

**BEFORE ENGINE START****Familiarise with HANDBOOK first!**

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'.

For usage of external 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 255 ppm, then decr.

Master Switch . . . . . ON

**MFD**

Conf. amber "BACKUP BATT" msg.

CAS message OFF

Note down Total Hours from MFD!

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.  $<10^{\circ}\text{C}$   $\geq 55\%$ | Coolant/Oil Tmp.  $>10^{\circ}\text{C}$  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 Engine fires. Then release

Start-Button and "Start Power".

Throttle . . . . . 2000 RPM

Oil Pressure . . . . . CHECKED

LANE A/B Indicator Lamps . . . . OFF

Both LANE SWITCHES remain ON!

Only the Indicator Lamps should go out.

Throttle . . . . . 2500 RPM FOR 10 SEC

To engage/sync generators.

Then back to 2000 RPM

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 Battery

Baro PFD + MFD . . . . . SET

StbyEFIS, GTN are synced. MFD isn't!

**BEFORE TAXIING**

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

**TAXIING**

Keep RPM < 2500, taxiing with walk-  
 ing speed! Check BRAKES & STEERING!  
 Ground Control . . . . . CHECKED  
 Brakes . . . . . CHECKED  
 Indications . . . . . CHECKED  
 Attitude/direction: PFD, MFD, stby EFIS

**ENGINE RUN UP**

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

**Engine Warm-Up:**

| 2500 RPM until oil temp > 50 °C.  
 Propeller Control . . . . . FINE  
 Fully forward

**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  
 Main Fuel Pump: ON

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

**CONTINUE: ENGINE RUN UP****LANE Checks**

Throttle: set to 2500 RPM  
 LANE A Switch: OFF  
 Max. vary  $\pm 250$  RPM (aft. 15 sec.)  
 Check Engine Params in Limits!  
 LANE A Switch: ON (wait 3 sec.)  
 LANE B Switch: OFF  
 Max. vary  $\pm 250$  RPM (aft. 15 sec.)  
 Check Engine Params in Limits!  
 LANE B Switch: ON (wait 3 sec.)

**Propeller Check**

Throttle: set to 4000 RPM  
 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

**Autopilot**

| Autopilot Switch: ON  
 Engage, for each test  
 Check if AP can be overpowered!  
 Check AP Disconnect by:  
 Any Trim input, AP-Disc. button.

Autopilot Switch . . . . . OFF  
 Autopilot Panel LEDs . . . . . ALL OFF  
 Trim . . . . . T/O POSITION  
 Flaps . . . . . AS REQUIRED

Flaps 0 recommended.

Flaps 1 also possible – See AFM!

**TAKE-OFF**

Landing-/Taxi-Light ..... ON  
 Brakes ..... RELEASED  
 Propeller Control .... FULL FORWARD

**When lined-up:**

Throttle ..... FULL POWER

**Engine Instruments:**

RPM: min. 5700, max. 5800  
 Manifold Pressure: within LIMITS  
 Manifold Temp: Below 65 °C

Airspeed Indication .... COMES ALIVE

**TAKE-OFF SPEEDS**

Nosewheel Unstick ..... 50 KIAS  
 Lift-Off ..... 60 KIAS  
 Initial Climb ..... 70 KIAS  
 Flaps retract ..... 75 KIAS  
 Not below 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

Outside circuit or CTR: OFF

**CRUISE****Fuel Selector**

Switch every 25 min, 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 Throttle to IDLE  
 in cold OAT environments!

**BEFORE LANDING**

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

**Final Approach**

Flaps . . . . . FLAPS 2  
 Speed . . . . . 65 KIAS  
 Trim . . . . . AS REQUIRED  
 Propeller Control . . . . . FINE  
     Fully 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

**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  
 Landing-/Taxi-Light . . . . . OFF  
 Propeller Control . . . . . FINE  
 Engine Speed . . . . . IDLE  
 Instruments . . . . . ALL IN LIMITS  
 ALT-C . . . . . OFF

Check Volts M  $\geq 13.4$  V!

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

    | Use timer in PFD or MFD!

    | Note down Total Hours from MFD!

Lane A . . . . . OFF  
 after 2 sec, LAMP: . . . . . CHECKED ON  
 Lane B . . . . . OFF

**Engine will STOP!**

Main Fuel Pump . . . . . OFF  
 GEN A/B . . . . . OFF  
 Avionics . . . . . OFF  
 EFIS . . . . . OFF  
 Strobes . . . . . OFF  
 Master . . . . . OFF  
 AEPS Locking Pin . . . . . INSERTED  
 Parking Brake . . . . . AS REQUIRED  
 All switches are OFF . . . . . CHECKED

**Parking and tie-down:**

All Lane & Master Switches . . . . . OFF  
 Parking Brake . . . . . SET

    | For short time parking only,  
     | for long time, use chocks!

Canopy . . . . . CLOSED & LOCKED  
**AIRCRAFT SECURED!**