

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

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

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!

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 walking 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 ±250 RPM (aft. 15 sec.)
 Check Engine Params in Limits!
 LANE A Switch: ON (wait 3 sec.)
 LANE B Switch: OFF
 Max. vary ±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

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

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

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

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

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

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!