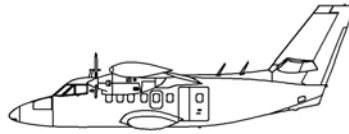




Aircraft Industries



## INFORMATION BULLETIN

**IB No.: L410UVP-E/528b Revision 1**

**Concerns:** L 410 UVP-E20 airplanes equipped with digital flight deck (EFI-890R system) up to S/N 3009 inclusive and S/N 3013.

**Subject:** Change wiring of loads on the S1A, S2A, S2B, S3B power buses.  
Change of yellow marked circuit breakers on the overhead panel.  
Clarification of brushes installation of the LUN 2132.02-8 starter/generator.

**Revision 1** corrects ground test and wiring of baggage compartment fire signalization.

**Reason:** Increasing of the EFIS reliability at specific failure of one DC generator.  
Reduction of crew load in case of both DC generators failure.  
Incorrect installation of brushes by an airplane operator.

**To be carried out at the latest by:** As per operator's requirement.

**To be carried out by:** Organization certified for periodic maint. of L-410 airplanes.

**Material costs to be covered by:** Aircraft Industries, a.s., 686 04 Kunovice, Czech Republic.

**Work costs to be covered by:** Operator.

**Necessary material to be delivered by:** AI, a.s., 686 04 Kunovice, Czech Republic against an order.

**Bulletin becomes effective:** On the day of release.

**Total No. of pages:** 8

**Bulletin L410UVP-E/528b Revision 1 supersedes previous bulletin L410UVP-E/528b.**

Released: Pavel Jurák  
Head of airworthiness dept.

The technical content of this document is approved under the authority of DOA ref. EASA. 21J.119.

Date of release: April 8, 2019

**PERFORMANCE: strongly recommended**

## **1. INSTRUCTIONS FOR PLANNING**

### **A. CONCERNS**

#### **1. Airplane type**

L 410 UVP-E20

#### **2. Version / S/N**

Airplanes up to S/N 3009 inclusive and S/N 3013.

#### **3. Qualification for implementation**

Airplanes equipped with digital flight deck (EFI-890R system).

#### **4. New equipment**

Not required.

### **B. REASON**

Increasing of the EFIS reliability at specific failure of one generator - faulty DC generator does not supply sufficient current for power supply of respective loads (this function is substituted by an onboard battery). Small residual current supplied by the DC generator disallows disconnection of the faulty DC generator from the mains and thereby switching loads to a functional DC generator.

Reduction of crew load in case of both DC generators failure.

Incorrect installation of starter/generator brushes by an airplane operator.

### **C. APPROVAL**

This bulletin has been elaborated based on data of the Type Design Change No. TDC-178-E20 and Design Changes No. ZKB 057 881 and 059 602 (Revision 1).

### **D. MAN-HOURS**

Supposed Man-hours: 16 M-hours

### **E. MATERIAL - AVAILABILITY**

#### **1. New equipment**

Not required.

#### **2. Installation parts**

Will be delivered by the airplane manufacturer Aircraft Industries, a.s., 686 04 Kunovice, Czech Republic against an order.

#### **3. Costs**

**Material:** To be covered by the AI, a.s., 686 04 Kunovice, Czech Republic.

**Work:** To be covered by the operator.

## F. SPECIAL TOOLS

Not required.

## G. WEIGHT AND BALANCE

The airplane empty weight is increased by 0.41 kg (0.90 lb).

The moment at empty weight is increased by 0.12 kg·m (0.11 lb·in/100).

The centre of gravity position at empty weight is shifted by 0.012 % MAC forward.

### **Valid only for airplanes on which this bulletin was implemented before the Revision 1 (including airplanes S/N 3006, 3007, 3008)**

The airplane empty weight is increased by 0.16 kg (0.35 lb).

The moment at empty weight is increased by 0.05 kg·m (0.04 lb·in/100).

The centre of gravity position at empty weight is shifted by 0.005 % MAC forward.

## H. USED DOCUMENTATION

### 1. Drawings:

B570 606X

Wiring diagram D – Pitot static probes

B570 956X

Change wiring of loads – EFIS

### 2. Maintenance Manual, doc. No. Do-L410-1232.2, chap.:

024.30.04 024.40.00 025.11.00 025.21.00 025.23.00 031.13.00  
027.00.00 053.30.00

### 3. Wiring Manual, doc. No. Do-L410-1242.2, chap.:

024.50.00 030.30.00

### 4. Maintenance Manual of GE M601E/E-21 engine, chap.:

80.11.00

### 5. Maintenance Manual of GE H80-200 engine, chap.:

80.10.01

## I. AMENDED DOCUMENTATION

AFM Supplement No. 204.

MS not affected.

MM not affected.

WM Supplement for S/N of the airplane.

## 2. INSTRUCTIONS FOR IMPLEMENTATION

### A. PREPARATORY WORK

- Disconnect the external power supply plug accord. to the MM, chap. 024.40.00.B.
- Remove accumulators from the airplane according to the MM, chap. 024.30.04.A.
- Remove the RH cover between bulkheads 1 to 2 according to the MM, chap. 053.30.00, page 401.
- Remove the pilot seats according to the MM, chap. 025.11.00, page 401.
- Tilt down the overhead panel according to the MM, chap. 031.13.00, page 401.
- Remove the RH cockpit ceiling panel – see MM, chap. 025.23.00, Fig. 1, pos. 19.
- Remove the passengers' double seat (the 1<sup>st</sup> row) according to the MM, chap. 025.21.00, page 401.
- Remove the detachable cover from vertical channel on the frame 7 according to the MM, chap. 027.00.00, point 4.E.(2).
- Remove the RH cover panel – see the MM, chap. 025.23.00, Fig. 1, pos. 13.
- Open the panels of the ceiling bay in the passengers' compartment between frames 7 to 12 according to the MM, chap. 027.00.00, point 4.E.(3).

### B. DISMOUNTING

#### **Change wiring of loads on the S1A, S2A, S2B, S3B power buses**

- Disconnect the 244D wire from the D12 and D32 circuit breakers (on the overhead panel – see the WM Supplement, chap. 024.50.00) and blind it.
- Disconnect the 2257M wire from the M292 and FA15 circuit breakers (on the overhead panel – see the WM Supplement, chap. 024.50.00) and blind it.
- Disconnect the 1100FE wire from the FE104 circuit breaker and lug terminal No. 6 of the V51 terminal block (on the overhead panel – see the WM Supplement, chap. 024.50.00) and blind it.
- Disconnect the 550FA wire from the M292 circuit breaker (on the overhead panel) and lug terminal No. 1 of the V43 terminal block (between frames 8 to 9, LH – see the WM Supplement, chap. 024.50.00) and blind it.
- Remove a jumper between the D32 and D33 circuit breakers (on the overhead panel – see the WM, chap. 030.30.00, Fig. 1).
- Remove a jumper between the A109 and M342 circuit breakers (between frames 8 to 9, LH – see the WM Supplement, chap. 024.50.00).

#### **Valid only for airplanes on which this bulletin was implemented before the Revision 1 (including airplanes S/N 3006, 3007, 3008)**

- Disconnect the 2257M wire from the M292 and FA15 circuit breakers (on the overhead panel – see the WM Supplement, chap. 024.50.00) and blind it.
- Disconnect the 550FA wire from the M292 circuit breaker (on the overhead panel) and lug terminal No. 1 of the V43 terminal block (between frames 8 to 9, LH – see the WM Supplement, chap. 024.50.00) and blind it.

## C. MOUNTING

### Change wiring of loads on the S1A, S2A, S2B, S3B power buses

- Connect the new 2032A, 2033A, 2257M, 8001A, 1100FE, 550FA wires acc. to the B570 956X wiring diagram. Verify conformity with the B570 606X wiring diagram. Fasten the wires to the existing harnesses. Use material pos. 1, 3, 4 of point 3.A. of this bulletin.
- Disconnect the 251A wire from the A38 circuit breaker and connect it to the A37 circuit breaker (between bulkheads 1 to 2, RH).

### Valid only for airplanes on which this bulletin was implemented before the Revision 1 (including airplanes S/N 3006, 3007, 3008)

- Connect the new 2257M, 550FA wires acc. to the B570 956X wiring diagram. Fasten the wires to the existing harnesses. Use material pos. 2, 3, 4 of point 3.A. of this bulletin.

### Change of yellow marked circuit breakers on the overhead panel

- Increasing a number of yellow marked circuit breakers due to sufficient capacity of batteries:

Added yellow strips	Cancelled yellow strips
STALL PROBE	WINDSHIELD HEATING LH
WING FLAPS	WINDSHIELD HEATING RH
SPOILERS	AC GENERATOR LH
INTERCOM II	AC GENERATOR RH
DME or DME I	COCKPIT LIGHTING
ELU LH	STBY CIRCUIT LIGHTING
ELU RH	
FUEL CROSSFEED	
POSITION LIGHTS	
ANTICOL BEACON	
RADIO ALTIMETER	

- Mark the circuit breakers stated in „Added yellow strips“ column with yellow paint (RAL 1023) on the overhead panel.
- Cancel yellow strips of the switches/circuit breaker stated in „Cancelled yellow strips“ column with black paint (RAL 9004) on the overhead panel.

### Clarification of brushes installation of the LUN 2132.02-8 starter/generator

- Check after installation of the starter/generator brushes (after the check for brush wear according to the MM of GE M601E/E-21 engine, chap. 80.11.00, page 501 or MM of GE H80-200 engine, chap. 80.10.01, page 203) – see Fig. 1:
  - tightening of screws connecting the brushes terminals with brushes holders
  - correct position of brushes terminals – perpendicular to the axis of commutator rotation
  - arrangement of conductors – they must not be crossed nor frayed

- integrity and setting of springs in the U-profiles on upper side of brushes
- free smooth motion of the brushes in holders

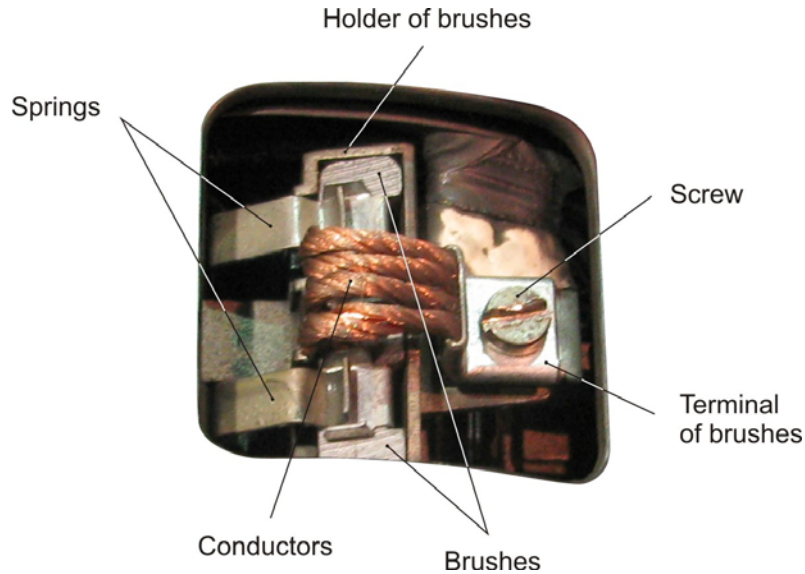


Fig. 1 Correct position of brushes in a holder

## D. TESTS

### 1. Ground Tests

- Switch on the BATTERY I, DCU, PFD I, DCP I, CHP, INTERCOM I, PA switch /circuit breakers on the overhead panel.
- Check function of the DCU, PFD I, DCP I, CHP units. Verify function of the INTERCOM I and PA systems.
- Switch off the EMERG. BUS BAR I circuit breaker (A37 between bulkheads 1 to 2, RH).
- Check shutdown of the DCU, PFD I, DCP I, CHP units. Check shutdown of the INTERCOM I and PA systems.
- Measure battery 1 voltage (cca 24 VDC) between FEATHERING PUMP LH, RH (M341, M342) circuit breaker outputs (3115M, 3116M wires, between frames 8 to 9, LH) and A/C ground.
- Switch off the BUS BAR S2A circuit breaker (A56 between frames 7 to 8, RH).
- Voltage must disappear.
- Switch on the STALL PROBE and SPOILERS circuit breakers on the overhead panel.
- Push the STALL PROBE button on the RH control panel and verify its lighting. Verify function of spoilers (spoilers physically extended but SPOILERS cell placed on the CWD is off because it is supplied from the battery 2).
- Switch off the BUS BAR S3B circuit breaker (A55 between frames 7 to 8, RH).
- STALL PROBE button must go out and spoilers are out of function.
- Switch off the DCU, PFD I, DCP I, CHP, INTERCOM I, PA, STALL PROBE, SPOILERS, BATTERY I switch/circuit breakers on the overhead panel and switch on A37, A55, A56 circuit breakers.

- Switch on the BATTERY II, ADC II, PFD II, DCP II, TCAS (if installed), SSR I (switch on in case the TCAS test only), DEICING PITOT STATIC II (or HEATING PITOT II), BAG. COMP. FIRE DET., CWD AIRFRAME switch/circuit breakers on the overhead panel.
- Check function of the ADC II, PFD II, DCP II, TCAS (if installed) units. Verify function of Baggage compartment fire detector system.
- Push the HEATING PITOT HEADS II button on the RH control panel and verify its lighting.
- Switch off the EMERG. BUS BAR II circuit breaker (A38 between bulkheads 1 to 2, RH).
- Check shutdown of the ADC II, PFD II, DCP II, TCAS units and HEATING PITOT HEADS II button must go out. Check shutdown of Baggage compartment fire detector system.
- Switch off the ADC II, PFD II, DCP II, TCAS (if installed), SSR I, DEICING PITOT STATIC II (or HEATING PITOT II), BAG. COMP. FIRE DET., CWD AIRFRAME, BATTERY II switch/circuit breakers on the overhead panel and switch on A38 circuit breaker.

## 2. Flight Tests

Not required.

## E. FINISHING WORK

- Install the RH cover panel – see the MM, chap. 025.23.00, Fig. 1, pos. 13.
- Close the ceiling panels in the passengers' compartment according to the MM, chap. 027.00.00, point 4.E.(20).
- Install the detachable cover on vertical channel on the frame 7 according to the MM, chap. 027.00.00, point 4.E.(21).
- Install the passengers' double seat acc. to the MM, chap. 025.21.00, page 401.
- Install the overhead panel according to the MM, chap. 031.13.00, page 401.
- Install the RH cockpit ceiling panel – see MM, chap. 025.23.00, Fig. 1, pos. 19.
- Install the pilot seats according to the MM, chap. 025.11.00, page 401.
- Install the RH cover between bulkheads 1 to 2 according to the MM, chap. 053.30.00, page 401.
- Install the airplane accumulators according to the MM, chap. 024.30.04.A.
- Insert the supplements into the respective airplane manuals.
- Record the weight and moment changes in the “Weight and Balance Record” in section VI of the Airplane Flight Manual and update the empty weight and moment.

### 3. NECESSARY MATERIAL

#### A. INSTALLATION PARTS DELIVERED BY THE AIRPLANE MANUFACTURER

Pos.	AI Identifier	Name	Pcs/Aircraft
1	B572 016N	Change wiring of loads – new wires	1
2	493 016 B572 016N	Change wiring of loads – new wires (2257M, 550FA wires only)	1
3	8710 2970	220N Vinytol leatherette	100 x 1000
4	8322 4105	A-A-52081-B-5 Lacing tape	5 m

**Note:** Pos. 2 is delivered only for airplanes on which this bulletin was implemented before the Revision 1 (including airplanes S/N 3006, 3007, 3008).

### 4. RECORD IN THE AIRPLANE LOGBOOK

Change wiring of loads on the S1A, S2A, S2B, S3B power buses and change of yellow marked circuit breakers on the overhead panel have been performed according to the IB L410UVP-E/528b Revision 1.

Date: .....

Performed by: .....

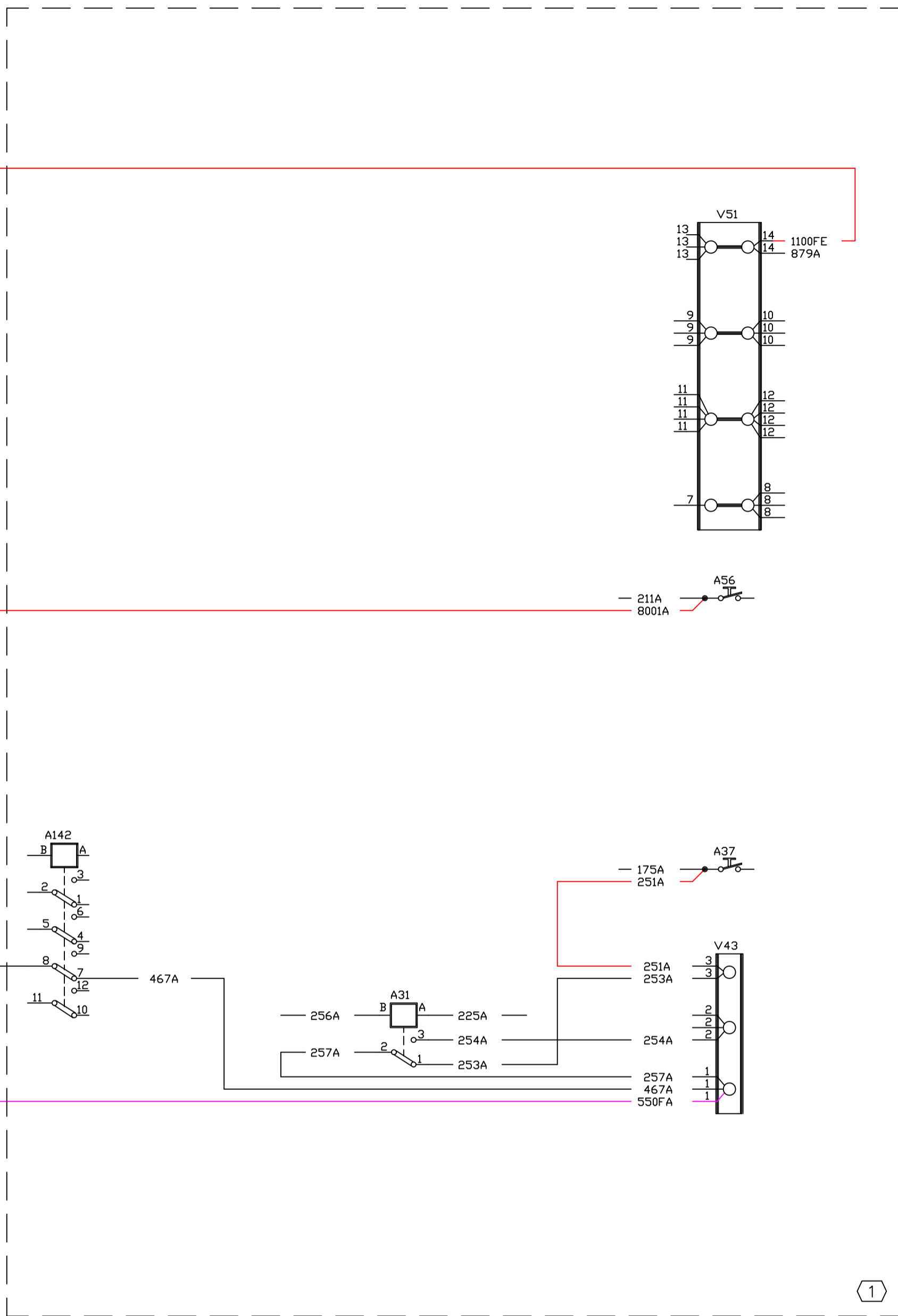
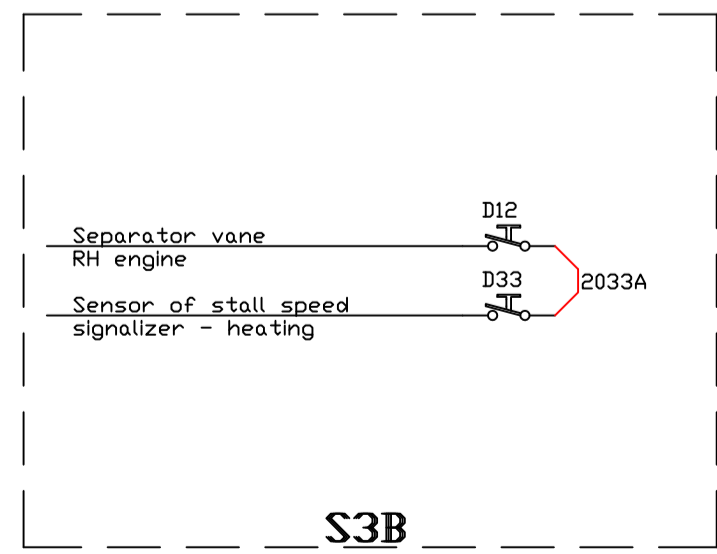
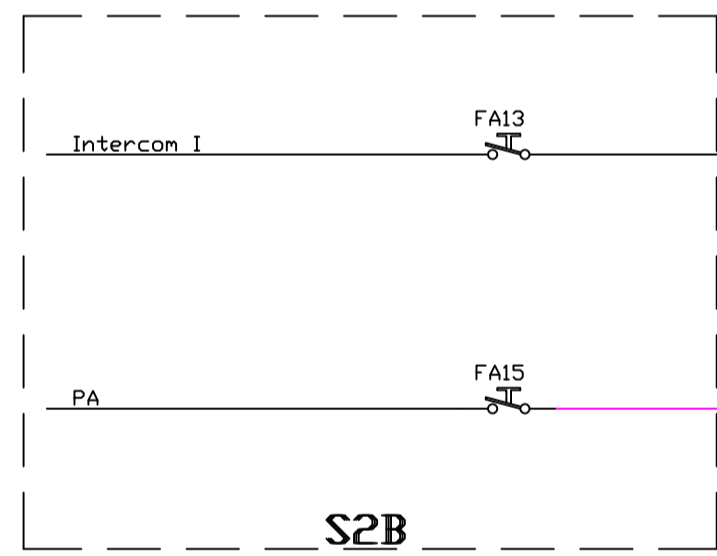
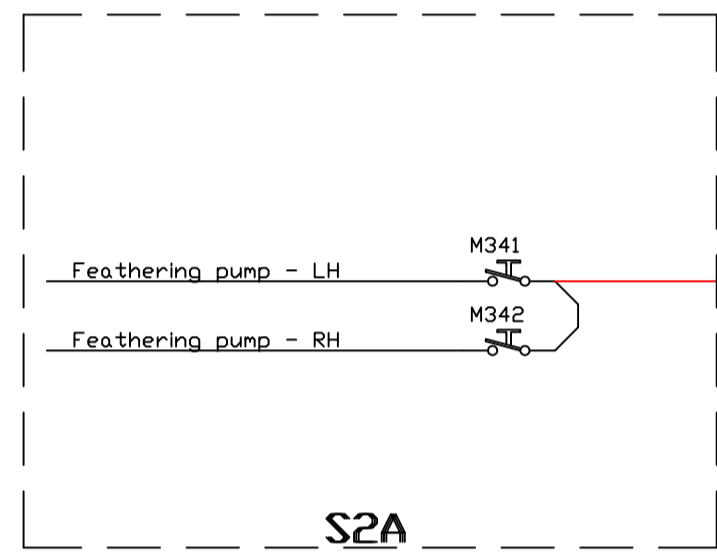
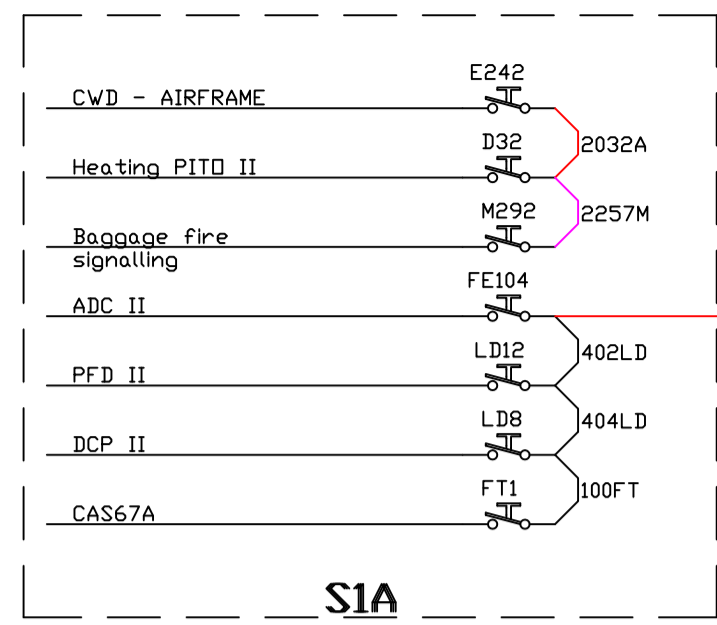
(name and signature of verification engineer)

Elaborated by: Ing. Vlastimil Lapčák ..... 

Checked by: Ing. Pavel Ulrich







1 EL. SCHÉMA – GENERÁTOR / AKUMULÁTOR

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