



Aquila AT01

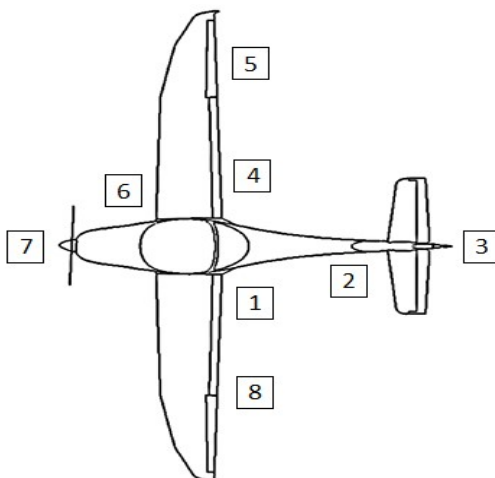
**NORMAL
&
EMERGENCY**

CHECKLIST

Daily Pre-flight Check

Papers.....	On Board
Ignition key.....	Removed
BAT Switch.....	On
Warning lights (alternator, fuel pressure)....	Alight
Engine instruments.....	Check
Fuel quantity.....	Check
External lights.....	Check for proper operation
Bat switch.....	Off
Foreign objects.....	Check and Remove
ELT.....	Check
Baggage.....	Stowed and Secured
Canopy.....	Check for damage and cleanliness

EXTERIOR CHECK, VISUAL INSPECTION



1. Left main landing

- a) Landing gear strut..... Visual inspection
- b) Wheel fairing..... Visual inspection
- c) Tire pressure..... Check
- d) Tire slip marking..... Check
- e) Tire, wheel, brake..... Visual inspection
- f) Brake chocks..... Remove

2. Tail boom

- Tail boom shell..... Visual inspection
- Skid plate..... Visual inspection
- Tail tie-down..... Disconnect

3. Empennage

- Elevator..... Visual inspection
- Horizontal stabilizer Visual inspection
- Rudder..... Visual inspection, fitting and bolt connection, proper control cable connection and screw locking.
- Vertical stabilizer..... Visual inspection

4. Right main landing gear

- a) Landing gear strut..... Visual inspection
- b) Wheel fairing..... Visual inspection
- c) Tire pressure..... Check
- d) Tire slip marking..... Check
- e) Tire, wheel, brake..... Visual inspection
- f) Brake chocks..... Remove

5. Right wing

- a) Entire wing surface..... Visual inspection
- b) Fuel vent..... Check if clear
- c) Flap..... Visual inspection
- d) Aileron and inspection window..... Visual inspection
- e) Wing tip, Nav-light and ACL..... Visual inspection
- f) Fuel level..... Check with dipstick and verify with the indicated fuel level in the cockpit
- g) Fuel tank filler cap..... Check if closed
- h) Fuel drain valve..... Drain, check for water and deposits
- i) Wing tie-down..... Disconnect

6. Nose section, cowling

- a) Check oil level..... Prior to the oil check, turn the propeller several times in the direction of engine rotation to pump oil from the engine back into the oil tank.
- a) Check coolant level..... Verify coolant level in the overflow bottle. Should be at least 2/3 full.
- c) Air intakes (4)..... Check if clear
- d) Radiator / oil cooler intake Check free from obstructions
- e) Cowling..... Visual inspection, check Camloc fasteners
- f) Propeller..... Visual inspection
- g) Propeller blades..... Check for cracks / damage
- h) Spinner dome..... Visual inspection
- i) Elect. Fuel pump and drain valve..... Drain, check for water and deposits

7. Nose landing gear

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

- c) Tire pressure..... Check
- d) Tire slip marking..... Check
- e) Tire, wheel..... Visual inspection
- f) Shock absorber unit..... Visual inspection
- g) Brake chocks and tow bar..... Visual inspection

8. Left wing

- a) Entire wing surface..... Visual inspection
- b) Fuel vent..... Check if clear
- c) Battery..... On
- d) Stall warning..... Check
- e) Battery..... Off
- f) Pitot/static heat..... Remove cover and check
if all holes are clear
- g) Wing tip, Nav-light and ACL..... Visual inspection
- h) Aileron and inspection plates..... Visual inspection
- i) Fuel level..... Check with dipstick and
verify with the indicated
fuel level in the cockpit
- j) Fuel tank drain valve..... Drain, check for water and
deposits

- k) Fuel tank filler cap..... Check if closed
- l) Flap..... Visual inspection
- m) Wing tie-dow..... Disconnect

BEFORE ENGINE START -UP

Daily pre-flight check.....	Completed
Passenger briefing.....	Completed
Seats.....	Adjust as required
Seat belts and harnesses.....	Fastened and Tightened
Canopy.....	Closed and Locked
Parking brake.....	Set
Control stick.....	Check for free movement
Carburetor heat.....	Off
Throttle.....	Idle
Propeller control lever.....	High RPM
Avionics switch.....	Off
ALT/BAT switch.....	On
Fuel selector valve.....	Switch to less fullest tank
Alternator 1+2 warning light.....	Illuminates
Fuel pressure warning light.....	Illuminates
Anti-collision light (ACL).....	On
Circuit breakers.....	Check all in

ENGINE START-UP

Electrical fuel pump.....	On
Fuel pressure warning light.....	Out
Throttle -cold engine.....	IDLE
-hot engine.....	2 cm Opened
Choke -cold engine.....	Pull
-hot engine.....	Off
Brakes.....	Set
Propeller area.....	Check if clear
Ignition switch.....	Start
Oil pressure gauge.....	Check
Alternator 1+2 warning light.....	Off
NAV-lights.....	As required
Electrical fuel pump.....	Off

BEFORE TAXIING

Avionics switch / PFD.....	On
Engine instruments.....	Check
Voltmeter.....	Check green range
Flaps.....	Cruise/UP
Avionics and flight instruments.....	Set up

TAXIING

Parking brake.....	Release
Nose wheel steering	Check function/free movement
Brakes.....	Check
Flight instruments and avionics.....	Check
Compass reading/gyro instruments.....	Check

BEFORE TAKE-OFF

Brakes.....	Apply
Parking brake.....	Set
Fuel selector valve.....	Switch to fullest tank
Fuel pressure warning light.....	Out
Throttle.....	Set 1700 RPM
Propeller control lever.....	Switch 3 times b/w High-Low Check RPM drop; 200 ±50 RPM
Ignition.....	Magneto Switch R-Both, L-Both Max drop: 120, diff L/R: 50
Carburetor Heat.....	Check (RPM drop: 20-50)
Throttle.....	Idle
Electrical Fuel Pump.....	On
Flaps.....	Take-off position
Trim.....	Check movement, set t/o position
Engine instruments.....	Checked within Green arc
Circuit breakers.....	Check all in
Control stick.....	Check for free movement
Seats belts and harnesses.....	Fastened and Tightened
Canopy.....	Closed and locked
Parking brake.....	Release

RUNWAY ITEMS

Landing Light..... On
Runway direction..... Checked
Transponder..... ALT
Tachometer..... 2200-2260 RPM

CLIMB

Prop Lever..... Checked 2260 RPM
Engine instruments..... Checked
Flaps..... Cruise position
Climb speed..... 65 KIAS
Electrical Fuel Pump..... Off

CRUISE

Cruise power..... As required
Propeller lever..... Between 1650 and 2260 RPM
Engine instruments..... Checked
Fuel balance..... Check every 30 min.

DESCENT

Throttle..... As required
Prop lever..... Set 1800-2200 RPM
Carburetor heat..... as required
Oil/cylinder head temperature..... Monitor

APPROACH

Seats belts and harnesses..... Check Tight
Electrical fuel pump..... On
Carburetor heat..... On
Throttle..... As required
Airspeed..... 80 KIAS
Flaps..... Take-Off position

FINAL

Flaps..... Landing position
Prop lever..... High RPM
Speed..... 60 KIAS
Landing light..... On

AFTER LANDING

Throttle..... Idle
Flaps..... Cruise/UP
Carburetor heat..... Off
Electrical fuel pump..... Off
Transponder..... Stby
Landing Light..... Off

ENGINE SHUT DOWN

Throttle..... Idle
Parking brake..... Set
Flaps..... Landing position
Trim..... Take-Off position
Avionics switch..... Off
Ignition switch..... Off (slowly in steps)
Electrical Equipment & lights..... Off
ALT/BAT switch..... Off
Hobbs Time..... Note

ENGINE FAILURE DURING TAKE-OFF RUN

Throttle	Idle
Brakes	Apply as required

ENGINE FAILURE IMMEDIATELY AFTER TAKE-OFF

Throttle.....	Full OPEN
Electrical fuel pump.....	On
Airspeed.....	70 KIAS
Propeller control lever.....	High RPM
Fuel selector valve.....	Switch to Fullest tank
Choke.....	Off
Carburetor heat.....	On
Ignition switch.....	Both

Before landing;

Fuel selector valve.....	Off
Ignition switch.....	Off
ALT/BAT switch.....	Off

ENGINE FAILURE IN FLIGHT

Engine Roughness;

Carburetor heat.....	On
Electrical fuel pump.....	On
Ignition switch.....	Switch to R-Both, then L-Both
Throttle.....	Do not change position

If Roughness continues;

Throttle.....	Reduce to required minimum
Precautionary landing.....	Perform

LOSS OF OIL PRESSURE

Oil temperature..... Check

If oil pressure falls below the green arc while oil temperature remains normal:

..... Land at the nearest airfield

If oil pressure falls below the green arc and is accompanied by a rise in oil temperature:

Throttle.....	Reduce to required minimum
Precautionary landing.....	Perform

LOSS OF FUEL PRESSURE

Electrical fuel pump..... On

Fuel selector valve..... Switch to Fullest tank

Electrical fuel pump..... Off, when warning light FUEL turns off

If low fuel pressure warning light remains on;

Electrical fuel pump.....On and Land at the nearest airfield

ENGINE RESTART PROCEDURE WITH STOPPED PROPELLER

Non-essential electrical equipment.....	Off
BAT switch.....	On
Propeller control lever.....	High RPM
Fuel selector valve.....	Switch to fullest tank
Electrical fuel pump.....	On
Throttle.....(hot engine)	2 cm opened
	(cold engine) Idle
Choke.....(hot engine)	Off
	(cold engine) Pull
Ignition switch.....	Both
Ignition switch.....	Start

When power is restored:

Oil Pressure.....	Check
Choke.....	Off
Electrical equipment.....	Switch On as required
Oil Temperature.....	Check

RESTART PROCEDURE WITH PROPELLER WINDMILLING

When engine power off and airspeed above 60 kts the propeller auto-rotates;

Airspeed.....	76 KIAS
BAT switch.....	On
Fuel selector valve.....	Switch to fullest tank
Propeller control lever.....	High RPM
Electrical fuel pump.....	On
Ignition switch.....	Both
Throttle.....(hot engine)	2 cm opened
	(cold engine) Idle
Choke.....(hot engine)	Off
	(cold engine) Pull

When power is restored:

Oil Pressure..... Check
Choke..... Off
Electrical equipment..... Switch On as required
Oil Temperature..... Check

POWER-OFF LANDING

EMERGENCY LANDING WITHOUT ENGINE POWER

Airspeed

Flaps in landing position.....	60 KIAS
Flaps in Take-off position.....	65 KIAS
Flaps in Cruise position.....	65 KIAS
Fuel selector valve.....	Off
Ignition switch.....	Off
Seats belts and harnesses.....	Tight
COM (ATC).....	Report location and intention
ALT/BAT switch.....	Off

PRECAUTIONARY LANDING WITH ENGINE POWER

Locate suitable field.....	Consider wind, terrain, obstructions
Seats belts and harnesses.....	Tight
Initiate descent	
Select field.....	Fly Over
Check before turning into final;	
- throttle	as required
- propeller control lever.....	High RPM
- Carburetor heat.....	On
- Electrical fuel pump.....	On
- Flaps.....	Extended
- Airspeed.....	60 KIAS
Touch down with lowest possible speed.	
After Touch down;	
- Brakes.....	Apply
- Fuel selector valve.....	Off
- Ignition switch.....	Off
- ALT/BAT switch.....	Off

SMOKE AND FIRE

ENGINE FIRE ON GROUND

Fuel selector valve.....	Off
throttle	Full OPEN
ALT/BAT switch.....	Off
Ignition switch.....	Off
Aircraft.....	Evacuate

ENGINE FIRE IN FLIGHT

Fuel selector valve.....	Off
Airspeed.....	90 KIAS
Flaps.....	Take-off position
Throttle	Full OPEN
Cabin heat.....	Off
Canopy slide-window.....	Full open
Proceed with Power-off landing page 13	

ELECTRICAL FIRE AND FORMATION OF SMOKE ON GROUND

ALT/BAT switch..... Off

IF ENGINE IS RUNNING:

Throttle.....	Idle
Fuel selector valve.....	Off
Ignition switch.....	Off
Canopy.....	Open
Fire Extinguisher (if installed).....	Activate as required

ELECTRICAL FIRE AND FORMATION OF SMOKE IN FLIGHT

BAT switch..... Off
Cabin vents..... Open
Canopy slide-window..... Full open
Fire Extinguisher (if installed)..... Activate as required

CABIN FIRE IN FLIGHT

BAT switch..... Off
Cabin vents..... Open
Cabin heat..... Off
Fire Extinguisher (if installed)..... Activate as required
If necessary, prepare safety landing

INADVERTENT ENCOUNTER OF ICING CONDITIONS

In the event of an inadvertent icing encounter, use the following procedure:

Carburetor heat..... On
Propeller RPM..... Increase
Cabin heat..... On
Immediately leave the region in which the icing has occurred.
Move the control surfaces periodically, to keep them moveable.

POWER-OFF GLIDING

Flaps..... Retracted
Airspeed..... 78 KIAS
Demonstrated glide ration..... 14 (4 km/1000' altitude loss)
Throttle Idle

SPIN RECOVERY PROCEDURE

Rudder.....	Apply full deflection opposite to direction of rotation
Throttle retard to.....	Idle
Elevator control move forward to.....	Neutral
Rudder return to.....	Neutral as soon as rotation stops
Ailerons return to.....	Neutral
Flaps.....	Retract if extended
Rudder return to.....	Neutral as soon as rotation stops
Elevator control.....	Cautiously Pull Out of the dive by applying back pressure on the stick

LANDING WITH A FLAT TIRE

ELECTRICAL FIRE AND FORMATION OF SMOKE ON GROUND

- Flaps..... Landing position
- Perform touch down on that side of the runway that is opposite of the defective tire, in order to have the complete width of the runway to correct direction changes caused by the defective tire.
 - Perform touch down with intact main tire first. Touch down nose wheel as soon as possible to obtain a better controllability of the aircraft on the ground
 - While taxiing, move aileron control fully to the side of the intact main tire, to unload the defective one.
 - When landing with a flat nose wheel tire; touch down with minimum speed. Hold the nose wheel off the ground as long as possible.

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS

COMPLETE FAILURE OF ELECTRICAL SYSTEM

BAT circuit breaker..... RESET if tripped
ALT/BAT switch..... Check if ON
If power is not restored..... Land at nearest airfield

ALTERNATOR FAILURE:

ALTERNATOR 1 warning light illuminates

Alternator switch..... Switch OFF then ON
Alternator 1 circuit breaker..... RESET if tripped
If alternator warning light remains alight:
Alternator1 circuit breaker..... Pull
Alternator switch..... Off
All non-essential equipment..... Off
Devices connected at 12 VDC receptacle..... Off
-Observe the voltmeter and ammeter readings
-Land at the nearest airfield if practical

ALTERNATOR 2 warning light illuminates

Alternator 2 circuit breaker..... RESET if tripped
If alternator 2 warning light remains on:
Alternator 2 circuit breaker..... Pull
(Alternator 1 takes over power supply)

ALTERNATOR 1 and 2 warning lights illuminate

Alternator switch..... Switch OFF then ON
Alternator 1 circuit breaker..... RESET if tripped
Alternator 2 circuit breaker..... RESET if tripped
If alternator 1 & 2 warning light remains on:
Alternator1 & 2 circuit breakers..... Pull
Alternator switch..... Off

LOW VOLTAGE INDICATION

- Low voltage indication on the ground ;

Engine speed..... Increase RPM until the needle moves into the Green arc region.

All non-essential equipment..... Turn off until the needle moves into Green arc region.

If the needle remains on the green-red shaded arc or below and the ammeter shows discharge..... Do not fly until problem is eliminated.

- Low voltage indication in flight ;

All non-essential equipment..... Turn off until the needle moves into Green arc region.

If the needle remains on the green-red shaded arc or below and the ammeter shows discharge..... Alternator is defective. Proceed with 'Alternator failure' checklist

LOW VOLTAGE INDICATION WHILE LANDING

After landing..... Proceed with 'Low voltage' checklist.

FLAP CONTROL SYSTEM MALFUNCTION

FLAP POSITION INDICATOR OR FLAP ACTUATOR MALFUNCTION

Flaps circuit breaker.....	Reset if tripped
Flap position.....	Check visually at the left wing
Airspeed.....	Within white arc airspeed indic.
Flap switch.....	Switch through all positions.

TRIM CONTROL SYSTEM MALFUNCTION

TRIM SYSTEM INOPERATIVE

Trim actuator circuit breaker.....	Reset if tripped
Trim switch.....	Press Nose Up and then Nose Down for several times

Land as soon as practical

TRIM ACTUATOR DOES NOT STOP AS DESIRED

Control stick.....	Hold in position
Trim actuator circuit breaker.....	Pull
Trim switch.....	Check, whether pressed, jammed, etc.

If the problem is obvious, and can be solved:

Trim actuator circuit breaker.....	Reset
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If the problem cannot be eliminated: Land at nearest airfield

AVIONICS MALFUNCTION

COMPLETE AVIONICS FAILURE

Avionics master switch..... Switch Off then On. The avionics switch is an automatic circuit protective switch. If the switch trips again;

Land at nearest airfield

RECEIVE MODE FAILURE OF COM-EQUIPMENT

Push to talk switch..... Check pilot's & co-pilot's PTT switches whether pressed, jammed, etc. .Check connectors

Head-set..... Switch off squelch momentarily
If no noise audible: Check head-set connectors.

TRANSMIT MODE FAILURE OF COM-EQUIPMENT

T-symbol..... Check whether displayed while transmitting

Selected frequency..... Check

Microphone..... check, if necessary replace head-set

STARTER MALFUNCTION

During engine start, the starter does not decouple from engine

Throttle Idle

Ignition switch..... Off

Repair damage before conducting planned flight

IN-FLIGHT FAILURES AND MALFUNCTIONS

SELF ACTUATING RELEASE AND OPENING OF THE CANOPY IN FLIGHT

Keep calm, there is no imminent danger

Flight attitude..... Stabilize flight attitude/altitude

Airspeed 65 – 75 KIAS

Surrounding airspace..... Check for obstacles/traffic

Canopy..... Close and lock canopy in flight if

possible. Check the canopy locking and the position of the canopy locking

lever continuously until landing. If this is not possible to close the canopy,

continue flight with open canopy and land at the nearest airfield