3fly.at

# OE-AKI

## Aquila A211 / GTN 650

MTOW = 750 kg / 1.653 lb

A/C-Size: W: 10,3 m H: 2,4 m L: 7,4 m

**OPERATOR**

**Motorflug Union - Wien**

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**CONTACT**

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**FUEL**

| | |
|---|---|
| Fuel | EN228 SUPER |
| Fuel (alternative)* | AVGAS 100LL |
| Maximum Fuel | 120 L / 31,7 gal |
| Unusable Fuel | 10,4 L / 2,8 gal |

*) If alternative Fuel used → Entry in A/C LOG

**OIL**

Aero Shell SPORT PLUS 4

Minimum

Maximum

DIFF = 0,45 L

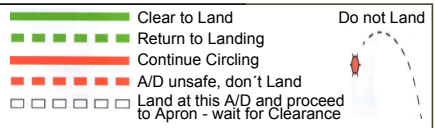
**TIRE**

| | |
|---|---|
| Front Tire | 36 psi / 2,5 bar |
| Main Tires | 36 psi / 2,5 bar |

**SPEED**

| | |
|---|---|
| $V_{S0}$ (Stall- Flps max) | 39 KIAS |
| $V_G$ (best glide, Flps up) | 78 KIAS |
| Max. Demo. X-Wind | 15 knots |

**COM FAIL**




**FPL (EXAMPLE)**

| | | |
|---|---|---|
| 7 | A/C ID | OE-AKI |
| 8 | Flight Rules | V |
| | Type of Flight | G |
| 9 | Type of A/C | A 211 |
| | Wake Turbul. Cat. | L |
| 10 | Equipment | S / S |
| 13 | Departure A/D | LOAV |
| | Departure Time | 0830 |
| 15 | Speed | N0110 |
| | Flight Level | VFR |
| | Route | SOPRON |
| 16 | Destination A/D | LHFM |
| | Total EET | 0025 |
| | Alternate A/D | LOAN |
| 18 | Other Info | EET/SOPRON0015 |
| 19 | Endurance | 0430 |
| | Persons on Bord | 2 |
| | Emerg. Equipm. | ELT |
| | A/C Colour | WHITE |
| | Name PIC | NAME |



**Consult POH / AFM for "Warnings, Cautions and additional Information"**

This document does not replace POH / AFM - (AKI 2017 V1.5)

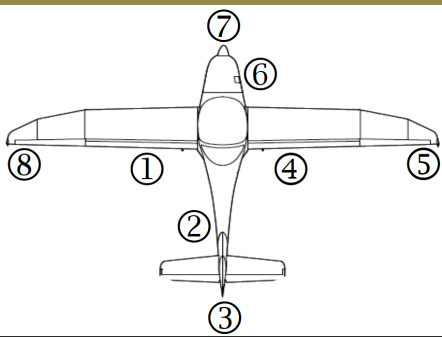
## DAILY INSPECTION

| | | |
|---|---|---|
| 1 | Fuel Tank Sumps | 2 x DRAIN |
| 2 | Electr. Fuel Pump | DRAIN |

## CABIN CHECK

| | | |
|---|---|---|
| 3 | A/C Documents | CHECK |
| 4 | Ignition Key | REMOVE |
| BATTERY | Master - ALT1 / BAT | ON |
| | Lights (ALT1, Fuel) | ILLUMIN |
| | Lights (ALT2, Volt) | ILLUMIN |
| | Master - ALT1 | OFF |
| | Eng. Instrument | CHECK |
| | Fuel Quantity | CHECK |
| | Light: Nav, Ldg, Instr | CHECK |
| | ACL, Stall Warning | CHECK |
| | Master - BAT | OFF |
| 14 | ELT | ARM |
| 15 | Foreign Objects | REMOVE |
| 16 | Baggage stowed | SECURE |
| 17 | Canopy clean | NO DAMAGE |
| 18 | Flashlights | CHECK |

## EXTERIOR CHECK




## 1. Left Main Gear

| | | |
|---|---|---|
| 19 | Wheel Fairng / Strut | CHECK |
| 20 | Tire Press /Slip Mkr. | CHECK |
| 21 | Tire / Wheel / Brake | VIS INSP |
| 22 | Chocks | REMOVE |

## 2. Fuselage

| | | |
|---|---|---|
| 23 | Shell & Skid Plate | VIS INSP |
| 24 | Tail Tiedown | DISCON |

## 3. Empennage

| | | |
|---|---|---|
| 25 | Elevat. & Stabilizer | VIS INSP |
| 26 | Rudder | VIS INSP |
| 27 | Fitting Bolt Connect. | CHECK |
| 28 | Vertical Stabilizer | VIS INSP |

## 4. Right Main Gear

| | | |
|---|---|---|
| 29 | Wheel Fairng / Strut | CHECK |
| 30 | Tire Press /Slip Mkr. | CHECK |
| 31 | Tire / Wheel / Brake | VIS INSP |
| 32 | Chocks | REMOVE |

## 5. Right Wing

| | | |
|---|---|---|
| 33 | Wing Surfaces | VIS INSP |
| 34 | Fuel Vent - clear | CHECK |
| 35 | Flap | CHECK |
| 36 | Aileron/Insp. Wndw. | VIS INSP |
| 37 | Wing Tip | VIS INSP |
| 38 | Fuel Level- Dipstick | CHECK |
| 39 | Fuel Filler Cap | CLOSE |
| 40 | Wing Tiedown | DISCON |



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| 6. Nose Section / Cowling | |
|---|---|
| 41 Ignition / ALT1/BAT | CHECK OFF |
| 42 Parking Brake | SET |
| 43 Crank Engine | CHECK NOISE |
| 44 Oil level / diff. 0,45L | CHECK |
| 45 Coolant Level | CHECK |
| 46 Air+Cooler Intakes | FREE |
| 47 Cowling Fasteners | CHECK |
| 48 Propeller / Spinner | CHECK |

| 7. Nose Ldg Gear | |
|---|---|
| 49 Wheel Fairng / Strut | CHECK |
| 50 Gear Strut Mount | VIS INSP |
| 51 Tire Pressure | CHECK |
| 52 Tire / Wheel | VIS INSP |
| 53 Shock Absorber | CHECK |
| 54 Chocks / Tow Bar | REMOVE |

| 8. Left Wing | |
|---|---|
| 55 Wing Surfaces | VIS INSP |
| 56 Fuel Vent - clear | CHECK |
| 57 Pitot / Static Cover | REMOVE |
| 58 Pitot / stat Opening | CLEAR |
| 59 Wing Tip | VIS INSP |
| 60 Aileron Insp. Wndw. | VIS INSP |
| 61 Fuel Level / Dipstick | CHECK |
| 62 Fuel Filler Cap | CLOSE |
| 63 Flap | CHECK |
| 64 Wing Tiedown | DISCON |

| PREFLIGHT | |
|---|---|
| 1 Daily Inspection | COMPL |
| 2 Tow Bar | REMOVE |
| 3 Fuel Quant. Dipstk | 2 x CHECK |
| 4 Ignition, ALT1 / BAT | CHECK OFF |
| 5 Parking Brake | SET |
| 6 Crank Engine | CHECK NOISE |
| 7 Oil level / diff. 0,45L | CHECK |
| 8 Coolant Level | CHECK |
| 9 Tiedown Straps | REMOVE |
| 10 Baggage Door | CLOSE/LOCK |
| 11 Pitot Cover | REMOVE |
| 12 Control Locks | REMOVE |
| 13 Seating Positions | ADJUST/LOCK |
| 14 Carburetor Heat | FREE - PUSH |
| 15 Cabin Heat | FREE - PUSH |
| 16 Choke free move | AUTO RESET |
| 17 Throttle free move | IDLE |
| 18 Prop free move | FULL FORWD |
| 19 Mass & Balance | IN LIMITS |

| BEF. ENGINE START | |
|---|---|
| 1 Preflight Check | COMPL |
| 2 Passenger Briefing | COMPL |
| 3 Seats | ADJUST |
| 4 Seat Belts / Harn. | FASTEN |
| 5 Canopy Closed | LOCK |
| 6 Canopy locked | CHECK |
| 7 Parking Brake | SET |
| 8 Controls movement | CHECK |



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| | | |
|---|---|---|
| 9 | Fuel Selector | FULLER TANK |
| 10 | Carburetor Heat | PUSH (OFF) |
| 11 | Throttle | IDLE |
| 12 | Prop | FULL FORWD |
| 13 | Avionic - Master | OFF |
| 14 | P/S Heat | OFF |
| 15 | All CB's | CHECK |
| 16 | Attitude Indicator | CAGE |
| 17 | Master - ALT1 / BAT | ON |
| 18 | ALT1 / ALT2 Light | ILLUMIN |
| 19 | Fuel Warning Light | ILLUMIN |
| 20 | P/S HEAT Light | ILLUMIN |
| 21 | ACL | ON |

## ENGINE START

| | | | |
|---|---|---|---|
| 1 | Before Start Check | | COMPL |
| 2 | Fuel Pump | | ON |
| 3 | Fuel Warning Light | | OFF |
| COLD | Throttle - when cold | | IDLE |
| | Choke - when cold | | PULL / HOLD |
| HOT | Throttle - when hot | | 1-2 cm OPEN |
| | Choke - when hot | | PUSH |
| 6 | Brakes Both Pedals | | PRESS |
| 7 | Prop Area | | CLEAR |
| 8 | Ignition | | START / BOTH |
| 9 | Oil Press < 10 sec. | | RISING |
| 10 | ALT1 Warning Light | | OFF |
| 11 | ALT2 Warning Light | | OFF |
| 12 | Fuel Pump | | OFF |
| 13 | Fuel Warning Light | | OFF |



## BEFORE TAXI

| | | | |
|---|---|---|---|
| 1 | Warmup max 1000rpm | | OIL MIN 50°C |
| 2 | Avionics | | ON / SET |
| 3 | Engine Instruments | | CHECK |
| 4 | Volt Meter in green | | CHECK |
| 5 | Trim Sw. + Indicator | | CHECK |
| 6 | Flap Sw. + Indicator | | CHECK + UP |
| 7 | P/S Heat ON | | LIGHT OFF |
| 8 | P/S Heat OFF | | LIGHT ON |
| ALTERNATOR TEST | Throttle 1.000 rpm | | SET |
| | NAV Lights | | ON |
| | Landing Light | | ON |
| | Instrument Lights | | ON |
| | Ammeter Charge | | CHECK |
| | Master - ALT1 | | OFF |
| | Ammeter Discharge | | CHECK |
| | ALT2 CB | | PULL (OFF) |
| | If Discharge increase | | → ALT2 OK |
| | If no Change | | → ALT2 U/S |
| | If one ALT u/s | | → NO NVFR |
| | ALT2 CB | | PUSH (ON) |
| | Master - ALT1 | | ON |
| | If Charge increase | | → ALT1 OK |
| | If no change | | → ALT1 U/S |
| | If one ALT u/s | | → NO NVFR |
| | All Switches | | AS REQ |
| 26 | Parking Brake | | RELEASE |
| TAXI | Brakes | | CHECK |
| | Steering | | CHECK |
| | Flight Instruments | | CHECK |

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## BEFORE TAKEOFF

| | | |
|---|---|---|
| 1 | Transponder | CHECK |
| 2 | Brakes | APPLY |
| 3 | Parking Brake | SET |
| 4 | Compass / Gyro | CHECK / SET |
| 5 | Fuel Selector | FULLER TANK |
| 6 | Fuel Warng Light | OFF |
| 7 | Engine Instruments | IN GREEN |
| 8 | Throttle | 1700 rpm |
| MAGNETOS | L - B - R - B | SWITCH |
| | Drop max.120 rpm | CHECK |
| | Diff L/R max 50 rpm | CHECK |
| | Ignition Switch Both | CONFIRM |
| 13 | Carburetor pull (on) | DROP 20-50 rpm |
| 14 | Carburetor | PUSH (OFF) |
| GOVERNOR | Prop 3 x to start / cruise end stops | |
| | ↳ Drop | 200 +/- 50 rpm |
| | ↳ Oil Press | CONSTANT |
| | ↳ Manifold Press | CHANGE |
| 19 | Throttle | IDLE |
| 20 | Fuel Pump | ON |
| 21 | Flaps | T/O |
| 22 | Trim | WHITE MARK |
| 23 | All CB's | CHECK |
| 24 | Contr. Movement | FREE |
| 25 | Lap Belt | TIGHTEN |
| 26 | Canopy → closed | LOCK |
| 27 | Departure Briefing | COMPL |
| 28 | T/O Briefing | COMPL |
| 29 | Parking Brake | RELEASE |

## LINE UP / TAKEOFF

| | | |
|---|---|---|
| 1 | Before T/O Check | COMPL |
| 2 | Landing Light | AS REQ |
| 3 | Approach Sector | CLEAR |
| 4 | Runway Heading | CONFIRM |
| 5 | Throt / Prop / Carb | FULL FORWD |
| 6 | RPM = 2300 - 2385 | CHECK |
| 7 | T/O Power Values | CORRECT |
| 8 | Elevator | NEUTRAL |
| 9 | Rudder | DIRECTION |
| 10 | Rotate ($V_R$) | **50 KIAS** |
| 11 | Climb Initialy | **57 KIAS** |
| 12 | Short T/O ($V_X$) | **52 KIAS** |

## CLIMB

| | | |
|---|---|---|
| 1 | Throttle | FULL |
| 2 | Prop full forward | MAX 5 MIN. |
| 3 | Prop 2260 rpm | REDUCE |
| 4 | Engine Instruments | IN GREEN |
| 5 | Climb Speed ($V_Y$) | **65 KIAS** |
| 6 | min. 400 ft AGL - Check Safe Spd | |
| 7 | Flaps | UP |
| 8 | Trim | AS REQ |
| 9 | Landing Light | OFF |
| 10 | Fuel Pump | OFF |
| 11 | Fuel Warning Light | CHECK |



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## CRUISE

| | | |
|---|---|---|
| 1 | Throttle | AS REQ |
| 2 | Prop | 1650-2260 rpm |
| 3 | Flaps | CHECK UP |
| 4 | Trim | AS REQ |
| 5 | P/S Heat as req. | OAT>15°C OFF |
| 6 | Engine Instruments | IN GREEN |
| 7 | Manvr. Speed ($V_A$) | **112 KIAS** |
| 8 | Turbulent Air ($V_{NO}$) | **MAX 130 KIAS** |

Full Throttle: → Prop min. 2140 rpm

## DESCENT

| | | |
|---|---|---|
| 1 | Throttle | AS REQ |
| 2 | Prop | MIN 2000 rpm |
| 3 | Carburetor Heat | AS REQ |
| RAPID DESCENT | Throttle | IDLE |
| | Prop | FULL FORWD |
| | Carburetor Heat | PULL (ON) |
| | Flaps | UP |
| | Airspeed | **MAX 130 KIAS** |
| | Engine Instruments | IN GREEN |

## LANDING

| | | |
|---|---|---|
| 1 | Lap Belt | TIGHTEN |
| 2 | Fuel Pump | ON |
| 3 | Landing Light | AS REQ |
| 4 | Carburetor Heat | PULL (ON) |
| 5 | Throttle | AS REQ |
| 5 | Airspeed ($V_{FE}$) | **MAX 90 KIAS** |
| 6 | Flaps | T/O OR LDG |
| 7 | Trim | AS REQ |

| | | |
|---|---|---|
| 8 | Flaps | LDG |
| 9 | Fin. Appr. Spd. | **60 KIAS** |
| 10 | Prop | FULL FWD |
| GO AROUND | Throttle | FULL FWD |
| | Prop | FULL FWD |
| | Carburetor Heat | PUSH (OFF) |
| | Flaps | T/O |
| | Climb Airspeed | **65 KIAS** |

**CAUTION:** Strong cross/head winds may require less flaps / higher airspeeds

## AFTER LANDING

| | | |
|---|---|---|
| 1 | Throttle | AS REQ |
| 2 | Flaps | UP |
| 3 | P/S Heat | OFF |
| 4 | Carburetor Heat | PUSH (OFF) |
| 5 | Fuel Pump | OFF |
| 6 | Landing Light | OFF |
| 7 | XPDR GND Mode | CHECK |

## SHUT DOWN

| | | |
|---|---|---|
| 1 | Throttle | IDLE |
| 2 | Parking Brake | SET |
| 3 | Flaps | LDG |
| 4 | ELT (121,5 MHz) | CHECK |
| 5 | Avionic Master | OFF |
| 6 | Ignition | OFF |
| 7 | Electr. Equipment | OFF |
| 8 | Instrument Lights | OFF |
| 9 | Master - ALT1 / BAT | OFF |
| 10 | Seats Pos. (L & R) | FULL AFT |
| 11 | Chocks / Tiedowns | AS REQ. |



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| Pressure altitude | Standard temperature | | Engine performance in % of MCP | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 55% | | | | 65% | | | | 75% | | | | 85% | | | | MCP | | | |
| H | T | T | RPM | MP | FF | FF | RPM | MP | FF | FF | RPM | MP | FF | FF | RPM | MP | FF | FF | RPM | MP | FF | FF |
| [ft] | [°C] | [°F] | [U/min] | [in Hg] | [l/h] | [gal/h] | [U/min] | [in Hg] | [l/h] | [gal/h] | [U/min] | [in Hg] | [l/h] | [gal/h] | [U/min] | [in Hg] | [l/h] | [gal/h] | [U/min] | [in Hg] | [l/h] | [gal/h] |
| 0 | 15 | 59 | 1900 | 24.6 | 14.0 | 3.7 | 2000 | 25.7 | 15.6 | 4.12 | 2100 | 27.0 | 21.0 | 5.55 | 2260 | 27.7 | 24.0 | 6.34 | 2260 | 28.0 | 26.0 | 6.87 |
| 2000 | 11 | 52 | 1900 | 24.0 | 15.0 | 4.0 | 2000 | 24.7 | 16.0 | 4.23 | 2200 | 25.7 | 21.3 | 5.63 | 2260 | 26.7 | 22.0 | 5.81 | 2260 | 27.0 | 26.0 | 6.87 |
| 3000 | 9 | 48 | 1900 | 23.7 | 15.5 | 4.1 | 2050 | 24 | 16.4 | 4.33 | 2230 | 25.0 | 21.4 | 5.65 | 2260 | 26 | 22.0 | 5.81 | | | | |
| 4000 | 7 | 44 | 1900 | 23.3 | 16.0 | 4.2 | 2100 | 23.3 | 16.8 | 4.44 | 2260 | 24.3 | 21.5 | 5.68 | 2260 | 25.2 | 22.0 | 5.81 | | | | |
| 5000 | 5 | 41 | 1950 | 22.7 | 16.5 | 4.4 | 2150 | 23 | 18.1 | 4.77 | 2260 | 23.8 | 21.9 | 5.79 | | | | | | | | |
| 6000 | 3 | 37 | 2000 | 22.0 | 17.0 | 4.7 | 2200 | 22.7 | 19.3 | 5.1 | 2260 | 23.3 | 22.3 | 5.89 | | | | | | | | |
| 8000 | -1 | 30 | 2100 | 21.0 | 18.0 | 4.8 | 2200 | 21.5 | 21.5 | 5.68 | 2260 | 21.5 | 23.0 | 6.08 | | | | | | | | |
| 10,000 | -5 | 23 | 2200 | 19.7 | 19.0 | 5.0 | 2260 | 20.1 | 22.0 | 5.81 | | | | | | | | | | | | |
| 12,000 | -9 | 16 | 2260 | 18.5 | 19.0 | 5.0 | | | | | | | | | | | | | | | | |

MCP: maximum continuous power
RPM: revolutions per minute
MP: manifold pressure
FF: fuel flow

Correction for non ISA temperature conditions:

For each 50°F (10°C) above ISA: increase Manifold Pressure by 3%, Fuel consumption increases by 5%

For each 50°F (10°C) below ISA: decrease Manifold Pressure by 3%, Fuel consumption decreases by 5%

## Airspeeds for Normal Operations

| | |
|---|---|
| **TAKEOFF** | |
| Climb Flaps T/O | 57 KIAS |
| $V_X$ Flaps T/O | 52 KIAS |
| $V_Y$ Flaps UP | 65 KIAS ☞ |
| **LANDING** | |
| Final APP Flaps LDG | 60 KIAS |
| Balked Ldg Flaps LDG | 60 KIAS |
| Max. demo X Wind | 15 KIAS |
| $V_{FE}$ max, Flaps LDG | 90 KIAS |
| **CRUISE** | |
| $V_A$ Maneuvering | 112 KIAS |
| $V_{NO}$ Max turbul. Air | 130 KIAS |
| $V_{NE}$ Max Airspeed | 165 KIAS |



## Airspeeds for Emergency Operations

| | |
|---|---|
| $V_A$ Maneuvering | 112 KIAS |
| Best Glide Flaps UP | 78 KIAS |
| Best Glide Flaps T/O | 73 KIAS |
| Precaut. Flaps LDG | 60 KIAS |
| **No Engine Power** | |
| Flaps T/O | 65 KIAS |
| Flaps UP | 70 KIAS |

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