

# EMERGENCY PROCEDURE PA-34 200T SENECA II



**Carenado**

## **EMERGENCY PROCEDURES PA-34-200T SENECA II**

### **ENGINE INOPERATIVE PROCEDURES**

#### **DETECTING DEAD ENGINE**

Loss of thrust:

Nose of Aircraft will yaw in direction of dead engine

#### **ENGINE SECURING PROCEDURE**

(FEATHERING PROCEDURE)

To attempt to restore power prior to feathering:

Mixtures -- AS REQUIRED

Fuel Selector -- CROSS FEED

Magnetos -- LEFT OR RIGHT ONLY

Alternate Air -- ON

Auxiliary Fuel Pump -- UNLATCH. ON HI. IF  
POWER IS NOT IMMEDIATELY  
RESTORES, OFF

Feather before RPM Drops Below 800

Minimum control speed -- 65 KIAS

Best S.E.R.C -- 89 KIAS

Maintain direction and airspeed above 76 KIAS

Mixture Controls -- FORWARD

Propeller Controls -- FORWARD

Throttle Controls -- FORWARD (40 in Hg MAX)

Flaps -- RETRACT

Gear -- RETRACT

Modify inoperative engine

Throttle of Inoperative Engine -- RETARD TO VERIFY

Mixture of Inoperative engine -- IDLE, CUT-OFF

Prop control of inop. Engine -- FEATHER

Trim -- AS REQUIRED

Auxiliary Fuel Pumps -- OFF  
(EXCEPT IN CASE OF ENGINE  
DRIVEN PUMP FAILURE)

Magnetos of inop. Engine -- OFF

Cowl Flaps -- CLOSE ON INOP. ENGINE,  
AS REQUIRED ON OPERATIVE ENGINE

Alternator of inop. Engine -- OFF  
 Electrical Load -- REDUCE  
 Fuel Management -- OFF INOP. ENGINE.  
 CONSIDER CROSSFEED

## **ENGINE FAILURE DURING TAKEOFF (Below 85 KIAS)**

If engine failure occurs during takeoff and 85 KIAS  
 has not been  
 Attained:  
 Throttles -- CLOSE BOTH IMMEDIATELY

Stop straight ahead

If inadequate runway remains to stop  
 Throttles -- APPLY MAX BRAKING  
 Master Switch -- OFF  
 Fuel Selectors -- OFF  
 Continue straight ahead, turning to avoid obstacles

## **ENGINE FAILURE DURING TAKEOFF (85 KIAS or above)**

If engine failure occurs during takeoff ground roll  
 or after lift-off with gear still down and 85 KIAS has  
 been attained: If adequate runway remains CLOSE both  
 throttles immediately, land if airborne and stop straight  
 ahead. If runway remaining is inadequate for stopping,  
 decide whether to abort or continue. If decision is made to  
 continue, maintain heading and airspeed. Retract landing  
 gear when climb is established and feather inoperative  
 engine prop (see Engine Securing Procedure).

## **ENGINE FAILURE DURING CLIMB**

If engine failure occurs when airspeed is below 66 KIAS:  
 Rudder -- APPLY TOWARDS OPERATING ENGINE  
 Throttles -- REDUCE THROTTLE SETTINGS  
                   AS REQUIRED TO MAINTAIN  
                   DIRECTIONAL CONTROL  
 Nose -- LOWER NOSE TO ACCELERATE  
           BEST SINGLE ENGINE RATE OF  
           CLIMB SPEED (89 KIAS)

Operating Engine -- INCREASE POWER AS AIRSPEED  
INCREASES ABOVE 66 KIAS

Inoperative engine Prop.-- FEATHER (SEE ENGINE  
SECURING PROCEDURE)

If engine failure occurs when airspeed  
is above 66 KIAS:

Maintain directional control.

Adjust airspeed toward the best single engine rate of  
climb speed (89 KIAS)

Inoperative engine Prop. -- FEATHER (SEE ENGINE  
SECURING PROCEDURE)

### **ENGINE FAILURE DURING FLIGHT (Below 66 KIAS)**

Rudder -- APPLY TOWARDS OPERATING  
ENGINE

Throttles (both engines). -- RETARD TO STOP TURN

Pitch Attitude. -- LOWER NOSE TO ACCELERATE  
ABOVE 66 KIAS

Operating Engine. -- INCREASE POWER AS AIRSPEED  
INCREASES ABOVE 66 KIAS

If altitude permits, a restart may be attempted.

If restart fails or altitude does not permit:

Inoperative engine Prop. -- FEATHER

Trim. -- ADJUST 5° BANK

TOWARDS OPERATIVE ENGINE

Inoperative engine. -- COMPLETE ENGINE  
SECURING PROCEDURE

Cowl Flap (Operating Engine) -- AS REQUIRED

### **ENGINE FAILURE DURING FLIGHT (Above 66 KIAS)**

Rudder -- APPLY TOWARDS OPERATING ENGINE

Inop. Eng. -- IDENTIFY

Operative Eng. -- ADJUST AS REQUIRED

Before Securing Inop. Engine:

Fuel Flow -- CHECK (IF DEFICIENT,  
AUXILIARY FUEL PUMP  
HI BOOST, IF POWER IS NOT  
RESTORED, OFF

Fuel Quantity -- CHECK

Fuel Selector (Inop. Eng.) -- CROSS FEED

Alternate Air -- ON

Mixture -- CHECK

Oil Pressure and Temp -- CHECK

Magnetos Switches -- CHECK

If engine does not start, complete Engine Securing  
Procedure.

Power (Operative Eng.) -- AS REQUIRED

Mixture (Operative Eng. -- ADJUST FOR POWER

Fuel Quantity (Operative Eng. Tank) -- SUFFICIENT

Auxiliary Fuel Pump (Operative Eng.) -- AS REQUIRED

Cowl Flap (Operative Eng.) -- AS REQUIRED

Trim (Rudder) -- ADJUST 5° BANK  
TOWARDS OPERATIVE ENGINE

Electrical Load -- DECREASE TO MIN. REQUIRED

Land as soon as practical at nearest suitable airport.

## **SINGLE ENGINE LANDING**

Inop. Engine Prop. -- FEATHER

When certain of making field:

Landing Gear -- EXTEND

Wing Flaps -- LOWER

Maintain additional altitude  
and speed during approach.

Final Approach Speed -- 91 KIAS

Wing Flaps -- 25°

## **SINGLE ENGINE GO-AROUND (Avoid if at all possible)**

Mixture -- FORWARD

Propeller -- FORWARD

Throttle -- OPEN SLOWLY TO 40 in HG

FLAPS -- RETRACT

Landing Gear -- RETRACT

Airspeed -- 89 KIAS  
Trim -- SET  
Cowl Flap Operating Engine -- AS REQUIRED

## **AIR START (UNFEATHERING PROCEDURE)**

Fuel Selector Inop. Engine -- ON  
Aux. Fuel Pump Inop. Engine -- OFF  
Throttle -- OPEN ¼ INCH  
Prop. Control -- FORWARD TO  
CRUISE RPM POSITION  
Mixture -- RICH  
Magnetos -- ON  
Starter -- ENGAGE UNTIL  
PROP WINDMILLS  
Throttle -- REDUCE POWER UNTIL  
ENGINE IS WARM  
If engine does not start, prime as required.  
Alternator -- ON

## **ENGINE FIRE ON GROUND**

If engine has not started:  
Mixture -- IDLE CUTOFF  
Throttle -- OPEN  
Starter -- CRACK ENGINE  
If engine has already started and is running, continue  
operating to try pulling the fire into the engine.

If fire continues, extinguish with best available means  
Fuel Selectors -- OFF  
Mixture -- IDLE CUT OFF

## **ENGINE FIRE IN FLIGHT**

Affected Engine:  
Fuel Selector -- OFF  
Throttle -- CLOSE  
Propeller -- FEATHER  
Mixture -- IDLE CUTOFF  
Heater -- OFF  
Defroster -- OFF  
If terrain permits land immediately, if fire continues.

## **FUEL MANAGEMENT DURING SINGLE ENGINE OPERATION**

### **CRUISING**

When using fuel from tank on the same side as the operating engine:

Fuel Selector Operating Engine -- ON

Fuel Selector Inop. Engine -- OFF

Auxiliary Fuel Pumps -- OFF

When using fuel from tank on the side opposite the operating engine:

Fuel Selector Operating Engine -- CROSSFEED

Fuel Selector Inop. Engine -- OFF

Auxiliary Fuel Pumps -- OFF

Use crossfeed in level flight only.

#### **NOTE**

Do not crossfeed with full fuel on same

Side as operating engine since vapor return fuel flow will be lost through the vent system.

### **LANDING**

Fuel Selector Operating Engine -- ON

Fuel Selector Inop. Engine -- OFF

### **ENGINE DRIVEN FUEL PUMP FAILURE**

Throttle -- RETARD

Auxiliary Fuel Pump -- UNLATCH on HI

Throttle -- RESET (75% POWER OR BELOW)

#### **CAUTIONS**

If normal engine operation and fuel flow is not immediately re-established, the auxiliary fuel pump should be turned off. The lack of a fuel flow indicator while on the HI auxiliary fuel pump position could indicate a leak in the fuel system or fuel exhaustion.

DO NOT actuate the auxiliary fuel pumps unless vapor suppression is required (LO position) or the engine driven fuel pumps fails (HI position). The auxiliary pumps have no standby function. Actuation of the HI switch position when the engines are operating normally may cause engine roughness and/or power loss.

## **LANDING GEAR UNSAFE WARNINGS**

Red light indicates gear is in transit.

Recycle the gear if the indication continues.

Light will illuminate when the gear horn sounds at low throttle settings.

## **MANUAL EXTENSION OF LANDING GEAR**

Check following before extending gear manually:

Circuit Breakers -- CHECK

Master Switch -- ON

Alternators -- CHECK

Navigation Lights -- OFF (DAYTIME)

To extend reposition clip downward clear of knob and proceed as follows:

Airspeed -- REDUCE (85 KIAS MAX)

Gear Selector -- GEAR DOWN

LOCKED POSITION

Emergency Gear Extend Knob -- PULL

Indicator Lights -- 3 GREEN

Leave emergency gear extension knob out.

## **ENGINE FAILURE IN ICING CONDITIONS**

Select alternate air and attempt restart.

If unable to restart engine:

Inop. Prop -- FEATHER

Airspeed -- AT OR ABOVE 89 KIAS

Descend if necessary to maintain airspeed

Electrical Load -- REDUCE

Avoid further icing conditions if possible.

Land as soon as practical.

Maintain at least 89 KIAS on final.



Do not extend gear or lower flaps until certain of making field.

Flaps -- 25°

## **ALTERNATOR FAILURE IN ICING CONDITIONS**

Overvoltage Relay -- RESET

Circuit Breakers -- CHECK AND RESET

If unable to restore alternator:

Avionics -- ALL OFF EXCEPT

NAV COM AND TRANSP

Electric Windshield -- OFF TO MAINTAIN 65A LOAD

If icing continues terminate flight as soon as practical.

Prior to landing:

Electric Windshield -- ON IF NECESSARY

Gear may require free fall extension.

## **ELECTRICAL FAILURES**

ALT annunciator light illuminated

Ammeters -- OBSERVE TO

DETERMINE INOP. ALT.

If both ammeters show zero output, reduce electrical load to minimum.

Turn OFF both alt. switches: then turn them ON momentarily one at a time while observing ammeters. Determine alt. showing LEAST (but not zero) amperes and turn its switch on.

Electrical Loads -- RE-ESTABLISH UP TO 60A

If one ammeter shows zero output, cycle its switch off, then on.

If power is not restored check circuit breakers and reset once if required.

If alternator remains inoperative, reduce electrical loads and continue flight.

WARNING Compass error may exceed 10° with both alternators inoperative.

## **GYRO PRESSURE FAILURES**

Pressure below 4.5 in Hg.

RPM -- INCREASE TO 2575

ALTITUDE -- DESCEND TO MAINTAIN 4.5 in HG

Use electrical turn indicator to monitor Directional Indicator and Attitude Indicator performance.

## **COMBUSTION HEATER OVERHEAT**

Unit will automatically cut-off

Do not attempt to restart.

## **SPINS**

Throttles -- RETARD TO IDLE

Rudder -- FULL OPPOSITE TO

DIRECTION OF SPIN

Control Wheel -- RELEASE BACK PRESSURE

Control Wheel -- FULL FORWARD IF

NOSE DOES NOT DROP

Ailerons -- NEUTRAL

Rudder -- NEUTRALIZE WHEN

ROTATION STOPS

Control Wheel -- SMOOTH BACK PRESSURE

TO RECOVER FROM DIVE

## **EMERGENCY DESCENT**

Throttles -- CLOSED

Propeller -- FULL FORWARD

Mixture -- AS REQUIRED FOR

SMOOTH OPERATION

Landing Gear -- EXTEND

Airspeed -- 129 KIAS



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