

INTRODUCTION

With the AQUILA AT01 you have acquired a very efficient training and utility aircraft, which is easy to operate and exhibits excellent handling qualities.

To ensure reliable operation and trouble free flight, we recommend that you read this Pilot's Operating Handbook thoroughly and adhere to the operating instructions and recommendations given herein.

CAUTION

All limitations, procedures and performance data contained in this handbook are EASA/FAA approved and mandatory. Failing to follow the procedures and limits set forth in this handbook can lead to a loss of liability by the manufacturer.

THE HANDBOOK

The handbook is presented in loose-leaf form to ease the substitution of revisions and is sized in A5-format for convenient storage in the aircraft.

Tab dividers throughout the handbook allow quick reference to each section. A Table of Contents is located at the beginning of each section to aid the location of specific data within that section.

All rights reserved.

Reproduction or disclosure to third parties of this document or any part thereof is not permitted, except with the prior and express written permission of AQUILA Aviation GmbH.

Copyright © by  AQUILA Aviation GmbH
Schönhagen, Germany

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.03 (08.04.2014)	19.10.2015	0 – 1

TABLE OF CONTENTS

	SECTION
GENERAL	1
OPERATING LIMITATIONS (approved section)	2
EMERGENCY PROCEDURES (approved section)	3
NORMAL PROCEDURES (approved section)	4
PERFORMANCE (partly approved section)	5
WEIGHT AND BALANCE	6
AIRCRAFT AND SYSTEMS DESCRIPTION	7
HANDLING AND MAINTENANCE	8
SUPPLEMENTS	9

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.03 (08.04.2014)	19.10.2015	0 – 2

LIST OF EFFECTIVE PAGES

Section	Issue	Approved	Page	Date
0	A.04		0-1 to 0-6	19.10.2015
1	A.02		1-1 to 1-12	15.10.2013
2	A.02	X	2-1 to 2-10	15.10.2013
3	A.02	X	3-1 to 3-18	15.10.2013
4	A.04	X	4-1 to 4-20	19.10.2015
5	A.02	(X)*	5-1 to 5-22	15.10.2013
6	A.02		6-1 to 6-14	15.10.2013
7	A.02		7-1 to 7-24	15.10.2013
8	A.02		8-1 to 8-6	15.10.2013
9	A.03		9-1 to 9-2	08.04.2014

* - partially approved

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.03 (08.04.2014)	19.10.2015	0 – 3

LIST OF REVISIONS

All revisions to the handbook, with the exception of individual weight and balance data and revisions to the Equipment List, must be recorded in the List of Revisions. Revisions must either be approved by the EASA or, in the case of documentary changes, in accordance with Part 21.A.263(c)(4) by the Design Organization of AQUILA Aviation GmbH.

Additions and revisions to text in an existing section will be identified by a vertical black line adjacent to the applicable revised area. A new issue code appears in the footer of the revised pages.

If revisions are distributed, the applicable sections are to be exchanged with the updated version. Generally only complete sections of the POH will be exchanged, and not individual pages.

The operation of the AQUILA AT01 is only permitted with a current and up to date POH carried on board. Please refer to the following web page whenever the revision status of your POH is in question.

www.aquila-aviation.de

Issue	Description of Revision	Revised Section(s)	EASA Approval-number	Approval by AQUILA / EASA Date / Signature
A.01	First Issue	All	10045112	29.05.2013
A.02	Editorial changes, Supplements 8,33 kHz FAA certification	All		15.10.2013
A.03	AS-00 „Winter Operation“	0, 9		08.04.2014
A.04	Editorial changes	0, 4		19.10.2015


Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.03 (08.04.2014)	19.10.2015	0 – 4



POH / AFM
AQUILA AT01-100B

Section 0

Revision A.04 of AFM ref. FM-AT01-1010-102 is approved under the authority of DOA ref. EASA.21J.025.

19.10.2015

Date, Signature Office of Airworthiness

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.03 (08.04.2014)	19.10.2015	0 – 5

PURCHASE OF TECHNICAL PUBLICATIONS

To guarantee safe operation and correct maintenance of the AQUILA AT01-100 aircraft, all manuals and technical publications must be kept in the current effective status.

All manuals and technical publications relating to the aircraft AQUILA AT01-100 are available from the companies listed below:

(a) ***AQUILA AT01-100B related Manuals and Publications***

AQUILA Aviation GmbH
OT Schönhagen
Flugplatz
D-14959 Trebbin

Tel: ++49 (0)33731-707-0
Fax: ++49 (0)33731-707-11
E-Mail: kontakt@aquila-aviation.de
Internet: <http://www.aquila-aviation.de>

(b) ***Engine ROTAX 912 S related Manuals and Publications***

Contact the ROTAX® authorized distributor for ROTAX® Aircraft Engines of the applicable distribution area.

For contact details of the local authorized distributor for ROTAX Aircraft Engines, please refer to chapter 13 of the ROTAX® Operator's Manual for 912 S Engines.

(c) ***Propeller MTV-21 related Manuals and Publications***

mt-Propeller Entwicklung GmbH
Flugplatz Straubing- Wallmühle
D-94348 Atting

Tel: ++49 (0)9429-9409-0
Fax: ++49 (0)9429-8432
Internet: www.mt-propeller.com
E-Mail: sales@mt-propeller.com

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.03 (08.04.2014)	19.10.2015	0 – 6

SECTION 4

NORMAL PROCEDURES

		Page
4.1	INTRODUCTION	4-2
4.2	AIRSPEEDS FOR NORMAL OPERATION	4-3
4.3	DAILY INSPECTION	4-4
4.4	PRE-FLIGHT INSPECTION	4-9
4.5	CHECKLISTS FOR NORMAL PROCEDURES	4-11
4.5.1	Before Engine Start-up	4-11
4.5.2	Engine Start-up	4-12
4.5.3	Before Taxiing	4-13
4.5.4	Taxiing	4-13
4.5.5	Before Take-off (at the Taxi Holding Position)	4-14
4.5.6	Take-off	4-15
4.5.7	Climb	4-15
4.5.8	Cruise	4-16
4.5.9	Descent	4-16
4.5.10	Landing	4-17
4.5.11	Go-Around (Balked Landing)	4-17
4.5.12	After Landing	4-17
4.5.13	Engine Shutdown	4-18
4.5.14	Refueling	4-18
4.5.15	Flight in Rain and/or with Wing Contamination	4-19

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 1

4.1 INTRODUCTION

This section provides normal operating procedures and checklists for the aircraft as well as recommended airspeeds.

Additional information is provided in the current issues of the Operators Manual for ROTAX® engine Type 912 series and the Operation and Installation Manual of mt-Propeller® ATA 61-01-024.

Normal procedures associated with optional equipment can be found in Section 9

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 2

4.2 AIRSPEEDS FOR NORMAL OPERATION

The following airspeeds are based on the maximum take-off weight of 1653 lbs (750 kg). They may also be used for any lower operational weight.

TAKE-OFF		
Airspeed (IAS)		kts
Normal climb speed to 50 Feet (Flaps T/O)		57
Best rate of climb speed at sea level (Flaps UP)	V_Y	65
Best angle of climb speed at sea level (Flaps T/O)	V_X	52

LANDING		
Airspeed (IAS)		kts
Final approach speed for landing (Flaps LDG)		60
Balked landing (Flaps LDG)		60
Maximum demonstrated crosswind component for take-off or landing		15
Maximum airspeed with Flaps LDG	V_{FE}	90

CRUISE		
Airspeed (IAS)		kts
Maneuvering speed	V_A	112
Maximum Turbulent Air Operating Speed	V_{NO}	130

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 3

4.3 DAILY INSPECTION

CAUTION

The daily inspection is begun by checking all 3 fuel sumps for water and contamination. This must be done **before** the aircraft is moved. Otherwise the fuel in the sump may mix.

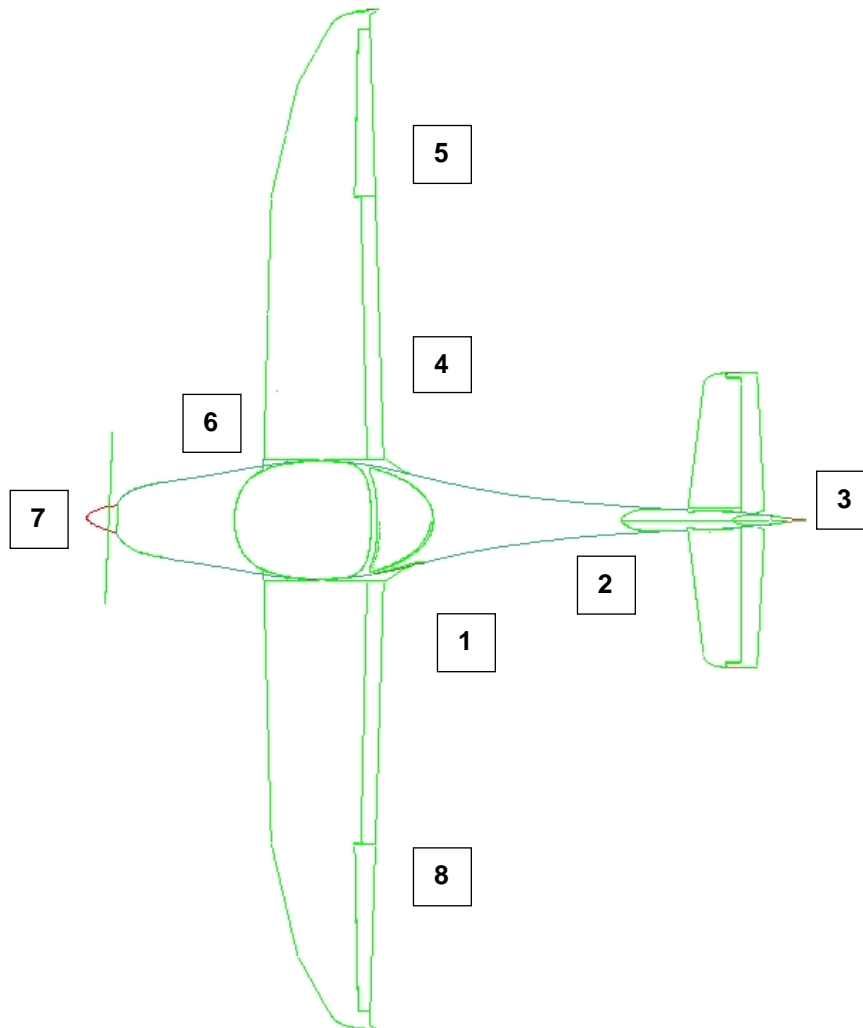
- | | | |
|----|--------------------------------|--|
| 1. | Tank drain (left / right wing) | drain and visually inspect for contamination |
| 2. | Electrical fuel pump drain | drain and visually inspect for contamination |

A) CABIN

- | | | |
|-----|--------------------------------------|----------------------------------|
| 1. | Aircraft Documentation | CHECK on board |
| 2. | Ignition key | REMOVED |
| 3. | ALT1/ BAT switch | ON |
| 4. | Warning lights (ALT1, FUEL) | ILLUMINATE |
| 5. | ALT1 switch | OFF |
| 6. | Engine instruments | CHECK |
| 7. | Fuel quantity | CHECK |
| 8. | Nav Lights switch | ON, CHECK, OFF |
| 9. | Landing Light switch | ON, CHECK, OFF |
| 10. | BAT switch | OFF |
| 11. | ELT | CHECK operational |
| 12. | Foreign objects | CHECK and REMOVE, when necessary |
| 13. | Baggage | STOWED and SECURED |
| 14. | Canopy | CHECK condition and cleanliness |

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 4

B) EXTERIOR CHECK, Visual Inspection



CAUTION

*In this manual, visual inspection means the following:
Inspect for mechanical damage, dirt, cracks, delamination, excessive play, looseness,
leaks, incorrect attachment, foreign objects and general condition.*

Control surfaces: in addition, check for free movement.

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 5

1. Left main landing gear
 - a) Landing gear strut Visual inspection
 - b) Wheel fairing Visual inspection (refer to 7.11.4)
 - c) Tire pressure and slip marking CHECK
 - d) Tire, wheel, brake Visual inspection
 - e) Chocks (if in use) REMOVE

2. Fuselage
 - a) Fuselage shell Visual inspection
 - b) Skid plate Visual inspection
 - c) Tail tie-down DISCONNECT

3. Empennage
 - a) Elevator Visual inspection
 - b) Horizontal stabilizer Visual inspection
 - c) Rudder Visual inspection,
CHECK: fitting and bolt
connection, proper control cable
connection and safe-tied.
 - d) Vertical stabilizer Visual inspection

4. Right main landing gear
 - a) Landing gear strut Visual inspection
 - b) Wheel Fairing Visual inspection (refer to 7.11.4)
 - c) Tire pressure and slip marking CHECK
 - d) Tire, wheel, brake Visual inspection
 - e) Chocks (if in use) REMOVE

5. Right wing
 - a) Entire wing surface (upper and under side) Visual inspection
 - b) Fuel vent CHECK if clear
 - c) Flap Visual inspection
 - d) Aileron and inspection window Visual inspection
 - e) Wing tip, NAV lights and ACL Visual inspection
 - f) Fuel level CHECK with dipstick (see inner
surface of baggage compartment
door) and verify with the indicated
fuel level on the fuel gauge cockpit
 - g) Fuel tank filler cap CHECK if closed
 - h) Wing tie-down DISCONNECT

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 6

6. Nose section, cowling

WARNING

*Before cranking the propeller:
Ignition and **ALT1/BAT** switch: OFF
Set the parking brake.*

WARNING

***RISK OF BURNS !**
Only check the oil and coolant levels when the engine is cool.*

- a) Check oil level Turn the propeller several times in the **direction of engine rotation** to pump oil from the engine back into the oil tank.

CAUTION

NEVER turn the propeller against the direction of engine rotation.

Stop turning the propeller when air begins to return to the oil tank. This is indicated by the sound of air rushing from the open oil tank.

Use the oil dip stick to check that the oil level is between the -min./max.- markings. The difference between -min./max.- is approximately 0.48 US Quarts (0.45 l).

CAUTION

The oil specification in Section 1.9.1 must be adhered to!

- b) Check coolant level: Verify coolant level in the **expansion tank** and replenish as required. (The expansion tank must be at least 2/3 filled or coolant has to be visible at the gauge glass.)

Verify coolant level in the **overflow bottle** and replenish as required. (The coolant level must be between the min. and max. markings.)

CAUTION

The coolant specification in Section 1.9.2 must be adhered to!

- | | |
|--------------------------|---|
| c) Air Intakes | CHECK if clear |
| d) Cooler intake | CHECK if free from obstructions |
| e) Cowling | Visual Inspection; CHECK Camloc fasteners |
| f) Propeller and Spinner | Visual inspection |
| g) Propeller blades | CHECK for cracks and other damage |

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 7

7. Nose landing gear

- a) Nose gear strut Visual inspection
- b) Wheel fairing Visual inspection

CAUTION

Both parts of the 2 piece nose wheel fairing must always be installed on the aircraft

- c) Tire pressure and slip marking CHECK
- d) Tire, wheel Visual inspection
- e) Shock absorber unit Visual inspection
- f) Chocks and tow bar REMOVE

8. Left wing

- a) Entire wing surface (upper and under side) Visual inspection
- b) Fuel vent CHECK if clear
- c) **BAT** switch ON
- d) Stall warning press to upper detent, warning tone is audible
- e) **BAT** switch OFF
- f) Pitot / Static tube REMOVE cover, CHECK if all openings are clear
- g) Wing tip, NAV lights and ACL Visual inspection
- h) Aileron and inspection window Visual inspection
- i) Cooler cover (if installed) Visual inspection
- j) Fuel level CHECK with dipstick and verify with the indicated fuel level on the fuel gauge
- k) Fuel tank filler cap CHECK if closed
- l) Flap Visual inspection
- m) Wing tie-down DISCONNECT

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 8

4.4 PRE-FLIGHT INSPECTION (Walk Around)

1. Daily Inspection Confirm has been carried out.
2. Tow bar Remove
3. Fuel level CHECK with dipstick and verify with the indicated fuel level on the fuel gauge

WARNING

*Before cranking the propeller:
Ignition and **ALT1/BAT** switch: OFF,
Set the parking brake.*

WARNING

*RISK OF BURNS !
Only check the oil and coolant levels when the engine is cool !*

4. Check oil level Turn the propeller several times in the direction of engine rotation to pump oil from the engine back into the oil tank.

Stop turning the propeller when air begins to return to the oil tank. This is indicated by the sound of air rushing from the open oil tank.

Use the oil dip stick to check that the oil level is between the min. and max. markings. The difference between min. and max. is approx. 0.48 US Quarts (0.45 l).

CAUTION

The oil specification in Section 1.9.1 must be adhered to !

5. Check Coolant Level Verify coolant level in the overflow bottle and replenish as required. (The coolant level must be between the min. and max. markings)

CAUTION

The coolant specification in Section 1.9.2 must be adhered to !

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 9

- | | |
|-----------------------------|--|
| 6. Tie-down straps | remove |
| 7. Baggage door | CHECK if closed and locked |
| 8. Pitot cover | remove |
| 9. Control locks | remove |
| 10. Seating position | adjust and lock, check that nose wheel steering and brakes can be operated |
| 11. Carburetor heat | CHECK for free movement, then PUSH (OFF) |
| 12. Cabin heat | CHECK for free movement, then PUSH (OFF) |
| 13. Choke | CHECK for free movement and automatic reset |
| 14. Throttle | CHECK for free movement, then set IDLE |
| 15. Propeller Control Lever | CHECK for free movement, then set in START Position |
| 16. Weight and balance | within limits? |

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 10

4.5 CHECKLISTS FOR NORMAL PROCEDURES

4.5.1 Before Engine Start-up

- | | | |
|-----|---------------------------------|--|
| 1. | Daily and Pre-Flight Inspection | COMPLETED |
| 2. | Passenger Briefing | COMPLETED |
| 3. | Seats | ADJUSTED |
| 4. | Seat Belts and Harnesses | FASTENED |
| 5. | Canopy | CLOSED and LOCKED
Check locking mechanism |
| 6. | Parking Brake | SET (pull lever back) |
| 7. | Control column | CHECK for free movement and
correct control surface deflections |
| 8. | Fuel Selector Valve | LEFT or RIGHT |
| 9. | Carburetor Heat | PRESS |
| 10. | Throttle | IDLE |
| 11. | Propeller Control Lever | START position |
| 12. | Avionics Switch | OFF |
| 13. | P/S-Heat (if installed) | OFF |
| 14. | Circuit Breakers | CHECK all set |

NOTE

*Cage the Attitude Indicator (if installed) before switching **ALT1/BAT** on.*

- | | | |
|-----|--------------------------|----|
| 15. | ALT1 / BAT switch | ON |
|-----|--------------------------|----|

NOTE

Pay attention to messages that may appear on the PFD and MFD displays while the system is loading.

The attitude indicators (AHRS module and stand-by indicator) require several minutes to stabilize. Pay attention to information on the Garmin G500 display.

- | | | |
|-----|--|-------------|
| 16. | ALT 1 warning light | ILLUMINATES |
| 17. | FUEL warning light | ILLUMINATES |
| 18. | P/S-HEAT warning light (if installed) | ILLUMINATES |
| 19. | ACL switch | ON |

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 11

4.5.2 Engine Start-up

- | | | | |
|----|---------------------------|---------------|------------------------------|
| 1. | Fuel Pump switch | | ON |
| 2. | FUEL warning light | | OFF |
| 3. | Throttle | - Cold Engine | IDLE |
| | | - Hot Engine | 0.8 in. (2 cm) OPENED |
| 4. | Choke | - Cold Engine | PULL, and keep pulled |
| | | - Hot Engine | RELEASE (automatic reset) |
| 5. | Brakes | | PRESS both pedals |
| 6. | Propeller area | | CLEAR |
| 7. | Ignition switch | | START, then BOTH |
| 8. | Oil Pressure | | CHECK, if oil pressure rises |

CAUTION

The oil pressure has to show rising values within 10 seconds after engine start, otherwise shut down the engine immediately!

NOTE

The starter may not be operated for more than 10 seconds at a time. Allow the starter to cool off for at least 2 minutes between attempts.

- | | | |
|-----|----------------------------|-----|
| 9. | ALT 1 warning light | OFF |
| 10. | Fuel Pump switch | OFF |

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 12

4.5.3 Before Taxiing

CAUTION

Warm up the engine for approx. 2 min at 800 RPM and then at 1000 RPM until the Oil Temperature reaches a temperature of at least 122°F (50°C)

- | | | |
|----|---------------------------------|-----|
| 1. | Avionics switch | ON |
| 2. | Avionics and flight instruments | SET |

The GARMIN G500 has an integrated sensor that automatically adjusts the brightness of the display.

It is also possible to adjust the brightness of the display manually. Using the large knob of the MFD change to the AUX page. Use the small knob to adjust the brightness. When finished press the ENT button to save the changes.

- | | | |
|----|--------------------|-------|
| 3. | Engine Instruments | CHECK |
|----|--------------------|-------|

NOTE

Oil can be brought up to temperature during taxiing.

- | | | |
|----|---------------------------------------|--|
| 4. | Voltmeter | CHECK, if needle is within the green range |
| 5. | Trim switch and indication | functional CHECK |
| 6. | Flap switch and indication | functional CHECK, afterwards UP |
| 7. | P/S Heat switch (if installed) | ON, P/S HEAT warning light goes off |
| 8. | P/S Heat switch (if installed) | OFF, P/S HEAT warning light goes on |
| 9. | all switches | AS REQUIRED |

4.5.4 Taxiing

- | | | |
|----|---------------------------------|---------------------------------|
| 1. | Parking Brake | RELEASE |
| 2. | Brakes | CHECK |
| 3. | Nose Wheel Steering | CHECK (function, free movement) |
| 4. | Flight instruments and Avionics | CHECK |

CAUTION

Do not operate the engine at high RPM when taxiing to prevent damage to the propeller through stones or other foreign objects.

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 13

4.5.5 Before Take-off (at the Taxi Holding Position)

- | | | |
|-----|---|---|
| 1. | Brakes | APPLY |
| 2. | Parking Brake | SET |
| 3. | Compass and gyro Instruments | CHECK setting |
| 4. | Fuel Selector Valve | LEFT or RIGHT, switch to the fuller tank |
| 5. | FUEL warning light | OFF, (otherwise, <u>do not attempt</u> take-off) |
| 6. | Engine instruments | CHECK if within the green range |
| 7. | Throttle | SET 1700 RPM |
| 8. | Ignition switch | Magneto check: SWITCH through: "L-BOTH-R-BOTH" – positions.
CHECK RPM-drop
max. RPM-drop: 120 RPM
max. difference L/R: 50 RPM
RPM drop must be noticeable
<u>then</u> : BOTH position |
| 9. | Carburetor heat | PULL (ON)
(RPM drop: 20 to 50 RPM) |
| 10. | Carburetor temperature indicator (if installed) | CHECK |
| 11. | Carburetor heat | PUSH (OFF) |
| 12. | Propeller control lever | SWITCH 3 times between START and CRUISE positions (end stops)
Check points:
1) RPM drop: 200 ± 50 RPM
2) increase manifold pressure
3) constant oil pressure (± 0,5 bar
<u>then</u> : START position |
| 13. | Throttle | IDLE |
| 14. | Fuel Pump switch | ON |
| 15. | Flap switch | T/O |
| 16. | Trim switch | white marking |
| 17. | Circuit breakers | CHECK all set |
| 18. | Control column | CHECK for free movement |
| 19. | Lap belt | FASTENED and TIGHTENED |
| 20. | Canopy | CLOSED and LOCKED |
| 21. | Parking brake | RELEASE |

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 14

4.5.6 Take-off (up to 50 ft)

- | | | |
|----|--------------------------|------------------------------------|
| 1. | Throttle | WIDE OPEN |
| 2. | Tachometer | CHECK if within 2300 - 2385 RPM |
| 3. | Elevator, control column | NEUTRAL during initial ground roll |
| 4. | Rudder pedals | Maintain direction |
| 5. | Rotatespeed | 50 KIAS |
| 6. | Climb speed | 57 KIAS |

CAUTION

*To increase power setting raise RPM first and open throttle second.
To decrease power setting close throttle first and lower RPM second.*

CAUTION

For the shortest take-off distance over a 50-feet obstacle at sea level:

- | | | |
|----|-----------------------|---------|
| 7. | Rotate speed | 50 KIAS |
| 8. | Climb speed (V_x) | 52 KIAS |

4.5.7 Climb

- | | | |
|----|--|-------------------------------|
| 1. | Throttle | WIDE OPEN |
| 2. | Propeller control lever (max. 5 minutes) | 2385 RPM, afterwards 2260 RPM |
| 3. | Engine instruments | CHECK if in GREEN range |

NOTE

During take-off and climb at take off power the RPM is intended to be in the caution area because the maximum continuous rpm is exceeded. This is acceptable for max. 5 minutes.

- | | | |
|----|-----------------------------|-----------------|
| 4. | Flap switch | UP |
| 5. | Climb speed | 65 KIAS |
| 6. | Fuel Pump switch | OFF |
| 7. | Landing Light switch | OFF |
| 8. | Trim switch | SET as required |

NOTE

The best rate-of-climb speed, V_y , is a function of the operating weight and decreases with altitude. For more information, refer to Section 5.2.6.

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 15

4.5.8 Cruise

- | | | |
|----|-------------------------|---|
| 1. | Throttle | AS REQUIRED (Ref. to Section 5,
Page 5-11) |
| 2. | Propeller control lever | SET 1650 to 2260 RPM |

CAUTION

Continuous operation with throttle wide open and propeller revolution below 2140 RPM should be avoided to prevent engine damage in particular at pressure altitudes below 3000ft and at high CHT (see SL-912-016)

NOTE

For best manifold pressure/propeller speed combinations: Refer to Section 5, page 5-11

- | | | |
|----|---|--|
| 3. | Flaps switch | UP |
| 4. | Trim switch | SET as required |
| 5. | P/S Heat switch (if installed) | AS REQUIRED, OFF at OAT
above 59° F (15° C) |
| 6. | Engine instruments | CHECK if in green range |
| 7. | Carburetor temperature indicator (if installed) | MONITOR |

CAUTION

*During flights above a pressure altitude of 6000 ft, the fuel pressure warning light must be monitored closely. If the **FUEL** warning light goes ON, the **Fuel Pump** must be switched ON to prevent fuel vapor formation in the fuel system.*

4.5.9 Descent

- | | | |
|----|---|----------------------------|
| 1. | Throttle | First decrease AS REQUIRED |
| 2. | Propeller control lever | Second SET above 2000 RPM |
| 3. | Carburetor heat | AS REQUIRED |
| 4. | Carburetor temperature indicator (if installed) | MONITOR |

CAUTION

For a rapid descent proceed as follows:

<i>Throttle</i>	<i>First IDLE</i>
<i>Propeller control lever</i>	<i>Second START</i>
<i>Carburetor heat</i>	<i>PULL (ON)</i>
<i>Flaps</i>	<i>UP</i>
<i>Airspeed</i>	<i>130 KIAS</i>
<i>Oil and cylinder head temperature</i>	<i>maintain in green range</i>

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 16

4.5.10 Landing

- | | | |
|-----|-----------------------------|------------------|
| 1. | Lap belt | CHECK SECURE |
| 2. | Fuel Pump switch | ON |
| 3. | Carburetor heat | PULL (ON) |
| 4. | Throttle | AS REQUIRED |
| 5. | Airspeed | 90 KIAS |
| 6. | Flaps switch | T/O or LDG |
| 7. | Trim switch | AS REQUIRED |
| 8. | Flaps switch | LDG |
| 9. | Approach speed | 60 KIAS |
| 10. | Propeller control lever | START |
| 11. | Landing Light switch | ON (as required) |

CAUTION

In strong headwinds or crosswinds, in turbulent air or in wind shear, it may be desirable to approach using less flaps and at a higher airspeed.

4.5.11 Go-Around (Balked Landing)

- | | | |
|----|-------------------------|-----------------|
| 1. | Throttle | First WIDE OPEN |
| 2. | Propeller control lever | Second START |
| 3. | Carburetor Heat | PUSH (OFF) |
| 4. | Flaps switch | T/O |
| 5. | Airspeed | 65 KIAS |

CAUTION

Any operation with throttle wide open and carburetor heat engaged should be avoided to prevent engine damage.

4.5.12 After Landing

- | | | |
|----|---------------------------------------|-------------|
| 1. | Throttle | AS REQUIRED |
| 2. | Flaps switch | UP |
| 3. | P/S Heat switch (if installed) | OFF |
| 4. | Carburetor Heat | PUSH (OFF) |
| 5. | Fuel Pump switch | OFF |
| 6. | Transponder | OFF |
| 7. | Landing Light switch | OFF |

Document Nr.:	Issue:	Supersedes Issue:	Date:	Page:
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 17

4.5.13 Engine Shutdown

- | | | |
|----|--------------------------|-----------------------------|
| 1. | Throttle | IDLE |
| 2. | Parking Brake | SET |
| 3. | Flaps switch | LDG |
| 4. | ELT | CHECK (frequency 121.5 MHz) |
| 5. | Avionics switch | OFF |
| 6. | Ignition Switch | OFF |
| 7. | Electrical equipment | OFF |
| 8. | ALT1 / BAT switch | OFF |

NOTE

*The GARMIN G500 is turned off with the **ALT1/BAT** switch.*

- | | | |
|----|----------------------|-------------|
| 9. | Chocks and tie-downs | AS REQUIRED |
|----|----------------------|-------------|

4.5.14 Refueling

1. Engine Shutdown as in Section 4.5.13
2. Ground the aircraft

CAUTION

*During refueling, the aircraft **must** be grounded (for example at the end of the exhaust pipe.)*

3. Open fuel tank filler cap
4. Refuel both tanks equally

NOTE

Insert the fuel pump nozzle carefully into the tanks to avoid damage.

5. Replace the fuel tank filler caps
6. Remove grounding cable

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 18

4.5.15 Flight in Heavy Rain and/or with Wing Contamination**CAUTION**

When flying with wet and/or contaminated wings and control surfaces, performance and handling qualities may be reduced. This applies in particular to take-off distance, climb performance, cruising speed and stall characteristics.

The stall speed may increase up to 3 kts and the air speed indicator may give false readings.

Visibility may deteriorate considerably in rain.

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 19



POH / AFM
AQUILA AT01-100B

Section 4
NORMAL PROCEDURES

[intentionally left blank]

<i>Document Nr.:</i>	<i>Issue:</i>	<i>Supersedes Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-102	A.04	A.02 (15.10.2013)	19.10.2015	4 - 20