issues

SERVICE BULLETIN No. RTC-073a SR

TECHNICAL CONTENT OF THIS DOCUMENT IS APPROVED UNDER THE AUTHORITY OF THE DOA REF. EASA.21J.057.

THIS SB COULD BE AFFECTED BY AD.

1. CONCERNING TO:	All SportStar RTC aircraft approved for VFR night operations.
2. REASON:	Issue of Revision 3 of Supplement No. 31 to the ERTC020-10-AS.
3. REQUIRED ACTIONS:	The operator / owner of the aircraft will insert into the POH changed pages of Supplement No. 31 which are attached to this bulletin.
4. LATEST DAY OF THE ACTION:	Immediately after receiving this bulletin.
5. CARRIED OUT BY:	The operator / owner of the aircraft.
6. COSTS COVERED BY:	The operator / owner of the aircraft.
7. NECESSARY MATERIAL:	Changed pages of Supplement No. 31 are included in this bulletin.
8. WORK PROCEDURE:	The operator/owner of the aeroplane will insert the changed pages of Supplement No. 31 attached to this bulletin into the POH. They shall mark the date of insertion of the changed pages into the table on page 0-2 and add their signature.
9. APPENDICES:	Changed pages to the POH Supplement No. 31, Revision No. 3.

Valid from: October 2nd, 2023.

tel: +420 572 537 558 / +420 572 537 605
e-mail: service@evektor.com / evektor@evektor.com https://www.evektor.com

Supplement No. 31

VFR Night Operation

Airplane Serial Number:

Airplane Registration Number:

Date of Issue: 20.07.2023

This Supplement must be contained in Pilot's Operating Handbook when the SportStar RTC airplane is equipped for VFR Night operation.

Information contained in this Supplement adds or supersedes information from basic Pilot's Operating Handbook in the further mentioned parts only. Limitation, procedures and information not included in this supplement are contained in the basic Pilot's Operating Handbook approved by EASA.

This Pilot's Operating Handbook Supplement is EASA approved under the Major Change Approval 10069567 dated 09 April 2019.

Log of Revisions

Rev. No.	Affected Pages	Description	EASA Approved / Date	Inserted / Date
1	2, 10, 11, 17, 18, 19, 20	Added procedures if airplane is not equipped with fire extinguisher. Specified oil check during preflight check and use of choke during engine starting according Rotax Operator´s Manual.	Appr. under DOA No. EASA.21J.57	2021-04-13
2	2, 3, 8, 28 up to 36	Added KW-31-033 propeller and appropriate information concerning propeller installation	Appr. under DOA No. EASA.21J.57	2022-07-26
3	2, 3, 8, 28, 29, 31	Added DUC SWIRL-3 L propeller and appropriate information concerning propeller installation	Appr. under DOA No. EASA.21J.57	

Section 1 – General Information

1.1 Introduction

This supplement contains all the information the pilot and instructor require for the safe and efficient operation by VFR Night of the SportStar RTC airplane, when equipped with the applicable NVFR equipment.

WARNING

THE PILOT SHOULD ALWAYS MAINTAIN EXTERNAL VISUAL ATTITUDE REFERENCE!

THE PILOT SHOULD NOT RELY ON THE ATTITUDE INDICATOR FOR ATTITUDE EVALUATION!

NOTE

Although the airplane is equipped with dual ADAHRS sensors and a digital attitude indicator, the pilot must always maintain visual reference. Should visibility deteriorate to a point where the pilot can no longer determine the airplane´s attitude using external visual references, the digital attitude indicator may be used to assist in identifying the airplane´s actual attitude.

1.4 Descriptive Data

1.4.2 Power Plant

The power plant consists of ROTAX 912 S2 engine and WOODCOMP Klassic 170/3/R propeller, KW-31-033 propeller or DUC SWIRL-3 L.

In connection with the installation of the F3A external alternator, on the airplane are installed the innovated engine cowlings dwg. No. S6 75-00 01.

1.4.4 Three View Drawing

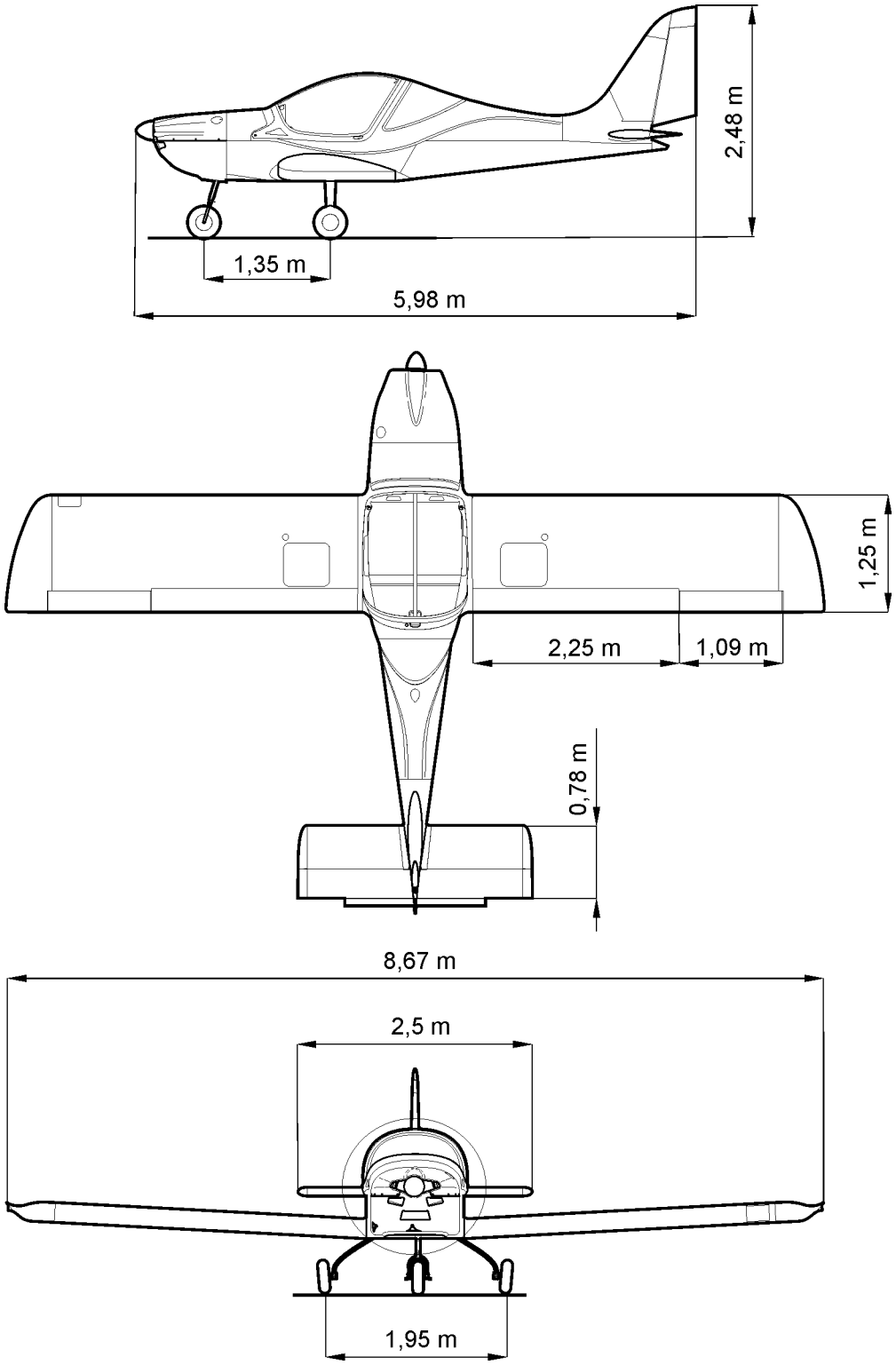

Figure 1-1 Three View Drawing

Equipment	Kinds of operation	
	VFR Day	VFR Night
• Stabilized heading on MFD	1	2
• Clock	1	1
• Stall warning system	1	1
• Pitot-static tube with heating indication on MFD	1	1
• Transponder with altitude encoding	1	1
Powerplant		
• Coolant temperature indication on MFD	1	1
• RPM indication on MFD	1	1
• Oil temperature indication on MFD	1	1
• Oil pressure indication on MFD	1	1
• EGT indication on MFD	1	1
• **EMS** red signaling light	1	1
Miscellaneous equipment		
• New engine cowlings	0	1
• Glareshield on instrument panel	0	1
* According to airplane configuration		

CAUTION

APPROPRIATE NATIONAL REGULATIONS FOR OPERATION CAN REQUIRE OTHER FUNCTIONAL EQUIPMENT.

2.16 Electrical System Limitations

None

2.16.1 Pitot-Static System

Maximum time of heating Pitot-static tube on the ground must not exceed 30 sec.

2.18 Limitation Placards

The following placards are located on the titling canopy:

Valid for Klassic 170/3/R propeller and DUC SWIRL-3 L propeller

This Light Sport Aircraft has been approved for VFR day / night flights under no icing conditions. Use GPS system for situational awareness only. The pilot should always maintain external visual reference!
Aerobatics and intentional spins are prohibited!

AIRSPEED IAS	
Never exceed V_{NE}	146 kts
Design Manoeuvring V_A	90 kts
Max. Flap Extended V_{FE}	70 kts
Stalling V_{S0}	39 kts

ENGINE SPEED	
Max. Take-off (max. 5 min.)	5800 rpm
Max. Continuous	5500 rpm
Min. Idling	1400 rpm

Unusable quantity of fuel	2 litres

This Light Sport Aircraft has been approved for VFR day / night flights under no icing conditions. Use GPS system for situational awareness only. The pilot should always maintain external visual reference!
Aerobatics and intentional spins are prohibited!

AIRSPEED IAS	
Never exceed V_{NE}	270 km/h
Design Manoeuvring V_A	167 km/h
Max. Flap Extended V_{FE}	130 km/h
Stalling V_{S0}	73 km/h

ENGINE SPEED	
Max. Take-off (max. 5 min.)	5800 rpm
Max. Continuous	5500 rpm
Min. Idling	1400 rpm

Unusable quantity of fuel	2 litres

Valid for KW-31-033 propeller.

This Light Sport Aircraft has been approved for VFR day / night flights under no icing conditions. Use GPS system for situational awareness only. The pilot should always maintain external visual reference!
Aerobatics and intentional spins are prohibited!

AIRSPEED IAS	
Never exceed V_{NE}	146 kts
Design Manoeuvring V_A	88 kts
Max. Flap Extended V_{FE}	70 kts
Stalling V_{S0}	41 kts

ENGINE SPEED	
Max. Take-off (max. 5 min.)	5800 rpm
Max. Continuous	5500 rpm
Min. Idling	1400 rpm

Unusable quantity of fuel	2 litres

This Light Sport Aircraft has been approved for VFR day / night flights under no icing conditions. Use GPS system for situational awareness only. The pilot should always maintain external visual reference!
Aerobatics and intentional spins are prohibited!

AIRSPEED IAS	
Never exceed V_{NE}	270 km/h
Design Manoeuvring V_A	163 km/h
Max. Flap Extended V_{FE}	130 km/h
Stalling V_{S0}	76 km/h

ENGINE SPEED	
Max. Take-off (max. 5 min.)	5800 rpm
Max. Continuous	5500 rpm
Min. Idling	1400 rpm

Unusable quantity of fuel	2 litres

Section 6 – Weight & Balance

No.	Title	Type	No. of items	Weight [kg]	Arm [m]	Installed
1.	External alternator assy	F3A	1	3.00	-1.036	✓
2.	Taxi light	LED 71141	1	0.45	0.140	✓
3.	Pitot-static tube	LUN 1152.14	1	0.25	0.605	✓
4.	Instrument panel lighting	S7 99-81 01	1	0.08	0.06	✓
5.	Flashlight	S-10-10	2	0,03	0,60	✓
6.	Glareshield	S1 66-72 01	1	0,60	0,185	✓

Section 7 – Airplane & System Description

7.4 Controls in the Cockpit and Instrument Panel

Airplane equipped with the Klassic 170/3/R and DUC SWIRL 3 L propeller.

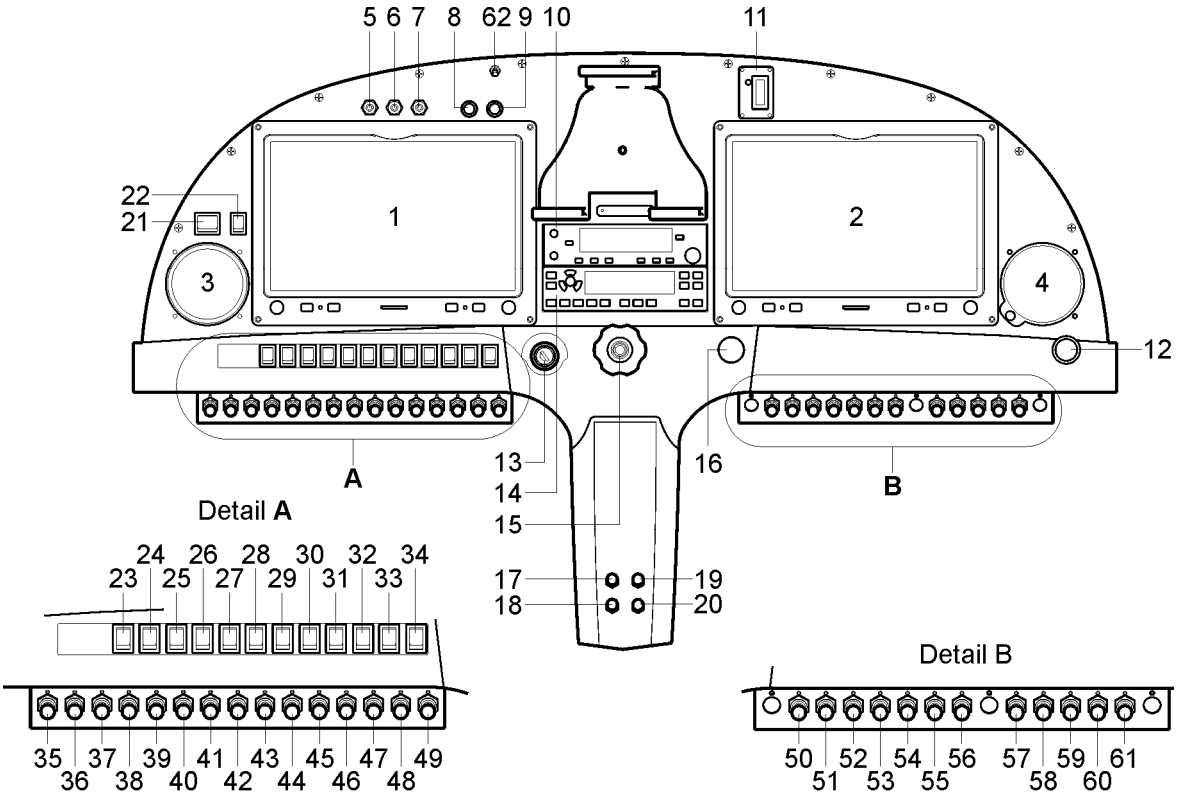

Figure 7–5 Instrument panel and center panel (page 1 of 2)

Legend to Figure 7–5

1 PFD GDU 460
2 MFD GDU 460
3 Backup airspeed indicator (optional)
4 Backup altimeter (optional)
5 **EMS** signaling light
6 **AUX. CHARG.** signaling light
7 **CHARGING** signaling light
8 **INSTR. PANEL DIM** knob
9 **INSTR. LIGHT DIM** knob
10 GNC 255A COM/NAV unit
11 ELT remote control
12 12 V socket
13 Ignition switch
14 GTX 328 transponder
15 Throttle controller
16 Choke controller
17 Cold air control knob
18 Carburetor preheating control knob
19 Hot air control knob
20 Windshield / feet heating control knob
21 **MASTER SWITCH**
22 **AVIONICS SWITCH**
Detail A – switches:
23 **SOCKET** switch
24 **IC** switch
25 **PITOT HEATING** switch
26 **FUEL PUMP** switch
27 **COCKPIT LIGHT** switch
28 **TAXI LIGHT** switch
29 **LDG LIGHT** switch
30 **POS. LIGHTS** switch
31 **BEACONS** switch
32 **BATTERY G3X** switch
33 **AUX. GEN** switch
34 **GEN** switch
Detail A – circuit breakers:
35 **TRIM** circuit breaker
36 **SIGNAL** circuit breaker
37 **FUEL PUMP** circuit breaker
38 **INSTR. LIGHTING** circuit breaker
39 **COCKPIT LIGHT** circuit breaker
40 **TAXI LIGHT** circuit breaker
41 **LDG LIGHT** circuit breaker
42 **POS. LIGHTS** circuit breaker
43 **BEACONS** circuit breaker
44 **BATTERY G3X** circuit breaker
45 **AUX. GEN FIELD** circuit breaker
46 **AUX. GEN** circuit breaker
47 **GEN** circuit breaker
48 **GEN-REF.** circuit breaker
49 **ACCU** circuit breaker
Detail B – circuit breakers:
50 **PDF** circuit breaker
51 **MFD** circuit breaker
52 **ADAHRS 1** circuit breaker
53 **ADAHRS 2** circuit breaker
54 **EMS** circuit breaker
55 **STALL WARNING** circuit breaker
56 **PITOT HEATING** circuit breaker
57 **SEAT HEATING** circuit breaker
58 **COM** circuit breaker
59 **NAV** circuit breaker
60 **XPDR** circuit breaker
61 **ALT ENCOD.** circuit breaker
62 **DAY-NIGHT** switch

Figure 7–5 Instrument panel and center panel (page 2 of 2)

Airplane equipped with the KW-31-033 propeller

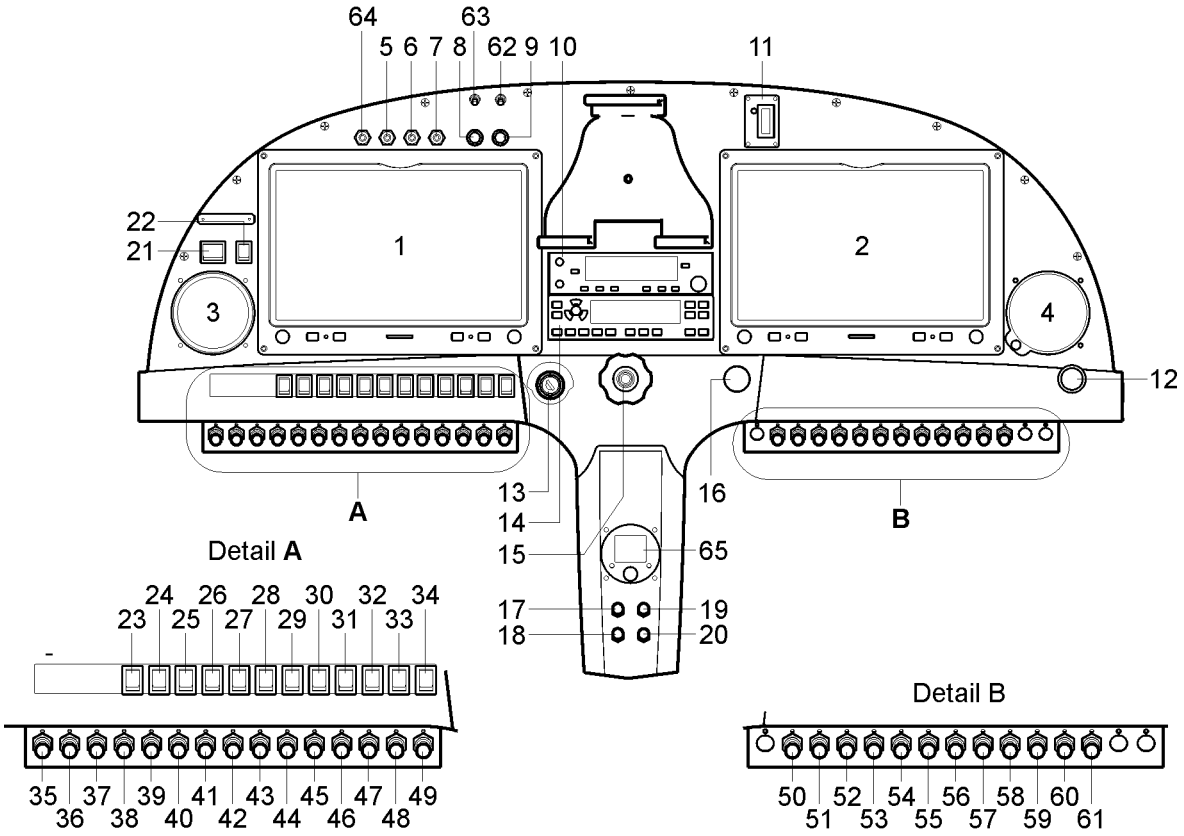

Figure 7–5 Instrument panel and center panel (page 1 of 2)

Legend to Figure 7–5

1 PFD GDU 460
2 MFD GDU 460
3 Backup airspeed indicator (optional)
4 Backup altimeter (optional)
5 **EMS** signaling light
6 **AUX. CHARG.** signaling light
7 **CHARGING** signaling light
8 **INSTR. LIGHT DIM** knob
9 **INSTR. PANEL DIM** knob
10 GNC 255A COM/NAV unit
11 ELT remote control
12 12 V socket
13 Ignition switch
14 GTX 328 transponder
15 Throttle controller
16 Choke controller
17 Cold air control knob

Detail A – circuit breakers:

35 **TRIM** circuit breaker
36 **SIGNAL** circuit breaker
37 **FUEL PUMP** circuit breaker
38 **INSTR. LIGHTING** circuit breaker
39 **COCKPIT LIGHT** circuit breaker
40 **TAXI LIGHT** circuit breaker
41 **LDG LIGHT** circuit breaker
42 **POS. LIGHTS** circuit breaker
43 **BEACONS** circuit breaker
44 **BATTERY G3X** circuit breaker
45 **AUX. GEN FIELD** circuit breaker
46 **AUX. GEN** circuit breaker
47 **GEN** circuit breaker
48 **GEN-REF.** circuit breaker
49 **ACCU** circuit breaker

Detail B – circuit breakers:

Legend to Figure 7–5

18 Carburetor preheating control knob
19 Hot air control knob
20 Windshield / feet heating control knob
21 **MASTER SWITCH**
22 **AVIONICS SWITCH**
Detail A – switches:
23 **SOCKET** switch
24 **IC** switch
25 **PITOT HEATING** switch
26 **FUEL PUMP** switch
27 **COCKPIT LIGHT** switch
28 **TAXI LIGHT** switch
29 **LDG LIGHT** switch
30 **POS. LIGHTS** switch
31 **BEACONS** switch
32 **BATTERY G3X** switch
33 **AUX. GEN** switch
34 **GEN** switch
50 **PDF** circuit breaker
51 **MFD** circuit breaker
52 **ADAHRS 1** circuit breaker
53 **ADAHRS 2** circuit breaker
54 **EMS** circuit breaker
55 **STALL WARNING** circuit breaker
56 **PROPELLER** circuit breaker
57 **PITOT HEATING** circuit breaker
58 **COM** circuit breaker
59 **NAV** circuit breaker
60 **XPDR** circuit breaker
61 **ALT ENCOD.** circuit breaker
62 **DAY-NIGHT** switch
63 **TAS AUDIO** switch
64 **PARK BRAKE LEVER UP** signaling light
65 Electronic propeller governor

Figure 7–5 Instrument panel and center panel (page 2 of 2)

NOTE

For other switches and circuit breakers description see basic POH and other Supplements to POH.

7.10 Power Unit

7.10.1 General

The engine ROTAX 912 S2 (100 hp) is used to power SportStar RTC airplane. ROTAX 912 S2 is a four-cylinder, four-stroke engine with opposite cylinders, central cam shaft, OHV valve mechanism and maximum take-off power of 100 hp (73.5 kW) at 5800 RPM.

The on-ground adjustable, composite, 3-blade propeller WOODCOMP KLASSIC 170/3/R is standard mounted on the engine ROTAX 912 S2.

The airplane can be optionally equipped with the 3-blade, composite, in-flight adjustable KW-31-033 propeller.

The airplane can be optionally equipped with the 3-blade, composite, on ground adjustable DUC SWIRL-3 L propeller.

7.12 Electrical System

The airplane is equipped with 14 V DC electrical installation (see Figure 7–12). A main generator with power of 250 W is the primary source of electrical energy.

A 600 W alternator is mounted on the forward left side of the engine. It is mounted via brackets on the propeller gear case and is belt driven from the propeller hub. The alternator supplies power to the airplane. The power supplied by the alternator is controlled by the integrated voltage regulator. It combines three essential devices in one physical container:

1. It functions as a linear regulator.
2. It provides a vital safeguard for electrical system with a solid-state, over voltage protection system.
3. It contains a low-voltage detection circuit that illuminates a red warning light **AUX. CHARG.** Whenever bus voltage drops below 12.5 V.

The external alternator is switched on/off by **AUX. GEN** switch located on the lower left part of the instrument panel. There is also **AUX. GEN** circuit breaker located below the left part of the instrument panel.

In case of external alternator installation in the airplane there is also a **GEN** switch installed on the lower left part of the instrument panel. The **GEN** switch switches off and on the main generator.