

**BEFORE ENGINE START**

Preflight Inspection . . . . COMPLETED

According to Handbook, Cpt. 4.3

Rudder Pedal Position . . . . . SET

Seat belts . . . . . TIGHTEN

Flight Controls . . . . . CHECKED

Canopy . . . . . LOCKED

Parking Break . . . . . SET

Apply pressure and set, then 'pump'.

**Use of ext. Power:**

| See notes in Handbook Cpt. 4.4.2

**ENGINE START**

Circuit Breakers . . . . . CHECKED

Backup Battery . . . . . ON

GTN650Xi, MFD, EFIS . . . . . BOOTING

**MFD**

| Wait for boot sequence.

| Check FUEL QTY!

| Conf. amber "BACKUP BATT" msg.

| Conf. CO value 255ppm, then decr.

Master Switch . . . . . ON

**MFD**

| Conf. amber "BACKUP BATT" msg.

| CAS message OFF

Backup Battery . . . . . OFF

GEN A/B . . . . . ON

Voltage M . . . . . MIN. 12 V

(Batt/Alt-C Bus)

Fuel Selector . . . . MORE EMPTY TANK

Propeller Control . . . . . FINE

Fully forward

Throttle . . . . . CLOSED

Strobe Light . . . . . ON

LANE A / LANE B . . . . . ON

Main Fuel Pump . . . . . ON

Continues next column!

**CONTINUE: ENGINE START**

Start Power . . . . . ON (HOLD!)

**LANE A/B Lamps:**

| wait till lamps turn OFF

MFD Engine Indication . . . . CHECKED

-> active and correct

-> Fuel Pressure in Limits

**Throttle Lever:**

| Coolant/Oil Tmp. <10°C >= 55%

| Coolant/Oil Tmp. >10°C ca. 45%

% as indicated as "T" on MFD.

See HINT and Start Performance Chart

in Handbook Cpt. 4.4.3 on P. 4-8!

**ENGINE START:**

Hold "Start Power", THEN press "START"

until Eng. fires. Then release

Start-Button and "Start Power".

Throttle: reduce to 1700 - 2000 RPM

Oil Pressure . . . . . CHECKED

LANE A / B . . . . . IND. LAMP OFF

Both switches remain ON!

The Indicator Lamps should go out.

Throttle . . . . . 2500 RPM FOR 10 SEC

Voltage M / Voltage B . . 13.4 / 14.0 V

**AFTER ENGINE START**

Avionics . . . . . ON

ALT-C . . . . . ON

Voltage M . . . . . CHECKED

Increasing, nom. 13.8 V

EFIS . . . . . ON

EFIS Power Source . . . . . CHECKED

Verify NOT on internal Batt.

Baro PFD + MFD . . . . . SET

StbyEFIS, GTN are synched. MFD isn't!

**Engine Warm-Up:**

| 2500 RPM until oil temp > 50°C.

| Then set throttle to IDLE.

**BEFORE TAXIING**

Nav Light (at night) . . . . AS REQUIRED  
 Landing-/Taxi-Light . . . AS REQUIRED  
 A/C moving: Lights on!  
 PFD, stby EFIS, MFD . . . . . CHECKED  
 ADHRS stabilised.

**TAXIING**

Keep RPM < 2500, taxiing with  
 walking speed! Check breaks & steering.  
 Ground Control . . . . . CHECKED  
 Brakes . . . . . CHECKED  
 Indications . . . . . CHECKED  
 Attitude/direction: PFD, MFD, stby EFIS

**ENGINE RUN UP**

Parking Brake . . . . . SET  
 Oil Temperature . . . . . MIN 50°C  
 Propeller Control . . . . . FINE  
 fully forward

Landing-/Taxi-Light . . . AS REQUIRED  
 A/C standing still: Lights off!

**Pump and Fuel Supply Check**

Throttle: 3000 RPM  
 AUX Pump: ON, pressure in limits  
 AUX Pump Light: ON  
 Main Fuel Pump: OFF  
 Pressure still in limits: CHECKED  
 Mail Fuel Pump: ON

Fuel Tank . . . . . SIDES SWITCHED  
 Fuel Pressure . . . . . CHECKED  
 Fuel Tank . . . . . FULLEST TANK  
 Continues next column!

**CONTINUE: ENGINE RUN UP****Wastegate/PVC/Lane**

Verify BRAKES are FULLY set!  
 Throttle: FULL THROTTLE  
 RPM: min 5700, max 5800  
 Manifold Pressure: within LIMITS  
 Manifold Temp: Below 65°C  
 Throttle: reduce to 4700 RPM  
 LANE A: OFF  
 Max drop 250 RPM (aft. 15 sec.)  
 Check ENG Params in Limits!  
 LANE A: ON (wait 3 sec.)  
 LANE B: OFF  
 Max drop 250 RPM (aft. 15 sec.)  
 Check ENG Params in Limits!  
 LANE B: ON (wait 3 sec.)

Propeller Control . . . . . CHECKED  
 Cycle 3 times. Move lever SLOWLY  
 backwards, but fast forward.

Throttle . . . . . IDLE CHECK  
 Throttle . . . . . SET 3000 RPM

**BEFORE TAKE-OFF**

Instruments . . . . . CHECKED  
 Pitot-heat . . . . . AS REQUIRED  
 Flight Controls . . . . . CHECKED  
 Cockpit Canopy . . . CLOSED & LOCKED  
 Seat Belts . . . . . TIGHTENED  
 AEPS System . . . . . UNLOCKED  
 store pin in middle compartment  
 Engine Instruments . . . . . CHECKED  
 Flaps . . . . . FLAPS 1  
 Continues next page!

**CONTINUE: BEFORE TAKE-OFF****Autopilot**

Autopilot Switch: ON  
 Engage, for each test  
 Check if AP can be overpowered!  
 Check AP Disconnect by:  
 Any Trim input, AP-Disc. button.  
 Trim.....T/O POSITION  
 Autopilot Switch ..... OFF  
 Autopilot Panel LEDs ..... ALL OFF

**TAKE-OFF**

Landing-/Taxi-Light ..... ON  
 Brakes ..... RELEASED  
 Propeller Control .... FULL FORWARD  
 Throttle ..... FULL POWER  
 Airspeed Indication .. CHECKED: ALIVE  
**TAKE-OFF SPEEDS**  
 Nosewheel Unstick ..... 50 KIAS  
 Lift-Off.....60 KIAS  
 Initial Climb ..... 70 KIAS  
 Flaps retract ..... 75 KIAS  
     Not less than 150 ft AGL  
 Climb .....  $V_Y$  78 KIAS

**CLIMB****Climbing Speeds**

$v_y$  best ROC 78 KIAS  
 $v_x$  best AOC 63 KIAS  
 Throttle ..... FULL FORWARD  
**Prop Control**  
     Set Engine Speed  
     max. 5800 RPM for 5 min  
     max continuous 5500 RPM  
 instruments ..... T & P IN LIMITS  
 AUX Pump ..... OFF  
 Fuel Pressure.....CHECKED  
 Landing Light ..... AS REQUIRED

**CRUISE****Fuel Selector**

Switch every 25min, latest.  
 Check for balanced quantity!  
 See notes in AFM Cpt. 4.4.13.  
 Throttle.....AS REQUIRED  
 Prop Control ..... MAX. 5500 RPM  
 Fuel Flow ..... CHECKED  
 Pitot Heat ..... AS REQUIRED  
**Changes in PWR:**  
 Increase Power ↑ .. 1. RPM - 2. MAP  
 Decrease Power ↓ .. 1. MAP - 2. RPM

PWR	RPM	MAP
100 %	5500 RPM	40.5 inHg
75 %	5000 RPM	33.0 inHg
59 %	4500 RPM	25.5 inHg

**DECENT**

Throttle.....15...17 INHG  
 Prop Control.....MAX 5000 RPM  
 Airspeed.....90...100 KIAS  
 Pitot-Heat ..... AS REQUIRED  
     Do NOT reduce to IDLE in  
     cold OAT environments!

**BEFORE LANDING**

Seat Belt ..... TIGHTENED  
 Cockpit ..... PREPARED  
 Autopilot ..... DISENGAGED  
 Autopilot Switch ..... OFF  
 Throttle ..... AS REQUIRED  
 Speed ..... 83 KIAS  
 Flaps ..... FLAPS 1  
 Trim ..... AS REQUIRED  
 Landing Light ..... ON  
 AUX Pump ..... ON

**Final Approach**

Flaps ..... FLAPS 2  
 Speed ..... 65 KIAS  
 Trim ..... AS REQUIRED  
 Prop Control ..... FINE (FORWARD)  
 Throttle ..... SET

| Approx. 7 inHG,  
 | Maint. RPM > 2600

**BALKED LANDING / GO-AROUND**

Throttle ..... FULL FORWARD  
 Speed ..... 70 KIAS  
 Flaps ..... FLAPS 1  
 Trim ..... ADJUSTED  
 Climb .....  $V_Y$  78 KIAS  
 Follow T/O Procedures

**LANDING**

Throttle ..... CLOSED  
 Touch-down ..... MAIN WHEELS  
 Brakes ..... AS NEEDED  
 Flaps ..... RETRACT

**AFTER LANDING**

Flaps ..... RETRACTED  
 Engine Speed ..... SET  
 Taxi with walking speed!  
 Landing-/Taxi-Light ..... ON  
 Pitot Heat ..... OFF  
 AUX Fuel Pump ..... OFF

**SHUTDOWN**

Parking Brake ..... SET  
 Landin-/Taxi-Light ..... OFF  
 Propeller Control ..... FINE  
 Engine Speed ..... IDLE  
 Instruments ..... ALL IN LIMITS  
 ALT-C ..... OFF

Check Volts M  $\geq$  13.4 V!

**min. 2min COOL-DOWN!**

| Use timer in EFIS!

Line A ..... OFF  
 after 2 sec, LAMP: ..... CHECKED ON  
 Line B ..... OFF  
 Main Fuel Pump ..... OFF  
 Avionics ..... OFF  
 EFIS ..... OFF  
 GEN A/B ..... OFF  
 Master ..... OFF  
 AEPS Locking Pin ..... INSERTED  
 Parking Brake ..... AS REQUIRED

**PARKING AND TIE-DOWN**

LANE Switches Checked ..... ALL OFF  
 Master Switch Checked ..... OFF  
 Parking Brake ..... SET  
 | For short time parking only,  
 | for long time, use chocks!  
 Canopy ..... CLOSED & LOCKED  
**Aircraft SECURED**