

# PA28R-201 – Arrow III PREFLIGHT CHECKLIST

Revision 6-1-2019

## **DISPATCH CHECK**

1. **Weather & Notams**.....**Obtained.**
2. **Squawks**.....Binder reviewed.
3. **Inspections**....Binder dates **reviewed.**
4. **Sick sacks**.....Two in binder.

## **ARRIVAL**

1. Baggage Door.....Opened.
2. Cabin Door.....Cracked.
3. **Fuel Quantity**.....**Checked.**
4. **Fuel Sumped**....**Wings & Gascolator.**
5. **Tiedowns, Chocks, Plugs, Covers**  
.....**Removed.**
6. **Oil Level**.....**6 to 7 Quarts.**

## **INTERIOR PREFLIGHT**

1. Emergency **Gear Extender**....**Standby.**  
(Unpinned /Centered)
2. **Flaps**.....Cycled & **TAKE OFF Set.**
3. Parking Brake.....As Needed.
4. **Cowl Flaps**.....**Opened.**
5. **Control Lock**.....**Removed.**
6. **Flight Controls**.....**Freed /**  
.....full/correct travel **Checked.**
7. **Mixture**.....Idle **cut off.**
8. Friction lock.....Set desired.
9. Switch Breakers .....All OFF.
10. Circuit Breakers.....All in.
11. Battery Master.....ON.
12. Panel Light Rheostat....Set as desired.
13. **Landing Gear Lever**.....**Down.**
14. Gear Indications.....**3 Green, No Red.**
15. **Fuel Gages**...**Compared** to visual Qty.
16. Radio Master.....ON.
17. **Voltmeter**.....**12+ volts** confirmed.
18. EDM LF / DIM.....Press Both.

19. **Hobbsmeter**.....**Recorded.**
20. **Magnetos/Ignition Switch**.....**OFF.**
21. **Annunciators**.....**Tested.**
22. **Pitot Heat/External Lights, Stall Bell.**  
.....**Checked** (Exit & enter cabin).
23. **Switches** .....All **OFF.**
24. **Battery Master**.....**OFF.**
25. **Compass Card**.....**Installed.**
26. **Fuel Selector**.....**Set to least full.**
27. **Alternate Static**....**Tested** as needed.
28. **Pitot Static**..... **Purged.** As needed.
29. Heating and Cooling **Vents**.....**Set.**
30. **Documentation**...AR(R)OW **Checked.**
31. Passenger **Brief Cards**.....**Located.**
32. Fire **Extinguisher**...**Checked** integrity.
33. Alternate Static.....Operable.
34. Pitot Static Plunger.....Push.

## **EXTERIOR PREFLIGHT**

1. Cabin **Roof** .... **Antennas inspected.**
2. **Right Main Landing Gear**.....Rear  
**Inspected.** (Tread, inflation, hub, disk,  
pads, lines, absorber, actuator, spring,  
J Hooks, Microswitch, wheel well, door).
3. **Right Flap**.....**Secure.**  
.....Only has up/down play.
4. **Right Aileron**.....**Secure.**  
.....Free & correct travel.  
.....Only has up/down play.
5. **Right Wing Tip**.**Undamaged/secured.**
6. **Right Wing Surface & Lead edge**.....  
.....**Undamaged.**
7. **Right Wing Tie Down**.....**Untied.**
8. **Inspection Panels**.....**Closed.**  
.....Screws flush.
9. **Right Fuel Vent**.....**Clear.**
10. **Fuel Cap**.....**Secured.**
11. **Main LDG Gear**.....**Front inspected.**
12. **Cowl Flaps**.....**Unobstructed.**
13. **Nose Landing Gear**..... **Inspected.**  
.....Crank Case Oil Breather, Doors,  
.....Wheel Well, Microswitch,

- .....Tow limits, Spring, Actuators,
14. **Right Cowl Hardware**.....**Inspected.**
15. **Engine Intakes**.....**Clear.**
16. **Propeller**.....**Inspected.**
17. **Spinner**.....**Inspected.**
18. Left Cowl Hardware.....Inspected.
19. **Transponder Antenna**....**Inspected.**
20. Left MLG **Squat switch**.... **Inspected.**
21. **Left MLG**.....**As per Right side.**
22. **Stall Vane & Pitot Tube**...**Inspected.**
23. Left Underside, Tiedown, Fuel Drain,  
Fuel Vent, Tank, Cap, Wing Surface,  
.....Lead edge, Wingtip, Aileron, Flap  
.....**As per Right side.**
24. **Left Fuselage**.....**Inspected.**
25. **Left Static Port**.....**Clear.**
26. **Antennas**.....**Inspected.**
27. **Vertical Stabilizer**.....**Secured.**
28. **Rudder**.....**Undamaged. Has play.**
29. **Tail Cone**.....Screws **secure.**
30. **Tail**.....**Untied.**
30. **Stabilator & Actuator**.....**Free**  
.....travel, **undamaged.** Recess  
.....unobstructed.
31. **Stabilator Tab** .....**Secure**  
.....Vertical play only.
32. **Right Fuselage**.....**Inspected.**
33. **Right Static Port**.....**Clear.**
34. **Windshield**.....**Clean?**  
.....(Use Pledge & diaper rags).
35. **Shock Struts**.....**Clean?**  
.....(Spray clean with brake cleaner.)

## **PREFLIGHT COMPLETION**

1. Oil Cans & Shop towels in Trash Box  
Only.
2. Wash hands after handling fuel, oil,  
or chemicals!
3. **Loose Baggage**.....**Secured.**
4. **Baggage door**.....**Locked shut.**
5. WALK AROUND .....Chocks, tiedowns,  
cowl plugs, towbars.....**Removed.**  
Fuel and oil caps.....**Secured.**

# REFERENCE CARD

Revision 6-1-2019 b

## PASSENGER BRIEFING

1. **Seat belt operation.**
2. **Cabin Doors & Window Operation.**
3. **No smoking.**
4. **Moving Switches & Controls –**  
Obtain Permission from PIC and use Positive Exchange.
5. **Passenger Illness:**
  - a. Sick sack location.
  - b. Informing crew early.
  - c. Air vent function.
6. **Forced landing:**
  - a. Seats back, glasses off.
  - b. Loose Items - Stow
  - c. Assume Brace position.
  - d. Cushioning – Obtain.
  - e. Unlatch doors only on PIC's cue.
  - f. Exit 45 degrees to rear after landing.
7. **Safety Equipment Location:**
  - a. Fire Extinguisher
  - b. Egress Hammer
  - c. Flotation Devices
  - d. First Aid, Flares
8. **Unnecessary conversion -** Avoid during critical phases.
9. **Passengers assist in locating traffic.**

## AUTOPILOT CHECK

1. **GREEN RDY LIGHT**.....Lit.
2. **PUSH MODE**.....ON. "STB" Lit.  
.....Wing leveler engaged.
3. **BANK CONTROLLER**.....Check.
4. **HDG MODE**.....Push.  
.....Turn Bug. Controls follow.
5. **ALT MODE**.....ON. Controls stiffen.
6. **"HDG" & "ALT"**.....Annunciated.
9. **YOKE AP DISCONNECT**....Depress.  
.....Controls Released.

## DEPARTURE ENGINE OUT BRIEF

**WITH RUNWAY.....STOP.  
NO RUNWAY OR ALTITUDE .....**

**.....GLIDE AHEAD & SECURE.**  
(Securing: Mix OFF. Flaps SET. Main OFF)

**.....APPROACH BEST SURFACE.  
.....and TURN INTO WIND.**

**LOW ALTITUDE .....**  
**....TROUBLE SHOOT BEFORE SECURE.**

(Troubleshooting: Mix Rich. Pump ON.  
Check Oil & Fuel Gages. Change Tanks.  
Mags BOTH )

**UNDER PARTIAL POWER LOSS.....  
TURN BACK ONLY AVAILABLE FROM  
LOW ALTITUDE OR HIGHER.**

**GIVEN CURRENT LOCAL WINDS &  
TERRAIN WE WILL CALL LOW  
ALTITUDE \_\_\_\_\_ FEET.**

**OTHERWISE FIRST CHANCE TO  
CONSIDER ENGINE OUT TURN BACK  
IS WHEN RUNWAY VISIBLE ON  
WINGTIP.**

Airplane glides (Approx) 1.6 NM "Clean"  
from 1000 AGL at 79 kts, including turns  
(with Prop set to Full Decrease).

## FLOODED START

1. **Ignition Key**.....Insert.
2. **Fuel Selector**.....Set to least full.
3. **Propeller**.....Full forward.
4. **Main Switch**.....ON.
5. **Throttle**..... Set half open.
6. **Prop Area**.....Visually clear
7. **Ignition**.....Start until engine catches.
8. **Mixture**...Slowly richen as engine fires.

*Briefings on this page are intended to  
be reviewed prior to engine start.*

## DEPARTURE BRIEFING

WE ARE DEPARTING RUNWAY \_\_\_\_\_  
IT IS (LEFT/RIGHT) TRAFFIC. RUNWAY  
IS \_\_\_\_\_ FEET LONG.  
WIND WILL MOSTLY BE ON THE  
(LEFT/RIGHT) SIDE OF THE RUNWAY.

WE'LL CHECK INITIAL ACCELERATION  
WHEN SPEED IS ALIVE AT 40 KTS. WE  
SHOULD THEN BE ABOUT ONE STRIPE  
DOWN THE RUNWAY. WE'LL CONFIRM  
GOOD ACCELERATION MIDWAY IN THE  
TAKE OFF ROLL. WE SHOULD ROTATE  
AT ABOUT ( \_\_\_\_\_ FEET OF GROUND  
ROLL / NEAR TAXIWAY \_\_\_\_\_)

ROTATE AT \_\_\_\_\_ KNOTS & PITCH FOR  
\_\_\_\_\_ KNOTS. PASSING \_\_\_\_\_ FEET,  
(FLY HEADING / TURN CROSSWIND)  
\_\_\_\_\_. TOP OF CLIMB IS \_\_\_\_\_  
FEET.

WE WILL BE CLOSED TRAFFIC (or)  
PRIMARY NAVIGATION WILL BE  
[VISUAL, LOOKING FOR \_\_\_\_\_  
(LANDMARK) / (GPS TO \_\_\_\_\_ / THE  
\_\_\_\_ VOR) ].

IN THE EVENT OF AN EMERGENCY,  
\_\_\_\_ WILL FLY THE AIRPLANE, AND ON  
CUE \_\_\_\_\_ WILL READ THE CHECKLIST  
BY "CHALLENGE & RESPONSE  
RESPONSE"

Insure copilot can locate check lists for  
Engine Failure On Take Off, Engine Failure  
In Flight, Forced Landing, Precautionary  
Landing, and Fires.

# PA28R-201 – Arrow III OPERATING CHECKLIST

Revision 6-01-2019

*Italicized Items* are minimum ground repo tasks.  
**Bold items** are checklist items to be verbalized.  
(Parentheses) items provide expansion.

## PRESTART Flow & Check

1. **Passengers / Emergencies**... Briefed.
2. **Departure Procedures**..... Reviewed.
3. **Belts, Harnesses**..... Secured.
4. **Brakes**..... Tested / Set.
5. **Battery Switch**..... ON.
6. **Voltmeter**..... >12 Volts.

Defer to AFTERSTART #11 if 12 Volts.

**CRAFT**..... Loaded.  
(Cleared Route & CDI, Altimeter,  
Frequencies, Transponder  
Code/Mode & Reply)

7. **Avionics Master**..... OFF.
8. **Nav Lights**..... ON.
9. **Door**..... Secured.
10. **Ignition**..... Keyed.
11. **Fuel Selector**..... Set least full.
12. **Propeller**..... Full Forward.
13. **Throttle**..... Set.  
(Normal Start: Open ½ Inch. HOT  
Start: ½ Open. Flooded: Full Open.)
14. **Mixture**..... RICH.

-----Start-----

### Reference & Flow

1. Fuel Pump..... As Required / OFF.  
(Normal Start: 5 GPH. Warm: 1-2 Sec.  
.....HOT/Flooded: OFF)
2. Mixture..... Cut Off.
3. Prop Area..... Visually clear.
4. Ignition..... START / As Required.
5. Mixture (Engine catches)..... 1/2 to 2/3

## AFTER START Flow & Check

1. **RPM** .....(Cold / Warm) **1000 /1200**.
2. **Oil Pressure**..... (In 30 sec) **Green**.
3. **Alternator Switch**..... ON.
4. **Annunciators**..... Unlit.
5. **Flight Instruments**..... Checked / Set.
6. **Headsets & Radios**..... ON / Checked.
7. **CRAFT**..... Checked Set.
8. **Autopilot**..... Tested / READY.  
.....(Lit Green)
9. **Bugs**..... Set.
10. **Trims**..... Tested / TAKE OFF.
11. **Mixture**..... (½ travel) Lean for Taxi.
12. **Fuel Selector**..... Fullest.
13. **Lights & Pitot Heat** ..... Cycled /  
..... Amp Load Supported.
14. **Time**..... Noted.
15. **Parking Brake**..... OFF.

## TAXI Flow & Check

1. **Oil Stains**.....(Pivot) Checked.
2. **Turn Coordinator**..... Actuates.
3. **Flight Controls**..... Free.
4. **Lights**..... As Required.

At Runup Spot:

5. **Nose wheel**..... Straight.
6. **Parking Brake**..... Set.
7. **Doors**..... Secured.
8. **Mixture**..... Rich.
9. **Oil Temp**..... Green.  
(Warm oil at 1500)

## RUNUP & BEFORE TAKE OFF

### Flow & Check

- (Runup power 2000 RPM)
1. **Magneto Check**.....(L/Both, R/Both.)  
.....<175 RPM drop/50 between.
  2. **Magnetos**..... BOTH.
  3. **Prop Cycles** ..... Smooth Travel.  
.....MP/RPM varies.  
..... Oil Pressure Changes.  
..... No Spray.
  4. **Governor Check**..... RPM Corrects.  
(Prop 18-1900 RPM, MP +1 / -2 inch)
  5. **Alternate Air**..... Checked / OFF.
  6. **Fuel Pump** ..... ON / Pressure Rises.
  7. **Engine Instruments**... Normal Range.
  8. **Annunciators**..... Unlit.
  8. **Idle RPM**..... Steady.
  9. **Throttle**..... 1200 RPM.
  10. **Breakers**..... In & cool.
  11. **Brake**..... Released.

- Before Take Off-----
12. **Trim**..... TAKE OFF.
  13. **Flaps** (0 to 25. As Needed)..... Set.
  14. **Cowl Flaps**..... Open.
  15. **Mixture & Propeller**..... Forward.
  16. **Fuel Pump**..... ON.
  17. **Fuel Selector**..... Fullest.
  18. **Departure Brief**..... As Needed.  
(Speeds, Courses, Altitudes,  
Emergency, Take Off & Climb Flows)

**VR**..... 70 KIAS.  
**Initial Climb**..... 78 KIAS.  
**VY- Gear RETRACTED**..... 90 KIAS.  
**VG**..... 79 KIAS.  
Power Off Short Final..... 72 KIAS.

- Final Items-----
19. **Autopilot**..... Disengaged.
  20. **Air Conditioner**..... OFF.
  21. **Doors**..... Latched.
  22. **Lights** (Strobes /Recog)..... ON.  
.....(Landing if dark, or towered field.)
  23. **Pitot Heat**..... Set (As Required.)

**TAKE OFF****Reference & Flow**

1. "Approach & Departure..... Clear."
2. Max Power – (Set / Check MP/Fuel Flow, Oil Temp & Press, 4x EGT).  
"2700 RPM, Engine Inst. Green."
3. "Brakes..... Released"
4. "40 kts (Speed alive by 2nd Centerline Stripe.)..... Continue / Stop."
5. "Good Acceleration (by 4<sup>th</sup> Centerline Stripe.) .....Continue / Stop."
6. "70 kts (VR).....Rotate."

Attitude: +5 degrees >VY. +10 deg. @ VY

**CLMB****Flow & Check**

1. Landing Gear...(+ROC/VY) Retracted.
2. Flaps ..... (300 AGL) Retracted.
3. Cruise Climb .....(700 AGL) Set.
4. Power.....(≥25"MP as needed) Set.
5. RPM..... 2500.

Exiting Pattern:

6. Fuel Pump ..... OFF
7. Fuel Pressure ..... Checked.
8. Timer ..... Started.
9. Cowl Flaps..... Set. As needed.

**CRUISE****Flow & Check**

1. Power, RPM, Mixture..(Per Chart) Set.
2. Trim / Lights.....Set (As Needed)
3. Indications.....Verified. (Monitor)
4. Fuel Tanks.....Selected.  
(Switch every 30 min with Pump ON.)
5. Cowl Flaps.....Closed.
6. Mixture .....(Max CHT 400 F) Reset.  
(Set EGT 100F ROP time permitting.)
7. Trend Data.....(TOC +5 min) Noted.

| Density Altitude | MP & RPM                 | % BHP    | Best Power GPH/TAS       |
|------------------|--------------------------|----------|--------------------------|
| 2,000            | 25.0 /2400<br>22.5 /2400 | 75<br>65 | 11.6/135kt<br>10.4/127kt |
| 4,000            | 24.4 /2400<br>22.0 /2400 | 75<br>65 | 11.6/139kt<br>10.6/132kt |
| 6,000            | 21.5 /2400               | 65       | 10.6/133kt               |
| 8,000            | 21.0 /2400               | 65       | 10.6/136kt               |
| 10,000           | 18.3/2400                | 55       | 9.1/127kt                |

**DESCENT****Flow & Check**

1. Altimeter.....Set.
2. CDI .....Selected.
3. Autopilot.....Mode verified.
4. Lights.....ON (As needed.)
5. Indications.....Verified
6. Brakes.....(Resistance) Checked.
7. Cowl Flaps.....Closed.
8. Gear Extender....(Unpinned) Standby.

**APPROACH TO LAND****Flow & Check**

1. Belts, Harnesses, Loose Items.....  
.....Secure.
2. Fuel Pump.....ON.
3. Fuel Selector.....Fullest.
4. Mixture.....RICH.
5. Landing Gear.....(-129kts) DOWN.  
.....
6. Propeller..... (At VFE) 2500 RPM.  
(Final - Full Forward)
7. Flaps.....As Required.
8. Air Conditioning.....OFF.
9. Autopilot.....OFF.

**SPEEDS****Quick Reference**

1. Approach - No Flaps.....85 KIAS.
2. Approach - Flaps 10 or 25.....80 KIAS.
3. Approach - Flaps LANDING....75 KIAS.
4. No wind, short field, TCH.....75 KIAS.
5. VX- Flaps TAKE OFF.....78 KIAS.

**AFTERLANDING****Flow & Check**

1. Flaps..... Retracted.
2. Mixture.....Lean for taxi.
3. Fuel Pump.....OFF.
4. Strobes / Landing Light.....OFF.
5. Pitot Heat.....OFF.
6. Cowl Flaps.....Open.

**SHUT DOWN****Flow & Check**

1. Taxi Lights.....OFF.
2. ELT.....(121.5) Quiet.

**-----Reference & Do-----**

3. ALL Avionics Units.....OFF.
4. Brake.....Set IF Required.
5. Air Conditioning.....OFF.
6. Magnetos.....Idle Ground Tested.  
(L, OFF, BOTH)
7. Power.....1000 RPM.
8. Mixture.....Cut off.
9. Magnetos.....OFF. Key out.
10. Hobbs/Tach.....(Press LF/Dim) Noted.
11. Master Switch .....OFF.
12. Fuel Selector..... OFF.

**POST FLIGHT****Reference & Flow**

1. Flight Plan.....CLOSED.
2. Squawks.....Record.
3. Control Lock.....Installed.
4. Trash.....Removed.
5. Towbar.....Secured.
6. Cowl plugs.....Install.
7. Pitot cover.....Install.
8. Cabin cover.....Install.
9. Tiedowns.....Secure.
10. Tire condition.....Verify.
11. Bugs.....Washed off.
12. Doors.....Latch cabin & cargo.

# EMERGENCY PROCEDURES

PA28R Revision 11-15-2016

## ENGINE PROBLEMS

### ENGINE FAILURE ON THE ROLL

1. Brakes.....Max.
2. Mixture..... Idle Cut Off.

### ENGINE FAILS DURING TAKE OFF

1. Speed.....70/79 kts, gentle banks only.
2. Mixture.....RICH.
3. Electric Fuel Pump.....ON.
4. Fuel Selector.....Switch tank.
5. Alternate Air.....OPEN.
6. Back Up Gear Extender .....  
.....Override As Needed.
7. If engine does not restart.....  
.....Go to **Power Off Landing**

### ENGINE FAILURE IN FLIGHT

1. Fuel Selector.....Switch Tank.
3. Electric Fuel Pump.....ON.
4. Mixture.....RICH.
5. Alternate Air.....OPEN.
7. Magnetos.....BOTH.
8. Engine Indications.....Check.
9. If engine does not restart.....  
.....Trim for 79 Kts.  
.....Go to **Power Off Landing**

### LOW OIL PRESSURE

1. Light On & Gage Low...Reduce Power.
2. Oil Temp in High Red...Reduce Power.  
.....Go to **Power Off Landing**

### LOW FUEL FLOW (Verify fuel Qty gages)

1. Electric Fuel Pump.....ON.
2. Fuel Selector.....Switch Tank.

### HIGH OIL TEMPERATURE

1. Land.....At nearest airport.
2. Power off Landing.....Anticipate.

### ENGINE ROUGHNESS

1. Mixture.....Adjust.
2. RPM.....Adjust for minimum vibration.
3. Alternate Air.....OPEN.
4. Electric Fuel Pump.....ON.
5. Magneto Switch..... L / R / Both.
6. Problem Persists .....  
.....Declare Emergency. Land.

### POWER OFF LANDING

1. Speed.....79 kts.
2. Emergency Gear Lever.....  
.....Prior to 105 Kts-Lock As Needed.
3. Radio.....Mayday call. 121.5 or ATC.
3. Transponder.....7700.
4. Mixture.....Idle Cut OFF.
5. Main switch.....OFF.
6. Magnetos.....OFF.
7. Fuel selector .....OFF.
8. Seats, Belts, Harnesses....Secured.
9. Speed.....72 field made.
10. Landing Gear...As Needed field made.
11. Flaps.....LANDING prior touchdown.

### PRECAUTIONARY LANDING

1. Radio.....Mayday call. 121.5 or ATC.
2. Speed.....79 / 72 kts.
3. Field.....Fly over prior to approach.
4. Seats, Belts, Harnesses.....Secured.
5. Landing Gear.....As Needed.
6. Main Switch.....OFF.
7. Landing.....Full Flaps. Nose high.
8. Mixture..... OFF during flare.
9. Brakes.....Apply.

### DITCHING

1. Emergency Gear Lever  
.....Locked prior 105 kts.
2. Seats, Belts, Harnesses.....Secured.
3. Speed.....72 kts.
4. Door.....Ajar.
5. Touch Down...Nose high/parallel swells.

### EMERGENCY DESCENT

1. Throttle..... Reduce as needed.
2. Airspeed.....129 kts.
3. Landing Gear .....DOWN.
4. Airspeed.....129 kts (VLE).
5. Crosscheck.....CHT.

## FIRES

### ENGINE FIRE DURING START

1. Ignition....."Start".
2. Mixture.....Idle Cut-Off.
3. Throttle.....Full forward.
4. Fuel Selector.....OFF.
5. Fuel Pump.....OFF.
6. Fire Continues  
a. Master Switch.....OFF.  
b. Evacuate & extinguish.

### CABIN / ELECTRICAL FIRE

1. Master Switch.....OFF.
2. Cabin Heat.....OFF.
3. Extinguisher.....Activate.
4. Cabin Air.....Partial open as needed.
5. Land..... As Soon As Possible.
6. If Fire Out-  
a. All Electrical Switches..... OFF  
b. Divert to Nearest Suitable Airport.  
c. Electrical Units.....  
.....ON one at a time if required only.

**FIRES CONTINUED NEXT PAGE.**

**AIRBORNE ENGINE FIRE**

1. Smoke/Flames Visually Detected.....
2. *Dive*.....*Suffocate Fire.*  
.....(*Altitude Permitting*)
2. **Fuel Selector**.....**OFF.**
3. Throttle.....CLOSED.
4. **Mixture**.....**OFF.**
5. **Fuel Pump**.....**OFF.**
6. **Heater/Defroster**.....**OFF.**
7. Go to **Power Off Landing**

**WING FIRE**

1. **Pitot Heat and Lights**.....**OFF.**
2. **Slip**...*Keep flames off fuel tank and tail.*
4. *Dive*.....*Suffocate Fire.*  
.....(*Altitude Permitting*).
5. **Emergency**.....**Declare.**
6. **Land**.....*As soon as possible.*

**SYSTEM FAILURES**

**DOOR OPEN IN FLIGHT**

1. **FLY THE PLANE FIRST.**
2. **CRM / Autopilot**.....**As Needed.**
3. **Speed**.....Slow to **87 Kts.**
4. Cabin Vents.....Close.
5. Storm Window.....Open.
1. Flaps & Trim .....Do not change.
2. If Upper Latch Open.....Latch.
3. If Side Latch Open.....  
...Pull armrest while move latch handle.
4. If Both Latches Open.....  
.....Latch side latch, then top latch.

**AIRSPPEED INDICATOR FAILURE**

1. Pitot Heat.....ON.
2. **GPS Ground Speed**...**Cross check.**
3. **Alternate Static**.....**Pull.**
4. Cabin Air.....Open.
5. IAS still Erratic.....Approach 15"  
.....Propeller full increase.

**VACUUM PUMP FAILURE**

**GPS**.....**Cross check** for *track* readout.

**STATIC SYSTEM FAILURE**

1. **Alternate Air**.....**Pull.**
2. **GPS**.....**Cross check** Alt, GS, VS info.

**SINGLE BRAKE FAILURE - LANDING**

(Aircraft pulling to side at application, not decelerating)

1. Rudder.....*Heavy opposite to yaw.*
2. **Brakes**.....**Pump.**
3. **Wing Flaps**.....**Retract.**
4. **Stabilator**.....**Full back.**

**FLAT MAIN TIRE – LANDING**

(Aircraft pulling to side without brakes applied)

1. Aileron & Rudder..... **Opposite yaw.**
2. **Brake - Gradual increase** opposite yaw.

**STABILATOR FAILURE**

1. **Trim**.....**79 Kts.**
2. **Power**
  - a. **For 500 FPM** descent.
  - b. Carry into the landing flare.
3. **Flare**.....**With trim.**

**AILERON FAILURE**

1. **Rudder**.....*For Lateral control.*
2. **Flaps**.....**Retract.**

3. *Approach*..... 79 kts.

**PROPELLOR GOVERNOR FAILURE**

1. Oil Pressure.....Check.
2. **Propeller**.....**Full Decrease.**
3. **Throttle and Airspeed**.....  
.....**Reduce to hold 2700 RPM.**

**INVOLUNTARY SPIN**

1. Rudder.....**Full & opposite rotation.**
2. **Control Wheel**.....**Full forward.**
3. **Ailerons**.....**Neutral.**
4. **Throttle**.....**Idle.**
5. Rudder... *Nuetral when rotation stops.*
6. Flaps.....*Retracted.*
7. **Control Wheel**.....  
.....*As required to regain level flight.*

**WEATHER**

**INADVERTANT ICING**

1. **Heading**.....*Turn around.*
2. **Altitude**.....**Change.**
3. **Alternate Air**.....ON.
4. **Pitot Heat**.....ON.
5. **Demisting & Heating**..... **Max.**
6. **RPM**...*High. Cycle to max @ intervals.*
6. **Stall speed**.....*Expect increase.*

## **ELECTRICAL**

### **ELECTRICAL EQUIPMENT FAILURE**

**CB Popped...Only reset Once if urgent.**

### **ALTERNATOR FAILURE**

1. Electrical Load.....  
.....Reduce as much as possible.
2. Alternator Switch.....OFF.
3. Alternator Switch.....ON (1 sec. later).
4. If No Output.....
  - a. Alternator Switch .....OFF
  - b. Electrical load...Reduce/Minimize.
  - c. Divert.
  - d. Landing Gear.....  
.....Use Emergency Extension.

### **COMMUNICATIONS FAILURE**

1. Radios.....*Check Volume.*
2. PTT.....*Test Pilot/Copilot.*
3. Audio Panel.....*Check.*  
.....*Transmitter, Receiver.*
4. Intercom.....*Check.*  
.....*Muting, Crew Isolation.*
5. Nav Audio.....*Select if IFR.*  
.....*Monitor nearest VOR.*
6. Headset Jacks.....*Swap.*
7. CB Panel.....*Check.*
8. Radios.....*Transmit in Blind.*
9. Squawk.....*7600.*

## **LANDING GEAR ISSUES**

### **LANDING GEAR FAILS TO RETRACT**

**[Red In Transit Light On]**

1. LDG Gear CB.....*Check in.*
2. Emergency Landing Gear Control.....  
.....*Pushed in.*
3. Landing Gear.....*Recycle Up.*
4. *If Gear does not retract, set gear down.*

### **LANDING GEAR FAILS TO EXTEND**

**[Green Light(s) Out]**

1. Master Switch.....ON.
2. Panel Lights.....Off (Daytime).
3. Landing Gear.....Down.
4. LDG Gear Pump /Lights.....CBs  
.....*Check in.*
5. Landing Gear Lights.....Swap.
6. Speed.....87 KT.
7. LDG Gear CB.....Trip.
8. Landing Gear Lever.....Down.
9. Emergency Gear Lever.....  
.....*OVERVERRIDE ENGAGED / Apply Yaw.*
10. Gear Lights.....3 Green, no red.
11. Landing.....Normal.

### **IF GEAR STILL SUSPECTED UNSAFE**

1. *Airplane.....Yaw/slip.*
2. *Low Pass.....Perform.*  
.....*Obtain ground observation of gear.*

### **NOSE LANDING GEAR UP OR PARTIALLY EXTENDED**

1. Flaps.....Landing.
2. Speed.....70 KT.
3. Seats, Belts, Harnesses.....Secure.  
**SHORT FINAL**
4. Master.....OFF.
5. Mixture.....Idle Cut-off.  
**AFTER TOUCH DOWN**
6. Elevator Back Pressure.....Hold full aft.
7. Braking.....Minimize.

### **MAIN LANDING GEAR UP OR PARTIALLY EXTENDED**

1. Landing Gear.....*Retract. Set UP.*
2. Emergency Gear Lever.....Locked.
3. Flaps.....Landing.
4. Speed.....72 KT.
5. Seats, Belts, Harnesses.....Secure.  
**SHORT FINAL**
6. Master.....OFF.
7. Mixture.....Idle Cut-OFF.
8. Landing.....*Grass surface preferred.*

**Bold Items are 1WA Memory Items.**

Italicized items are suggested by 1World Aero, and are not specified by Piper AFM.