

SUBJECT:

Installation of canopy lock with safety latch and sensor.

AFFECTED:

All aircraft WT-9 Dynamic.

REASON:

When improper execution of canopy latching and locking point during before takeoff procedure, the canopy may not be properly locked. The main latch is only partially plugged-in the canopy lock socket what may result under certain conditions in canopy opening during flight.

COMPLIANCE:

Optional.

WEIGHT AND BALANCE:

Weight change: Negligible

Moment change: Negligible

REQUIRED ACTION:

Install new canopy lock with safety latch and sensor, that minimize the risk of canopy opening during flight by two ways:

- Indication of insufficient plug-in of main latch (check lamp on the instrument panel)
- Safety latch holding the main latch after plug-out from the canopy lock socket.

The system of canopy lock with a sensor indicates insufficiently locking of the canopy and the safety latch prevents unintentional opening of the canopy. The system does not substitute properly execution of canopy latching and locking point during before takeoff procedure!

In the case of installation difficulties contact the aircraft manufacturer at service@aerospool.sk.

1. **Removing of original canopy lock socket and enlarging of installation hole.**
 - 1.1. Drill out the rivets (1, Fig. 1) and remove original canopy lock socket (2) from the fuselage.
 - 1.2. Place the template (Fig. 2) for installation hole enlarging on the fuselage and align with the rivet holes (template in the scale 1:1 is in the Appendix 1, „UP“ symbol marks upper side of template). Enlarge the hole in the fuselage for installation of new canopy lock socket according to template. It is necessary to chamfer the sharp corners min. $R = 0.5 \text{ mm}$!

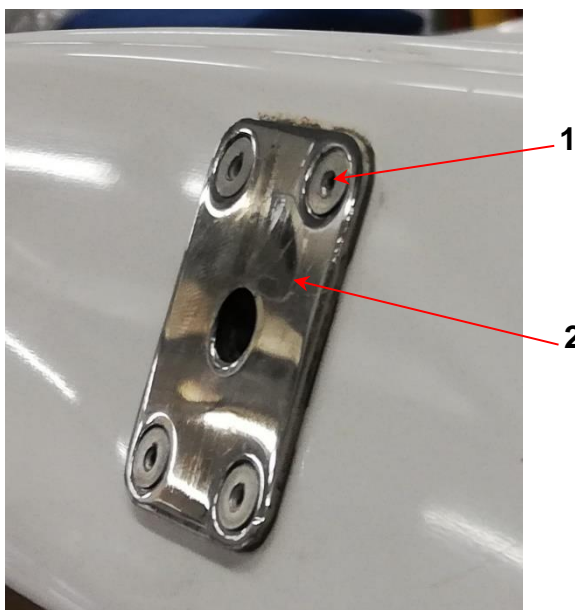


Fig. 1

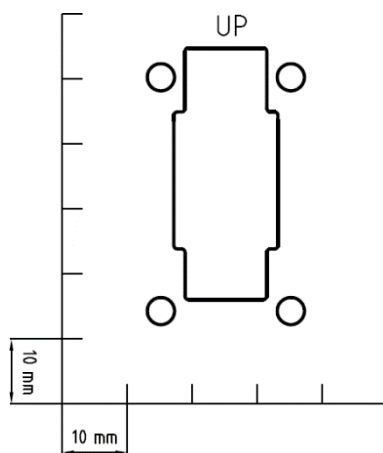


Fig. 2

2. Installation of new canopy lock socket.

- 2.1. Put the insulation (6, Fig. 3) on the cable (5), solder the wires (4, 5) according to wiring diagram (Fig. 10).
- 2.2. Place the insulation (6, Fig. 3) on the joint and apply heat to shrink it.
- 2.3. Pass the cable (7, Fig. 4) to the right through the fuselage stiffener and central tunnel to the instrument panel.
- 2.4. From the rear drill the hole in the fuselage stiffener for access to adjusting screw (10, Fig. 5) of sensor.
- 2.5. Place the canopy lock socket (1, Fig. 3) into the fuselage (2) and attach it by rivets (3) (see Fig. 7).
- 2.6. Fix the cable (7, Fig. 4) to the fuselage and other electrical installation by means of clips (8) and cable ties (9).
- 2.7. Connect the cable (7) to the check lamp and circuit breaker according to wiring diagram (Fig. 10).
- 2.8. Bond the protective plate (11, Fig. 7) on the canopy frame (12) using Araldite 2022-1 in the position according to main latch (13).

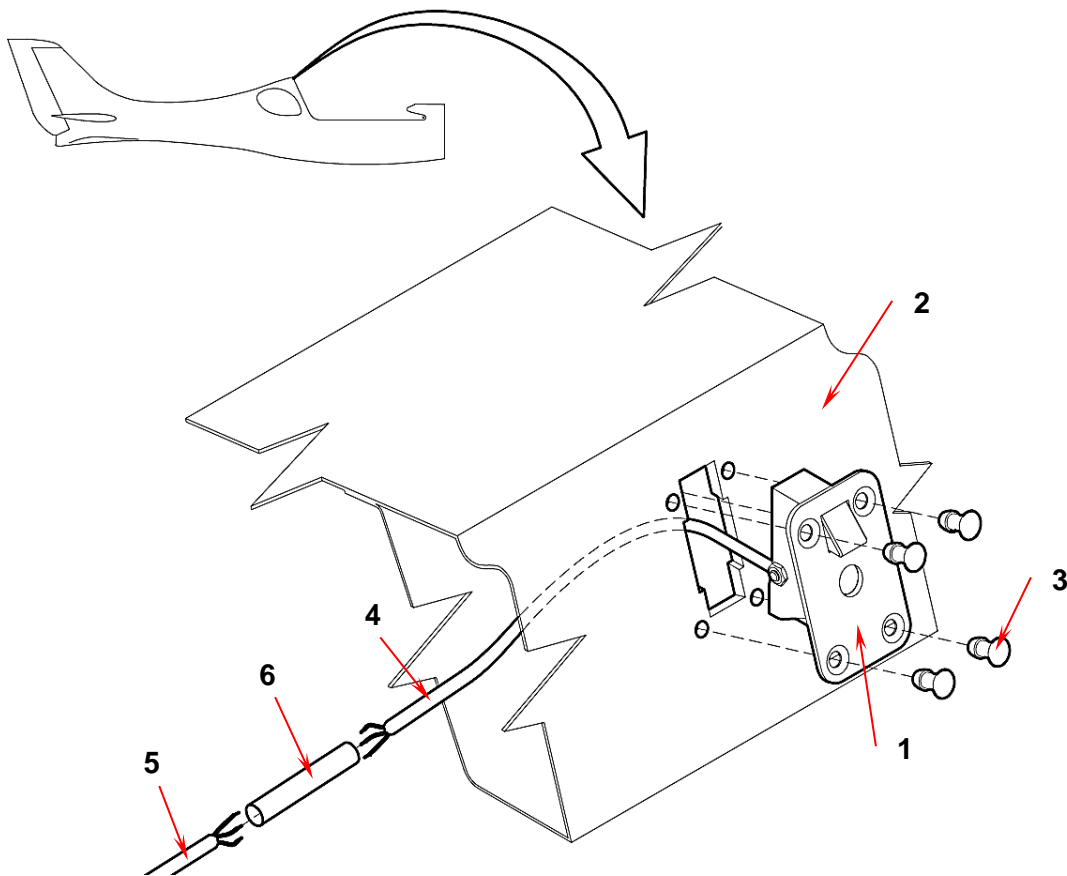


Fig. 3

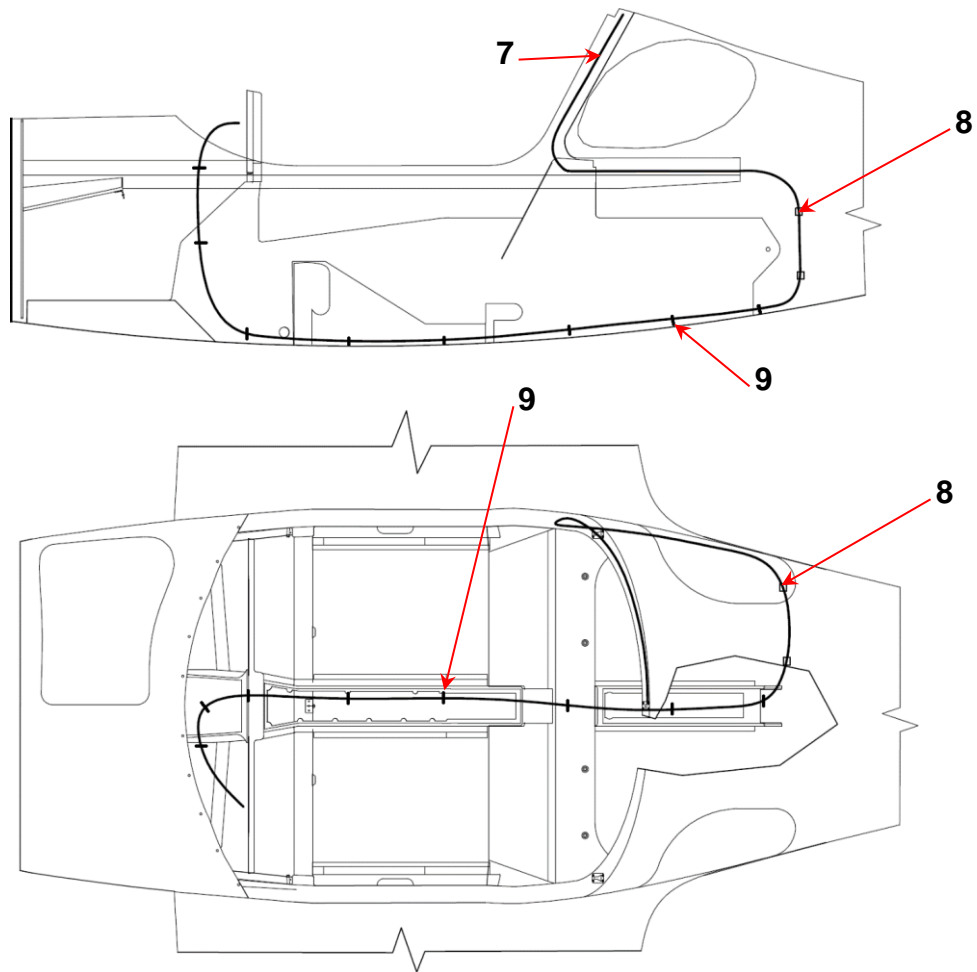


Fig. 4

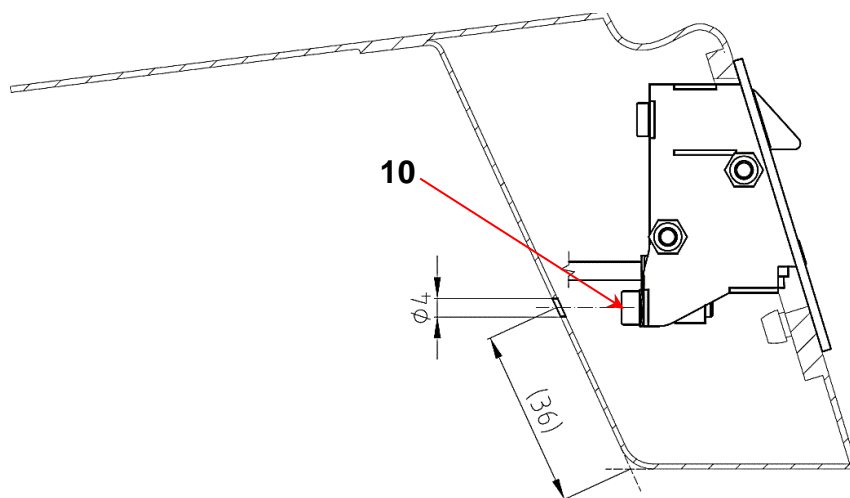


Fig. 5

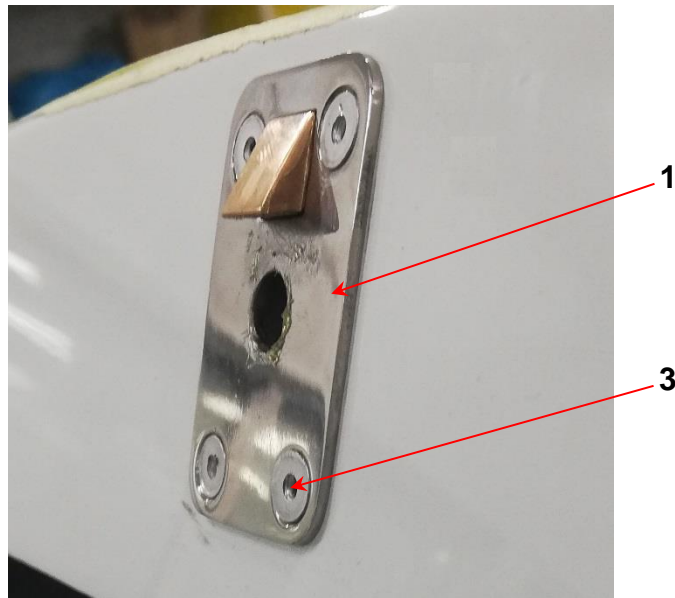


Fig. 6

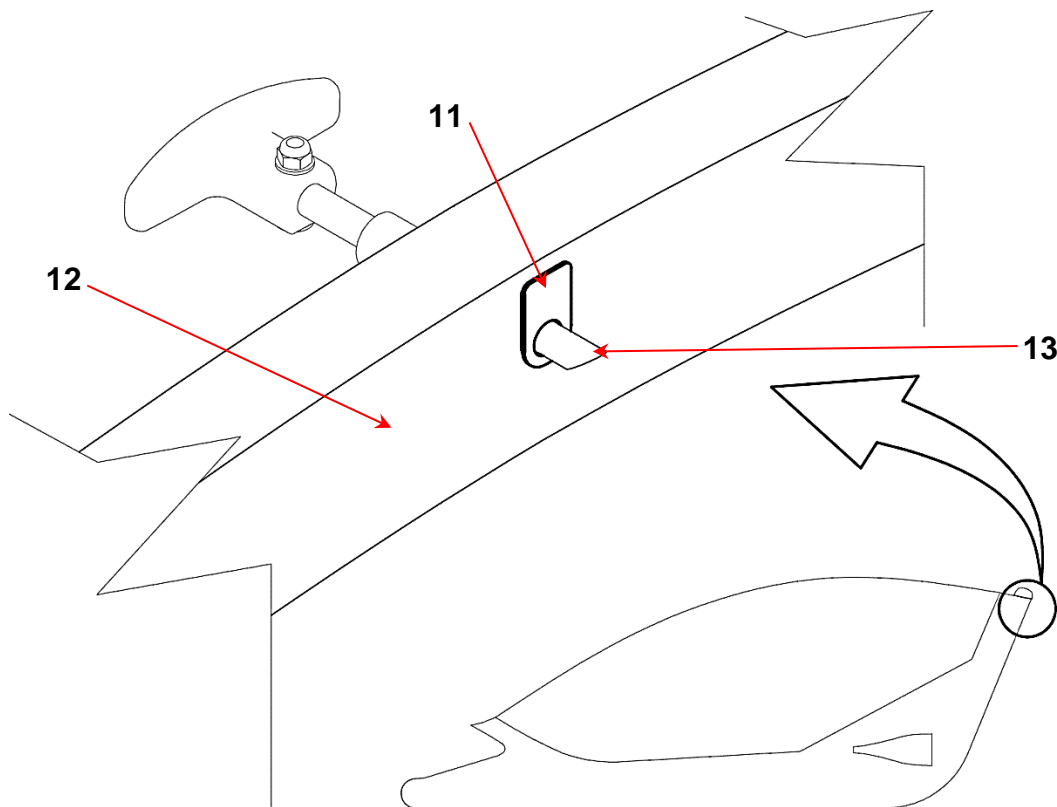


Fig. 7

3. Instrument panel and connection**3.1. Variant A** (individual check lamp):

- 3.1.1. Drill a hole $\varnothing 8.5$ mm for the check lamp (area A, Fig. 8) and $\varnothing 9.5$ mm for the circuit breaker (area B) on the instrument panel.
- 3.1.2. Connect the sensor of canopy lock socket to the check lamp and circuit breaker according to wiring diagram (Fig. 10).
- 3.1.3. Install the check lamp and circuit breaker on the instrument panel.
- 3.1.4. Mark the check lamp and circuit breaker by label "**CANOPY**".

3.2. Variant B (check lamps panel):

- 3.2.1. Connect the sensor of canopy lock socket to the pin No. 8 of connector DB37 of check lamps panel and to the circuit breaker of check lamps panel according to wiring diagram (Fig. 10).

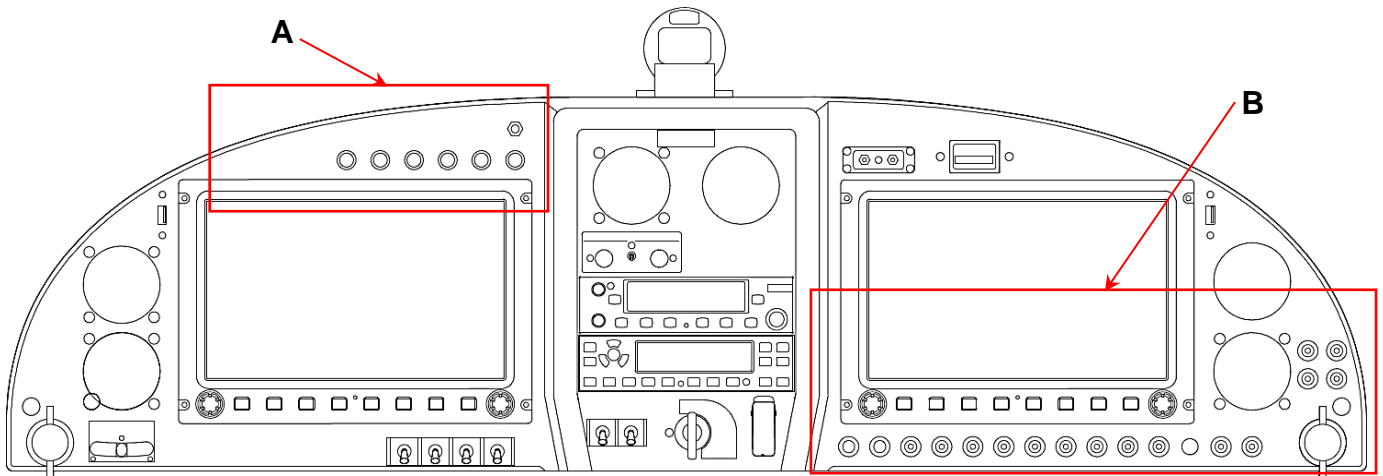


Fig. 8

4. Sensor adjustment

The aircraft must stand on its landing gear during adjustment of sensor!

- 4.1. Close the canopy.
- 4.2. Set the main latch (10, Fig. 9) to the reference position i. e. closely to the entry hole of canopy lock socket (6).
- 4.3. Plug-in the main latch (10) 5 ± 0.3 mm deep into the canopy lock socket (12) and fix it in this position.
- 4.4. By means of adjusting screw (5) and Allen key 2.5 mm (11) adjust the sensor position (12) to trigger the check lamp in this position of main latch (10).
- 4.5. After adjustment check the function of system.

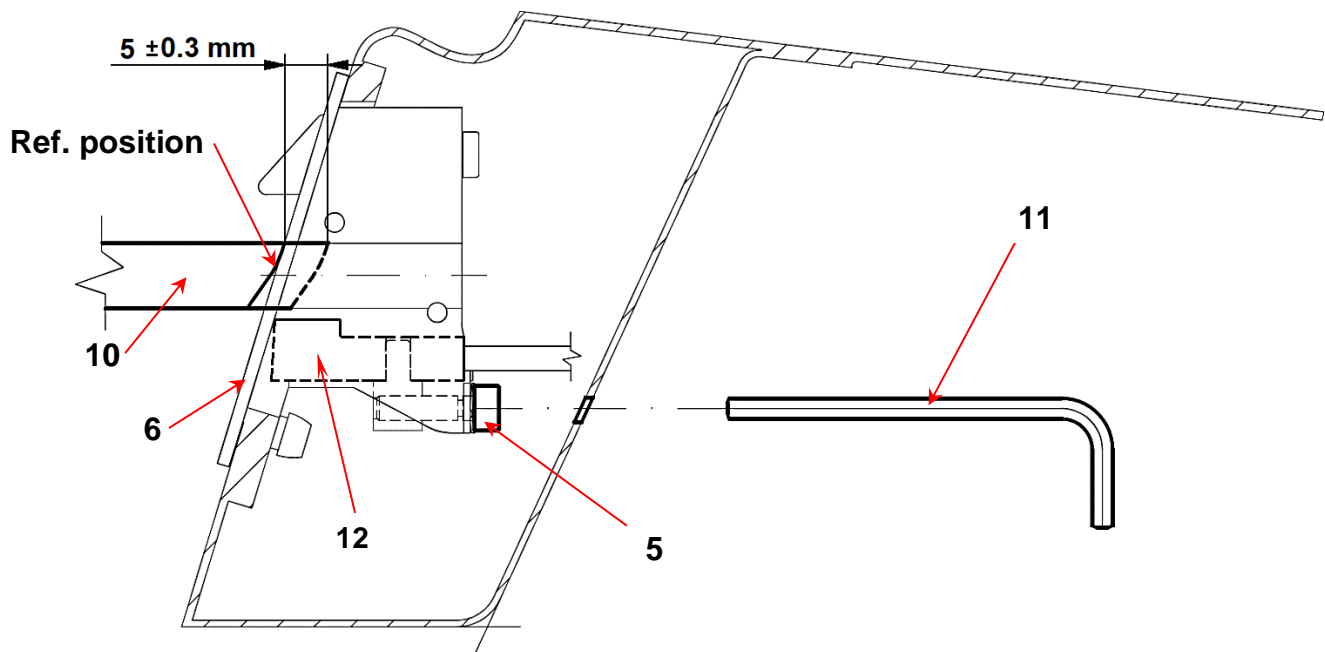


Fig. 9

5. Wiring diagram

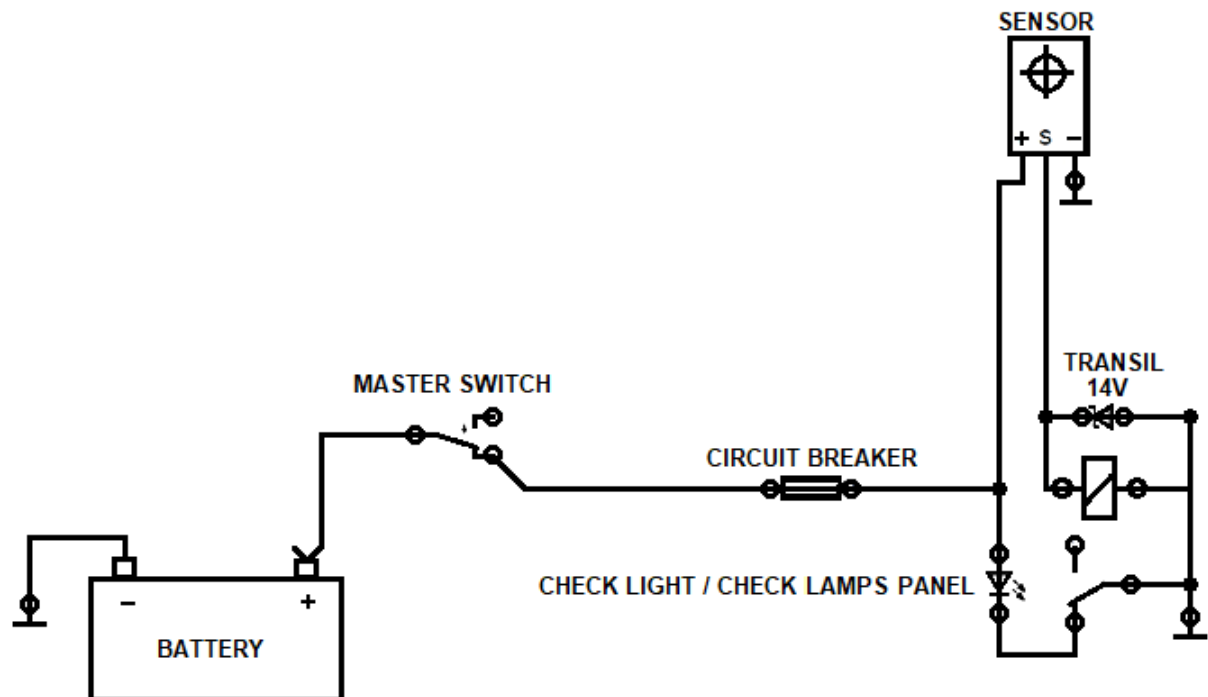


Fig. 10

NECESSARY MATERIAL:

Material: DVWT9-10B-A Variant A (individual check lamp), price on request
or

DVWT9-10B-B Variant B (check lamps panel), price on request

Work time: Max. 8 hours.

Material for Variant A (individual check lamp):

Order No.	Item	Quantity
DVWT9-10B-A	Material DV WT9 10B – Variant A	1 set

Set DVWT9-10B-A contains:

Item No.	Item	Quantity
DYN-130-20-2	Canopy lock socket 2	1 pc
103440161	Rivet 4X16 / DIN7337B 4X16 AL/ST A1P	4 pcs
44A1131-24-0-2	Cable 3-wire T 0,24	6 m
44A0111-22-9	Cable 1-wire 0,38	2 m
DB-6-63	FASTIN AWG 16-14 / DURASEAL B-106-4632	1 pc
DR-6-40	Cable eye 4,6-4,3 / DURASEAL B-106-1402	1 pc
DR-6-50	Cable eye 4,6-5,3 / DURASEAL B-106-1502-S	1 pc
1-275	Yellow check lamp / ELECO SMS95 Y 12DC P30	1 pc
1-230	Rectifier diode / SMD 200V 1.1V 1A	1 pc
DYN-125-21	Logic convertor	1 pc
1-010	Circuit breaker 1A / ETA 106-P10-1A	1 pc
A055700075	Rivet / WEIDMULLER 9019040000	2 pcs
1-225	Cable tie 2,5x135 / B.A.CH RT-304UV	50 pcs
06832	Clip 19x19 / HILPRESS 06832	4 pcs
801910	Shrink tube / POS 19,0-9,5 black	0.1 m
4914000C	Shrink tube / POS 6,4-3,2 white	0.1 m
E37.95.032	Shrink tube / POS 3,2-1,6 black	0.1 m
-	Label "CANOPY"	2 pcs
-	Template	1 pc

Material for Variant B (check lamps panel):

Order No.	Item	Quantity
DVWT9-10B-B	Material DV WT9 10B – Variant B	1 set

Set DVWT9-10B-B contains:

Item No.	Item	Quantity
DYN-130-20-2	Canopy lock socket 2	1 pc
103440161	Rivet 4X16 / DIN7337B 4X16 AL/ST A1P	4 pcs
DYN-125-21	Logic convertor	1 pc
44A1131-24-0-2	Cable 3-wire T 0,24	6 m
44A0111-22-9	Cable 1-wire 0,38	2 m
801910	Shrink tube / POS 19,0-9,5 black	0.1 m
4914000C	Shrink tube / POS 6,4-3,2 white	0.1 m
E37.95.032	Shrink tube / POS 3,2-1,6 black	0.1 m
1-225	Cable tie 2,5x135 / B.A.CH RT-304UV	50 pcs
06832	Clip 19x19 / HILPRESS 06832	4 pcs
-	Template	1 pc

For material purchase contact the airplane manufacturer's local representative or contact airplane manufacturer directly at spareparts@aerospool.sk.




DOCUMENTATION:

1. Update of Pilots Operating Handbook and Maintenance Manual according to appendixes.
2. Record compliance into aircraft documentation.

APPENDIXES:

- Appendix 1 Template
Appendix 2 Supplement to Pilot's Operating Handbook
Appendix 3 Supplement to Maintenance Manual

APPROVAL:

 Jozef Šnirc Technical Director	 Ing. Ľubomír KVAK	
Position, Name, Signature	Transport Authority, Slovak Republic	