

## Preflight

<b>Preflight Inside Cockpit</b>	
Maint. Status Sheet	Checked
Discrepancy Sheets	Checked
VOR Checks (IFR Only)	Current
Required Docs. (AROW)	On Board
Weight and CG	Within Limits
Control Lock	Remove
Landing Gear Switch	Checked Down
Alternate Static Source	Closed
Pitot and Static	Drain
Parking Brake	Set
Avionics & Electrical Switches	Off
Master Switch	On
Landing Gear Lights	Check Three Green
Fuel Quantity	Assure Adequate
Master Switch	Off
Cowl Flaps	Open
Ignition Switches	Off
Mixture Controls	Idle Cut-off
Trim Indicators	Set Neutral
Flaps	Extend
Fuel Strainer	Remove

<b>Preflight Exterior</b>	
Right Wing, Flap and Aileron	General Condition
Wing Tip	Check
Fuel Quantity	Check Visually/Cap Secure
Leading Edge	Check
Fuel Sump Drains	Drained
Fuel Vent	Check
Fresh Air Inlet	Unobstructed
Gear Truss & Door	Check
Main Tire & Brakes	Check Wear
Limit Switches	Checked/No Damage
Struts	3.5" Exposed/Static Load
Cowl Flaps	Open & Secure
Right Engine Compartment	Inspect
Oil Quantity	Min. 6/Max. 8
Propeller & Spinner	Check
Governor	No Leaks
Air Scoops	Unobstructed
Gascolator	Drain
Nose Section	Check
Nose Wheel Chock	Remove
Nose Gear Strut	Assure Extended
Nose Tire	Check Condition
Forward Baggage Door	Secure & Locked

## Preflight continued

<b>Preflight Exterior</b>	
Windshield	Clean
Oil Quantity	Min. 6/ Max. 8
Nose Section	General Condition
Nose Gear	No Leaks
Nose Strut	2.5" Exposed/Static Load
Tire Pressure/Wear	Checked
Landing Light	General Condition
Battery Drains	Unobstructed
Forward Baggage Door	Secure and Locked
Windshield	Clean and Secure
Left Engine Compartment	Inspect
Oil Quantity	Min. 6/ Max. 8
Propeller and Spinner	Check
Governor	No Leaks
Air Scoops	Unobstructed
Gascolator	Drain
Gear Truss and Door	Check
Main Tire and Brakes	Check Wear
Limit Switches	Checked/ No Damage
Struts	3.5" Exposed/Static Load
Cowl Flaps	Open and Secure
Leading Edge	Check
Fuel Sump Drains	Drained
Fuel Vent	Check
Fresh Air Inlet	Check
Pitot Tube	Unobstructed
Stall Warning Switches	Check
Fuel Quantity	Check Visually/Cap Secure
Wing Tip, Aileron and Flap	General Condition
Left Side Fuselage	Check
Rear Door	Latched
Left Static Vent	Unobstructed
Dorsal Fin Air Scoop	Unobstructed
Empennage	General Condition
Stabilator & Trim Tab	Freedom of Motion
Right Static Vent	Unobstructed
Antennas	Secure
Right Side Fuselage	Check
Cross feed	Drain
Navigation Lights	Check

## Engine Start

<b>Before Engine Start</b>	
Maintenance Status Sheets	Checked
Squawk Sheets	Checked
Hobbs Sheet	Record Information
Seats	Adjust and Lock
Seats Belts & Shoulder Harness	Fasten
Circuit Breakers	Check In
Radio Master Switch	Off
Cowl Flaps	Open
Alternate Air	Off
Autopilot	Off
Alternators	Off
Passenger Briefing	Complete
<b>Starting Engines (*Repeat for Both Engines)</b>	
Fuel Selectors	On
Mixture Controls	Idle Cutoff
Props	Full Forward
Throttle Controls	1/2" Open
Master Switch	On
Beacon	On
Ignition Switches	On
Electric Fuel Pump	On
Mixture Control (Priming)	Rich/Check FF/Then Cutoff
*Propeller	Clear
*Starter	Engage
*Mixture	Advance as Engine Engages
*Throttle	1,000 RPM
* Oil Pressure	Rising within 30 Seconds
*Electric Fuel Pump	Off/Check Fuel Pressure
*Alternator	On/Charging
*Vacuum Gauge	4.5" - 5.2" Hg
<b>Before Taxi</b>	
Left Fuel Selector	X-Feed
Radio Master	On
Auto Pilot	Off
Transponder	Standby
ATIS	Check
Altimeter	Set
Trim	Test/Set
External Lights	As Desired
Left Fuel Selector	On
Right Fuel Selector	X-Feed

## Abnormal Start Procedures

<b>Hot Start</b>	
Mixture Controls	Idle Cut-off
Throttle Controls	Open ½ inch
Propeller Controls	Forward
Master Switch	On
Ignition Switches	On
Electric Fuel Pumps	Off
Propeller	Clear
Starter	Engage
Mixture Control	Advance as Engine Starts

<b>Flooded Start</b>	
Mixture Controls	Idle Cut-off
Throttle Controls	Full Forward
Propeller Controls	Forward
Master Switch	On
Ignition Switches	On
Electric Fuel Pumps	Off
Propeller	Clear
Starter	Engage
Throttles	Retard as Engine Starts
Mixtures	Advance as Engine Starts

## Engine Run-Up

<b>Engine Run-Up (Left Then Right)</b>	
Parking Brake	Set
Fuel Selectors	On
Mixture Controls	Rich
Propeller Controls	Full Forward
*Throttle Control	1500 Rpm
*Propeller Control	Exercise (Max Drop Down to 1,000 Rpm within 1-3 seconds)
*Throttle Control	2000 Rpm
Props	1800 Rpm
*Throttle	25" MP (Check that Rpm Holds)
Props	Full Forward
Throttle	2000 Rpm
*Alternate Air	On/Off Check RPM Drop
*Magnetos	Off/On (Normal Drop 100 Rpm, Max Drop 175, Difference of 50 Rpm)
*Alternator	Off
*Over Voltage Relay Light	Press/Illuminated
*Alternator	On/Charging
*Vacuum Gauge	4.5" - 5.2" Hg
*Throttle	1,000 RPM
*Engine Gauges	In the Green
<b>Before Take-off Check</b>	
Flight Instruments	Checked/Set
Radios	Set
Transponder	On
Alternate Air	Off
Controls	Free and Correct
Clock	Wound and Set
Trim	Set for Takeoff
Flaps	Set for Takeoff
Fuel Selectors	On
Mixtures	Rich
Props	Full Forward
Quadrant Friction Lock	Set
Cowl Flaps	Open
Electric Fuel Pumps	On
Landing Lights	On
Windows	Closed
Doors	Latched
Seat Belts/Shoulder Harness	Fastened
Seat Backs	Erect
Pitot Heat	As Required

## Take-off Checklists

### Line-up Checklist

Taxi to Rwy Centerline	Hold Brakes
Heading Indicator	Check Runway Heading
Time	Note
Throttle	2000 RPM
Engine Gauges	Check
Brakes	Release
Throttle	Full Forward
Rotate (Normal Take-off)	80 Mph
Lift Off (Normal Take-off)	85 Mph
Accelerate	Vx or Vy (90/105) Mph
Gear Up	No useful Rwy./Pos. R.O.C.

### Climb Check (500' AGL)

Climb Power	25"/2500 Rpm 105/120 Mph
Gear/Flaps	Up
Landing Lights	Off
Cowl Flaps	As Required
Fuel Pumps	Off Above 1000' AGL
Engine Instruments	Monitor

### Cruise Check

Power Set	24"/2400 Rpm
Mixture	Lean As Appropriate
Cowl Flaps	As Necessary
Engine Instruments	Monitor
DG	Set

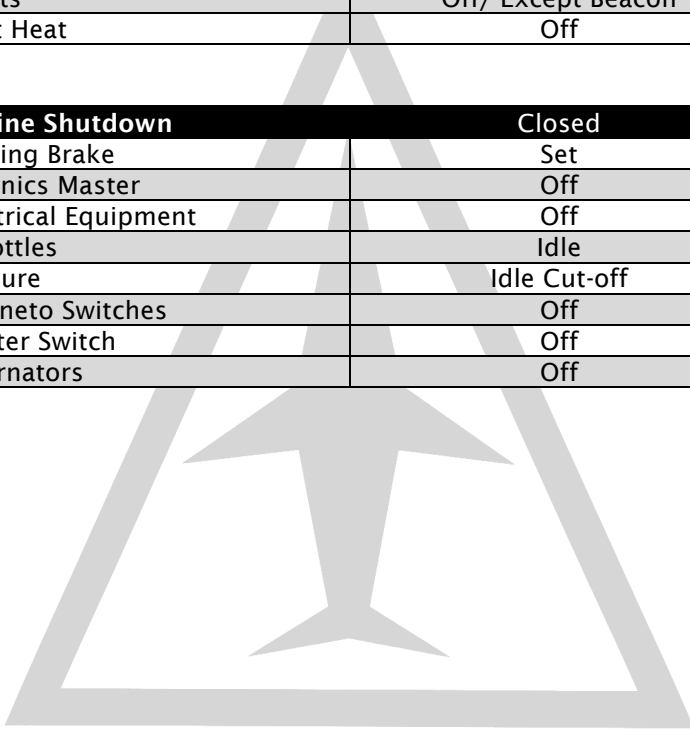
### Approach and Landing

Seat Backs	Erect
Seat belts/Shoulder Harness	Fastened
Fuel Selectors	On
Cowl Flaps	As Required
Electric Fuel Pumps	On
Mixture Controls	Rich
Props	2500 Rpm
Landing Gear	Below 150 Mph
Flaps	1 <sup>st</sup> Notch (10 deg) - < 160 Mph 2 <sup>nd</sup> Notch (25 deg) - < 140 Mph 3 <sup>rd</sup> Notch (40 deg) - < 125 Mph
GUMPS	Complete

## After Landing Checklist

After Landing	
Flaps	Up
Cowl Flaps	Open
Transponder	Standby
Fuel Pumps	Off
Lights	Off/ Except Beacon
Pitot Heat	Off

Engine Shutdown	Closed
Parking Brake	Set
Avionics Master	Off
Electrical Equipment	Off
Throttles	Idle
Mixture	Idle Cut-off
Magneto Switches	Off
Master Switch	Off
Alternators	Off



## Emergency Procedures

<b>Engine Failure</b>	
Mixture	Rich
Props	Full Forward
Throttles	Full Forward
Flaps	Retract
Gear	Retract
Identify	Dead foot/Dead engine
Verify	Dead Engine
Pitch for Blue Line	105 Mph
<b>Restart Procedures</b>	
<b>Above TPA</b>	
Mixture	As required
Electric Fuel Pump	On
Fuel Selector	Cross feed
Magnetos	Select L or R only
Alternate Air	On
<b>Feather</b>	
Mixture	Rich
Props	Full Forward
Throttle	Full Forward
Flaps	Retract
Gear	Retract
Identify	Dead Foot/ Dead Engine
Verify	Dead Engine
Pitch for Blue Line	105 Mph
Throttle of Inop. Engine	Retard to Verify
Prop. of Inop. Engine	Feather
Mixture of Inop. Engine	Idle Cut Off
Trim	As Required
Bank 5 deg.	Toward Good Engine
<b>Save Good Engine</b>	
Throttle	Adjust as necessary
Cowl Flaps	Open
Fuel Pump	On
Electric Load	Reduce
<b>Secure The Dead Engine</b>	
Fuel Pump	Off
Magnetos	Off
Cowl Flaps	Closed
Alternator	Off
Fuel Selector	Off (Consider X-Feed)



## Un-feathering Procedure

<b>Un-feathering Inop. Engine</b>	
Fuel Selector	On
Electric Fuel Pump	Off
Throttle	Open ¼"
Propeller Control	Forward to Cruise
Mixture	Rich
Magneto Switches	On
Starter	Engage until Prop Windmills
Throttle	Reduce until engine warms up
Failure to start	Consider Priming w/ Fuel Pump
Alternator	On

## Engine Failure

<b>Prior to Takeoff &lt; 100 Mph</b>	<b>When Adequate Rwy Remains</b>
Throttles	Closed
Brakes	Apply Max. Braking
Master Switch	Off
Fuel Selectors	Off
Directional Control	Maintain Centerline
<b>After Liftoff (Gear Down)</b>	
Heading	Maintain
Airspeed	105 Mph (Blue Line)
Landing Gear	Retract when Climb is Est.
Feather Inop Engine	See Feathering Procedures

## Single Engine Go-Around

<b>Go around Procedures</b>	
Mixture	Forward
Propeller	Forward
Throttle	Open
Flaps	Retract
Landing Gear	Retract
Airspeed	VySE 105 Mph
Trim	Set
Cowl Flap	As required

## Manual Gear Extension

Gear Extension Procedures	
Circuit Breakers	Checked
Master Switch	On
Alternators	Check
Navigation Lights	Off (Daytime)
Airspeed	< 100 Mph
Landing Gear Selector Switch	Gear Down Position
Emergency Gear Knob	Pull
Gear Down Lights	Check 3 Green
Emergency Gear Knob	Leave out

## Emergency Landing

Gear Up Landing	
Airspeed	Normal
Flaps	Up
Throttles	Close before Touchdown
Master Switches	Off
Ignition Switches	Off
Fuel Selectors	Off
Touch Down	Minimum Airspeed

## Engine Fire

In Air	
Fuel Selector	Off
Throttle	Close
Propeller	Feather
Mixture	Idle Cut-off
Heater	Off
Defroster	Off
If Terrain Permits	Land Immediately
On Ground (Before Start)	
Mixture	Idle Cut-off
Throttle	Open
Starter	Engage
On Ground (Engine Running)	
Continue Operating	Attempt to pull fire in Engine
Fire Remains	Extinguish by best means Avail
Fuel Selectors	Off
Mixture	Idle Cut-off

## Airports in the vicinity of Allentown

(Not for navigation)

<b>Allentown; Lehigh Valley Intl. (ABE)</b>	
Freqs:	<b>ATIS:</b> 126.975 <b>Allentown Approach:</b> 124.45 (S ABV 3000); 119.65 (N ABV 3000) 118.2 (3000 & BLO) <b>Tower:</b> 120.5 <b>Ground:</b> 121.9 <b>Clearance:</b> 124.05
Runways	<b>13-31:</b> 5797X150 <b>6-24:</b> 7600X150
Elev. (TPA)	393ft MSL: (Traffic Pattern: 1,400 ft MSL)
<b>Alexandria (N85) – Dist. KABE: 20nm</b>	
Freqs:	<b>CTAF:</b> 122.975
Runways	<b>13-31:</b> 1804X100 <b>8-26:</b> 2550X60
Elev. (TPA)	480ft MSL: (Traffic Pattern: 1,500 ft MSL)
<b>Blairstown (1N7) – Dist. KABE: 28nm</b>	
Freqs:	<b>CTAF:</b> 123.0
Runways	<b>7-25:</b> 3100X70;
Elev. (TPA)	372ft MSL: (Traffic Pattern: 1,400 ft MSL)
<b>Braden Airpark (N43) – Dist. KABE: 10nm</b>	
Freqs:	<b>CTAF:</b> 123.0
Runways	<b>18-36:</b> 1956X165;
Elev. (TPA)	399ft MSL: (Traffic Pattern: 1,200 ft MSL)
<b>Butter Valley Golf Port (7N8)– Dist. KABE: 16nm</b>	
Freqs:	<b>CTAF:</b> 122.8
Runways	<b>16-34:</b> 2420X85 1535 x 24 asphalt, remain. turf
Elev. (TPA)	500ft MSL: (Traffic Pattern: 1,300 ft MSL)
<b>Doylestown (DYL) – Dist. KABE: 24nm</b>	
Freqs:	<b>CTAF:</b> 122.975
Runways	<b>5-23:</b> 3004X60
Elev. (TPA)	394ft MSL: (Traffic Pattern: 1,390 ft MSL)

## Airports (continued)

<b>Hackettstown (N05)</b> - Dist. KABE: 28nm	
Freqs:	CTAF: 122.9
Runways	5-23: 2200X50;
Elev. (TPA)	670ft MSL: (Traffic Pattern: 1,500 ft MSL)
<b>Jake Arner Memorial (22N)</b> - Dist. KABE: 17nm	
Freqs:	CTAF: 123.05
Runways	8-26: 3000X60
Elev. (TPA)	534ft MSL: (Traffic Pattern: 1,700 ft MSL)
<b>Kutztown (N31)</b> - Dist. KABE: 18nm	
Freqs:	CTAF: 123.0
Runways	17-35: 2460X240 (10-28: 2221X150 turf)
Elev. (TPA)	512ft MSL: (Traffic Pattern: 1,312 ft MSL)
<b>Queen City Mun (1N9)</b> - Dist. KABE: 5nm	
Freqs:	CTAF: 122.7
Runways	15-33: 3159X75 7-25: 3950X75
Elev. (TPA)	399ft MSL: (Traffic Pattern: 1,390 ft MSL)
<b>Quakertown (UKT)</b> - Dist. KABE: 13nm	
Freqs:	CTAF: 122.725
Runways	11-29: 3201X50
Elev. (TPA)	526ft MSL: (Traffic Pattern: 1,500 ft MSL)
<b>Pennridge (N70)</b> - Dist. KABE: 17nm	
Freqs:	CTAF: 123.0
Runways	8-26: 4215X100
Elev. (TPA)	568ft MSL: (Traffic Pattern: 1,365ft MSL)
<b>Perkiomen Valley (N10)</b> - Dist. KABE: 27nm	
Freqs:	CTAF: 122.8
Runways	9-27: 2950X40;
Elev. (TPA)	277ft MSL: (Traffic Pattern: 1,100 ft MSL)

## Airports (continued)

<b>Pocono Mountains Municipal (MPO)</b>	
Dist. KABE: 29nm	
Freqs:	<b>CTAF: 122.7</b>
Runways	<b>13-31: 3948X60;</b> <b>5-23: 4000X100;</b>
Elev. (TPA)	1,916ft MSL: (2,900ft MSL)
<b>Pottstown Limerick (PTW) - Dist. KABE: 25nm</b> (the maintenance place)	
Freqs:	<b>CTAF: 122.7</b>
Runways	<b>10-28: 3371X75 RIGHT traffic!</b>
Elev. (TPA)	309ft MSL: (Traffic Pattern: 1,109ft MSL)
<b>Pottstown Municipal (N47) - Dist. KABE: 26nm</b>	
Freqs:	<b>CTAF: 122.8</b>
Runways	<b>7-25: 2704X75</b>
Elev. (TPA)	256ft MSL: (Traffic Pattern: 1,256ft MSL)
<b>Reading Regional (RDG) - Dist. KABE: 29nm</b>	
Freqs:	<b>Reading Approach: 125.15</b> <b>ATIS 127.1 Tower: 119.9</b> <b>Ground: 121.9</b>
Runways	<b>13-31: 6350X150</b> <b>18-36: 5151X150</b>
Elev. (TPA)	344ft MSL: (Traffic Pattern: 1,400ft MSL)
<b>Slatington (69N) - Dist. KABE: 10nm</b>	
Freqs:	<b>CTAF: 122.8</b>
Runways	<b>1-19: 2460X50</b>
Elev. (TPA)	380ft MSL: (Traffic Pattern: 1,400 ft MSL)
<b>Sky Manor (N40) - Dist. KABE: 22nm</b>	
Freqs:	<b>CTAF: 122.975</b>
Runways	<b>7-25: 2439X50</b>
Elev. (TPA)	560ft MSL: (Traffic Pattern: 1,300 ft MSL)
<b>Stroudsburg-Pocono(N53) - Dist. KABE: 26nm</b>	
Freqs:	<b>CTAF: 123.0</b>
Runways	<b>8-26: 3087X30;</b>
Elev. (TPA)	480ft MSL: (Traffic Pattern: 1,280 ft MSL)

## Emergency Checklist

### Emergency Checklist ENGINE FAILURE

Airspeed	Trim for 85 MPH
Landing Site	Choose
Fuel Selector	Switch Tanks
Electric Fuel Pump	On
Mixture	Rich
Carburetor Heat	On
Engine Gages	Check for cause
Primer	In and Locked

### IF TIME PERMITS

Magnetos (Check)	Left/Right/Both
Throttle/Mixture	Different settings

### Emergency Checklist POWER OFF LANDING

Transponder	Squawk 7700
Transmit Distress Signal	121.5 MHz
Ignition	Off
Master Switch	Off
Magnetos	Off
Fuel Selector	Off
Seat Belts	Tight

### Emergency Checklist ELECTRICAL FIRE

Master Switch	Off
Vents	Open
Cabin Heat	Off
Land as soon as possible	

### Emergency Checklist ENGINE FIRE

Fuel Selector	Off
Throttle	Closed
Mixture	Idle Cut-off
Heater	Off
Defroster	Off
Land immediately	