

# MOORABBIN AVIATION SERVICES PTY LTD

## PA28R-201 (PIPER ARROW) CHECKLIST

### PRE START

Daily.....complete  
Flight Manual.....on board  
Maintenance Release.....checked&signed  
Licence/Medical.....current,onboard  
Loose items.....stowed  
Seat.....adjusted  
Harness.....secure  
Park Brake.....on  
Pitch.....full fine  
Fuel.....on lowest tank  
Avionics ..... off  
Switches.....off  
Circuit breakers .....in

### START CHECKS

Throttle ..... 1 cm open  
Master Switch.....on  
Fuel pump.....on  
Mixture .....rich to prime,then to idle cut off  
Check.....“Clear Prop”  
Magnetos ..... start  
Mixture ..... full rich

### AFTER START

Revs..... set 1000 rpm  
Oil pressure.....green arc within 30 secs  
Suction..... 4.8”-5.1” Hg  
Flaps ..... retracted  
Ammeter..... positive charge  
Radio.....on/check ATIS/back to GND  
Beacon.....on

### TAXI CHECKS

Brakes.....checked  
Instruments .....turning checks

### PRE T/O VITAL ACTIONS

**T**..... trims set, throttle friction adjusted  
**M**..... mixture rich/master on/mags on both  
**P**..... propeller, full fine  
**Fuel pump on,change tanks,pump off-check pressure**  
**F**..... 3 stages flap checked  
**I**..... instruments checked and set  
..... auto pilot checked  
**S**..... switches, as required  
**C**..... controls full & free  
**H**..... hatches & harnesses secure

### RUN-UP CHECKS

Park brake ..... on  
Oil temp & pressure .....green arc  
Lookout.....all clear  
Throttle .....set 2000 rpm  
Magnetos .....left, both, right, both  
max drop 125 RPM,max diff 50 RPM  
Alternate air ..... on then off  
Pitch Lever.....bring back till drop  
.....max 500 rpm. Repeat 3 times  
Pitch Lever..... set fully fine  
Ammeter ..... positive charge  
Suction ..... 4.8” – 5.1” Hg  
Slow idle ..... smooth running  
Throttle .....set 1000 rpm

### PRE LINE UP CHECKS

**P**..... fuel pump on  
**I**.....instruments, DG to compass  
**S**..... strobes on  
**T**..... transponder to ALT  
**R**.....Radio,Change Frequency

### AFTER T/O CHECKS

Undercarriage..... Identify, Select, Retract  
(Speed below 107, gear up)  
Flaps..... retracted 200 ft  
Power ..... set 25”/2500 RPM  
Oil temp & pressure .....green arc  
Fuel pump ..... off 400 ft, pressure checked

### PRE MANOEUVRE CHECKS

**H**..... Height sufficient to recover by 3000 ft  
**A**..... Airframe config appropriate  
**S**..... Security of harnesses/loose objects  
**E**..... Engine T’s and P’s in green,pump on  
**L**..... Location not over a built up area  
**L**..... Lookout 360° clearing turn

### PRE LANDING CHECKS

**S**..... Speed below 129 KIAS  
**B**..... Brakes, check pressure and off  
**U**..... Undercarriage down and locked  
**M**..... Mixture rich,Master on ,Mags both  
**F**..... Fuel pump on, press & contents  
**O**..... Oil Temp & Pressure,green arc  
**H**..... Hatches & Harnesses secure

### FINAL CHECKS

**P**..... Pitch fully fine  
**U**..... Undercarriage down, 3 greens  
**F**..... Flaps set as required

### AFTER LANDING CHECKS

Flaps .....retract  
Fuel pump.....off  
Strobes ..... off  
Transponder.....STBY  
Radio ..... to GND

### SHUTDOWN

Park brake.....on  
Throttle..... set 1000 rpm  
Propeller.....full fine  
Magnetos.....check for RPM drop  
Avionics.....off  
Beacon..... off  
Mixture .....idle cut off  
Throttle .....closed  
Master/Alternator ..... off  
Magnetos.....off,key out  
Park brake.....release if tying down

### POST FLIGHT

Controls ..... secure  
Hatches ..... secure  
Tie downs..... secured

### RADIO FREQUENCIES

MB GROUND ..... 119.9 MHz  
MB TOWER (EAST) ..... 118.1 MHz  
MB TOWER (WEST)..... 123.0 MHz  
MB ATIS ..... 398 or 120.9 MHz

EN GROUND ..... 121.9 MHz  
EN TOWER ..... 125.1 MHz  
EN ATIS ..... 356 or 119.8 MHz

ML RAS ..... 135.7 MHz  
ML APP ..... 124.7 MHz  
ML DEP ..... 118.9 or 129.4 MHz  
ML TWR ..... 120.5 MHz  
ML SMC ..... 121.7 MHz  
ML ACD ..... 127.2 MHz  
ML ATIS ..... 114.1 or 132.7 MHz

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<u>EMERGENCY PROCEDURES</u>		<u>PA28R (PIPER ARROW) DATA</u>																																									
<p><b><u>ENGINE FIRE DURING START</u></b></p> <p>Starter ..... crank engine  Mixture ..... idle cut off  Throttle ..... open  Electric fuel pump ..... off  Fuel selector ..... off</p> <p>Abandon if fire continues</p> <p><b><u>ENGINE FAILURE IN FLIGHT</u></b></p> <p>INITIAL ACTIONS:</p> <p><b>CHECK FOR FIRE</b></p> <p>Throttle ..... set 1/3 position  Alternate air ..... on  Mixture ..... rich  Fuel pump ..... on  Fuel selector ..... change tanks</p> <p><b>ASSESS WIND  SELECT FIELD  MAKE PLAN</b></p> <p>TRUBLE CHECKS:</p> <p>Fuel ..... on contents checked  Mixture ..... through range, set rich  Oil ..... temps and pressure  Switches ..... check magnetos  Throttle ..... through range set 1/3 position</p> <p><b>MAYDAY CALL  SHUTDOWN CHECKS:</b></p> <p>Brakes ..... check pressure and off  Undercarriage ..... down  Switches ..... all off, fuel off  Hatches and harnesses ..... secure</p>	<p><b><u>ENGINE FIRE IN FLIGHT</u></b></p> <p>Mixture ..... idle cut-off  Throttle ..... closed  Fuel Pump ..... off  Fuel Selector ..... off  Heater ..... off  Defroster ..... off</p> <p>Proceed with</p> <p>POWER OFF LANDING</p> <p><b><u>LOSS OF OIL PRESSURE /</u></b></p> <p><b><u>HIGH OIL TEMPERATURE</u></b></p> <p>Land as soon as possible and investigate cause.</p> <p>Prepare for power off landing</p> <p><b><u>EMERGENCY GEAR EXTENSION</u></b></p> <p>Gear selector ..... down  Circuit breaker ..... in  Nav lights ..... off  Master switch ..... on  Bulbs ..... checked  Speed ..... below 87 KIAS  Emerg gear dump ..... hold down</p> <p>If gear fails to extend, yaw aircraft abruptly.</p> <ol style="list-style-type: none"> <li>1. Reduce airspeed to below 87 KTS.</li> <li>2. Move landing gear selector to down.</li> <li>3. Move the emergency gear lever to emergency down position.</li> <li>4. If gear fails to lock down, yaw the aircraft abruptly from side to side with rudder.</li> </ol> <p>For other emergency procedures refer to section 3 of the Pilots Operating Handbook.</p>	<p><b><u>AIRSPEDS</u></b></p> <p>Basic Stall Speed (<math>V_{S1}</math>) ..... 60 KIAS  Stall with Flap (<math>V_{S0}</math>) ..... 55 KIAS  Best Climb Angle (<math>V_X</math>) ..... 78 KIAS  Best Climb Rate (<math>V_Y</math>) ..... 90 KIAS  Cruise Climb (Normal) ..... 104 KIAS  Flap Limit Speed (<math>V_{FE}</math>) ..... 103 KIAS  Gear Extending (<math>V_{LE}</math>) ..... 129 KIAS  Gear Retracting (<math>V_{LO}</math>) ..... 107 KIAS  Threshold ..... 70 KIAS</p>	<p>Manoeuvre Speed (<math>V_A</math>) ..... 96-118 KIAS  Flight Planning TAS ..... 135 KTAS  Maximum Cruising (<math>V_{NO}</math>) ..... 146 KIAS  Never Exceed (<math>V_{NE}</math>) ..... 183 KIAS  Best Glide ..... 79 KIAS  TOSS ..... 70 KIAS  Base ..... 90 KIAS  Final ..... 75 KIAS  Maximum Crosswind ..... 17 KIAS</p>																																								
		<p><b><u>WEIGHT LIMITATIONS</u></b></p> <p>Max Takeoff Weight ..... 1202 Kg  Empty Weight: ..... 785.5 Kg ( for VH-HXJ)  Max Baggage Weight ..... 90 Kg</p>																																									
		<p><b><u>FUEL</u></b></p> <p>Type: ..... 100 Octane Avgas (green) or 100 LL (blue)  Quantity: ..... Total 189 lt, Useable 181 lt  Typical Consumption: ..... 45 lt per hour (fuel flow at 75%)</p>																																									
		<p><b><u>POWER SETTINGS</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td>Take-off</td> <td colspan="3">29.5" / 2700 RPM</td> </tr> <tr> <td>Climb</td> <td colspan="3">25" / 2500 RPM</td> </tr> <tr> <td>Cruise</td> <td>(2400)</td> <td><b>55%</b></td> <td><b>65%</b></td> </tr> <tr> <td></td> <td><b>2000"</b></td> <td>20.0"</td> <td>22.5"</td> </tr> <tr> <td></td> <td><b>4000"</b></td> <td>19.5"</td> <td>22.0"</td> </tr> <tr> <td></td> <td><b>6000"</b></td> <td>19.1"</td> <td>21.5"</td> </tr> <tr> <td></td> <td><b>8000"</b></td> <td>18.7"</td> <td>21.0"</td> </tr> <tr> <td>Descent</td> <td colspan="3">20-24" / 2400 RPM</td> </tr> <tr> <td>Circuit</td> <td colspan="3">21" / 2400 RPM</td> </tr> <tr> <td>Base</td> <td colspan="3">15" / 2400 RPM</td> </tr> </table>	Take-off	29.5" / 2700 RPM			Climb	25" / 2500 RPM			Cruise	(2400)	<b>55%</b>	<b>65%</b>		<b>2000"</b>	20.0"	22.5"		<b>4000"</b>	19.5"	22.0"		<b>6000"</b>	19.1"	21.5"		<b>8000"</b>	18.7"	21.0"	Descent	20-24" / 2400 RPM			Circuit	21" / 2400 RPM			Base	15" / 2400 RPM			
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		<p><b><u>ENGINE</u></b></p> <p>Avco Lycoming IO-360-C Series  4 cylinder, horizontally opposed, direct drive, air cooled, fuel injected  Output: ..... 200 Hp @ 2700 rpm</p>																																									
		<p><b><u>OIL</u></b></p> <p>Type: ..... Aviation grade D100  Quantity: ..... Max 8 US quarts, Min 6 US quarts (Company reqts)</p>																																									