TYPE-CERTIFICATE
DATA SHEET

No. EASA.A.026
for
L-410

Type Certificate Holder:

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

For models:
L-410 M Turbolet
L-410 UVP – Turbolet
L-410 UVP-E
L 410 UVP-E9
L 410 UVP-LW
L 410 UVP-E-LW
L 410 UVP-E20
L 410 UVP-E20 CARGO
L-420
L 410 NG
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SECTION A: L-410 M Turbolet Type Design

A I. General

1. Data Sheet No: EASA.A.026

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

3. Airworthiness Category: Commuter

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

   686 04 Kunovice 1177
   CZECHOSLOVAKIA

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 and their Serial Numbers of L-410/L-420 aircraft and their approved equipment.

4. Dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingspan</td>
<td>17.478 m</td>
</tr>
<tr>
<td>Length</td>
<td>13.605 m</td>
</tr>
<tr>
<td>Height</td>
<td>5.646 m</td>
</tr>
<tr>
<td>Wing Area</td>
<td>32.865 m²</td>
</tr>
</tbody>
</table>

5. Engines:

<table>
<thead>
<tr>
<th>Engine</th>
<th>Type Certificate</th>
<th>Model</th>
<th>Engine Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td></td>
<td>WALTER M 601 A</td>
<td>Maximum take-off for 5 minutes power rating</td>
</tr>
<tr>
<td>5.1.1</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Gas generator speed</td>
</tr>
<tr>
<td>5.1.2</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Propeller speed</td>
</tr>
<tr>
<td>5.1.3</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Maximum torque</td>
</tr>
<tr>
<td>5.1.4</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Equivalent power</td>
</tr>
</tbody>
</table>

Intermediate contingency power rating

<table>
<thead>
<tr>
<th>Engine</th>
<th>Type Certificate</th>
<th>Model</th>
<th>Engine Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td></td>
<td>WALTER M 601 A</td>
<td>Maximum continuous power rating</td>
</tr>
<tr>
<td>5.1.1</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Gas generator speed</td>
</tr>
<tr>
<td>5.1.2</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Propeller speed</td>
</tr>
<tr>
<td>5.1.3</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Maximum torque</td>
</tr>
<tr>
<td>5.1.4</td>
<td></td>
<td>75 - 03, CAA CZ issued</td>
<td>Equivalent power</td>
</tr>
</tbody>
</table>

6. Propellers:

<table>
<thead>
<tr>
<th>Propellers</th>
<th>Model</th>
<th>Type Certificate</th>
<th>Number of blades</th>
<th>Sense of Rotation</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>V508</td>
<td>EASA.P.028 (replacing 91-01, CAA CZ issued)</td>
<td>3</td>
<td>Clockwise in view of flight direction</td>
<td>2500 mm</td>
</tr>
</tbody>
</table>
7. Fluids:

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

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

8. Fluid capacities:

8.1. Fuel: Standard Tank
   - Total: 1020 kg
   - Usable: 986 kg

8.2. Oil: Engine
   - Maximum: 11 Litre
   - Minimum: 5.5 Litre

9. Air Speeds:

   - Never exceeding speed \( V_{NE} \) 405 km/h IAS
   - Normal operating limit speed \( V_{NO} \) 350 km/h IAS
   - Design 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
   with tyre 9.00-6(550 x 225) M4
   Main wheel K20-6100-7
   with tyre 12.50-10(720 x 310) M4

A IV. Operating and Service Instructions

1. Flight Manual
   - In Czech:
     Do-L410.1018.2 Letová příručka pro letoun L - 410 M Turbolet
     Do-L410.1018.3 Letová příručka pro letoun L - 410 M Turbolet
     Do-L410.1018.6 Letová příručka pro letoun L - 410 MA Turbolet
     Do-L410.1018.7 Letová příručka pro letoun L - 410 MA Turbolet
     Do-L410.1018.5 Letová příručka pro letoun L - 410 MU

2. Maintenance Schedule:
   - In Czech:
     Do-L410.1052.1 Předpis pro údržbu letounu L 410 M
     Do-L410.1052.3 Předpis pro údržbu letounu L 410 MA Pro letouny v experimentálním
                       provozu bez generální opravy
     Do-L410.1052.4 Předpis pro údržbu letounu L 410 MA

3. Maintenance Manual:
   - In Czech:
     Do-L410.1037.1 Technická příručka letounu L - 410 M Turbolet
     Do-L410.1039.1 Technická příručka letounu L 410 MA

   - In Czech:
     Do-L410.1061.1 Album elektroschematic letounu L 410 M
     Do-L410.1069.1 Album elektroschematic letounu L - 410 MA
     Do-L410.1068.1 Album elektroschematic letounu L 410 MU

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 Czech:
     Do-L410-2021.1 Příručka pro opravu draku letounu L 410
7. Illustrated Parts Catalogue
   - In Czech:
     Do-L410.1043.1 Kusovník letounu L 410 A/ L 410 AS Turbolet

8. 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

9. Eligible Serial Numbers

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

A V. Notes

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

2. List of BCAR requirements for which exemptions were approved:
   - K2-4, 2.4 Final take-off climb
   - K2-9, 2.1.3(a) Ability to trim
   - K2-10, 5.1 Static lateral stability
   - K4-3, 6.1.2 Use of flame resistant materials
   - K4-8, 2.2.3(d) Indication of trim tab position
   - K-1, 8.5 Assembly of non-return valves in
   - K5-4, 1.1 to 4.2.5 Powerplant installation
   - K5-5, 2.2.2 De-icing and anti-icing precautions
   - K5-5, 2.2.3 Continuous and heavy icing
   - K5-8, 1.1, 7.2, 8, 9.1, 9.2, 11 Fire precautions
   - K6-1, 2.1 Equipment installation
   - K6-1, 2.2 Equipment approval
   - R1-1, 3.2 MESIT equipment stability
   - R1-1, 4.1 Flammability of radio equipment components
   - J2-3, 4.3.3 Types of circuit breakers used
   - J3-2, 5.1 Types of cables
3. The permission for continuous operation of those aircraft within EU member states after 1 July 2010 will be granted based on condition that essential safety modifications are carried out on the aircraft in accordance with the Service Bulletin L410M/095b, as mandated by EASA Airworthiness Directive 2008-0102.

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

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

SECTION B: L-410 UVP – Turbolet Type Design

B I. General

1. Data Sheet No: EASA.A.026
2. Type / Model / Variant
   - Type: L-410
   - Models: L-410 UVP – Turbolet
   - Variant L 410 UVP-LW (see note no.8)
   - Variant L 410 FG (see note no.9)
3. Airworthiness Category: Commuter
4. Type Certificate Holder: Aircraft Industries, a.s.
   Na Záhonech 1177,
   686 04 Kunovice
   CZECH REPUBLIC
   686 04 Kunovice 1177
   CZECHOSLOVAKIA
6. National Certification Date: July 10, 1979
7. CAA Application Date: 1974
8. CAA Recommendation Date: ---
9. EASA Type Certification Date: 28 March, 2007

B II. Certification Basis

1. Reference Date for determining
   the applicable requirements:
2. CAA CZ Type Certificate Data Sheet No 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 and their Serial Numbers of L-410/L-420 aircraft and their approved equipment.

4. Dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingspan</td>
<td>19.479 m</td>
</tr>
<tr>
<td>Length</td>
<td>14.467 m</td>
</tr>
<tr>
<td>Height</td>
<td>5.829 m</td>
</tr>
<tr>
<td>Wing Area</td>
<td>35.18 m²</td>
</tr>
</tbody>
</table>

5. Engines:

5.1. Model: WALTER M – 601 B

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

5.1.2. Engine Limits

<table>
<thead>
<tr>
<th>Power Type</th>
<th>Power (kW)</th>
<th>Gas Generator Speed (rpm)</th>
<th>Propeller Speed (rpm)</th>
<th>ITT Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum continuous power rating</td>
<td>515</td>
<td>99 %</td>
<td>2080</td>
<td>690</td>
</tr>
<tr>
<td>Take-off power rating</td>
<td>515</td>
<td>101.5 %</td>
<td>2080</td>
<td>735</td>
</tr>
<tr>
<td>Take-off power rating with water injection</td>
<td>515</td>
<td>101.5 %</td>
<td>2080</td>
<td>735</td>
</tr>
<tr>
<td>Contingency power rating</td>
<td>559</td>
<td>104 %</td>
<td>2080</td>
<td>780</td>
</tr>
</tbody>
</table>

or
5.2. Model: WALTER M – 601D
5.2.1. Type Certificate: EASA.E.070 (replacing 90-04, CAA CZ issued)
5.2.2. Engine Limits

Standard L 410 UVP – Turbolet aircraft:

Maximum continuous power rating:
- Maximum power: 515 kW
- Max. gas generator speed: 99 %
- Max. propeller speed: 2080 rpm
- Max. ITT: 690°C

Take-off power rating:
- Maximum power: 515 kW
- Max. gas generator speed: 101.5 %
- Max. propeller speed: 2080 rpm
- Max. ITT: 735°C

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

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

Maximum continuous power rating:
- Maximum power: 515 kW
- Max. gas generator speed: 99 %
- Max. propeller speed: 2080 rpm
- Max. ITT: 690°C

Take-off power rating:
- Maximum power: 540 kW
- Max. gas generator speed: 101.5 %
- Max. propeller speed: 2080 rpm
- Max. ITT: 735°C

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

6. Propellers:

6.1. Model: V 508B
6.1.1. Type Certificate: EASA.P.028 (replacing 91-01, CAA CZ issued)
6.1.2. Number of blades: 3
6.1.3. Sense of Rotation: Clockwise in view of flight direction
6.1.4. Diameter: 2500 mm

or

6.2. Model: V 508D
6.2.1. Type Certificate: EASA.P.028 (replacing 91-01, CAA CZ issued)
6.2.2. Number of blades: 3
6.2.3. Sense of Rotation: Clockwise in view of flight direction
6.2.4. Diameter: 2500 mm maximum, 2498 mm minimum
7. Fluids:

7.1. Fuel
T1 according to ST SEV 5024-85, or GOST 10227-86
TS 1 according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
RT according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
PL 6 according to PND 25005-76
PL 7 according to PND 25005-92
JET A according to 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
Maximum operating speed
Maximum flaps extended speed, landing configuration 35°
Maximum flaps extended speed, take-off configuration 15°
Maximum landing gear operating speed
Maximum landing gear extended speed
Maximum spoiler operating speed
- for MTOW 5700 kg (see note no.4)
- for MTOW 5800 kg (see note no.7)
Minimum control speed on ground
Minimum control speed, take-off
Minimum control speed, balked landing
Minimum control speed, landing

<table>
<thead>
<tr>
<th>Speed</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>V_D</td>
<td>410 km/h IAS</td>
</tr>
<tr>
<td>V_MO</td>
<td>355 km/h IAS</td>
</tr>
<tr>
<td>V_FE</td>
<td>205 km/h IAS</td>
</tr>
<tr>
<td>V_FE 15°</td>
<td>250 km/h IAS</td>
</tr>
<tr>
<td>V_LO</td>
<td>250 km/h IAS</td>
</tr>
<tr>
<td>V_LE</td>
<td>250 km/h IAS</td>
</tr>
<tr>
<td>V_SP</td>
<td>230 km/h IAS</td>
</tr>
<tr>
<td>V_SP 180 km/h</td>
<td>180 km/h IAS</td>
</tr>
<tr>
<td>V_MIN_ER</td>
<td>125 km/h IAS</td>
</tr>
<tr>
<td>V_MIN_EV</td>
<td>130 km/h IAS</td>
</tr>
<tr>
<td>V_MIN_EK</td>
<td>125 km/h IAS</td>
</tr>
<tr>
<td>V_MIN_EP</td>
<td>120 km/h IAS</td>
</tr>
</tbody>
</table>

10. Maximum Operating Altitude
4200 m

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

12. Maximum Weight:

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

<table>
<thead>
<tr>
<th>Weight</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum take-off weight</td>
<td>5700 kg</td>
</tr>
<tr>
<td>Maximum take-off weight</td>
<td>5800 kg</td>
</tr>
<tr>
<td>Maximum take-off weight</td>
<td>6000 kg</td>
</tr>
<tr>
<td>Maximum take-off weight</td>
<td>5700 kg</td>
</tr>
<tr>
<td>Maximum landing weight</td>
<td>5500 kg</td>
</tr>
<tr>
<td>Maximum zero-fuel weight</td>
<td>5300 kg</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

Forward c.g. limit
Aft c.g. limit

<table>
<thead>
<tr>
<th>Range</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward c.g. limit</td>
<td>17% MAC</td>
</tr>
<tr>
<td>Aft c.g. limit</td>
<td>28% MAC</td>
</tr>
</tbody>
</table>
14. Datum: Datum point is the levelling point No. 2 on the fuselage, located 2.730 m aft of the fuselage nose tip.

15. (reserved)

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

17. Minimum Flight Crew: 2

18. Number of seats: 15 pax

19. (reserved)

20. Baggage / Cargo Compartments Maximum baggage load

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

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

21. Wheels and Tyres

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

2. Maintenance Schedule:
   - In Czech: Do-L410-1053.2 Předpis pro údržbu letounu L-410 UVP

   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
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 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

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

6. Album of production, operation and repair tolerances
   - In Czech: Do-L410-2032.0 Album výrobních, provozních a opravárenských 16anouví L-410 UVP
   - In English: Do-L410-2032.2 Album of Production, Operation and Repair Tolerances of the L 410 UVP Aeroplane

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

8. Structural Repair Manual
   - In Czech: Do-L410-2021.1 Příručka pro opravu draku letounu L-410 v polních podmínkách

   - 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
1. Eligible Serial Numbers

L410 UVP
770001, 770003, 770101, 770102, 770103, 790201 through 790220, 790301 through 790325,
800326 through 800330, 800401 through 800430, 800501 through 800530, 810601 through
810640, 810701 through 810732, 820733 through 820840, 820801 through 820840, 820901
through 820925, 830921, 830922, 830935 through 830940, 831001 through 831040, 831101
through 831135, 841335 through 841340, 851335 through 851340, 851401 through
851427, 851431 through 851432, 851435 through 851440, 851444 through 851448, 851450
through 851454, 851460 through 851464, 851470 through 851475, 851480 through 851484
851485 through 851489, 851490 through 851494, 851500 through 851504, 851505 through 851520,
851521 through 851525, 851527.

L 410 FG:
851521 through 851526, 851528

B V. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 79-02 on July 10,
1979.
2. List of NLGS-2 requirements for which exemptions have been approved:
- 3.1.5, 3.1.8, 3.1.2, 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
- 3.7.3.6 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, 7.5.1.2.2a 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
- 5.7.26 Maximum temperature of mixed air
- 5.7.32 Hot air temperature measurement
- 5.7.33 Air-conditioning system mode indication
- 5.9.6 Engine air intake icing indication
- 5.10.1.1, 5.10.3, 8.4.1.2, 8.4.2.1, 8.4.3.3, 8.4.3.5 Cockpit noise recorder
- 5.10.1.2 Flight data recorder
- 5.10.2.2 Flight data recording duration
- 5.11.8.2 Windows in emergency exits
- 5.11.10.1 Minimum width of aisle
- 5.12.6 Single-point fuelling
- 6.6.4 Clearance between propeller blade tips and airframe parts
- 7.1.1.11 Fuel transfer
- 7.1.2.9 Continuous fuelling
- 7.1.3.9 Impossibility of installation of non-return valves in reverse sense
- 7.1.3.11 Fuel system markings
- 7.1.7.1, 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 engines with oil
- 7.2.3.2 Oil system marking
- 7.5.1.3 Fire resistance of cable bundles
3. Previous maximum spoiler operating speed was provided by TC 79-02.

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

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

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

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

8. Duly performance of the L410UV/140b Service Bulletin (recorded to the Aircraft Log Book) converts the L-410 UV – Turbolet model to the L-410 UVP-LW model with lower MTOW 5700kg.

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

10. The permission for continuous operation of each listed S/N aircraft within EU member states after 1 July 2010 will be granted based on condition that essential safety modifications are carried out on the aircraft in accordance with the Service Bulletin L410 UV/149b as mandated by EASA Airworthiness Directive No. 2008-0103.

Aircraft that comply with Part A and Part B of Service Bulletin L410 UV/149b will be without any additional operation limitations.

Aircraft that only comply with Part B of Service Bulletin L410 UV/149b will be restricted to transport of maximum 9 passengers or to Para trooping purposes.
SECTION C: L-410 UVP–E Type Design

C I. General

1. Data Sheet No: EASA.A.026

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

3. Airworthiness Category: Commuter

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

   LET, a.s.
   686 04 Kunovice 1177
   CZECHOSSLOVAKIA / 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 VI. Notes, paragraph 4

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

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


C III. Technical Characteristics and Operational Limitations


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-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 List of models and their 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 m² with wing tips tanks
     34.86 m² without wing tip tanks

5. Engines: 2
   5.1. Model: WALTER M 601 E
      5.1.1.Type Certificate: EASA.E.070 (replacing 89-03, CAA CZ issued)
      5.1.2.Engine Limits
         - Maximum continuous power rating: 560 kW
         - Maximum power: 100.5 %
         - Max. gas generator speed: 2080 rpm
         - Max. propeller speed: 760 °C

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

Take-off power rating with water injection:
Maximum power 560 kW
Max. gas generator speed 100 %
Max. propeller speed 2080 rpm
Max. ITT 735°C

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

or

5.2. Model: WALTER M 601E-21
5.2.1. Type Certificate: EASA.E.070 (replacing 89-03, CAA CZ issued)
5.2.2. Engine Limits

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

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

Take-off power rating with water injection:
Maximum power 560 kW
Max. gas generator speed 100 %
Max. propeller speed 2080 rpm
Max. ITT 735°C

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

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

7.1. Fuel

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

7.2. Oil

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

8. Fluid capacities:

8.1. Fuel:

<table>
<thead>
<tr>
<th>Tank Type</th>
<th>Total</th>
<th>Usable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Tank</td>
<td>1000 kg</td>
<td>991 kg</td>
</tr>
<tr>
<td>Wing Tips Tank</td>
<td>314 kg</td>
<td>310 kg</td>
</tr>
</tbody>
</table>

8.2. Oil:

<table>
<thead>
<tr>
<th>Engine</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11 Litre</td>
<td>5.5 Litre</td>
</tr>
</tbody>
</table>

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

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: 5700 kg
- 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 Kit)

19. (reserved)

20. Baggage / Cargo Compartments
   Maximum baggage load
   - forward baggage compartment 140 kg
   - aft baggage compartment 150 kg
   - Cargo kit 1000 kg

21. Wheels and Tyres
   Nose wheel K39-1100-7 with tyre
   9.00-6 (550 x 225) M4 or
   9.00-6/906 TO6-1 – Good Year
   Main wheel K38-1100-7 with tyre
   12.50-10 (720 x 310) M3 or M4 or
   29x11,0-10/11OTO1-1 Good Year

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.

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
4. Maintenance Manual:
- In Czech:
  Do-L410-1231.1 Provozně technická příručka pro letoun L – 410 UVP – E
  Do-L410-1231.4 Maintenance Manual for the L 410 UVP-E Aeroplane

5. Wiring Manual
- In Czech:
  Do-L410-1241.1 Album elektroschemat letounu L – 410 UVP – E
  Do-L410-1241.4 Wiring Manual for the L 410 UVP-E Aeroplane

6. Illustrated Parts Catalogue
- In Czech:
  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 tolerance L – 410 UVP – E, E9, E20
  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:
   - In Czech:  
     Do-L410-2021.1  Příručka pro opravu draku letounu L-410 v polních podmínkách
   - In English:  

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

11. Eligible Serial Numbers

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

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

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

C V. Operational Suitability Data


C VI. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 86-01 on January 30, 1986.
2. List of NLGS-2 requirements having been replaced by ENLGS requirements:
   - NLGS-2 para 3.6.1.5 replaced by ENLGS para 3.6.2.1 Actual landing distances
   - NLGS-2 para 5.2.8.4 replaced by ENLGS para 5.2.8.4 Remote electric control of wing flaps
     and spoilers
   - NLGS-2 para 5.4.2 replaced by ENLGS para 5.4.2 Brake fluid leakage
   - NLGS-2 para 5.4.6 replaced by ENLGS para 5.4.6 Landing with braked wheels
   - NLGS-2 para 5.4.8 replaced by ENLGS para 5.4.6 Skidding with braked wheels
   - NLGS-2 para 5.5.5 replaced by ENLGS para 5.5.5 Incombustible hydraulic fluid
   - NLGS-2 para 5.5.10 replaced by ENLGS para 5.5.9 Automatic change-over of primary
     hydraulic systems
   - NLGS-2 para 5.5.13 replaced by ENLGS para 5.5.5 Fire resistance and explosion resistance
     of hydraulic system
   - NLGS-2 para 5.7.6 replaced by ENLGS para 5.7.4 Control of air temperature in cabin
   - NLGS-2 para 5.11.8.2 replaced by ENLGS para 5.11.7.16 Windows in emergency exits
   - NLGS-2 para 7.1.2.9 replaced by ENLGS para 7.1.2.8 Part only: Fuelling time
   - NLGS-2 para 7.5.1.2.7 replaced by ENLGS para 7.5.1.2.5 Automatic operation of fire
     extinguishing system during emergency landing
   - NLGS-2 para 7.5.1.4.8 replaced by ENLGS para 7.5.1.2.5 Actuation of fare extinguishing
     system during emergency landing
   - NLGS-2 para 8.5.5.11 replaced by ENLGS para 8.5.2.13

3. List of NLGS-2 requirements for which exemptions have been approved:
   - 3.6.1.3 Landing distances required
   - 3.7.5.2 Transient process characteristics during critical engine failure
   - 5.4.2 Brake fluid leakage
   - 5.4.17 Brake system warning indication
   - 5.7.2 Independence of air-conditioning system
   - 5.12.6 Single-point fuelling
   - 5.11.10.1 Width of aisle
   - 7.1.1.11 Overfilling of fuel tanks
   - 7.1.7.1 Fuel system instruments
   - 7.1.7.2 Fuel quantity checking
   - 7.1.7.3 Fuel reserve checking error
   - 7.1.8.8.1 Reserve fuel quantity indicator error
   - 7.2.6.1 Oil system instruments
   - 7.5.1.1.1a Fire precautions
   - 7.5.1.4.6 Automatic actuation of fire extinguishing system
   - 7.5.1.4.7 Inadvertent actuation of fire extinguishing system
   - 8.2.2.1.7 Pitch-angle, bank-angle, and heading indication after a failure
   - 8.2.2.1.9 Indication of correct operation of pitch-angle, bank-angle, and 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-colour contrast

4. Duly performance of the Service Bulletin L410UVP-E/192b (recorded to the Aircraft Log Book) 
   converts the L-410 UVP-E model to the L-410 UVP-E-LW model with lower MTOW 5700kg.
5. The permission for continuous operation of each listed S/N aircraft within EU member states after 1 July 2010 will be granted based on condition that essential safety modifications are carried out on the aircraft in accordance with the Service Bulletin L-410 UVP-E/230b as mandated by EASA Airworthiness Directive 2008-0104. Aircraft that comply with Part A and Part B of Service Bulletin L-410 UVP-E/230b will be without any additional operation limitations. Aircraft that only comply with Part B of Service Bulletin L-410 UVP-E/230b will be restricted to transport of maximum 9 passengers or to Para trooping purposes.
SECTION D: L 410 UVP – E9 Type Design

D I. General

1. Data Sheet No: EASA.A.026
2. Type / Model / Variant
   - Type: L-410
   - Model: L 410 UVP – E9
3. Airworthiness Category: Commuter
4. Type Certificate Holder: Aircraft Industries, a.s.
   Na Záhonech 1177, 686 04 Kunovice
   CZECH REPUBLIC
5. Manufacturer:
   LET, n.p.
   Na Záhonech 1177
   686 04 Kunovice
   CZECHOSLOVAKIA
   LET, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECHOSLOVAKIA / CZECH REPUBLIC
   LETECKÉ ZÁVODY, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC
   Aircraft Industries, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC
6. National Certification Date: March 22, 1988
7. CAA Application Date: ---
8. CAA Recommendation Date: ---
9. EASA Type Certification Date: 28 March, 2007

D II. Certification Basis

1. Reference Date for determining the applicable requirements:
2. CAA CZ Type Certificate Data Sheet No 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 VI. Notes, paragraph 3

8. EASA Equivalent Safety Findings:

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

9. EASA Environmental Standards:

L16/I, Part II, Chapter 10

10. Operational Suitability Certification Basis:

MMEL: CS-MMEL, Initial Issue

D III. Technical Characteristics and Operational Limitations

1. Type Design Definition:

Specification sheet B 500 202 N - L 410 UVP - E9

2. Description:

Self-supporting, upper-wing, all-metal design. Powered by two turboprop engines. Control system is performed for two pilots. Landing gear consists of main and nose landing gear. L410 UVP-E9 with Ambulance Kit installation is determined for transport of 9 patients.

3. Equipment:

The list of approved equipment is shown in the document Do-L410-3200.0
List of models and their Serial Numbers of L-410/L-420 aircraft and their approved equipment.

4. Dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>With Wing Tips Tanks</th>
<th>Without Wing Tip Tanks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingspan</td>
<td>19.980 m</td>
<td>19.479 m</td>
</tr>
<tr>
<td>Length</td>
<td>14.467 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 m²</td>
<td>34.86 m²</td>
</tr>
</tbody>
</table>

5. Engines:

2

5.1. Model:

WALTER M 601 E

5.1.1. Type Certificate:

EASA.E.070 (replacing 89-03, CAA CZ issued)

5.1.2. Engine Limits

<table>
<thead>
<tr>
<th>Engine Limit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Continuous Power Rating</td>
<td>560 kW</td>
</tr>
<tr>
<td>Maximum Power</td>
<td></td>
</tr>
<tr>
<td>Max. Gas Generator Speed</td>
<td>100.5 %</td>
</tr>
<tr>
<td>Max. Propeller Speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>760 °C</td>
</tr>
</tbody>
</table>
Take-off power rating:
- Maximum power: 560 kW
- Max. gas generator speed: 100 %
- Max. propeller speed: 2080 rpm
- Max. ITT: 735°C

Take-off power rating with water injection:
- Maximum power: 560 kW
- Max. gas generator speed: 100 %
- Max. propeller speed: 2080 rpm
- Max. ITT: 735°C

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

or

5.2. Model: WALTER M 601E-21

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

5.2.2. Engine Limits

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

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

Take-off power rating with water injection:
- Maximum power: 560 kW
- Max. gas generator speed: 100 %
- Max. propeller speed: 2080 rpm
- Max. ITT: 735°C

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

6. Propellers: 2

6.1. Model: V510

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

6.1.2. Number of blades: 5

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

6.1.4. Diameter: 2300 mm
### Fluids:

#### 7. 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

### Fluid capacities:

#### 8. 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

### Air Speeds:

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

### Maximum Operating Altitude
- 4250 m

### 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

### 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

### Centre of Gravity Range:
- **Forward c.g. limit** 17 % MAC
- **Aft c.g. limit** 30 % MAC
14. Datum: Datum point is the levelling point No. 2 (LP 2) on the fuselage, located 2.730 m aft of the fuselage nose tip

15. (reserved)

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

17. Minimum Flight Crew: 2

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

19. (reserved)

20. Baggage / Cargo Compartments
    Maximum baggage load
    - forward baggage compartment 140 kg
    - aft baggage compartment 150 kg
    - Cargo kit 1000 kg

21. Wheels and Tyres
    Nose wheel K39-1100-7 with tyre
    9.00-6 (550 x 225) M4 or
    9.00-6/906 TO6-1 - Good Year
    Main wheel K38-1100-7 with tyre
    12.50-10 (720 x 310) M3 or M4 or
    29x11,0-10/11OTO1-1 Good Year

**D IV. Operating and Service Instructions**

1. Flight Manual
   - In English:
     Do-L410-1211.2 Airplane Flight Manual for the L-410 UVP-E Aeroplane
     Do-L410-1213.2 Airplane Flight Manual for the L-410 UVP-E9 Aeroplane
     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:

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:

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:

  - 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. 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
11. Eligible Serial Numbers

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

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

D V. Operational Suitability Data

DO-L410-3000.2, Initial Issue, dated 24 July 2014,
EASA approved 17 December 2015, or any later
EASA approved issue.

D VI. Notes

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

2. List of JAR-25 requirements for which exemptions have been approved:

- JAR 25.607 (a) Some removable fasteners in those systems specified in (1) and (2) of this
paragraph do not incorporate two separate locking devices. They are secured by means of
slotted nuts and split pins.
- JAR 25.672 (a) Only the condition of automatic bank control circuit is enunciated on the
central warning display. Drop of pressure in the hydraulic system is indicated by a pressure
gauge. Correct function of electrical circuit is checked before take-off by means of a TEST
pushbutton.
- JAR 25.677 (b) For the aileron trim tab the neutral position is only enunciated. The Aeroplane
Flight Manual requires that the neutral position must be checked before taxiing-out for take-off.
- JAR 25.679 The control surfaces can only be locked on the ground, by means of clamps.
These locking devices are conspicuously marked by red flags.
- JAR 25.703 A yellow light on the central warning display annunciates that the wing flaps are
not in the take-off position. Parking brake release is indicated by the position of the control
lever and a change in pressure gauge reading.
- JAR 25.777 (e) The wing-flap control is located level with the landing gear control.
- JAR 25.777 (f) The landing gear control is not located of the throttles, but aft of the throttles.
- JAR 25.853 (c) The test in compliance with this requirement was not conducted.
- JAR 25.1305 (c) A fuel flow meter indicator is not included in the fuel system for each engine.
The engine power setting is sufficiently characterized by the indicated engine parameters.
- JAR 25.1305-(c) (8) There is no indication of proper functioning of the fuel heater. Warm oil
passes through the heater continuously.

Note: Fuel heater was removed from type design by TDC ZTN 001, TDC ZKB 53 210 and
TDC ZKB 53 689 for the airplanes manufactured after August 12/2009.

- JAR 25.1305 (e) (3) Each propeller blade position below the minimum flight pitch is indicated.
- JAR 25.1326 (a) Operation of the pilot heating system is indicated 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.
3. The permission for continuous operation of each listed S/N aircraft within EU member states after 1 July 2010 will be granted based on condition that essential safety modifications are carried out on the aircraft in accordance with the Service Bulletin L-410 UVP-E/231b as mandated by EASA Airworthiness Directive 2008-0105. Aircraft that comply with Part A and Part B of Service Bulletin L-410 UVP-E/231b will be without any additional operation limitations. Aircraft that only comply with Part B of Service Bulletin L-410 UVP-E/231b will be restricted to transport of maximum 9 passengers or to Para trooping purposes.
SECTION E: L 410 UVP-E20 Type Design

E I. General

1. Data Sheet No: EASA.A.026
2. Type / Model / Variant
   - Type: L-410
   - Models: L 410 UVP-E20
   - Variant: L 410 UVP-E20 CARGO (see the chapter Eligible Serial Numbers)
3. Airworthiness Category: Commuter
4. Type Certificate Holder: Aircraft Industries, a.s.
   Na Záhonech 1177,
   686 04 Kunovice
   CZECH REPUBLIC
5. Manufacturer:
   LET, n.p.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC
   LET, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECHOSLOVAKIA
   LETECKÉ ZÁVODY, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC
   Aircraft Industries, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC
6. National Certification Date: October 30, 1990
7. CAA Application Date: ---
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.VI. Notes, paragraph 3

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

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


**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 dropings. 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 and their Serial Numbers of L-410/L-420 aircraft and their approved equipment.

4. Dimensions:
   - Wingspan 19.980 m with wing tips tanks
   - Length 14.424 m
   - Height 5.829 m
   - Wing Area 35.18 m² with wing tips tanks
   - 34.86 m² without wing tip tanks

5. Engines: 2
   5.1. Model: WALTER M601E
   5.1.1. Type Certificate: EASA.E.070 (replacing 89-03, CAA CZ issued)
### Engine Limits

5.1.2. Engine Limits

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum continuous power rating:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>560 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>100.5 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>760 °C</td>
</tr>
<tr>
<td>Take-off power rating:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>560 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>100 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>735 °C</td>
</tr>
<tr>
<td>Take-off power rating with water injection:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>560 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>100 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>735 °C</td>
</tr>
<tr>
<td>Contingency power rating:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>595 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>102 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>780 °C</td>
</tr>
</tbody>
</table>

5.2. Model:

- **WALTER M601E-21**

5.2.1. Type Certificate:

- EASA.E.070 (replacing CAA CZ TC No 89-03)

5.2.2. Engine Limits

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum continuous power rating:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>560 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>100.5 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>760 °C</td>
</tr>
<tr>
<td>Take-off power rating:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>560 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>100 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>735 °C</td>
</tr>
<tr>
<td>Take-off power rating with water injection:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>560 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>100 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>735 °C</td>
</tr>
<tr>
<td>Contingency power rating:</td>
<td></td>
</tr>
<tr>
<td>Maximum power</td>
<td>595 kW</td>
</tr>
<tr>
<td>Max. gas generator speed</td>
<td>102 %</td>
</tr>
<tr>
<td>Max. propeller speed</td>
<td>2080 rpm</td>
</tr>
<tr>
<td>Max. ITT</td>
<td>780 °C</td>
</tr>
</tbody>
</table>
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:

6.1. Model: V510

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

6.1.2. Number of blades: 5

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

6.1.4. Diameter: 2300 mm

or


(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 ASTMD 1655-89
- JET A-1 according to ASTMD 1655-89, or DERD 2494
- PSM 2 according to PN-86/C-96026

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

8.1. Fuel:

<table>
<thead>
<tr>
<th>Tank Type</th>
<th>Total</th>
<th>Usable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Tank</td>
<td>1290 L</td>
<td>1278 L</td>
</tr>
<tr>
<td>Wing Tips Tank</td>
<td>400 L</td>
<td>395.2 L</td>
</tr>
</tbody>
</table>

8.2. Oil:

<table>
<thead>
<tr>
<th>Tank Type</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine</td>
<td>11.00 L</td>
<td>5.50 L</td>
</tr>
</tbody>
</table>

9. Air Speeds:

<table>
<thead>
<tr>
<th>Speed Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum design speed</td>
<td>$V_D$ 400 km/h IAS</td>
</tr>
<tr>
<td>Demonstrated maximum flight speed</td>
<td>$V_{DF}$ 400 km/h IAS</td>
</tr>
<tr>
<td>Maximum operating speed</td>
<td>$V_{MO}$ 335 km/h IAS</td>
</tr>
<tr>
<td>Maximum flaps extended speed, landing configuration 42°</td>
<td>$V_{FE}$ 220 km/h IAS</td>
</tr>
<tr>
<td>Maximum flaps extended speed, take-off configuration 18°</td>
<td>$V_{FE}$ 250 km/h IAS</td>
</tr>
<tr>
<td>Maximum maneuvering speed</td>
<td>$V_{A}$ 265 km/h IAS</td>
</tr>
<tr>
<td>Maximum landing gear operating speed</td>
<td>$V_{LO}$ 250 km/h IAS</td>
</tr>
<tr>
<td>Maximum landing gear extended speed</td>
<td>$V_{LE}$ 250 km/h IAS</td>
</tr>
<tr>
<td>Maximum spoiler operating speed</td>
<td>$V_{SP}$ 190 km/h IAS</td>
</tr>
<tr>
<td>Minimum control speed on ground take-off run</td>
<td>$V_{MCG}$ 130 km/h IAS</td>
</tr>
<tr>
<td>Minimum control speed, take-off</td>
<td>$V_{MCA}$ 135 km/h IAS</td>
</tr>
<tr>
<td>Minimum control speed during landing approach</td>
<td>$V_{MCL}$ 135 km/h IAS</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Weight Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum taxiing weight</td>
<td>6620 kg</td>
</tr>
<tr>
<td>Maximum take-off weight</td>
<td>6600 kg</td>
</tr>
<tr>
<td>Maximum landing weight</td>
<td>6400 kg</td>
</tr>
<tr>
<td>Maximum landing weight in exceptional cases</td>
<td>6600 kg</td>
</tr>
<tr>
<td>Maximum zero-fuel weight</td>
<td></td>
</tr>
<tr>
<td>- without wing-tip tanks</td>
<td>6000 kg</td>
</tr>
<tr>
<td>- with wing-tip tanks</td>
<td>6060 kg</td>
</tr>
</tbody>
</table>

13. Centre of Gravity Range:

<table>
<thead>
<tr>
<th>Limit Type</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward c.g. limit</td>
<td>19 % MAC</td>
</tr>
<tr>
<td>Aft c.g. limit</td>
<td>30 % MAC</td>
</tr>
</tbody>
</table>

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

19 pax (L 410 UV-P-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)

18. Number of seats:

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 with M601E or M601E-21 engines and V510 propellers:
  Do-L410-1211.2 Approved Flight manual for the L 410 UVP-E20 Aeroplane
  Do-L410-1214.2 Airplane Flight manual for the L 410 UVP-E20
  For aircraft with H80-200 engines and AV-725 propellers:
  Do-L410-1218.2 Airplane Flight Manual for the L-410 UVP-E20 with H80-200 Engines and AV-725 Propellers
  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.

2. Maintenance Schedule:

- In Czech: Do-L410-1223.0 Předpis pro údržbu letounu L-410 UV-P-E20 bez GO
- In English: Do-L410-1223.2 Maintenance Schedule for the L410 UVP-E20 Aeroplane without overhaul
3. 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 (valid)
     Do-L410-1231.1  Provozně technická příručka pro letoun L-410 UVP – E
   - In English:
     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-L410-1232.2 is issued for L 410 UVP-E20 with GE H80-200 engines and AV-725 propellers.

   - In Czech:
     Do-L410-1242.0  Album elektroschemat pro letouny L-410 UVP-E, L-410 UVP-E9, L-410 UVP-E20
     Do-L410-1241.1  Album elektroschemat letounu L-410 UVP – E
   - In English:
     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.
     Do-L410-1241.4  Wiring Manual for the L 410 UVP-E Aeroplane

5. 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

6. 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
7. 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: 

8. 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. 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

11. Eligible Serial Numbers

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

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

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

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

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

E V. Operational Suitability Data

E VI. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 90-03 on October 30, 1990.

2. List of FAR-23 requirements for which exemptions have been approved:
   - FAR 23.677 (a) For the aileron trim tab the neutral position is only enunciated. The Aeroplane Flight Manual requires that the neutral position must be checked before taxiing-out for take-off.
   - FAR 23.1305 (v) There is no indication of proper functioning of the fuel heater. The heater operates automatically, there are no pilot-operated controls. A malfunction of the heater will not result in an emergency. A check of correct functioning of the fuel heater is required by 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.

3. The data in this TCDS where there is no reference to the List of FAR requirements, refer to both L 410 UV-E20 and L 410 UVP-E20 CARGO.

4. Certification Basis for Type Design Changes

4.1 TDC-001-E20: Cargo kit with cargo restrain system for 1700 kg:
   - FAR 23 Amdt. 41 plus

4.2 TDC-063-E20-420: Installation of Universal EFI-890R Electronic Flight Displays, FA 2200 MADRAS FDR and integrated systems:
   - FAR 23 Amdt. 41 plus

4.3 TDC-070-E9-E20-420: Installation of the HF KHF1050 radio
   - FAR 23 Amdt. 41 plus

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

4.5 TDC-092-E9-E20-420: Ambulance kit
   - FAR 23 Amdt. 41 plus

4.6 TDC-094-E20-420: Conversion of toilet area in rear passenger cabin into baggage compartment:
   - FAR 23 Amdt. 41 plus

4.7 TDC-106-E20: Installation of GE H80-200 engines and AV-725 propellers:
   - FAR 23 Amdt. 41 plus

4.8 TDC-108-E9-E20-420: Passenger to cargo quick change configuration with foldable seats:
FAR 23 Amdt. 41 plus

4.9 TDC-133-E20-420: Sport Parachuting Kit:
FAR 23 Amdt. 41 plus

4.10 TDC-139-E9-E20-420 Flight attendant's folding seat installation
FAR 23 Amdt. 41 plus

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

5. L 410 UVP-E20 model with the "R" included in the Serial number, i.e. RBBNN, where BB is a batch number and NN is a number of an aircraft in the batch, are manufactured in Russian Federation. Those Serial Numbers are not eligible for registration in the EU Member States.
SECTION F: L-420 Type Design

F I. General

1. Data Sheet No: EASA.A.026
2. Type / Model / Variant
   - Type: L-410
   - Model: L-420
   - Variant:
3. Airworthiness Category: Commuter
4. Type Certificate Holder: Aircraft Industries, a.s.
   Na Záhonech 1177
   686 04 Kunovice
   CZECH REPUBLIC
5. Manufacturer:
   S/N 922729A:
   LET, n.p.
   686 04 Kunovice 1177
   CZECHOSLOVAKIA
   
   S/N 012735A:
   LETECKÉ ZÁVODY a.s.
   686 04 Kunovice 1177
   CZECH REPUBLIC

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

6. National Certification Date: March 11, 1998
7. CAA Application Date: ---
8. CAA Recommendation Date: ---
9. EASA Type Certification Date: 19 August 2005

F II. Certification Basis

1. Reference Date for determining the applicable requirements:
2. CAA CZ Type Certificate Data Sheet No 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: - L16/I, Part II, Chapter 10
   - FAR Part 36

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

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

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

3. Equipment: The list of approved equipment is shown in the document Do-L410-3200.0 List of models and their 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 m² with wing tips tanks
     34.86 m² without wing tip tanks

5. Engines:
   5.1. Model: WALTER M 601 F
   5.1.1. Type Certificate: EASA.E.070 (replacing CAA CZ TC No 89-03)
   5.1.2. Engine Limits
      Maximum continuous power rating:
      - Maximum power: 580 kW
      - Max. gas generator speed: 100.5 %
      - Max. propeller speed: 2080 rpm
      - Max. ITT: 760°C
      Take-off power rating:
      - Maximum power: 580 kW
      - Max. gas generator speed: 100 %
      - Max. propeller speed: 2080 rpm
      - Max. ITT: 735 °C
      Take-off power rating with water injection:
      - Maximum power: 580 kW
      - Max. gas generator speed: 100 %
      - Max. propeller speed: 2080 rpm
      - Max. ITT: 735 °C
Maximum take-off power rating:
Maximum power 595 kW
Max. gas generator speed 102 %
Max. propeller speed 2080 rpm
Max. ITT 780°C

6. Propellers:

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

7. Fluids:

7.1. Fuel
T1 according to ST SEV 5024-85, or GOST 10227-86
TS 1 according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
RT according to ST SEV 5024-85, or GOST 10227-86, or ČSN 656 520
PL 6 according to PND 25005-76
PL 7 according to PND 25005-92
JET A according to ASTM 1655-89
JET A-1 according to ASTM 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)
Exxon TO 2380
Castrol 599

8. Fluid capacities:

8.1. Fuel:
Standard Tank
Total: 1000 kg
Usable: 991 kg
Wing Tips Tank
Total: 313.8 kg
Usable: 305.8 kg

8.2. Oil:
Engine
Maximum: 11.00 Litre
Minimum: 5.50 Litre

9. Air Speeds:

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

10. Maximum Operating Altitude 6100 m

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

12. Maximum Weight:

Maximum taxing weight 6620 kg
Maximum take-off weight 6600 kg
Maximum landing weight 6400 kg
Maximum landing weight in exceptional cases 5950 kg
13. Centre of Gravity Range:
   Forward c.g. limit 19 % MAC
   Aft c.g. limit 30 % MAC

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

15. (reserved)

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

17. Minimum Flight Crew:
   2

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

19. (reserved)

20. Baggage / Cargo Compartments
   Maximum baggage load
   - forward baggage compartment 140 kg
   - aft baggage compartment 150 kg
   - Cargo kit 1000 kg

21. Wheels and Tyres
   Nose wheel K39-1100-7 with tyre
   9.00-6 (550 x 225) M4 or
   9.00-6/906 TO6-1 — Good Year
   Main wheel K38-1100-7 with tyre
   12.50-10 (720 x 310) M3 or M4 or
   29x11,0-10/11OTO1-1 Good Year

**F IV. Operating and Service Instructions**

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 snimatelných 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 Aeroplane

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 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

10. Eligible Serial Numbers: 922729A, 012735A

F V. Notes

1. This model was originally approved by CAA Czech under Type Certificate No. 98-01 on March 11, 1998.
2. EASA TC No. EASA.A.026 for the L-420 model was issued on August 19, 2005.
SECTION G: L 410 NG Type Design

G I. General

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

G II. Certification Basis

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

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

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

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

3. Equipment: The list of approved equipment is shown in the
Do-L410NG-1230.2 Maintenance manual

4. Dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>With wing tips tanks</th>
<th>Without wing tip tanks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingspan</td>
<td>19.980 m</td>
<td>19.479 m</td>
</tr>
<tr>
<td>Length</td>
<td>15.074 m</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>5.969 m</td>
<td></td>
</tr>
<tr>
<td>Wing Area</td>
<td>35.18 m²</td>
<td>34.86 m²</td>
</tr>
</tbody>
</table>

5. Engines:

5.1. Model: H85-200 BC04

5.1.1. Type Certificate: EASA.E.070

5.1.2. Engine Limits

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

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

6. Propellers:


6.1.1. Type Certificate: EASA.P.031

6.1.2. Number of blades: 5

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

6.1.4. Diameter: 2300 mm
7. Fluids:

7.1. Fuel
- JET A1 according to ASTM D 1655 or DERD 2494
- RT according to ST SEV 5024 or GOST 10227 or CSN 65 6520
- TS−1 according to ST SEV 5024 or GOST 10227 or CSN 65 6520
- PSM 2 according to PN 86/C 96026
- T−1 according to ST SEV 5024 or GOST 10227
- PL−6 according to PND 25 005 76
- PL−7 according to PND 25 005 92
- JET A according to ASTM D 1655

Mixing of the above shown fuels is permitted.

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

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

8. Fuel capacities:

<table>
<thead>
<tr>
<th>Wing Tank</th>
<th>Total capacity (gravity fuelling)</th>
<th>1870 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total capacity (pressure fuelling)</td>
<td>1700 kg</td>
</tr>
<tr>
<td></td>
<td>Total usable fuel (gravity fuelling)</td>
<td>1854 kg</td>
</tr>
<tr>
<td></td>
<td>Total usable fuel (pressure fuelling)</td>
<td>1684 kg</td>
</tr>
<tr>
<td></td>
<td>Total unusable:</td>
<td>16 kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wing Tips Tank</th>
<th>Total wing tip tanks capacity</th>
<th>394 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total usable fuel</td>
<td>390 kg</td>
</tr>
<tr>
<td></td>
<td>Total unusable:</td>
<td>4 kg</td>
</tr>
</tbody>
</table>

9. Air Speeds:

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

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

11. All-weather Capability:
- The aircraft is approved for day and night VFR and IFR flights.
- The aircraft is approved for intended flights into icing conditions.
12. Maximum Weight:
   - Maximum ramp weight: 7,020 kg (15,476 lb)
   - Maximum take-off weight: 7,000 kg (15,432 lb)
   - Maximum landing weight: 6,800 kg (14,991 lb)
   - Maximum zero fuel weight: 6,600 kg (14,550 lb)
   - Maximum zero fuel weight - without wing tip tanks: 6,660 kg (14,683 lb)

13. Centre of Gravity Range:
   - Forward c.g. limit: 19 % MAC
   - Aft c.g. limit: 30 % MAC

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

15. (reserved)

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

17. Minimum Flight Crew:
   - 2

18. Number of passengers:
   - 19

19. (reserved)

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

21. Wheels and Tyres
   - Nose wheels and tyres: 550x225 Model 5 Tubeless
   - Main wheels and tyres: 720x310 Model 5 Tubeless

**G IV. Operating and Service Instructions**

1. Flight Manual
   - Do-L410NG-1210.2, IR, dated November 30, 2017, EASA approved December 19, 2017 or any later approved Revision

2. Maintenance Schedule (MS)
   - Do-L410NG-1220.2
   - MS includes Airworthiness Limitation Section
   - EASA approved December 19, 2017

   - Do-L410NG-1230.2

4. Illustrated Parts Catalogue
   - Do-L410NG-1250.2

5. Wiring Manual
   - Do-L410NG-1240.2

   - Do-L410NG-2020.2

7. Album of Production, Operation & Repair Tolerances
   - Do-L410NG-2030.2

8. Inspection Manual
   - Do-L410NG-2010.2

9. Eligible Serial Numbers
   - Format of s/n is XX, where first s/n starting with 5001
**G V. Operational Suitability Data**

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

Flight Crew Data  
TBD

**G VI. Notes**

1. The L 410 NG model is developed as a derivative of the L 410 UVP-E20. Certification Basis for changed areas has been upgraded to CS 23 / Amdt. 4, effective July 16, 2015. Based on Part 21.A.101, the following sections of FAR-23 / amendment 41, effective November 26, 1990, have been used: 23.143, 23.345, 23.391, 23.397, 23.399, 23.457, 23.1093 and 23.1419.

2. List of EASA approved Flight Manual Supplements for the following kits:
   a. Cargo kit with cargo restrain system for 1700 kg (Do-L410NG-1210.2 AFM Supplement No. 1, IR, or later approved revisions);
   b. Ambulance kit (9 lying patients) (Do-L410NG-1210.2 AFM Supplement No. 2, IR, or later approved revisions);
   c. Sport parachuting kit (Do-L410NG-1210.2 AFM Supplement No. 3, IR, or later approved revisions);
   d. Passenger to cargo quick change configuration with foldable seats (Do-L410NG-1210.2 AFM Supplement No. 4, IR, or later approved revisions).

3. As long as the Operational Suitability Data (ref. to G V.) are not EASA approved no aircraft should be registered in an EU Member State.
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
### Change Record:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
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<tr>
<td>1</td>
<td>February 4, 2005</td>
<td>Initial Issue</td>
</tr>
<tr>
<td>2</td>
<td>August 19, 2005</td>
<td>Editorial changes</td>
</tr>
<tr>
<td>3</td>
<td>September 2005</td>
<td>Editorial changes</td>
</tr>
<tr>
<td>4</td>
<td>October 24, 2005</td>
<td>Editorial changes</td>
</tr>
<tr>
<td>5</td>
<td>May 17, 2006</td>
<td>Change in address of TC holder</td>
</tr>
<tr>
<td>6</td>
<td>February 22, 2007</td>
<td>Incorporation of L 410 UVP-E20 CARGO</td>
</tr>
<tr>
<td>8</td>
<td>June 22, 2007</td>
<td>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-L and L 410 UVP-E-LW by reference to Serial number and date</td>
</tr>
<tr>
<td>10</td>
<td>30 May 2008</td>
<td>Updated requirements concerning safety modifications of the L 410 M Turbolet, L 410 UVP-Turbolet, L 410 UVP-E, L 410 UVP-E9, L 410 UVP-LW and L 410 UVP-E-LW models</td>
</tr>
<tr>
<td>11</td>
<td>May 7 2009</td>
<td>Addition of Notes about Installation Approval of Universal EFI-890R Dual Electronic Flight Displays and Madras FA 2200 Flight Data Recorder on L 410 UVP-E20 and L 420 aircraft models</td>
</tr>
<tr>
<td>12</td>
<td>June 8, 2010</td>
<td>Addition of L 410 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</td>
</tr>
<tr>
<td>13</td>
<td>June 28, 2010</td>
<td>Addition of L 410 UVP-E s/n 902506 to list of aircraft meeting the TCDS design standard. Reformating in new standard EASA TCDS style</td>
</tr>
<tr>
<td>14</td>
<td>March 1, 2011</td>
<td>Addition of ageing aircraft programme details.</td>
</tr>
<tr>
<td>16</td>
<td>June 5, 2013</td>
<td>Addition of the GE H80-200 engine with AV-725 propeller for L410UVP-E20 airplane; Addition of Ambulance kit. Editorial changes</td>
</tr>
<tr>
<td>17</td>
<td>May 12, 2014</td>
<td>Certification Basis of Major Changes added in E.V.5, S/N updated in all sections.</td>
</tr>
<tr>
<td>19</td>
<td>October 22, 2015</td>
<td>Range of Serial Numbers in section E IV. Updated</td>
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<tr>
<td>20</td>
<td>December 18, 2015</td>
<td>OSD (MMEL) data added to Sections C, D, E; renumbering.</td>
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<tr>
<td>21</td>
<td>February 7, 2017</td>
<td>Addition of L 410 UVP-E20 s/n 882101 to list of aircraft meeting the TCDS design standard (Section E IV. Point 11).</td>
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