ASTM D 1655-89  
JET A-1 according to ASTM D 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:   | 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 design speed                                     | V <sub>D</sub>   | 400 km/h IAS |
| Demonstrated maximum flight speed                        | V <sub>DF</sub>  | 400 km/h IAS |
| Maximum operating speed                                  | V <sub>MO</sub>  | 335 km/h IAS |
| Maximum flaps extended speed, landing configuration 42°  | V <sub>FE</sub>  | 220 km/h IAS |
| Maximum flaps extended speed, take-off configuration 18° | V <sub>FE</sub>  | 250 km/h IAS |
| Maximum maneuvering speed                                | V <sub>A</sub>   | 265 km/h IAS |
| Maximum landing gear operating speed                     | V <sub>LO</sub>  | 250 km/h IAS |
| Maximum landing gear extended speed                      | V <sub>LE</sub>  | 250 km/h IAS |
| Maximum spoiler operating speed                          | V <sub>SP</sub>  | 190 km/h IAS |
| Minimum control speed on ground take-off run             | V <sub>MCG</sub> | 130 km/h IAS |
| Minimum control speed, take-off                          | V <sub>MCA</sub> | 135 km/h IAS |
| Minimum control speed during landing approach            | V <sub>MCL</sub> | 135 km/h IAS |
| Airplane with GE H80-200 engines and AV-725 propellers:  |                  |              |
| Operating maneuvering speed                              | V <sub>O</sub>   | 265 km/h IAS |
| Minimum control speed on ground take-off run             | V <sub>MCG</sub> |              |
| Minimum control speed, take-off                          | V <sub>MCA</sub> | 111 km/h IAS |
| Minimum control speed during landing approach            | V <sub>MCL</sub> | 121 km/h IAS |

Variant for Brazil:

|  |                  |              |
|--|------------------|--------------|
| Maximum design speed                                     | V <sub>D</sub>   | 400 km/h IAS |
| Demonstrated maximum flight speed                        | V <sub>DF</sub>  | 400 km/h IAS |
| Maximum operating speed                                  | V <sub>MO</sub>  | 335 km/h IAS |
| Maximum flaps extended speed, landing configuration 42°  | V <sub>FE</sub>  | 230 km/h IAS |
| Maximum flaps extended speed, take-off configuration 18° | V <sub>FE</sub>  | 260 km/h IAS |
| Maximum maneuvering speed                                | V <sub>A</sub>   | 275 km/h IAS |
| Maximum landing gear operating speed                     | V <sub>LO</sub>  | 260 km/h IAS |
| Maximum landing gear extended speed                      | V <sub>LE</sub>  | 260 km/h IAS |
| Maximum spoiler operating speed                          | V <sub>SP</sub>  | 190 km/h IAS |
| Minimum control speed on ground, take-off run            | V <sub>MCG</sub> | 140 km/h IAS |
| Minimum control speed, take-off                          | V <sub>MCA</sub> | 155 km/h IAS |
| Minimum control speed during landing approach            | V <sub>MCL</sub> | 150 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.
  - 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 seats: 19 pax (L 410 UVP-E20)  
18 pax (L410UVP-E20 with Sport Parachuting Kit installation)  
9 pax. (L410UVP-E20 with Ambulance Kit installation)  
0 pax (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**

### 1. Flight Manual

- In English:

For aircraft S/N 851334, 922728, 942705, 942707, 942708, 942709

Do-L410-1211.2 Airplane Flight Manual for the L-410 UVP-E20 for aircraft operating based on Brazilian Type Certificate No. 9401- from S/N 912532

Do-L410-1212.2 L 410 UVP-E20 Brazilian Airplane Flight Manual

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

Do-L410-1217.2 Airplane Flight Manual for the L-410UVP-E20 (applicable for CIS registered airplane)

For aircraft operating based on Indonesian Type Certificate No. A048

Do-L410-1216.2 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

Do-L410-1219.2 Airplane Flight Manual for the L-410 UVP-E20 with H80-200 Engines and AV-725 Propellers – airplane with russian placard in cockpit (applicable for CIS registered airplane)

The supplement No. 94 to the Airplane Flight Manual Do-L410-1214.2 is issued for L 410 UVP-E20 CARGO.

The supplement No. 146 to the Airplane Flight Manual is issued for Ambulance Kit.

The supplement No. 162 to the Airplane Flight Manual is issued for Ambulance Kit for IAC AR certified airplanes.

### 2. Maintenance Schedule:

- In Czech:

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

- In English:

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 L 410 UVP-E20 with GE H80-200 engines and AV-725 propellers.

### 3. Master Minimum Equipment List

- In English:

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

### 4. Maintenance Manual:

- In Czech:

For aircraft manufactured since 15.03.93

Do-L410-1232.0 Provozně technická příručka pro letouny L-410 UVP-E, L-410 UVP-E9, L-410 UVPE20 (valid)

For aircraft since S/N 912710

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

- In English:

For aircraft since S/N 972731

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

For aircraft to S/N 962709

Do-L410-1231.4 Maintenance Manual for the L 410 UVP-E Aeroplane

The supplement No.124 to the Maintenance Manual is issued for the L 410 UVP-E20 CARGO

The supplement No. 210 to the Maintenance Manual Do-L410-1223.2 is issued for L 410 UVP-E20 with GE H80-200 engines and AV-725 propellers.

### 5. Wiring Manual

- In Czech:

For aircraft manufactured since 15.03.93

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

For aircraft to S/N 912710

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

- In English:

For aircraft from S/N 972731

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 Do-L410-1242.2 is issued for  
L 410 UVP-E20 with GE H80-200 engines and AV-725 propellers.

For aircraft to S/N 962709

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

6. Illustrated Parts Catalogue

- In Czech:

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

- In English:

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

7. Album of Production, Operation and Repair Tolerances

- In Czech:

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

- In English:

Do-L410-2031.0 Album of Production, Operation and Repair Tolerances  
of the L 410 UVP-E, E9, E20 Aeroplane

8. Inspection Manual
  - In Czech:  
Do-L410-2011.0 Příručka pro revizi letounů L-410 UVP-E, L-410 UVP-E9, L-410 UVP-E20
  - In English:  
Do-L410-2011.2 Inspection Manual for the L 410 UVP-E Aeroplane, L 410 UVP-E9 Aeroplane, L 410 UVP-E20 Aeroplane
9. Structural Repair Manual
  - In Czech:  
Do-L410-2021.1 Příručka pro opravu draku letounu L-410
  - In English:  
Do-L410-2021.2 Airframe Repair Manual L 410 UVP, E, E9, E20 Aeroplane
10. List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
  - In Czech:  
Do-L410-3200.0 Přehled modelů a jejich variant, výrobních čísel letounů řady L410/ L420 a jejich schváleného vybavení.
  - In English:  
Do-L410-3200.0 Survey of models, their variants, and serial numbers of the L 410/L 420 aircraft series and their approved equipment.
10. 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
  - In English:  
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
  - In Czech:  
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
  - in Russian:  
Do-L410-1229.1 Руководство по проверке самолетов старше 20 лет для типов L 410 M,, L 410 UVP, L 410 UVP – E, L 410 UVP – E9, L 410 UVP – E20, L-420

## **E V. Notes**

1. The model was approved by the original Type Certificate No. 90- 03 of 30.10.1990.
2. The list of models serial numbers and their variants is shown in the document Do-L410-3200.0 List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.

3. 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.
  - This exemption is cancelled for aircraft manufactured according to the Indonesian Type Certificate A 048 by introduction of aileron trim tab indication in all range of deflections.
  - 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 the Maintenance Schedule after 300 flight hours.  
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.
  - 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. This arrangement prevents the possibility of a loss of all electrical power sources in the event of one master switch failure.  
This exemption is cancelled in force for aircraft completed after 01.01.2004 by introduction of Master Switch installation.
4. The data in this TCDS where there is no reference to the specific variant of the aircraft stated , refer to both variants L 410 UVP-E20 and L 410 UVP-E20 CARGO.

## **SECTION F: L-420 Type Design**

### **F I. General**

1. Data Sheet No: EASA.A.026
2. Type / Variant or Model
  - Type: L-410
  - Variant or Model: L-420
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  
CZECH REPUBLIC
  - S/N 012735A:  
LETECKÉ ZÁVODY a.s.  
686 04 Kunovice 1177  
CZECH REPUBLIC
  - From S/N 062636 onwards.  
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 TC 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:    | <ul style="list-style-type: none"> <li>- L16/I, Part II, Chapter 10</li> <li>- FAR Part 36</li> </ul> |

### **F III. Technical Characteristics and Operational Limitations**

- |   |                          |   |  |                                  |          |                      |        |                          |                        |                      |          |          |        |                        |  |               |                      |                          |       |                      |                        |          |        |   |  |               |        |                          |       |                      |          |          |        |
|---|--------------------------|---|--|----------------------------------|----------|----------------------|--------|--------------------------|------------------------|----------------------|----------|----------|--------|------------------------|--|---------------|----------------------|--------------------------|-------|----------------------|------------------------|----------|--------|---|--|---------------|--------|--------------------------|-------|----------------------|----------|----------|--------|
| 1.  | Type Design Definition:  | B 500 300 N (top specification sheet) L-420   |  |                                  |          |                      |        |                          |                        |                      |          |          |        |                        |  |               |                      |                          |       |                      |                        |          |        |   |  |               |        |                          |       |                      |          |          |        |
| 2.  | Description:             | <p>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.</p>  |  |                                  |          |                      |        |                          |                        |                      |          |          |        |                        |  |               |                      |                          |       |                      |                        |          |        |   |  |               |        |                          |       |                      |          |          |        |
| 3.  | Equipment:               | <p>The list of approved equipment is shown in the document Do-L410-3200.0<br/>List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.</p>  |  |                                  |          |                      |        |                          |                        |                      |          |          |        |                        |  |               |                      |                          |       |                      |                        |          |        |   |  |               |        |                          |       |                      |          |          |        |
| 4.  | Dimensions:              | <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Wingspan</td> <td style="width: 30%;">19.980 m</td> <td style="width: 40%;">with wing tips tanks</td> </tr> <tr> <td></td> <td>19.479 m</td> <td>without wing tip tanks</td> </tr> <tr> <td>Length</td> <td>14.424 m</td> <td></td> </tr> <tr> <td>Height</td> <td>5.829 m</td> <td></td> </tr> <tr> <td>Wing Area</td> <td>35.18 m<sup>2</sup></td> <td>with wing tips tanks</td> </tr> <tr> <td></td> <td>34.86 m<sup>2</sup></td> <td>without wing tip tanks</td> </tr> </table>  |  | 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 <sup>2</sup> | with wing tips tanks     |       | 34.86 m <sup>2</sup> | without wing tip tanks |          |        |   |  |               |        |                          |       |                      |          |          |        |
| 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 <sup>2</sup>     | with wing tips tanks  |  |                                  |          |                      |        |                          |                        |                      |          |          |        |                        |  |               |                      |                          |       |                      |                        |          |        |   |  |               |        |                          |       |                      |          |          |        |
|   | 34.86 m <sup>2</sup>     | 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     | <table border="0" style="width: 100%;"> <tr> <td colspan="2">Maximum continuous power rating:</td> </tr> <tr> <td>Maximum power</td> <td style="text-align: right;">580 kW</td> </tr> <tr> <td>Max. gas generator speed</td> <td style="text-align: right;">100.5 %</td> </tr> <tr> <td>Max. propeller speed</td> <td style="text-align: right;">2080 rpm</td> </tr> <tr> <td>Max. ITT</td> <td style="text-align: right;">760°C</td> </tr> <tr> <td colspan="2">Take-off power rating:</td> </tr> <tr> <td>Maximum power</td> <td style="text-align: right;">580 kW</td> </tr> <tr> <td>Max. gas generator speed</td> <td style="text-align: right;">100 %</td> </tr> <tr> <td>Max. propeller speed</td> <td style="text-align: right;">2080 rpm</td> </tr> <tr> <td>Max. ITT</td> <td style="text-align: right;">735 °C</td> </tr> <tr> <td colspan="2">Take-off power rating with water injection:</td> </tr> <tr> <td>Maximum power</td> <td style="text-align: right;">580 kW</td> </tr> <tr> <td>Max. gas generator speed</td> <td style="text-align: right;">100 %</td> </tr> <tr> <td>Max. propeller speed</td> <td style="text-align: right;">2080 rpm</td> </tr> <tr> <td>Max. ITT</td> <td style="text-align: right;">735 °C</td> </tr> </table> |  | 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 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: 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 ASTM D 1655-89  
JET A-1 according to ASTM D 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 <sub>MO</sub> | 375 km/h IAS |
| Maximum flaps extended speed, landing configuration 42°  | V <sub>FE</sub> | 210 km/h IAS |
| Maximum flaps extended speed, take-off configuration 18° | V <sub>FE</sub> | 297 km/h IAS |
| Maneuvering speed  | V <sub>A</sub>  | 273 km/h IAS |
| Maximum landing gear operating speed                     | V <sub>LO</sub> | 297 km/h IAS |
| Maximum landing gear extended speed                      | V <sub>LE</sub> | 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 variant 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**

1. Flight Manual
  - In Czech:  
Do-L410-1311.0 Letová příručka pro letoun L 420
  - In English:  
Do-L410-1311.2 Airplane Flight Manual for the Airplane Model L-420  
The supplement No. 83 to the Airplane Flight Manual is issued for Ambulance Kit.
2. Maintenance Schedule:
  - In Czech:  
Do-L420-1224.0 Předpis pro údržbu letounu L-420
  - In English:  
Do-L420-1224.2 Maintenance Schedule for the L-420 Aeroplane
3. Master Minimum Equipment List
  - In Czech:  
Do-L410-1312.0 Základní seznam minimálního vybavení a seznam snímatelných dílců a podmínky provozu při jejich ztrátě nebo poruše pro letoun L-420
  - In English:

- Do-L410-1312.2 Master Minimum Equipment List and Configuration Deviation List for the Airplane Model L-420
4. Maintenance Manual:
- In Czech:  
Do-L410-1233.0 Provozně technická příručka pro letoun L-420
  - In English:  
Do-L410-1233.2 Maintenance Manual for the L-420 Aeroplane
5. Wiring Manual
- In Czech:  
Do-L410-1243.0 Album elektroschemat pro letoun L-420
  - In English:  
Do-L410-1243.2 Wiring Manual for the L-420 Aerplane
6. Illustrated Parts Catalogue
- In Czech:  
Do-L420-2052.0 Katalog dílů a montážních jednotek letounu L-420
  - In English:  
Do-L420-2052.2 Illustrated Parts Catalogue for the L-420 Aeroplane
7. Album of Production, Operation and Repair Tolerances
- In Czech:  
Do-L420-1231.0 Album výrobních, provozních a opravárenských tolerancí L-420
  - In English:  
Do-L420-1231.0 Album of Production, Operation and Repair Tolerances of the L-420 Aeroplane
8. Structural Repair Manual
- In Czech:  
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
  - In English:  
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
9. List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment.
- In Czech:  
Do-L410-3200.0 Přehled modelů a jejich variant, výrobních čísel letounů řady L410/ L420 a jejich schváleného vybavení.
  - In English:  
Do-L410-3200.0 Survey of models, their variants, and serial numbers of the L 410/L 420 aircraft series and their approved equipment.
10. 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
- In English:  
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
  - In Czech:  
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
  - in Russian:

Do-L410-1229.1      Руководство по проверке самолетов старше 20 лет для типов  
L 410 M,, L 410 UVP, L 410 UVP – E, L 410 UVP – E9,  
L 410 UVP – E20, L-420

## **F V. Notes**

1. The model was approved by the original Type Certificate No. 98- 01 of 11.03.1998.
2. The list of models serial numbers and their variants is shown in the document Do-L410-3200.0 List of models, their variants, serial numbers of L-410/L-420 aircraft and their approved equipment
3. EASA TC No. EASA.A.026 has been issued for model L-420 aircraft on August 19, 2005.

## **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 variants  |
| 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 variants  |
| 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.<br>Addition of Sport Parachuting kit.<br>Removal of fuel heater from type design of the airplane L410UVP-E20 and L-420 manufactured after August 12/09.<br>Addition of Aging aircraft program in Czech and Russian language.<br>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<br>Addition of Ambulance kit.<br>Editorial changes   |