

**PA 44-180 SEMINOLE – NORMAL PROCEDURES**  
**BEFORE ENGINE START THROUGH ENGINE SHUTDOWN – CHECKLIST WILL BE VERBALIZED**

**BEFORE ENGINE START**

HOBBS ..... CHECK TIME REMAINING  
HOBBS TIME ..... RECORD  
PARKING BRAKE ..... SET  
PASSENGER BRIEF ..... COMPLETE  
SEATBELTS ..... FASTEN AND SECURE  
GEAR SELECTOR ..... DOWN  
THROTTLES ..... IDLE  
PROPELLER CONTROLS ..... FULL FWD  
MIXTURE ..... IDLE  
CARBURETOR CONTROLS ..... OFF  
COWL FLAPS ..... OPEN  
FUEL SELECTORS ..... ON  
RADIO MASTER ..... OFF  
ELECTRICAL SWITCHES ..... OFF  
HEATER SWITCH ..... OFF  
CIRCUIT BREAKERS ..... IN

**COLD START**

ALTERNATORS ..... ON  
BATTERY MASTER ..... ON  
ANTI-COLLISION LIGHTS ..... ON  
GEAR LIGHTS ..... 3 GREEN  
THROTTLES ..... OPEN ¼ INCH  
PROPELLER CONTROLS ..... FULL FWD  
MIXTURES ..... FULL RICH  
\*ELECTRIC FUEL PUMP ..... ON  
\*PRIMER ..... AS REQUIRED  
\*PROPELLER AREA ..... CLEAR  
\*MAGNETO SWITCH ..... ON  
\*STARTER ..... ENGAGE  
\*THROTTLE ..... 1000 RPM  
\*OIL PRESSURE ..... CHECK  
FUEL PRESSURE ..... CHECK

**REPEAT START (\*) FOR SECOND ENGINE**

ALTERNATORS ..... CHECK AMPS

**HOT START**

ALTERNATORS ..... ON  
BATTERY MASTER ..... ON  
ANTI-COLLISION LIGHTS ..... ON  
GEAR LIGHTS ..... 3 GREEN  
THROTTLES ..... OPEN ½ INCH  
PROPELLER CONTROLS ..... FULL FWD  
MIXTURES ..... FULL RICH  
\*ELECTRIC FUEL ..... PUMP ON  
\*PROPELLER AREA ..... CLEAR  
\*MAGNETO SWITCH ..... ON  
\*STARTER ..... ENGAGE  
\*THROTTLE ..... 1000 RPM  
\*OIL PRESSURE ..... CHECK  
FUEL PRESSURE ..... CHECK

**REPEAT START (\*) FOR SECOND ENGINE**

ALTERNATORS ..... CHECK AMPS

**COLD WEATHER START (BELOW 10°F)**

SEE POH FOR START PROCEDURE

**FLOODED START**

ALTERNATORS ..... ON  
BATTERY MASTER ..... ON  
ANTI-COLLISION LIGHTS ..... ON  
GEAR LIGHTS ..... 3 GREEN  
THROTTLES ..... OPEN FULL  
PROPELLER CONTROLS ..... FULL FWD  
MIXTURE ..... IDLE  
\*ELECTRIC FUEL PUMP ..... OFF  
\* PROPELLER AREA ..... CLEAR

\*MAGNETO SWITCH ..... ON  
\*STARTER ..... ENGAGE  
\*MIXTURE ..... ADVANCE  
\*THROTTLE ..... 1000 RPM  
\*OIL PRESSURE ..... CHECK  
\*FUEL PRESSURE ..... CHECK

**REPEAT START (\*) FOR SECOND ENGINE**

ALTERNATORS ..... CHECK AMPS

**ENGINE START – EXTERNAL POWER SOURCE**

SEE POH FOR START PROCEDURE

**PRE-TAXI**

AVIONICS ..... ON, TEST  
AWOS/ATIS ..... CHECK  
ALTIMETER/DG ..... SET  
TRANSPONDER ..... 1200 & STBY  
FUEL SELECTORS ..... CROSSFEED  
BRAKES ..... TEST

**ENGINE RUN-UP**

PARKING BRAKE ..... SET  
FUEL SELECTORS ..... ON  
FLIGHT CONTROLS ..... FREE & CORRECT  
AUTO PILOT ..... ON & TEST  
ELECTRIC TRIM ..... TEST & SET  
PROPELLER CONTROLS ..... FULL FWD  
MIXTURE ..... RICH  
THROTTLES ..... 1500 RPM  
PROPELLERS ..... FEATHER CHECK

\*MAX DROP 500 RPM

THROTTLES ..... 2000 RPM  
PROPELLERS ..... EXERCISE

\*MAX DROP 300 RPM

GOVERNOR CHECK ..... CHECK  
MAGNETOS ..... CHECK

\*MAX DROP 175 RPM/MAX DIFF 50 RPM

CARBURETOR HEAT ..... CHECK  
VACUUM ..... CHECK

\*4.8 – 5.2 IN. Hg

ENGINE INSTRUMENTS ..... CHECK  
ALTERNATORS ..... CHECK AMPS L & R  
PITOT HEAT ..... CHECK  
FUEL PUMPS ..... OFF  
FUEL PRESSURE ..... CHECK  
ANNUNCIATOR PANEL ..... CHECK OFF  
THROTTLES (500-600 RPM) ..... IDLE CHECK  
THROTTLES ..... 1000 RPM  
FLIGHT INSTRUMENTS ..... CHECK & SET  
CABIN DOOR ..... LATCHED

**BEFORE TAKE-OFF**

TYPE OF TAKEOFF ..... DETERMINE  
FLAPS ..... RETRACTED  
AIRSPEEDS: ROTATION, CLIMB OUT,  
AND BEST GLIDE ..... CALCULATE (GUST SPREAD)  
PRE-TAKEOFF BRIEFING ..... COMPLETE  
FUEL PUMPS ..... ON  
ANTI-COLLISION LIGHTS ..... ON  
LANDIN/REC LIGHTS ..... ON  
TRANSPONDER ..... 1200  
MIXTURES ..... AS REQUIRED  
AUTO PILOT ..... OFF  
COWL FLAPS ..... OPEN  
CABIN DOOR ..... LATCHED  
TAKE-OFF TIME ..... RECORD

**\*\* RESET HEADING INDICATOR AFTER TAXIING ONTO RUNWAY\*\***

V SPEEDS Vr – 75 Vx – 82 Vy – 88 Vyse – 88

**CLIMB (BETWEEN 500 AND 1500 AGL)**

POWER/PROP ..... SET  
GEAR ..... UP  
TRIM ..... SET  
COWL FLAPS ..... AS REQUIRED  
FUEL PUMPS ..... OFF  
FUEL PRESSURE ..... CHECK  
LANDING/REC LIGHTS ..... OFF  
HEADING INDICATOR ..... CHECK

**CRUISE (AT TOP OF CLIMB FOR X/C AND LCL FLIGHTS)**

POWER/PROP ..... SET  
TRIM ..... SET  
COWL FLAPS ..... CLOSED  
HEADING INDICATOR ..... CHECK

**IN-RANGE (X/C – BEFORE TOP OF DESCENT; LCL – BEFORE TURNING TO OUN)**

AWOS/ATIS ..... CHECK  
ALTIMETER ..... SET  
COWL FLAPS ..... AS REQUIRED  
MIXTURE ..... RICH  
FUEL PUMPS ..... ON  
FUEL PRESSURE ..... CHECK  
FUEL SELECTORS ..... ON  
LANDING/REC LIGHTS ..... ON  
SEATBELTS ..... FASTEN AND SECURE

**BEFORE LANDING (BEFORE PATTERN ENTRY AND BEFORE MIDFIELD DOWNWIND EACH SUBSEQUENT APPROACH)**

APPROACH SPEED ON FINAL ..... CALCULATE  
FLAP SETTING ON FINAL ..... DETERMINE  
LANDING GEAR ..... DOWN/LOCKED (TOUCH 3 GREEN)  
NACELLE MIRROR ..... VERIFY

**MEMORY**

PROPELLER (PRIOR TO BASE OR FAF) ..... FULL INCREASE  
AUTO PILOT ..... OFF  
LANDING GEAR ON FINAL ..... DOWN/LOCKED (TOUCH 3 GREEN)

**AFTER LANDING**

FLAPS ..... UP  
FUEL PUMPS ..... OFF  
COWL FLAPS ..... OPEN  
LANDING/REC LIGHTS ..... AS REQUIRED  
TRANSPONDER ..... 1200  
HEATER – FOR TURNOFF ..... FOLLOW PROC

**ENGINE SHUTDOWN**

THROTTLES ..... 1000 RPM  
HEATER (IF ON) ..... FAN 2 MIN THEN OFF  
AVIONICS MASTER ..... OFF  
NAV, PANEL, AND OVERHEAD LIGHTS ..... OFF  
ELECTRICAL SWITCHES ..... OFF  
MIXTURES ..... OFF  
MAGNETOS ..... OFF  
ALTERNATORS ..... OFF  
BATTERY MASTER ..... OFF  
VENT WINDOW ..... CLOSED  
PARKING BRAKE ..... RELEASED  
HOBBS TIME ..... RECORD

**POST-FLIGHT**

CABIN DOOR ..... SECURED  
AIRCRAFT ..... TIED DOWN OR CHOCKED  
WALK AROUND AIRCRAFT ..... NOTE GENERAL CONDITION

## PA 44-180 SEMINOLE – EMERGENCY PROCEDURES

### ENGINE FAILURE

CONTROL..... Vyse – 88 kts  
CRAM..... MIXTURE, PROP, THROTTLE – FWD  
CLEAN ..... GEAR & FLAPS – UP  
IDENTIFY ..... LEFT OR RIGHT ENGINE  
VERIFY ..... LEFT OR RIGHT ENGINE  
TROUBLESHOOT ..... IF SAFE AND TIME PERMITS  
FEATHER..... DEAD ENGINE  
SECURE ..... DEAD ENGINE

### ENGINE TROUBLESHOOT

MIXTURE ..... ADJUST  
FUEL PUMP..... ON  
FUEL SELECTOR ..... CROSSFEED  
MAGNETOS ..... CYCLE LEFT/RIGHT/BOTH  
CARBURETOR HEAT ..... ON  
THROTTLE..... ½ TRAVEL  
IN ENGINE FAILS TO ..... PROP FEATHER

### ENGINE SECURE

MIXTURE ..... IDLE/CUT OFF (DEAD ENGINE)  
FUEL PUMPS ..... OFF (DEAD ENGINE)  
MAGNETOS ..... OFF (DEAD ENGINE)  
COWL FLAPS..... CLOSED (DEAD ENGINE)  
FUEL SELECTOR ..... OFF (DEAD ENGINE)  
ALTERNATOR..... OFF (DEAD ENGINE)  
CARBURETOR HEAT ..... OFF (DEAD ENGINE)  
ELECTRICAL LOAD ..... MINIMIZE

### ENGINE RESTART

ALTERNATOR..... ON  
FUEL SELECTOR ..... ON  
ELECTRIC FUEL PUMP..... ON  
THROTTLE..... OPEN ½ INCH  
MIXTURE ..... RICH  
MAGNETOS ..... ON  
PROP ..... FWD TO CRUISE  
\*IF PROP NOT WINDMILLING WITHIN 5/7 SECONDS – ENGAGE STARTER  
THROTTLE..... REDUCE UNTIL ENGINE IS WARM  
\*IF ENGINE FAILS TO START – PRIME FOR 3 SECONDS  
FUEL PUMP..... OFF  
COWL FLAP..... CLOSED