



CAVOK

CAVOK Aviation Training Ltd.

Tecnam P2006T and
P2006-023 FNPT II MEP
Standard Operational Procedures

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Notes:

- These SOP's and Checklists were developed for P-2006T Tecnam and FNPT II MEP training.
- This SOP is written in accordance with the Tecnam P2006T Aircraft Flight Manual (AFM) and CAVOK Aviation Training Ltd. IFR Procedures
- Approved aircraft manuals always take precedence over this training manual.
- Operation in IFR is only approved on a 1200 m paved runway or longer.
- Normal procedures shall be completed by memory as a „flow" followed by reading the appropriate normal checklist. Normal checklists can be found on a laminated form on board.
- During emergency situations non-normal checklists shall be completed when the aircraft and flight path are under positive control and above minimum sector altitude. It is permissible to read non-normal checklists below MSA only when the aircraft is under radar vectors or PIC can maintain positive visual contact with the ground.
- When an emergency situation requires imminent action pilots shall complete non-normal checklist by memory. These checklists are: *ENGINE SECURING, ENGINE FAILURE DURING TAKEOFF RUN, ENGINE FAILURE DURING CLIMB, ENGINE FAILURE IN FLIGHT, ENGINE FIRE ON THE GROUND, ENGINE FIRE DURING TAKEOFF RUN, ENGINE FIRE IN FLIGHT, ELECTRICAL SMOKE IN CABIN ON THE GROUND, ELECTRICAL SMOKE DURING FLIGHT, UNINTENTIONAL SPIN RECOVERY, AIRCRAFT EVACUATION.*
- In the following procedure „CHECK" means the item is checked according to the Aircraft Flight Manual.
- When „As required" is indicated in the checklist corresponding item or system status should be called out.

CAVOK OPERATIONAL LIMITATIONS

Engine failure training on aircraft:

Below 2500 ft AGL simulation of engine failure approved by a power reduction only.

The allowed minimum altitude for engine failure training simulated by power reduction is 500 ft AAL.

Actual engine shutdown for training purposes allowed at or above 2500 ft AGL only. This exercise shall be carried out near a suitable aerodrome, so that a safe single engine landing can be carried out in case of an unsuccessful restart.



Normal Procedures

Preflight Inspection:

Note: Visually inspect aircraft for general condition. Fuel tank drain – before first flight of a day and after each refueling.

Action	Call
AIRPLANE CONDITION..... Reported Airworthy	
WEATHERSuitable	
NOTAM..... Check	
FUEL..... Calculated	
WEIGHT AND BALANCE Calculated	
FLIGHT PLAN..... Filed, Accepted	
CREW AND AC DOCUMENTS..... On-Board	
MAPS AND NAV EQUIPMENT..... On-Board	

Walk-around inspection procedure:

Note: Before every first take-off a day or after a crew change, a walk-around inspection should be completed.

Action	Call
<u>PILOT DOOR AND CABIN:</u>	
DOOR..... Condition Check	
EMERGENCY CHECKLIST On-Board	
LANDING GEAR KNOB Check DOWN	
SWITCHES Check OFF	
<i>MAGNETO SWITCHES..... Check OFF</i>	
CIRCUIT BREAKERS Check IN	
EMERGENCY EQUIPMENT Check as needed	
<u>LEFT MAIN LANDING GEAR:</u>	
CHOKES/BLOCKS Removed	
TIRE SLIP (Red line) Check	
PROPER TIRE INFLATION Check	
TIRE WEAR STATUS Check	
SHOCK ABSORBERS Check	
HYDRAULIC FLUID LEAKAGE..... Check	
BRAKES..... Check	
LIMIT SWITCHES..... Check	
<u>PROPELLER AND SPINNER</u>	
CONDITION OK	
BOLTS TIGHTENING..... Secure	
BLADE FIXING..... OK	
HYDRAULICS LEAKAGE FROM FLANGE..... No leak	



Action	Call
<p><u>LEFT ENGINE:</u> NACELLE Surface check INLETS AND EXHAUSTS Free RADIATORS Free of obstructions, No leak MAGNETO SWITCHES..... <i>Check OFF</i> <i>Open the Oil Tank cover, remove the oil cap, pull out the dipstick and leave it on the shoulder within the tank, rotate the propeller normal direction till you hear a murmuring sound + 5 more rotations</i> OIL LEVEL..... Check OIL CAP Closed, secured INSPECTION DOORS Closed, secured FILTER..... Drain DRAINAGE HOSES Fix LOCKS AND BOLTS..... Fix AIR VENTS Free</p> <p><u>LEFT WING:</u> LEADING EDGE Check, No damage TOP AND BOTTOM PANELS..... Check, No damage FUEL TANK Capacity check, cap secured FUEL TANK VENT Drain WINGLET Check(+ NAV and Strobe lights) STATIC DISCHARGE WICKS Check AILERON Free movement AILERON Fixing & Hinges OK FLAP Fixing & Hinges OK</p> <p><u>FUSELAGE:</u> LEFT STATIC PORT Clear ANTENNAS Check EMERGENCY GEAR PRESSURE..... 20-24 Bar BATT. DOOR + EXT. POWER Locked & Secured VERTICAL SURFACE Check HORIZONTAL SURFACE Free movement HORIZONTAL SURFACE Fixing & Hinges OK STATIC DISCHARGE WICKS Check FUSELAGE SKIN Check, no damage RIGHT STATIC PORT Clear</p> <p><u>RIGHT WING:</u> FLAPS..... Fixing & Hinges OK AILERON Free movement AILERON Fixing & Hinges OK STATIC DISCHARGE WICKS Check WINGLET Check(+ NAV and Strobe lights) LEADING EDGE Check, No damage TOP AND BOTTOM PANELS..... Check, No damage FUEL TANK Capacity check, cap secured FUEL TANK VENT Drain STALL WARNING SYSTEM..... Lift, Condition Check</p>	



Action	Call
<p><u>PROPELLER AND SPINNER:</u> CONDITION OK BOLTS TIGHTENING..... Secure BLADE FIXING..... OK HYDRAULICS LEAKAGE FROM FLANGE..... No leak</p> <p><u>RIGHT ENGINE:</u> NACELLE Surface check INLETS AND EXHAUSTS Free RADIATORS Free of obstructions, No leak MAGNETO SWITCHES..... <i>Check OFF</i> <i>Open the Oil Tank cover, remove the oil cap, pull out the dipstick and leave it on the shoulder within the tank, rotate the propeller normal direction till you hear a murmuring sound + 5 more rotations</i> OIL LEVEL..... Check OIL CAP Closed, secured INSPECTION DOORS Closed, secured FILTER..... Drain DRAINAGE HOSES Fix LOCKS AND BOLTS..... Fix AIR VENTS Free</p> <p><u>PASSENGER DOOR AND CABIN:</u> DOOR Condition check EMERGENCY EQUIP..... Check as needed SEAT BELTS..... Check BAGGAGE COMPARTMENT..... Check location and stowage EMERGENCY EXIT Lock and secure VENTILATION PORTS..... Check setting</p> <p><u>RIGHT MAIN LANDING GEAR:</u> CHOKES/BLOCKS Removed TIRE SLIP (Red line) Check PROPER TIRE INFLATION Check TIRE WEAR STATUS Check SHOCK ABSORBERS Check HYDRAULIC FLUID LEAKAGE..... Check BRAKES..... Check LIMIT SWITCHES..... Check</p> <p><u>FUSELAGE:</u> BOTTOM ANTENNAS..... Check RIGHT CABIN RAM-AIR INLET..... Clear RIGHT PITOT TUBE Clear COWLING Check integrity LEFT PITOT TUBE Clear LEFT CABIN RAM-AIR INLET. Clear WINDSHIELD Clear</p>	



Action	Call
<p><u>NOSE LANDING GEAR:</u></p> <p>TOWING BAR..... Removed</p> <p>SERVICE DOOR Close, secure</p> <p>TIRE SLIP (Red line) Check</p> <p>PROPER TIRE INFLATION Check</p> <p>TIRE WEAR STATUS Check</p> <p>SHOCK ABSORBERS Check</p> <p>HYDRAULIC FLUID LEAKAGE..... Check</p> <p>MECHANISM INTEGRITY Check</p> <p>DOOR AND THEIR ATTACHMENTS Check</p> <p>LIMIT SWITCHES..... Check</p>	<p>“Pre-flight inspection completed”</p>

After entering cabin:

Action	Call
<p>MAPS/EQUIPMENT On-board</p> <p>FLIGHT + GARMIN MANUAL..... Within reach</p> <p>SEAT+SEAT BELTS Set + Secure</p> <p>DOOR..... Closed</p> <p><u>Passenger briefing</u></p> <p>CAUTION</p> <p><i>If even only one engine works, it is PROHIBITED to open doors, extraordinarily in an emergency, see AFM!</i></p> <p>RH FUEL SELECTOR Check RIGHT</p> <p>LH FUEL SELECTOR Check LEFT</p> <p>LANDING GEAR KNOB Check DOWN</p> <p>THROTTLE LEVER Free, set friction</p> <p>CONTROLS Free movement</p> <p>ALTERNATE STATIC PORT Check closed</p> <p>CABIN HEAT OFF</p>	<p>“In case of evacuation, I will announce EVACUATE NOW, USE LEFT OR RIGHT DOORS. Passengers will be required to open the assigned door and leave the aircraft as quickly as possible leaving all belongings on board. In case of pilot incapacitation, passengers may start evacuation without the pilot’s call”</p>



Engine start procedure:

Action	Call
<u>In case of at a Controlled Airport:</u>	
MASTER SWITCH On	
START-UP CLEARANCE.....Obtain	
MASTER SWITCHOff	
<u>ENGINE STARTING:</u>	
PARKING BRAKESet	
CIRCUIT BREAKERS Check IN	
AVIONICS SWITCHESCheck OFF	
ELECTRIC SWITCHES Check OFF	
PROP LEVERS Full forward	
THROTTLESIdle	
CARBURETTOR HEATOff	"Before startup checklist"
<i>Complete before startup checklist</i>	"Before startup checklist complete"
MASTER SWITCH On	
STROBE LIGHT On	
<u>For each engine separately:</u>	
CHOKE.....As needed	"Propeller Clear"
FUEL PUMP..... On	
PROPELLER AREA..... Check free	
IGNITION SWITCHES.....Starting engine: ON	
START BUTTON.....Push (max. 5 sec.)	"Oil pressure checked"
THROTTLE 1200 RPM	
OIL PRESSURE Check rising, min. 0,15bar in 10s	
<u>Note:</u>	
<i>If the outside temperature is low, the oil pressure may after the engine starts increase up to 7 bars.</i>	
CHOKE..... Gradually OFF (keep RPM)	
FIELD..... On	
CROSS BUS..... On	
AMPERMETER Charge	
VOLTMETER..... Check	
FUEL PUMP.....Off	
AVIONICS ON	
LIGHTSAs needed	



Before Taxi procedure:

Action	Call
FIRE DETECTOR..... Test	"Altimeters set and crosschecked"
ALTIMETERS..... Set QNH	
DEPARTURE CLEARANCE Record NAVAIDS, FREQUENCIES Set, tune, identify DEPARTURE PROCEDURE Review	"Departure review complete"
FLIGHT INSTRUMENTS..... Check LANDING GEAR LIGHTS Test RUDDER TRIM..... Check + Set ELEVATOR TRIM Check + Set FLAPS Full cycle <i>Verify flap operation</i>	"Before taxi checklist" "Before taxi checklist complete"
FUEL QUANTITY..... Check	
CIRCUIT BREAKERS Check IN	
RH FUEL SELECTOR Set LEFT	
LH FUEL SELECTOR Set RIGHT	
TAXI LIGHTS On	
TAXI AREA..... Free PARKING BRAKE Release	

Taxi procedure:

Action	Call
BRAKES Check operation	
MAG. COMPASS Free moving, full of liquid	
TURN INDICATOR Indicates turning	
GYRO..... Indicates turning	
AIRSPED INDICATOR Indicates 0	"Departure review complete"
VERTICAL SPEED INDICATOR Indicates 0	
If ATC provides departure clearance during taxi:	
AIRCRAFT Stop	
PARKING BRAKE Set	
DEPARTURE CLEARANCE Record NAVAIDS, FREQUENCIES Set, tune, identify	
DEPARTURE PROCEDURE Review	



Holding point:

Action	Call
DOORS Locked, Secured SEAT BELTS + SEATS..... Locked, Secured PARKING BRAKE Engage THROTTLES1000-1200 RPM RH FUEL SELECTORSet RIGHT LH FUEL SELECTOR Set LEFT ENGINE INSTRUMENTS Indicating required PROP LEVERS FULL FWD	
<p><u>ENGINE RUN-UP (BOTH ENGINES, SAME TIME):</u> THROTTLES 1650 RPM ENGINE INSTRUMENTS Indicating required PROP LEVERS Max. to min. travel, 3x* <i>* max to min does NOT include feather range!</i> <i>MAP increasing, RPM Decreasing, oil pressure decreasing</i> <i>Note: For FSTD for governor check set throttle to 15 inHg MAP, then after governor check set prop levers full FWD and throttle to 1650 RPM</i></p> MAGNETO CHECK..... Check <i>Decrease max. 130RPM Difference max 50 RPM</i> CARBURETTOR HEATCheck <i>Verify decrease in RPM</i> THROTTLESIdle <i>Verify engine instruments indications</i> THROTTLES1000-1200 RPM	
<p><u>PREPARE FOR DEPARTURE:</u> FLIGHT INSTRUMENTS.....Check, set for T/O TRANSPONDERSet A. PILOT MASTER.....As needed TRIM Check + Set FUEL PUMPSBoth ON FLAPST/O FLIGHT CONTROLS.....CHECK free movement DEPARTURE EMERGENCY REVIEW Perform</p>	<p><i>"If I decide to abort the take-off I will call REJECT. If I reject before rotation, I will close the power levers immediately and apply maximum braking. If I reject after rotation, I will check the landing gear down 3 greens, set full flaps and land straight ahead, Stop the aircraft, and set the parking brake. I will announce evacuation if needed. After the decision point, I will call CONTINUE.</i></p>



Complete before takeoff checklist

WHEN LINEUP CLEARANCE RECEIVED:

- T/O and APP area Clear
- TAXI LIGHT Off
- LANDING LIGHT On
- TRANSPONDER ALT
- RWY HEADING Check

WHEN TAKEOFF CLEARANCE RECEIVED:

- TIME Check

Set full power, maintain RWY heading, and accelerate to Vyse (80kts). Retract the gear with a positive rate of climb. Identify the malfunction and start memory items when positive climb and aircraft control is achieved.

In case of VMC:

I will join the visual pattern of RWY XX and land.

In case of IMC:

I will follow the IFR escape route or ATC instructions for landing"

"Before Takeoff Checklist"

"Before Takeoff Checklist complete"



Take-off procedure:

Action	Call
MANUAL BRAKESet THROTTLES 2000 RPM	
ENGINE INSTRUMENTSCheck indications stable	
BRAKES Release THROTTLES FULL FWD	"Take-off power set"
<i>Note: Right hand remains on power levers until decision point</i>	
AIRSPEED INDICATOR First movement	"Speed alive"
AIRSPEED INDICATOR 70 KTS	"Rotate"
<i>Rotate the aircraft and maintain V_{XSE} (79 kts). When passing decision point and re-land not possible:</i>	"Re-land not possible, Gear up"
LANDING GEAR UP	
<i>Note: Select gear up with positive rate of climb and verify retraction</i>	"Gear up, no lights"
<i>On normal takeoff, gradually accelerate to V_Y (83 KTS SIM)</i>	
<u>If clear of obstacles, at 500' AGL (200' AGL if VFR):</u>	
<u>After take-off:</u>	
FLAPS 0°	
THROTTLES 27 inHg	
PROPELLERS 2250 RPM	
SPEED 85 KTS	"After take-off checklist"
LANDING LIGHT OFF	"After take-off checklist completed"
FUEL PUMPS OFF	
<i>At 1000' AGL Complete after takeoff checklist</i>	
<i>Accelerate to enroute climb speed 100 KTS if applicable.</i>	



<p><u>Cruise climb:</u> SPEED.....90-100 KTS THROTTLESMaintain 27inHg then FULL PROPELLERS..... 2250 RPM</p> <p><u>At Transition Altitude:</u> ALTIMETERS..... Set STD</p>	<p>“STD Set, crosschecked”</p>
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Descent Procedure (IFR)

Action	Call
<p><u>Approach preparation:</u> <i>Note:</i> <i>Get WX and landing condition (record ATIS if available) and plan the approach before top of descent. Calculate landing performance. Set, tune, identify NAVAIDS during the preparation. It is permissible to continue the preparation during descent, but it must be completed before starting the approach at latest.</i></p> <p><u>Approach review:</u> <i>Review STAR, Instrument approach, Missed approach and after landing procedure</i></p> <p>APPROACH MINIMUMS Check (Set) G/A ALTITUDE..... Check (Set) MIN. SAFE ALTITUDE Check</p> <p><u>Top of descent:</u> CARB HEATS As required THROTTLES Below gear horn limit LANDING GEAR WARNING Verify THROTTLES 13-15 inHg PROPELLERS..... 2050 RPM</p> <p><u>At Transition Level:</u> ALTIMETERS..... Set QNH</p> <p><i>Monitor speed and engine parameters during descent.</i></p> <p>FUEL SELECTORS..... Check SEATS..... Upright Pos.</p>	<p>“Approach review complete”</p> <p>“QNH xxxx, altimeters set and crosschecked”</p>



SEATBELTS Fastened

Approach Procedure (IFR)

Action	Call
<p><u>Passing Initial Approach Fix/on intercept HDG/on downwind leg:</u></p> <p>Complete Approach Checklist</p>	<p>“Approach checklist” “Approach checklist completed”</p>
<p><u>2 NM before FAF or when GS alive:</u> <u>(latest: 1 dot below GS or 1 NM before FAF)</u></p> <p>BELOW 118 KTS FLAPST/O</p> <p>BELOW 93 KTS LANDING GEAR..... Down FUEL PUMPS..... On LANDING LIGHTS On</p>	<p>“Speed checked, flaps” “Speed checked, gear down”</p>
<p><u>Intercepting GS or descent profile or at FAF:</u></p> <p>THROTTLESdescent power (~15inHg) AIRSPEED85-90 KTS Start descending</p>	<p>“Passing FAF/On Glideslope, xxxx feet checked”</p>
<p><u>At 4NM final, OM or equivalent position:</u></p> <p>CARB. HEATSOff PROPELLERS..... Full FWD</p> <p style="text-align: center;"><u>Note:</u> In IFR, land with flaps T/O</p>	<p>“Passing OM, xxxx feet checked”</p>
<p><u>Passing 1000’ AAL (Circling 300’ AAL)</u> Complete Landing checklist</p>	<p>“Landing checklist” “Landing checklist completed”</p>
<p><u>Approaching minimum by 100 feet:</u> Last check on gear</p>	<p>“Approaching minimum, Gear down, 3 greens”</p>
<p><u>At minimum:</u> Decide</p>	<p>“Landing/Go-around”</p>



Missed Approach Procedure

Action	Call
<p><u>In case of go-around:</u></p> <p>THROTTLES Full FWD PROPELLERS..... Check full FWD CARB HEATS..... Check OFF ROTATE.....approx 8°-10°, by 3°/sec FLAPS 1 notch up CHECK POSITIVE RATE LANDING GEAR..... Up</p> <p style="text-align: center;"><u>Note:</u></p> <p style="text-align: center;"><i>Check speed is above V_{MC} before flap retraction. Retract the gear with positive rate of climb.</i></p> <p><i>Gradually accelerate to V_Y (blue line) speed, maintain RWY heading</i></p> <p><u>If clear of obstacles at 500' AGL:</u></p> <p><u>After take-off:</u></p> <p>FLAPS UP THROTTLES 27 inHg PROPELLERS..... 2250 RPM SPEED..... 85 KTS LANDING LIGHT OFF FUEL PUMPS..... OFF <i>Tune radios for go-around and contact ATC.</i></p> <p><i>At 1000' AGL After take-off checklist</i></p> <p><i>Accelerate to enroute climb speed 100 KTS if applicable.</i></p>	<p>“Go-around flaps”</p> <p>“Positive rate, gear up”</p> <p>“After take-off checklist” “After take-off checklist complete”</p>

Landing procedure:

Action	Call
<p><i>Reduce the speed in order to fly over the threshold with 80 KTS.</i></p> <p><i>Land with two hands on the controls. Use gradual manual braking. Delay the flap retraction on the ground until vacating the RWY, unless strong crosswind or gusty weather conditions exist, or maximum braking is required.</i></p>	<p>“Landing”</p>



Taxi in procedure:

Action	Call
<u>After vacating the runway:</u>	
LANDING LIGHTS OFF	
TAXI LIGHTS ON	
FUEL PUMPS OFF	
FLAPS 0°	
TRANSPONDER OFF	

Shut-down procedure:

Action	Call
<u>At stand:</u>	
PARKING BRAKESet	
AVIONICS OFF	
MAGNETOS OFF	
NAV&STROBE LIGHTS OFF	
MASTER SWITCH OFF	
<i>Shutdown checklist</i>	<p>"Shutdown checklist" "Shutdown checklist complete"</p>



Descent and Arrival Procedure (VFR)

Action	Call
<p><i>Before entering traffic pattern, reduce speed below 120 KTS.</i></p>	
<p><u>On Downwind leg</u> <i>Monitor traffic, wind and downwind HDG and ALT</i></p>	
<p><u>Abeam Threshold:</u></p>	
<p>CARB. HEATS..... On</p>	
<p>THROTTLES Below gear horn limit</p>	
<p>LANDING GEAR WARNING Verify</p>	
<p>THROTTLES 13-15 inHg</p>	
<p><i>BELOW 118 KTS</i></p>	
<p>FLAPS T/O</p>	<p>“Speed checked Flaps”</p>
<p><i>BELOW 93 KTS</i></p>	
<p>LANDING GEAR Down</p>	<p>“Speed checked, gear down”</p>
<p><i>Adjust power to maintain 85kts</i></p>	
<p>LANDING LIGHT On</p>	
<p>FUEL PUMPS On</p>	
<p><u>After completing base turn:</u></p>	
<p><i>Start descending, maintain 85-90kts with flaps T/O</i></p>	
<p><u>After completing final turn:</u></p>	
<p>FLAPS LANDING (Grass runway)</p>	
<p>AIRSPEED 85 KTS</p>	
<p><u>Final:</u></p>	
<p>CARB. HEATS..... OFF</p>	
<p>PROPELLERS..... Full FWD</p>	
<p>AIRSPEED 85 KTS</p>	<p>“Landing Checklist”</p>
<p><i>Complete Landing Checklist</i></p>	<p>“Landing Checklist completed”</p>
<p><u>Short Final</u></p>	
<p><i>LAST CHECK ON GEARS..... DOWN, 3 GREENS</i></p>	<p>“Gear down, 3 greens”</p>



Landing procedure:

Action	Call
<p><i>Reduce the speed in order to fly over the threshold with 75 KTS.</i></p> <p><i>Land with two hands on the controls. Use gradual manual braking. Delay the flap retraction on the ground until vacating the RWY, unless strong crosswind or gusty weather conditions exist, or maximum braking is required.</i></p>	<p>"Landing"</p>

Taxi in procedure:

Action	Call
<p><u>After vacating the runway:</u></p> <p>LANDING LIGHTS OFF</p> <p>TAXI LIGHTS ON</p> <p>FUEL PUMPS OFF</p> <p>FLAPS UP</p> <p>TRANSPONDER OFF</p>	

Shut-down procedure:

Action	Call
<p><u>At stand:</u></p> <p>PARKING BRAKESet</p> <p>AVIONICS OFF</p> <p>MAGNETOS..... OFF</p> <p>NAV&STROBE LIGHTS OFF</p> <p>MASTER SWITCH OFF</p> <p><i>Shutdown checklist</i></p>	<p>"Shutdown checklist"</p> <p>"Shutdown checklist complete"</p>