



POH / AFM
AQUILA AT01-100

POH-Supplement
AS-00

SECTION 9

Pilot's Operating Handbook Supplement AS-00

Winter Operation

This supplement is applicable and must be inserted into Section 9 of the Pilot's Operating Handbook when a radiator inlet baffle and / or an engine preheater system from Horn GmbH is installed onto the AQUILA AT01-100. The information in this supplement adds to or replaces information in the basic Pilot's Operating Handbook.

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26.06.17 
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0.1 RECORD OF REVISIONS

Issue	Reason for Change	Effected Pages	Date of Issue
A.01	Initial Issue	All	08.04.2014
A.02	Engine preheater system Horn GmbH	All	13.04.2015
A.03	larger inlet baffle "Swiss"	All	26.06.2017

0.2 LIST OF CURRENT PAGES

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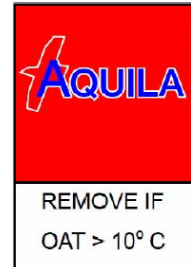
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1. GENERAL

1.1 Radiator inlet baffle

For OAT below 10°C (50°F) at the take-off location (GND) the effective area of the oil and the water cooler can be reduced by installation of a radiator inlet baffle. At the baffle the following placard has to be affixed:



For OAT below +5°C (41°F) at the take-off location (GND) alternatively installation of radiator inlet baffle "Swiss" is recommended. It has a bigger reduction area and thereby is more effective. At the baffle the following placard has to be affixed:



1.2 Engine preheater system Horn GmbH

To minimize wear by engine cold starts an engine preheater system from Horn GmbH can be installed. Operation of this system is only allowed with the aircraft parked and all systems switched off. With this POH supplement only an overview of the system is given. For operating instructions the manufacturer's instructions are obligatory.

2. OPERATING LIMITATIONS

2.1 Radiator inlet baffle

The maximum tested OAT for take-off with installed standard baffle is +10°C (50°F).

Take-off with installed baffle "Swiss" is recommended up to 41°F (+5°C) at maximum.

The Pilot is anymore responsible to maintain all engine limitations as specified in the basic Pilot's Operating Handbook chapter 2.4.1 f) and g).

2.2 Engine preheater system Horn GmbH

There is no change regarding the information in the basic Pilot's Operating Handbook.

3. EMERGENCY PROCEDURES

There is no change regarding the information in the basic Pilot's Operating Handbook.

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4. NORMAL PROCEDURES

4.1 Radiator inlet baffle

Expand check item 6d) in chapter 4.3 Daily Inspection B) "Exterior Check" in the basic Pilot's Operating Handbook:

Cooler intake

- check if free from obstructions and if necessary remove or install the radiator inlet baffle according to OAT on ground at take-off location

4.2 Engine preheater system Horn GmbH

Expand check item 2 in chapter 4.4 Preflight Inspection in the basic Pilot's Operating Handbook:

- tow bar and power supply engine preheater system.....Remove

5. PERFORMANCE

There is no change regarding the information in the basic Pilot's Operating Handbook.

6. WEIGHT AND BALANCE

6.1 Radiator inlet baffle

There is no change regarding the information in the basic Pilot's Operating Handbook.

6.2 Engine preheater system Horn GmbH

The installation has to be taken into account with a mass of **0.3kg** and a lever of **- 0.901m** into the weight and balance record of the POH.

7. SYSTEMS DESCRIPTION

7.1 Radiator inlet baffle

The radiator inlet baffle is a composite angular piece which is installed with integrated quick release fasteners to the lower cowling in front of the cooler unit. The effective performance of the cooler unit is reduced, whereby the operating temperatures of oil and water are increased.

7.2 Engine preheater system Horn GmbH

The preheater system is installed at the engine compartment. It consists of a 150W heater pad at the bottom of the engine block, a 110W heater pad at the oil tank, connecting cables as well as a connector plug located at the opening for external power connection.

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8. HANDLING, SERVICE AND MAINTENANCE

8.1 Radiator inlet baffle

If not in use the baffle should be removed from the cowling by unlocking the quick release fasteners and stored in the baggage compartment.

8.2 Engine preheater system Horn GmbH

Operation, Maintenance and any repair has to be in accordance with the manufacturer's instructions (see installation and operation manual engine preheater P/N 120567):

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e-mail: info@horngmbh.com

Before operation of the system it has to be ensured that all wiring, in particular the earth grounding wires to the oil tank and to the engine block are undamaged.
Earth grounding has to be tested according to national regulations regularly.

Connection to the mains supply is only allowed power-off plugged to the system first via the provided 10m connection cable with integrated earth leakage circuit breaker (ELCB) and second to an 230V AC mains socket with grounding! Disconnection from the mains supply is only allowed vice versa. Otherwise there remains a risk for mains voltage being present on the aircraft structure and also formation of sparks may be possible!

WARNING

Danger of electrical shock and sparking!

The heater pads are controlled by bi-metal strips and can reach up to 311°F (155°C) at their outside.

WARNING

Danger of skin burn!

Do not operate the system unattended! In case of malfunction of a bi-metal strip overheating of the engine compartment and resulting damages can occur!

At every maintenance inspection of the aircraft an additional check for proper adhesion and condition of the heater pads as also proper condition of the wiring and the plug has to be performed.

Repair of components or of the complete preheater system is only allowed after approval from the manufacturer Horn GmbH.

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