

# ATLANTA FLYING CLUB









## Piper Saratoga PA-32R-301T

### Normal and Emergency Checklists

#### SPEED REFERENCE

$V_{NE}$	191 KIAS
$V_{NO}$	160 KIAS
$V_{SO}$	63 KIAS
$V_{S1}$	67 KIAS
$V_R$	88 KIAS
$V_R$ SHORT FIELD	84 KIAS
$V_X$	84 KIAS
$V_Y$ GEAR UP, FLAPS UP	93 KIAS
$V_A$ (3600)	134 KIAS
$V_{FE}$ $V_{LO}$	110 KIAS
$V_{LE}$	132 KIAS
BEST GLIDE	83 KIAS

#### ATC LIGHT GUN SIGNALS

Color & Type	On the Ground	In Flight
Steady Green 	Cleared for takeoff	Cleared to land
Flashing Green 	Cleared to taxi	Return for landing
Steady Red 	STOP	Give way, continue circling
Flashing Red 	Taxi clear of the runway	Airport unsafe, do not land
Flashing White 	Return to starting point	N/A
Alt. Red / Green 	Exercise extreme caution	Exercise extreme caution

## **PREFLIGHT INSPECTION - COCKPIT**

Required Documents	AVAILABLE
<b>Airworthiness Certificate</b>	
<b>Registration</b>	
<b>Radio License (int'l)</b>	
<b>Operating Reference (POH)</b>	
<b>Weight &amp; Balance</b>	
Maintenance Status	CHECKED
Hobbs & Tach Meters	CHECKED
Control Lock	REMOVED
Landing Gear Selector	CHECK DOWN
Radio Master	OFF
Circuit Breakers	CHECK IN
Propeller Area	CLEAR
Magneto Switches	OFF
BATT Master	ON
Fuel Quantity	CHECKED
Annunciator Panel	PUSH TO TEST
Pitot Heat	CHECK
Flaps	EXTEND FULL
All Lights	ON & CHECK
All Lights (except beacon)	OFF
BATT Master	OFF

## **PREFLIGHT INSPECTION – EXTERNAL**

### **RIGHT WING**

Flap & Aileron	CHECKED
Wing Tip & Leading Edge	CHECKED
Tie Down	REMOVED
Fuel Level	CHECKED
Fuel Cap	SECURED
Fuel Strainer	CHECKED
Strut, Tire and Brake	CHECKED

### **NOSE**

Engine Cooling Air Inlets	CHECKED
Propeller & Spinner	CHECKED
Baggage Door	SECURED

Air Filter	CLEAR
Nose Wheel & Strut	CHECKED
Engine Oil	9-10 QTS
Windshield	CHECKED

### **LEFT WING**

Leading Edge & Wing Tip	CHECKED
Fuel Level	CHECKED
Fuel Cap	SECURED
Fuel Strainer	CHECKED
Stall Warning Openings	CLEAR
Pitot Tube Cover	REMOVED
Pitot Tube	CHECKED
Tie Down	REMOVED
Aileron and Flap	CHECKED
Strut, Tire and Brake	CHECKED

### **EMPENNAGE**

Window Shades	OPEN
Cabin Door	SECURED
Tie Down	REMOVED
Stabilator & Trim Tab	CHECKED

## **BEFORE STARTING ENGINE**

Preflight Inspection	COMPLETE
Seat Position	ADJUST
Seatbelts	SECURED
Doors	CLOSED
Passengers	BRIEF
1) Seatbelts / shoulder harnesses	
2) Personal electronic devices off	
3) Air vents / comfort	
4) Fire extinguisher location / operation	
5) Door operation	
6) Emergency procedures & egress	
Parking Brake	PULL ON
Flaps	UP
Mixture	CUT OFF
Throttle	IDLE

## STARTING ENGINE

Fuel Tank Selector	L or R TANK
Propeller Area	CLEAR
BATT Master	ON
FIN Strobe	ON

### NORMAL START

Mixture	CUT OFF
Throttle	1/4" OPEN
ALTR Switch	ON
Magneto Switches	BOTH ON
Fuel Pump	ON
Prime	IF REQUIRED
Mixture	FULL RICH
Mixture	CUT OFF
Starter Button	ENGAGE
Mixture	ADVANCE
Throttle	1200 RPM
Oil Pressure	CHECKED
Fuel Pump	OFF
Mixture	LEAN

### FLOODED START

Throttle	FULL FORWARD
Master Switch	ON
ALTR Switch	ON
Magneto Switches	BOTH ON
Fuel Pump	OFF
Mixture	CUT OFF
Starter Button	ENGAGE
Mixture	ADVANCE RICH
Throttle	RETARD
Oil Pressure	CHECK
Fuel Pump	OFF

## BEFORE TAXI

Electrical System	VERIFY AMPS/VOLTS
PFD Master	ON
Radio Master	ON
AP Master	ON
Engine Gauges	CHECK GREEN
GPS Database	VERIFY DATE
Fuel Quantity	CHECK & RESET
Radios	SET & CHECK
FMS & Weather	SETUP / OBTAIN
Altimeter (PFD & Dial)	SET
Autopilot Altimeter (Baro)	SET
Transponder	CHECK ALT
PFD & G650s	CHECK NO RED X's
Flight Instruments	CHECK & BRIEF
1) Airspeed, ZERO	
2) Attitude Indicator, IN-LINE WITH HORIZON	
3) Altimeter, WITHIN 75FT OF FIELD ELEVATION	
4) Turn coordinator, LEVEL AND BALL CENTERED	
5) Vertical speed indicator, ZERO	
6) Heading indicator, CHECKED WITH COMPASS	
Taxi Clearance	OBTAIN IF REQUIRED
Taxi Light	ON
NAV Light	ON
Parking Brake	RELEASED
Taxi Area	CLEAR
Brakes	TEST

## BEFORE TAKEOFF (RUN UP)

Parking Brake	SET
Cabin Doors & Windows	CLOSED
Seatbelts	SECURED
Autopilot	TEST
<ol style="list-style-type: none"> <li>1) Autopilot - ENGAGE</li> <li>2) Flight Controls – VERIFY OVERPOWER</li> <li>3) Autopilot Disconnect – VERIFY</li> </ol>	
Elevator Trim	SET TO TAKEOFF
Flight Controls	FREE & CORRECT
Fuel Pump	ON
Fuel Tank Selector	CHANGE TANK
Mixture	RICH
Throttle	2000 RPM
Magneto Check	R-BOTH-L-BOTH
<p style="margin-left: 20px;">Max RPM drop of 175, max difference between R / L is 50</p>	
Propeller Feather Check	Drop RPM / Rise MP
Propeller Feather Check	OP CHECKED
Propeller Feather Check	NO OIL LEAKS
Engine Indicators	CHECK GREEN
Ammeters and Voltmeters	CHECK
Fuel Pump	OFF
Fuel Flow	CHECK
Throttle	CHECK IDLE
Throttle	1200 RPM
Clearance	OBTAIN IF REQUIRED
FMS / GPS Flight Plan	CHECK & SET
Altitude Select	SET
Heading	SET
Transponder	VFR or CODE

Departure Briefing

COMPLETE

This will be a VFR / IFR departure to \_\_\_\_\_

(Who) will be performing the takeoff.

Type of takeoff to be performed, flaps set.

Review V speeds ( $V_R$ ,  $V_X$ , and  $V_Y$ /Climb).

Runways in use, planned takeoff runway.

Review takeoff distances, abort if not off by \_\_\_\_\_

Review positive exchange of flight controls.

Review emergency procedures:

- 1) Any malfunction before  $V_R$ :  
Idle power, abort straight ahead
- 2) Any malfunction after  $V_R$  with runway:  
Abort / land straight ahead
- 3) Engine malfunction after  $V_R$  without runway and below 500ft AGL:  
Select suitable landing area ahead, fuel off, mixture cut off, master off, mags off, release door latch.
- 4) Engine malfunction above 500ft AGL:  
Best glide airspeed of 83 KIAS, select landing area, possible return to airport.

Parking Brake

RELEASED

## NORMAL TAKEOFF

Trim	SET
Propeller	FULL FORWARD
Mixture	FULL RICH
Flaps	UP / 10° IF REQ'D
Doors & Window	CLOSED
Air Conditioning	OFF
Landing Light	ON
Strobe Lights	ON
Fuel Pump	ON

---

Traffic	FINAL CLEAR
Departure Runway	VERIFY
Throttle	FULL – 38" MAX
Airspeed Indicator	VERIFY
Engine Gauges	CHECK GREEN
Rotate V <sub>R</sub>	88 KIAS
Airspeed V <sub>Y</sub>	93 KIAS
Landing Gear	UP

## CLIMB – 500FT AGL

Airspeed V <sub>Y</sub>	105 KIAS
Flaps	UP
Engine Gauges	CHECK GREEN
Throttle	36" MP
Propeller	2400 RPM

## CRUISE

Fuel Pump	OFF
Taxi Light	OFF
Landing Light	PULSE
Throttle	SET 22-31" MP
Propeller	SET 2200-2400
Mixture	LEAN FOR 1625 TIT
FMS / GPS	REVIEW



## CRUISE POWER SETTINGS

2200RPM – 25” MP – 12.5GPH

2200RPM – 28” MP – 14.5GPH

2300RPM – 30” MP – 16.5GPH

2400RPM – 33” MP – 20.0GPH

## PRE-MANEUVER CHECKLIST

Emergency Landing Area	CONFIRM
Seatbelts	SECURED
Fuel Tank Selector	CHANGE
Propeller	FULL FORWARD
Mixture	AS REQUIRED
Landing Light	PULSE
Fuel Pump	ON
Clearing Turns	PERFORM

## DESCENT

Weather	OBTAIN
Seatbelts	SECURED
Mixture	ADJUST
Engine Cooling	CHECK JPI CLD°
Altimeters (2 + AP)	SET
ALT Select	SET
Instruments / Radios	SET
Approach / Pattern Entry	BRIEF
1) Approach Name / Airport	
2) Frequency / Course	
3) Minimums / Airport and TDZE Elevations	
4) Missed Procedure / MSA	
5) Notes	
6) Highest Obstacle / Terrain Review	
7) Lighting	
8) Crosswind Component	
9) Runway Length Available	
10) Airport Diagram	
11) Destination on Field / Taxi Route	

## BEFORE LANDING

Seatbelts	SECURED
Fuel Tank Selector	CHANGE
Landing Gear (<132 KIAS)	DOWN
Mixture	RICH
Propeller	FULL FORWARD
Flaps (<110 KIAS)	SET 10°
Landing Light	ON
Taxi Light	ON
Fuel Pump	ON

## LANDING

Autopilot	OFF
Air Conditioning	CHECK OFF
Airspeed	95 KIAS
Flaps	SET 25°
Airspeed	85 KIAS
Flaps	SET 40°

## GO AROUND

Throttle	FULL
Airspeed	93 KIAS
Flaps	SET 25°
Positive Climb Rate – Landing Gear	UP
Flaps	SET 10°
<i>Above 500 AGL</i>	
Flaps	UP
Airspeed	105 KIAS

## AFTER LANDING

Fuel Pump	OFF
Strobe Lights	FIN STROBE
Taxi Light	ON
Landing Lights	OFF
Flaps	UP
Mixture	LEAN

## SECURING AIRCRAFT

Parking Brake	SET
Throttle	IDLE
Air Conditioning	OFF
AP Master Switch	OFF
Radio Master	OFF
PFD Master	OFF
Mixture	CUT OFF
Magneto Switches	OFF
BATT Master Switch	OFF
Taxi Light	OFF
FIN Strobe	OFF
Control Lock	INSTALL
Window	CLOSED
Pitot Tube Cover	INSTALL
Tie Downs	INSTALL
Cowl Plugs	INSTALL
Flight Plan	CLOSED

## FUEL TANK CHANGE

Fuel Pump	ON
Fuel Tank Selector	CHANGE
Fuel Flow	CHECK
Fuel Pump	OFF

## ENGINE FIRE DURING START

Ignition	HOLD BUTTON
----------	-------------

IF ENGINE STARTS:

Mixture	CUT OFF
Throttle	FULL FORWARD
Fuel Pump	OFF
Fuel Tank Selector	OFF
Ignition	OFF

IF ENGINE DOES NOT START:

Ignition	HOLD BUTTON
Mixture	CUT OFF
Throttle	FULL FORWARD
Fuel Pump Switch	OFF
Ignition Switch	RELEASE

Master Switch	OFF
Fire Extinguisher	OBTAIN
Aircraft	EVACUATE
Fire	EXTINGUISH

## ENGINE FAILURE DURING TAKEOFF

Throttle	IDLE
Brakes	APPLY

Mixture	CUT OFF
Magneto Switches	OFF
Master Switch	OFF

## ENGINE FAILURE AFTER TAKEOFF

Airspeed	BEST GLIDE
Flaps Up	83 KIAS
Flaps 10	64 KIAS
Mixture	CHECK RICH
Propeller	FULL FORWARD
Fuel Pump	CHECK ON
Fuel Tank Selector	CHANGE
Magnetos Switches	CHECK ON
Landing Gear	DOWN
Flaps	AS REQUIRED
Alternate Air	OPEN
Cabin Door	UNLATCH
Land	STRAIGHT AHEAD

## ENGINE FAILURE DURING FLIGHT

Airspeed – Best Glide	83 KIAS
Fuel Pump	ON
Mixture	RICH
Fuel Tank Selector	CHANGE
Alternate Air	OPEN
Engine Gauges	CHECK
Air Conditioning	OFF
Magneto Switches	CHECK ON
Ignition Switch (If Prop Stopped)	HOLD

## POWER OFF EMERGENCY LANDING

Airspeed	
Flaps Up	83 KIAS
Throttle	IDLE
Propeller	FULL FORWARD
Mixture	CUT OFF
Magneto Switches	OFF
ALT Switch	OFF
Fuel Tank Selector	OFF
Radio Call 121.5	MAY DAY
Transponder	7700
Seats & Seat Belts	SECURE
Landing Gear	DOWN
Flaps	AS REQUIRED
BATT Master	OFF
Doors	UNLATCHED

## ENGINE FIRE IN FLIGHT

Fuel Tank Selector	OFF
Throttle	IDLE
Mixture	CUT OFF
Fuel Pump	OFF
Cabin Heat and Air	OFF
BATT Master	OFF
Cabin Vents	OPEN
Airspeed	100+ KIAS
Emergency Landing	EXECUTE

## CABIN FIRE IN FLIGHT

BATT Master	OFF
ALT Switch	OFF
Cabin Vents	CLOSED
Cabin Heat and Air	OFF
Fire Extinguisher	ACTIVATE
Cabin	VENTILATE

## ELECTRICAL FIRE IN FLIGHT

BATT Master	OFF
Cabin Vents	CLOSED
Cabin Heat and Air	OFF
Fire Extinguisher	ACTIVATE
Radio Switch	OFF
Electrical Switches	OFF
Cabin	VENTILATE

IF FIRE IS OUT AND ELECTRICAL IS NEEDED:

Circuit Breakers	CHECK
BATT Master	ON
Radio Switches	OFF
ALT Switch	ON

## WING FIRE

Landing Light	OFF
NAV Lights	OFF
Strobe Lights	OFF
Pitot Heat	OFF
Side Slip (fire away)	EXECUTE
Emergency Landing	EXECUTE

## ICING

The Piper Saratoga is not equipped for flight into known icing. If icing is encountered, you should make a level 180° turn to exit.

Pitot Heat	ON
Cabin Heat	ON FULL
Defroster	OPEN
Cabin Air	ADJUST
Throttle	INCREASE

Stall speed increases with ice buildup, plan approach speed at 85+ KIAS with ice buildup.

Flaps	UP
Landing	EXECUTE

## PROPELLER OVERSPEED

Throttle	REDUCE
Oil Pressure	CHECK
Propeller	REDUCE
Airspeed	REDUCE
Throttle	UNDER 2700 RPM

## EMERGENCY GEAR EXTENSION

BATT Master	CHECK ON
ALT Switch	CHECK ON
Circuit Breakers	CHECK
Light Dimming Switch	CHECK DAY
Gear Indicator Bulbs	PRESS TO CHECK
Annunciator Switch	TEST

If Landing Gear Does Not Check Down:

Airspeed	< 90 KIAS
Landing Gear Selector	DOWN

If Landing Gear Still Does Not Check Down:

Emergency Gear Pump	PULL CIRCUIT BREAKER
Emergency Gear Knob	PULL OUT

Pull emergency gear knob while fish-trailing airplane.  
Approx. 10 seconds to be down and locked.

If electrical power has been lost, landing gear must be extended by pulling Emergency Gear Knob – position lights will not illuminate.

## AMMETER EXCESSIVE CHARGE

Ammeter Full Scale	CHECK
ALTN Switch	OFF
Non-Essential Electrical	OFF
Land	ASAP