

**Before Start**

Landing/Taxi Light .....	Working
NAV Lights.....	Working
Strobe/Beacon.....	Working
Flashlight.....	Available
Tach Log.....	Check
Baggage.....	Secure
Pitot Heat.....	Chk heating
Fuel Shut-off valve Handle .....	Select/note
Avionics Master Switch .....	OFF
Transponder .....	STANDBY
Elevator Trim Tab .....	Set Takeoff
Circuit Breakers.....	All IN
Gear Switch.....	Down
Passengers .....	Briefing
<i>Belts/Exits/Sterile/Airsickness/Phones/IElect</i>	
<b>AutoPilot .....</b>	<b>OFF</b>
Clock .....	Start Time
Fuel Selector .....	Note Tank

**Engine Start- COLD START**

Throttle .....	Cracked
Propeller.....	HIGH RPM
Master Switch.....	ON
<b>Gear Lights.....</b>	<b>GREEN</b>
Beacon/strobe lights.....	ON
<b>Fuel Pump .....</b>	<b>ON</b>
Mixture.....	Full Rich
<b>Fuel Flow .....</b>	<b>6 gph/5sec</b>
<b>Mixture .....</b>	<b>Idle/Cutoff</b>
<b>Fuel Pump .....</b>	<b>OFF</b>

**Engine Start- HOT START**

Throttle .....	Cracked
Propeller.....	HIGH RPM
Master Switch.....	ON
Gear Lights.....	Green
Fuel Pump .....	ON
Mixture .....	Idle/Cutoff

Propeller Area.....	CLEAR
Ignition Switch .....	Push in start
Mixture.....	Rich [after start]
Oil Pressure.....	Check/green
Fuel Pressure .....	Green
Master Avionics Switch.....	ON
Throttle Setting.....	Idle/800 RPM

**Pre-Taxi / Taxi**

Gear Lights.....	3 Green
Altimeter .....	Set
Altimeter Error .....	Note Error
Marker beacon Lights.....	Test
NAV Radios.....	Set
Com Radios.....	Set
Comm Radio .....	Ground
Clearance request.....	Requested
Transponder .....	ATC or 1200
Turn/Bank .....	Check
Gyro Instruments.....	Stable

**Runup**

Throttle .....	2300RPM
1. Engine Instruments .....	Check/green
2. Suction Gauge .....	4.6 to 5.4
3. Magnetos .....	<125rpm <50diff
Throttle .....	1850
1. Propeller .....	Cycle Hi/Lo/Hi (2)
Throttle .....	IDLE
Ammeter.....	Check
Heading Indicator (DG) .....	Set
Flaps.....	Exercise/Set UP
Flight controls.....	Check

**Takeoff and Climb**

Door and Window.....	Closed
Mixture.....	Set
Lights.....	ON
Transponder .....	ON to ALT
Fuel Pump.....	ON
<b>Rotate .....</b>	<b>77-88 mph</b>
Climb Speed .....	100 mph
Gear.....	Up
Cruise Climb .....	25" MP/2500 RPM
Cruise Climb Speed.....	110 mph
Fuel Pump .....	OFF- chk pressure

**Approach And Landing**

Passenger Briefing .....	Belts/Talk
Gas .....	Fullest Tank
Fuel Pump .....	On
Landing Light (in clear air) .....	ON
Gear.....	Extended/Locked
<b>Downwind speed .....</b>	<b>125 mph</b>
<b>Base Speed .....</b>	<b>90 mph</b>
<b>Final .....</b>	<b>82 w/Flaps, 90 w/o</b>
<b>Power @ Final .....</b>	<b>12"</b>
<b>AP and GUMP.....</b>	<b>OFF &amp; Complete</b>

**After Clearing Runway**

Flaps .....	Verify/Up
Fuel Pump .....	OFF
Mixture .....	Lean
Trim.....	Takeoff
Transponder.....	Stdby, 1200

**ShutDown, Parking and Securing**

Avionics Master Switch .....	Off
Lights/Beacon/Strobe/AP.....	Off
Throttle.....	1000 rpm
Mixture .....	Idle/Cutoff
Ignition/Master Switch.....	Off
Windows .....	Close

**N7508J - PIPER-ARROW**  
**WARNING - GEAR LIGHTS VERY DIM**  
**WHEN CONTROL PANEL LIGHT SWITCH IS ON**

## EMERGENCY PROCEDURES

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### LANDING GEAR - NOT LOCKED

1. Master..... ON
2. Breakers ..... ON
3. Check NAV lights..... OFF  
**gear lights dim when NAV ON**
4. Gear bulbs ..... SWAP

### EMERGENCY GEAR RELEASE

1. Airspeed..... <100mph
2. Gear switch..... Down
3. EMERGENCY GEAR ..... Push Down  
fishtale abruptly to shake gear down
4. Gear..... 3 Green

### EMERGENCY GEAR UP LANDING

1. Approach ..... 110mph
2. FLAPS ..... UP
3. Throttle ..... CLOSE
4. Master..... OFF
5. Ignition..... OFF
6. Fuel Selector ..... OFF
7. Ground contact @ min speed

### ENGINE POWER LOSS

1. Fuel Selector ..... Opp Tank  
If power not restored after tank switch
1. Fuel Pressure ..... Check
2. Fuel Pump ..... On, if OFF  
or, OFF if ON
3. Mixture..... Full Rich
4. Ignition..... L, R, Both  
find best set

Stall gear dwn- 0flps	69mph
Stall gear dwn- 40flps	63mph
Rotate .....	75mph
V <sub>X</sub> (best angle) ..	90mph
V <sub>Y</sub> (best rate)....	100mph
Cruise Climb ....	110MPH
Land - 0 flaps....	90mph
Land - 40 flaps. .	82mph
V <sub>NE</sub> .....	214mph
V <sub>A</sub> (manuv) ....	134mph
V <sub>FE</sub> 30 flaps ....	125mph
V <sub>max</sub> w/gear down ..	150mph
Glide .....	100mph

### Slow Cruise

110mph (no flaps)	18/2400
100mph (10 flaps)	18/2400
90mph (25 flaps)	18/2400

### 500 fpm Descent

95mph (10+G)	17/2400
88mph (10+G)	15/2500

Empty/Useful	1491/1008
Gross Weight	2500 lbs

Usable Fuel Total 48g (50 TTL)

**Electrical System - 12/14 volt  
Battery 12V - 60Amps**

Fuel ..... ~ 10 gph  
Oil ..... 8 max

Mains ..... 27 psi  
Nose ..... 30 psi

### ELECTRIC TRIM PROBLEM

1. If malfunction, turn off trim using switch on panel beneath yoke column.
2. In emergency, electric pitch trim can be manually overpowered.
3. In cruise configuration, trim malfunction results in 10° pitch change and 30 ft altitude variation.

### AMMETER REGISTERS 0 AMPS

Meter is actually a load meter and shows total load on the electrical system. Minimum value is about 2A with all switches off and a fully charged battery. Night flight with all avionics and lights on will show about 32A. If meter shows 0 amps,

- |                    |                                    |
|--------------------|------------------------------------|
| 1. Electrical load | Reduce                             |
| 2. Breakers        | Check two, reset                   |
| 3. Master          | OFF for 1minute<br>resets OV relay |

If meter still shows 0A, reduce electrical load to minimum and terminate flight ASAP.

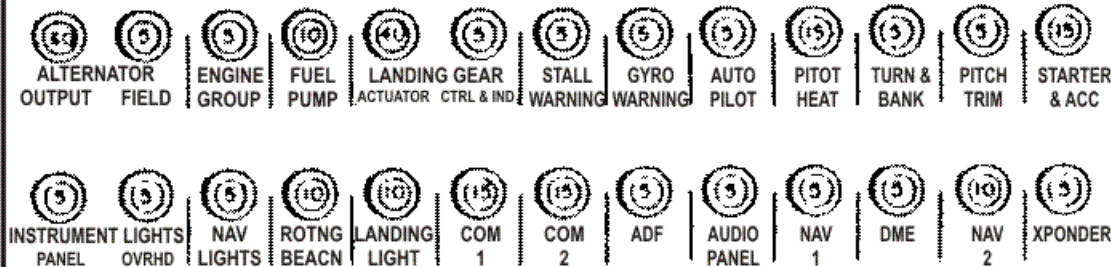
### TRIPPED CIRCUIT BREAKER

1. Allow 5 minute cooling off period
2. Push to reset, pull to disconnect

### GEAR INDICATORS

**YELLOW - In Transit** indicator is **ON** if any of the gears are **not fully retracted** or **not fully extended**.

**GREEN** operate independently and are on as each gear is locked in extended position.



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