

0.2 LIST OF EFFECTIVE PAGES

Page	Revision	Date	Page	Revision	Date
0-1	00	12.12.2013	4-14	00	12.12.2013
0-2	01	18.12.2014	4-15	00	12.12.2013
0-3	00	12.12.2013			
0-4	01	18.12.2014	5-1	00	12.12.2013
0-5	00	12.12.2013	5-2	00	12.12.2013
0-6	00	12.12.2013	5-3	00	12.12.2013
			5-4	00	12.12.2013
1-1	00	12.12.2013			
1-2	00	12.12.2013	6-1	00	12.12.2013
1-3	00	12.12.2013	6-2	00	12.12.2013
1-4	00	12.12.2013	6-3	00	12.12.2013
1-5	00	12.12.2013	6-4	00	12.12.2013
			6-5	00	12.12.2013
2-1	00	12.12.2013			
2-2	00	12.12.2013	7-1	00	12.12.2013
2-3	01	18.12.2014	7-2	00	12.12.2013
2-4	00	12.12.2013	7-3	00	12.12.2013
2-5	01	18.12.2014	7-4	00	12.12.2013
2-6	00	12.12.2013	7-5	00	12.12.2013
2-7	00	12.12.2013	7-6	00	12.12.2013
2-8	01	18.12.2014	7-7	00	12.12.2013
			7-8	00	12.12.2013
3-1	00	12.12.2013	7-9	00	12.12.2013
3-2	00	12.12.2013	7-10	00	12.12.2013
3-3	00	12.12.2013	7-11	00	12.12.2013
3-4	00	12.12.2013	7-12	00	12.12.2013
3-5	00	12.12.2013	7-13	00	12.12.2013
3-6	00	12.12.2013	7-14	00	12.12.2013
3-7	00	12.12.2013	7-15	00	12.12.2013
3-8	00	12.12.2013	7-16	00	12.12.2013
4-1	00	12.12.2013	8-1	00	12.12.2013
4-2	00	12.12.2013	8-2	00	12.12.2013
4-3	00	12.12.2013	8-3	00	12.12.2013
4-4	00	12.12.2013	8-4	00	12.12.2013
4-5	00	12.12.2013	8-5	00	12.12.2013
4-6	00	12.12.2013	8-6	00	12.12.2013
4-7	00	12.12.2013	8-7	01	18.12.2014
4-8	00	12.12.2013			
4-9	00	12.12.2013	9-1	00	12.12.2013
4-10	00	12.12.2013	9-2	00	12.12.2013
4-11	00	12.12.2013			
4-12	00	12.12.2013	10-1	00	12.12.2013
4-13	01	18.12.2014	10-2	00	12.12.2013

2.3. Airspeed indicator markings

Airspeed indicator markings and their colour code significance are shown below:

Colour code significance	Airspeed		Significance
	KIAS	IAS	
White arc	41 - 79	76 - 146	Operating range with extended flaps. (Lower limit is v_{S0} . Upper limit is v_{FE} .)
Green arc	48 - 121	89 - 225	Normal operating range. (Lower limit is v_S . Upper limit is v_C .)
Yellow arc	121 - 149	225 - 276	Manoeuvres must be conducted with caution. (Lower limit is v_C . Upper limit is v_{NE} .)
Red line	149	276	Never exceeded speed v_{NE}

2.4. Powerplant

Engine		
Engine manufacturer	-	BRP-Powertrain GmbH, Austria
Engine model	-	Rotax 912 ULS
Maximum power	Take-off (<i>max. 5 min.</i>)	73,5 kW / 100 hp
	Continuous	69,0 kW / 94 hp
Maximum RPM	Take-off (<i>max. 5 min.</i>)	5800 min ⁻¹
	Continuous	5500 min ⁻¹
Coolant temperature	Maximum	120 °C
Cylinder head coolant temperature	Maximum	120 °C
Oil temperature	Minimum	50 °C
	Normal	90 - 110 °C
	Maximum	130 °C
Oil pressure	Minimum	0,8 bar / 12 psi
	Normal	2,0 - 5,0 bar / 29 - 73 psi
	Maximum	7 bar / 102 psi
Fuel pressure	Minimum	0,15 bar / 2,18 psi
	Normal	0,25 bar / 3,63 psi
	Maximum	0,50 bar / 7,25 psi
Oil consumption	Maximum	0,06 l/h

2.5. Powerplant instrument markings

Digital powerplant instrument SkyView SV D1000 for monitoring of engine parameters complemented with analogue fuel pressure gauge are marked with following colour code significance:

Digital instrument (Dynon SV-D1000)	Unit	Red Line Minimum Limit	Green Arc Normal Operating	Yellow Arc Caution Range	Red Line Maximum Limit
Tachometer	min ⁻¹	1400	1400 - 5500	5500 - 5800	5800
Manifold pressure	inHg	-	0,0 - 28,0	28,0 - 29,5	29,5
Coolant temperature	°C	50	90 – 110	50 – 90 110 – 120	120
Cylinder head coolant temperature	°C	50	90 – 110	50 – 90 110 – 120	120
Oil temperature	°C	50	90 - 110	50 - 90 110 - 130	130
Oil pressure	bar	0,8	2,0 - 5,0	0,8 - 2,0 5,0 - 7,0	7,0
Exhaust gas temperature	°C	250	300-800	250-300 800-880	880
Fuel pressure	bar	0,15	0,15 - 0,50	-	0,50
Fuel flow meter	l/h	-	0,0 - 25,0	-	over 25,0
Fuel level	l	Red light annunciator will be illuminated with the remaining 7 litres of fuel in the fuel tank.			

2.6. Miscellaneous instrument markings

No additional miscellaneous instruments.

2.14. Maximum passenger seating

The maximum number of passenger on board is one passenger sitting in the right seat in the cockpit.

During towing is not allowed passenger on board.

2.15. Other limitations**(a) Wind speed**

The maximum demonstrated crosswind velocity for take-off and landing is 24 kts (12,4 m/s)

(b) Smoking

No smoking on board the aircraft.

(c) Minimum equipment for flight operation:

- 1 Airspeed indicator.
- 2 Sensitive barometric altimeter.
- 3 Magnetic compass.
- 4 SkyView SV D1000 with following indications:
 - a. Fuel quantity indication
 - b. Engine RPM indication
 - c. Oil temperature indication
 - d. Oil pressure indication
 - e. Cylinder head coolant temperature indication
- 5 Safety harness for each occupied seat.

2.16. Limitations placards

AIRSPEEDS:	
V _{NE}	149 kts
V _A	99 kts
V _{FE}	79 kts
V _{SO}	41 kts

AIRSPEEDS:	
V _{NE}	276 km/h
V _A	184 km/h
V _{FE}	146 km/h
V _{SO}	76 km/h

WARNING IFR flights and flights in icing conditions are prohibited!	WARNING Aerobatic manoeuvres and intentional spins are prohibited!
APPROVED FOR: DAY - VFR	WARNING Do not exceed maximum take-off weight: 600 kg / 1320 lbs
NO SMOKING	



Note: this placard is in two pieces (one for each section of baggage compartment)

WEAK LINK
MAX. 300 daN

4.5.7. Climbing

Monitor cylinder head coolant temperature and oil pressure during climb. Oil temperature limits must not be exceeded. In the case of high readings, increase airspeed and reduce engine power setting.

Without glider:

- | | |
|----------------------|--|
| 1. Throttle lever: | Throttle lever to max. continues power. |
| 2. Airspeed: | Conduct at speed 70-76 kts (130-140 km/h). |
| 3. Flaps retracting: | At height 200 ft (60 m) AGL retract the wing flaps slowly. |
| 4. Landing lights: | Switch OFF. |
| 5. Fuel pump: | Should be switched OFF after take-off in safety altitude 500 ft (150 m). |

With glider:

- | | |
|----------------------|--|
| 1. Throttle lever: | Throttle lever to max. continues power. |
| 2. Airspeed: | Conduct at glider towing speed. |
| 3. Flaps retracting: | At height 200 ft (60 m) AGL retract the wing flaps slowly. If the towing speed is below 59 kts (110 km/h), let the flaps in take-off position. |
| 4. Landing lights: | Switch OFF. |
| 5. Fuel pump: | Should be switched OFF after take-off in safety altitude 500 ft (150 m). |
| 6. Glider release: | Climb to the releasing area and check in the rear mirror if the glider got released. |

4.5.8. Cruise

The range of cruising speeds is from 79-121 kts (146 to 225 km/h). The economy airspeed for best fuel economy is 108 kts (200 km/h), the optimum operation is between 99-121 kts (184 -225 km/h). In case of turbulence reduce the cruising speed below 121 kts (225 km/h). Under certain conditions, the aircraft may be overstressed. The aircraft can be trimmed through the range of the cruising speeds.

Due to economy reasons is recommended to maintain the following parameters:

Engine Rotax 912 ULS Engine power setting	Engine Speed (min ⁻¹)	Performance (kW)	Torque (Nm)	Manifold pressure (inHg)
Take-off power	5 800	73,5	121,0	27,5
Continuous power	5 500	69,0	119,8	27,0
75 %	5 000	51,0	97,4	26,0
65 %	4 800	44,6	88,7	26,0
55 %	4 300	38,0	84,3	24,0

8.7. Winter operation

Pre-flight inspection:

In addition during the pre-flight inspection in winter operation must be done:

- Remove the ice from the aircraft surfaces.
- Check control surfaces free movement and cleanness of slots of control surfaces and flaps.
- Check cleanness of the fuel tank venting.
- During winter operation on the frozen or harden surface of the runway is recommended to remove the wheel fairings to avoid of their damages by accumulated snow and ice.

Engine and oil pre-heating:

There is possible to start an engine without need of pre-heating if outside temperature is not below +5 °C. It is recommended to pre-heat the engine and oil if temperature falls below +5 °C. Use suitable air heater or a dryer.

Blow the hot air from the front into the hole around the propeller hub. Temperature of hot air should not exceed 100 °C. Pre-heat until cylinder head coolant temperature and oil temperature exceed +20 °C.

Parking and taxiing:

Check wheel brakes for freezing when parking outside and temperature is below 0 °C. Check wheels free rotation prior to taxiing (hold a propeller and tow the aircraft). Heat the brakes with the hot air to remove ice. Do not remove the ice by braking during taxiing!

WARNING

Never use open fire to pre-heat an engine!

CAUTION

If cylinder heads coolant and oil temperatures fall during parking among flights than is recommended to start and warm up engine from time to time. Do not open choke when starting hot engine!