FNPT II MEP IFR STANDARD OPERATIONAL PROCEDURES

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Notes:

-**These SOP's and Checklists were developed for FNPT II training only. Approved aircraft manuals always take precedence over this training manual.**

-Take-off only with flaps 0

-Operation in IFR only approved on 1500 m paved runway or longer.

-Normal procedures shall be comleted by memory as a „flow" followed by reading the appropriate normal checklist. Normal checklists can be found in laminated form on board. Additionally, After takeoff, Approach and Landing normal checklists are placed on the instrument panel as well.

-During emergency situations non-normal checklists shall be completed when aircraft and flight path is 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 emergency situation requires imminent action pilot shall complete non-normal checklist by memory. These checklists are: Engine failure (Feathering procedure), Engine fire, Propeller overspeed. Memory items regarding one engine operation finish when affected engine's micture is idle cutoff, aircraft is trimmed and 5 degrees bank toward operating engine is established.

-In the following procedures „Check" means item is checked according to Pilot's Operating Handbook

-When „As required" is indicated in the checklist corresponding item or system status should be called out.

NORMAL PROCEDURES

Preflight procedures:

Action		Call
-Weather	Check	
-Notams	Check	
-Aircraft status	Check	
-Crew documents	Check	
-Flight plan	Create and file	
-Minimum Block fuel	Calculate	
-W and B	Check	
-ASDR, TODR, Decision point	Calculate	

Walk-around inspection procedure:

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

Action		Call
In Cabin:		
-Landing gear position	Down	
-Avionics	Off	
-Master switch	On	
-Landing gear lights	Check	
-Fuel Quantity	Check	
-Cowl flaps	Open	
After successfull completion of the items above:		
-Master switch	Off	
-Ignition switches	Off	
-Mixture controls	Idle cut-off	
-Trim	Neutral	
-Flaps	Check	
-Flight controls	Unlocked, Check	
-Empty seats	Secure	
-Bags	Secure	
-Pitot and static system	Drain	
-Aircraft documents	Check	

Action	Call
Outside Airplane:	
-Right wing, aileron and flap Check	
-Right main gear Check	
-Right wing tip Check	
-Right leading edge Check	
-Right fuel cup Check and secure	
-Right engine nacelle Check	
-Right propeller Check	
-Cowl flap Open and secure	
-Fuel drains Drain	
-Nose section Check	
-Nose gear Check	
-Forward baggage door Secure and lock	
-Windshield Clean and secure	
-Left propeller Check	
-Left engine nacelle Check	
-Left fuel cup Check	
-Left leading edge Check	
-Left wing tip Check	
-Left main gear Check	
-Left wing, aileron and flap Check	
-Pitot tube Check	
-Stall warning vanes Check	
-Rear door Close	
-Left static vent Check	
-Dorsal fin air scoop Check	
-Empennage Check	
-Stabilator Check	
-Right static vent Check	
-Antennas Check	
-Nav and landing lights Check	
	„Walk around inspection complete"

Engine start procedure:

Action	Call
Before engine start:	
-Seats .... Adjust	
-Seat belts .... Fasten	
-Aircraft door .... Close and secure	
-Parking brake .... Set	
-Cicuit breakers .... Check	
-Avionics .... Off	
-Cowl flaps .... Open	
-Alternate air .... Off	
-Alternators (Generators) .... On	
-Passenger emergency briefing Complete	
	*„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 quick as possible leaving all belongings on board.*
	In case of pilot incapacitation passengers may start evacuation without pilot's call"
	„Before engine start checklist"
-Before engine start checklist Complete	
In case of at Controlled Airport:	
-Master switch .... On	
-COM Radios .... On	
-Start-up clearance .... Obtain	
-COM Radios .... Off	
-Master switch .... Off	

Starting engines:	
-Mixture controls Idle cut-off	
-Throttle Open ½ inch	
-Propellers Full forward	
-Master switch On	
-Ignition switch On	
-Electric fuel pums On	
-Mixture control Move to rich position until a fuel flow is indicate and stabilized then move it idle cut-off.	
-Propeller area clearance Verify	***„Prop clear"***
-Starter Engage	
-Mixture control Advance as engine starts	
-Oil pressure Check	
Note: Oil pressure should come within 30 sec may be longer in very cold weather	
Repeat steps with the other engine.	
After both engines are running on idle:	
-Fuel pumps Off	
-Fuel pressure Check	
-Vacuum gauge Check	
-Attitude indicator Set	
-Avionics On	
-Alternators (Generators) On, Output check	
-Clock Set	
-Anticollision On	
-Navlights (at night only) On	***„After engine start checklist"***
-After engine start checklist Complete	

Taxi procedure:

Action	Call
Before start to taxi: -ATIS Record -Altimeters (Both) Set *Note: Confirm planned take-off performance and decision point match present weather and runway status.* -Emergency departure briefing Complete	*„Altimeters set and crosschecked"* *If I decide to abort the take-off I will call REJECT. If I reject before rotation I will close power levers immediately and apply maximum breaking. If I reject after rotation I will check 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 decision point I will call CONTINUE. Set full power, maintain rw heading and adjust speed to* ==Vxse.== *Check speed and verify flaps up. Retract the gear with positive rate of climb. Identify the malfunction and start memory items when positive climb and aircraft control achieved. In case of VMC I will join visual pattern of rw XX and land/ in IMC I will follow IFR escape route or ATC instructions for landing"* *„Emergency briefing complete"*
-ATC departure clearance Obtain	

If ATC provides departure clearance during taxi: -Aircraft Stop -Parking brake Set -Departure briefing Complete -NAVAIDS Set, tune , identify **After taxi clearance received:** -Taxi light On *Note: During taxi the pilot should check the following:* *-Operation of turn indicator, directional gyro and coordination ball instruments.* *-Heater and defroster* *-Fuel selector* *-Brakes*	*„Departure briefing complete"*

Pretake-off procedure:

Action	Call
Run-Up check: *Note: Verify local regulations and the area behind the aircraft and complete RUN-UP check before every first take-off a day or after crewchange.* -Parking brake Set -Engine parameters Check -Micture Forward -Propellers Forward -Throttle Set 1500 RPM -Feather control Check -Throttle Set 2000 RPM	

-Governor control　　　　　　Check	
-Propellers　　　　　　Forward	
-Alternate air　　　　　　Check	
-Magnetos　　　　　　Check	
-Alternator output　　　　　　Check	
Approaching holding point:	
-Parking brake　　　　　　Set	
-Fuel selectors　　　　　　On	
-Electric fuel pums　　　　　　On	
-Engine parameters　　　　　　Check	
-Propellers　　　　Full forward	
-Mixture contols　　　　Full forward	
-Quadrant friction　　　　　　Adjust	
-Alternate air　　　　　　Off	
-Cowl flaps　　　　　　Set	
-Wing flaps　　　　Set for take-off	
Note: Set Flaps 0 for IFR Departures	
-Trim　　　　Set for take-off	
Note: Set trim 6 unit UP in the simulator	
-Flight controls　　　　　　Check	
	„Pretake-off checklist"
-Pretake-off checklist　　　　Complete	
Line-up clearance received:	
-Clearance at left and right　　　Check	
-Transponder　.　　　Set alt mode	
-Pitot heat　　　　　　On	
	„Clear left and right lining up rw XX"
Take-off clearance received:	
- Landing lights　　　　　　On	

Take-off procedure:

Action	Call

When lined up with the runway:
-Manual brake   Set
-Take-off power   Set
   39,5/2750 (SIM), Full forward (A/C)
 	
Release the brakes and start rolling.
 	
   Note:Right hand remains on power levers until decision point. Should aircraft handling become difficult it is allowed to use both hands during rotation until established in trimmed climb.
 	
At speed indicator first movement:
 	
At 75 KTS (SIM), 85MPH (A/C)
 	
Rotate the aircraft and accelerate to Vyse. When passing decision point and reland not possible:
 	
-Landing gear   UP
 	
   Note: Select gear up with positive rate of climb and verify retraction.
 	
At 400'AGL accelerate to
105 KTS (SIM), 120 MPH (A/C) then:
-Flaps   1 notch UP(if not up
-Max. continous power   Set
        38/2500 (SIM), 24/2400 (A/C)
-Electric fuel pumps   Off
-Landing- and taxilights   Off
 	
-**At 1000' AGL**
 	
-After take-off checklist   Complete
	„Take-off power set"
	
	„Speed alive"
	
	„Rotate"
	
	„Reland not possible"
	
	„Gear up, no lights"
	
	„After take-off checklist"

Cruise procedure:

Action	Call
-Power As required -COM 2 Monitor *Note: Normal cruise power is 30/2100 (SIM),21/2100 (A/C). Adjust manifold pressure according to cost index and altitude.* *It is mandatory to listen out on 121,5 Mhz on second box during cruise.*	

Descent procedure:

Action	Call
Note: Record ATIS and plan the approach before top of descent. Calculate landing performance. Set, tune , identify NAVAIDS during the briefing. It is permissible to continue the brief during descent but it has to be completed before starting an approach at latest. -Approach briefing Complete -NAVAIDS Set, Tune, Identify -Mixture Rich -Seats and belts Set -Descent power Set 15/2100 (SIM) and (A/C)	

Approach procedure:

Action	Call
When passing intermediate fix or on intercept heading or on downwind leg: -Fuel tanks On -Cowl flaps As required Reduce the speed to 100 KTS (SIM), 115 MPH (A/C) -Flaps 10 Approach checklist Complete 1 NM before FAF or 1 dot below GS : -Gear Down -Electric fuel pums On Approaching FAF or GS: -Propellers Forward -Flaps 25 At FAF or GS intercept verify distance and altitude :	„Approach checklist"
Reduce speed to Vyse on final. *Note: In VMC set full flaps according to landing performance when landing is assured at pilot's discretion.* *In IFR land with flaps 25.* Passing 1000' AGL (circling 300' AGL)	„FAF/Glideslope xxxx feet checked"
-Landing checklist Complete Landing clearance received: -Landing lights On At Mimima:	„Landing Checklist" „Landing /or Go-around"

Missed approach procedure:

Action	Call
When not visual at minima: -Power Set Max. Manifold 39,5(SIM), Full forward(A/C) -Propellers Check Full Forward -Mixture Check Rich -Flaps 1 notch Up -Pitch Go-around -Gear Up *Note: Check speed is above Vmc before flap retraction. Retract the gear with positive rate of climb.* At 400'AGL accelerate to 105 KIAS (SIM), 120 MPH (A/C) then: -Flaps 1 notch UP(if not UP) -Max. continous power Set 38/2500 (SIM), 24/2400 (A/C) - Tune radios for go-around, contact ATC. -Electric fuel pumps Off -Landing- and taxilights Off -At 1000' AGL -After take-off checklist Complete	**„Go-around"** **„After takeoff checklist"**

Landing procedure:

Action	Call
When visual at minima: Reduce the speed in order to overfly the treshold with 80 KIAS(SIM) 90 MPH(A/C). Land with two hands on the controls. Use gradual manual braking. Delay the flap retraction on the ground until vacating the runway unless strong crosswind or gusty air conditions exist or maximum braking required.	„Landing"

Taxi in procedure:

Action	Call
After vacating the runway: -Landing lights Off -Taxi light On -Flaps UP -Cowl flaps Fully open -Electric fuel pumps Off	

Shut down procedure:

Action	Call
-Avionics Off -Mixture controls Idle-cutoff -Magnetos Off -Master switch Off -Parking brake Set -Shutdown checklist Complete	*„Shutdown checklist"*