

# FREEDOM AVIATION

## PIPER WARRIOR CHECK LIST

This check list must not be taken as authoritative and must be used in conjunction with the Pilots Operating Handbook, issued as part of the Aircraft C of A as amended. The requirements of current CAA, EASA, AIP, ANO, AICs, Freedom ATO Manual and ATC instructions must be adhered to.

**Checks in DARK RED with sidebar must be committed to memory**

### CONTACT DETAILS:

|                               |                                 |
|-------------------------------|---------------------------------|
| Freedom Aviation:             | 07973 322698                    |
| Cotswold Airport Operations:  | 01285 771177                    |
| Distress & Diversion:         | 01489 612691                    |
| AFPEX – closing flight plans: | 01489 612792 (24 Hour Helpdesk) |

### OUT BRIEF

Booked into destination  
Met situation – TAFs & METARS  
NOTAMs to affect flight  
A-Check / Transit Check  
Aircraft Tech Log Completed  
Current Charts & VFR Flight Log  
Mass & Balance  
Performance Calcs Complete

### If landing away:

Flight Plan submitted and acknowledged  
GAR Customs forms submitted  
Aircraft Documents (Journey Log & Crew Licences)  
Flying over water: Life jackets, Life raft, PLB

### AFTER Arrival at Destination:

Overseas destination: Close flight plan with destination airfield, last ATC unit or AFPEX

### RADIO FREQUENCIES

|                    |               |                                 |       |                |
|--------------------|---------------|---------------------------------|-------|----------------|
| KEMBLE INFORMATION | 118.430       | FARNBOROUGH                     | West  | 125.250        |
| OAKSEY RADIO       | 132.230       |                                 | North | 132.800        |
| BRIZE              | RADAR 124.275 |                                 | East  | 123.225        |
|                    | ZONE 119.000  | GLOUCESTER                      | APPR  | 128.555        |
| LISTENING SQK      | 3727          |                                 | TWR   | 122.905        |
|                    | ATIS 126.500  |                                 | ATIS  | 127.480        |
| BOSCOMBE APPROACH  | 126.700       | LONDON INFO (WEST)              |       | 124.750        |
| BRISTOL            | RADAR 125.650 | <b>DISTRESS &amp; DIVERSION</b> |       | <b>121.500</b> |
| LISTENING SQK      | 5077          |                                 |       |                |

## **FIRST FLIGHT OF THE DAY - 'A' CHECK (signed for in the Journey Log)**

### **COCKPIT PREPARATION**

|                                                                               |                                         |
|-------------------------------------------------------------------------------|-----------------------------------------|
| Control lock .....                                                            | Removed                                 |
| Parking Brake .....                                                           | Set OFF then ON                         |
| Fire Extinguisher .....                                                       | Check, in date (under front seat)       |
| First Aid Kit .....                                                           | Check, in date (rear of seat)           |
| PLB .....                                                                     | Check, in date (rear of seat)           |
| Magneto/starter .....                                                         | OFF, keys out                           |
| Pitot Static Source (under pilot's inst panel) .....                          | Normal (lever points to right wing)     |
| Heat and Demist Controls .....                                                | OFF, fully LEFT                         |
| Battery & Alternator Switches .....                                           | ON                                      |
| Fuel Selector .....                                                           | ON, select <b>lowest</b> tank           |
| <i>Note: Take as short a time as possible to avoid flattening the battery</i> |                                         |
| Fuel Pump .....                                                               | ON, check ½ - 5 psi, OFF                |
| Nav Lights .....                                                              | ON (left rotating switch up)            |
| Panel Lights .....                                                            | OFF (right rotating switch down)        |
| Landing Light .....                                                           | ON                                      |
| Anti Collision Lights .....                                                   | ON                                      |
| Pitot Heater .....                                                            | ON                                      |
| <b>Outside:</b> Check strobes, all lights, pitot heater, stall warner buzzer  |                                         |
| <b>Return to Cockpit</b> .....                                                | ALL the above OFF (leave nav lights on) |
| Battery & Alternator Switches .....                                           | OFF                                     |
| Flaps .....                                                                   | Check operation, set full down          |
| Fuel Tester tool .....                                                        | Remove from stowage                     |

### **STARBOARD (RIGHT) WING**

|                                   |                                                                                                    |
|-----------------------------------|----------------------------------------------------------------------------------------------------|
| Flap .....                        | Security, attachment bolts, side play                                                              |
| Aileron .....                     | Full movement, attachment bolts secure, hinge pins in                                              |
| Wing Tip, Nav light, strobe ..... | Security, condition                                                                                |
| Wing surface (upper & lower) ..   | Surface condition top & bottom – clean, No dents etc especially the leading edge                   |
| Wing tie down .....               | Removed from lower surface                                                                         |
| Fuel tank .....                   | Visually check contents, filler cap secure<br>Water/sediment check completed                       |
| Landing gear .....                | 4-6 inches oleo extension, tyre inflated, valve “square” to rim, creep marks aligned, split pin in |

### **NOSE AREA**

|                                 |                                                               |
|---------------------------------|---------------------------------------------------------------|
| Right windscreen, side screen . | Both are clear and clean                                      |
| Right engine cowling .....      | Lift & restrain while checking inside                         |
| Oil contents .....              | Check. If below 5, fill to 6, replace cap <u>finger tight</u> |

|                                  |                                                                                    |
|----------------------------------|------------------------------------------------------------------------------------|
| Plug leads .....                 | All secure                                                                         |
| Engine compartment .....         | Check for leaks, signs of chafing, loose pipes etc                                 |
| Right engine cowling clips ..... | Secured                                                                            |
| Propeller and spinner .....      | Check leading edge condition, check spinner screws not loose                       |
| Front engine air intakes .....   | Unblocked. Alternator belt tension tight, Cowling intake screws all present        |
| Landing light .....              | Secure, glass unbroken                                                             |
| Exhaust pipes .....              | Secure                                                                             |
| Nosewheel .....                  | 3-6 inch oleo extension, tyre inflated. Valve "square" to rim, creep marks aligned |
| <b>Nosewheel towbar .....</b>    | <b>Removed</b>                                                                     |
| Left engine cowling .....        | Lift & restrain while checking inside                                              |
| Hydraulic reservoir .....        | Check contents sufficient, cap secure                                              |
| Plug leads .....                 | All secure                                                                         |
| Engine Compartment .....         | Check for leaks, signs of chafing, loose pipes etc                                 |
| Left engine cowling .....        | Secured                                                                            |
| Left windscreen, side screen ... | Both are clear and clean                                                           |
| Fuel Drain tap .....             | Water/sediment check completed                                                     |

### **PORT (LEFT) WING**

|                                   |                                                                                                       |
|-----------------------------------|-------------------------------------------------------------------------------------------------------|
| Wing surface (upper & lower) ...  | Surface condition top & bottom – clean<br>No dents etc, especially the leading edge                   |
| Fuel tank .....                   | Visually check contents, filler cap secure,<br>Water/sediment check completed                         |
| Landing gear .....                | 4-6 inches oleo extension, tyre inflated, valve<br>"square" to rim, creep marks aligned, split pin in |
| Wing tie down .....               | Removed from lower surface                                                                            |
| Pitot head .....                  | Unblocked, front, bottom and rear hole                                                                |
| Wing Tip, Nav light, strobe ..... | Security, condition                                                                                   |
| Aileron .....                     | Full movement, attachment bolts secure,<br>hinge pins in                                              |
| Flap .....                        | Security, attachment bolts, side play                                                                 |

### **REAR FUSELAGE**

|                           |                                         |
|---------------------------|-----------------------------------------|
| Fuselage skin .....       | Check clear of dents, surface condition |
| Aerials .....             | Secure                                  |
| Tail surfaces .....       | Check for dents, surface condition      |
| Tail skid .....           | Check paint is undamaged                |
| Stabilator .....          | Raise fully, check attachment bolt      |
| Fin & Rudder.....         | Condition                               |
| Fuselage skin .....       | Check clear of dents, surface condition |
| Baggage compartment ..... | Contents secure, door secured           |
| Fuel tester .....         | Re-stowed                               |
| Flaps .....               | Raise                                   |

## **BEFORE STARTING**

|                                |                                              |
|--------------------------------|----------------------------------------------|
| External check .....           | Complete                                     |
| Chocks, wing tie downs, towbar | Removed – Positive confirmation              |
| Flaps .....                    | UP                                           |
| Fuel selector .....            | ON – lowest tank                             |
| Parking brake .....            | OFF then ON                                  |
| Passenger Emergency Brief .... | Complete                                     |
| Seats and Seat Belts .....     | Adjusted and fitted                          |
| Cabin Door .....               | Closed, 2 latches away from each other       |
| Flying Controls .....          | Full and free, correct sense                 |
| Trimmers (Elevator and rudder) | Check operation – set neutral                |
| Nav Lights.....                | ON (Left rotary switch click UP)             |
| Altimeter (analogue) .....     | Set airfield elevation (or 0ft for circuits) |
| Carb Heat .....                | Check full movement then OFF                 |
| Circuit Breakers .....         | All made (IN)                                |
| Vent Fan (if fitted) .....     | OFF (switch centre)                          |
| Heating & Demist .....         | Both OFF (fully left)                        |

## **STARTING ENGINE**

|                                  |                                                                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Battery & Alternator Switches .. | Both ON                                                                                                                                        |
| Mixture .....                    | Check operation – Set RICH                                                                                                                     |
| Engine Primer .....              | WARM: no primes required. Check locked<br>COLD: 6-8 primes. Check locked                                                                       |
| Throttle .....                   | Set <b>CLOSED</b>                                                                                                                              |
| Avionics/Radios .....            | OFF                                                                                                                                            |
| Propeller Area .....             | Check surrounding area clear                                                                                                                   |
| Call .....                       | “CLEAR PROP”                                                                                                                                   |
| Start Key.....                   | Inserted. Turn BOTH/START (turn & push XAVI, CLEA, TOES). Max 20 secs cranking. If engine fails to start try once more then rest for 5 minutes |

## **AFTER START**

|                                     |                                |
|-------------------------------------|--------------------------------|
| <b>R</b> RPM .....                  | <b>Smoothly set 1200RPM</b>    |
| <b>O</b> Oil Pressure .....         | <b>Rising (within 30 secs)</b> |
| <b>S</b> Starter warning light .... | <b>OUT (if fitted)</b>         |
| <b>A</b> Alternator .....           | <b>Charging</b>                |
| <b>M</b> Magnetos .....             | <b>DROP not STOP</b>           |

**AFTER START (CONTINUED)**

|                              |                               |
|------------------------------|-------------------------------|
| Avionics switch .....        | ON                            |
| Fuel pressure .....          | ½ - 8 psi                     |
| Low Volt Warning Light ..... | OUT                           |
| Transponder .....            | SBY, set 7000                 |
| Taxy Clearance .....         | Obtained                      |
| Altimeters .....             | Set QNH/QFE x2 and crosscheck |

**TAXYING CHECK**

|                       |                                        |
|-----------------------|----------------------------------------|
| Brakes .....          | Check immediately after moving off     |
| When in a clear area: |                                        |
| Instruments .....     | Checked and working                    |
|                       | Compass moving, HSI moving, TC wing    |
|                       | moving, balance ball moving, AI stable |
| Rudder .....          | Full movement                          |

**ENGINE RUN-UP****STOP AIRCRAFT INTO WIND.****IF OIL TEMPERATURE COLD, SET 1500RPM UNTIL TEMP IN THE GREEN.**

|                          |                                                           |
|--------------------------|-----------------------------------------------------------|
| Parking Brake .....      | ON                                                        |
| RPM .....                | Set 1200RPM                                               |
| Fuel Selector .....      | Change to other tank                                      |
| Oil Temperature .....    | In GREEN ( <b>IF NOT WAIT until in GREEN</b> )            |
| Brakes .....             | Footbrakes covered with feet                              |
| Check clear behind ..... | Hold control wheel                                        |
| Throttle .....           | <b>LOOKOUT</b> , set 2000RPM – check brakes holding       |
| Carb Heat .....          | ON for 10 sec – rpm drop, stabilise – OFF                 |
| Magnetos .....           | Check: Max 175 rpm drop, 50 rpm between                   |
| Ts & Ps .....            | In GREEN sectors                                          |
| Alternator .....         | Charging, max 48 amps                                     |
| Throttle .....           | Smoothly fully close – check rpm stable, then set 1200RPM |

**PRE TAKE-OFF CHECK**

|                                         |                                                                                                                                                                                     |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trimmers .....                          | Neutral                                                                                                                                                                             |
| Flaps .....                             | As required                                                                                                                                                                         |
| Seats & Harnesses .....                 | Secure                                                                                                                                                                              |
| Cabin Door/ DV Window .....             | Closed and Locked (2 Latches)                                                                                                                                                       |
| Autopilot .....                         | OFF/TESTED (G-VICC ONLY, p17)                                                                                                                                                       |
| Flight Instruments .....                | QNH/QFE Set x2<br>Check DI aligned with compass, set first heading on bug<br>Radio frequencies pre-selected<br>Timer pre-selected (if required)<br>IRR set up (if required, see p8) |
| Warning Lights .....                    | TESTED (x3 – Low volt, annunciator panel & starter)                                                                                                                                 |
| Fuel Primer .....                       | LOCKED                                                                                                                                                                              |
| Mixture .....                           | FULL RICH                                                                                                                                                                           |
| Carb Heat .....                         | OFF                                                                                                                                                                                 |
| Rotate IAS & Take off Emergencies ..... | Briefed                                                                                                                                                                             |
| <b>Transponder .....</b>                | <b>Code set (Kemble ccts 7010), ALT selected</b>                                                                                                                                    |
| <b>Fuel Pump .....</b>                  | <b>ON (check pressure)</b>                                                                                                                                                          |
| <b>Landing Light .....</b>              | <b>ON (check ammeter)</b>                                                                                                                                                           |
| <b>Anti-Collision Lights .....</b>      | <b>ON (check ammeter)</b>                                                                                                                                                           |
| <b>Pitot Heater (if required) .....</b> | <b>ON (check ammeter)</b>                                                                                                                                                           |
| ATC Take Off Clearance .....            | Obtained, acknowledged                                                                                                                                                              |

## **AFTER LANDING CHECKS**

If parked up - parking brake ON, set 1200RPM.

|                             |                   |
|-----------------------------|-------------------|
| Flaps .....                 | UP                |
| Fuel Pump .....             | OFF               |
| Landing Light .....         | OFF               |
| Anti-Collision Lights ..... | OFF               |
| Pitot Heater .....          | OFF               |
| Carb Heat .....             | OFF               |
| Throttle Friction .....     | OFF               |
| Transponder .....           | Set 7000 and SBY  |
| Auto Pilot .....            | OFF (G-VICC ONLY) |

## **SHUT DOWN**

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Parking Brake .....                 | ON                                  |
| Throttle .....                      | Set 1200RPM                         |
| Avionics Master .....               | OFF                                 |
| Magnetos .....                      | Check DROP not STOP                 |
| Mixture .....                       | CUT OFF (leave throttle at 1200RPM) |
| Magnetos/key .....                  | OFF, <b>KEYS OUT</b>                |
| Battery & Alternator Switches ..... | OFF                                 |
| Vent Fan .....                      | OFF                                 |
| Trimmers .....                      | NEUTRAL                             |
| Checklist .....                     | Leave in Aircraft!                  |

## **LEAVING THE AIRCRAFT**

|                      |                                            |
|----------------------|--------------------------------------------|
| Control Wheel .....  | Locked with seat strap, if parking outside |
| Aircraft cover ..... | Fitted, if parking outside                 |
| Nav Lights .....     | Check off                                  |

## **IRR SET UP - \*IRR ONLY\***

|                                |                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------|
| Garmin 650 self-test .....     | Check localiser (LCDI) half left/no flag<br>Check glideslope (VCDI) half up/no flag |
| Flight Plan .....              | SET                                                                                 |
| Procedure .....                | Load Approach                                                                       |
| RAIM (utilities section) ..... | Check (RNP approaches only)                                                         |
| Default Nav .....              | Set GPS/VLOC as required                                                            |
| Comm frequencies .....         | Pre-selected comm 1 and comm 2                                                      |
| Nav frequencies .....          | Pre-selected nav 1 and nav 2                                                        |
| DME .....                      | Pre-selected                                                                        |
| Timer .....                    | Pre-selected (on transponder)                                                       |
| Altimeter .....                | Set QNH x2 and crosschecked                                                         |
| HSI .....                      | Set course, set heading bug<br>Set bearing/single needle pointer to GPS             |

## DURING TAKE-OFF RUN

|               |                 |
|---------------|-----------------|
| RPM .....     | 2350-2450RPM    |
| Ts & Ps ..... | In Limits/GREEN |
| IAS .....     | Increasing      |

### AFTER TAKE-OFF CHECK (min 300ft AGL)

**Ts & Ps ..... In GREEN**  
**Carb Heat..... OFF**  
**Flaps ..... UP (if more than 70kts)**

## TOP OF CLIMB, IN-FLIGHT & RECOVERY

**FREDAC**

|                   |                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------|
| F Fuel .....      | Sufficient – balanced<br>If changing tanks, fuel pump ON<br>Fuel Pump OFF above 1000ft agl |
| R Radio .....     | Frequency in use & next frequency stby                                                     |
| E Engine .....    | T's & P's, Charging, Mixture, Warning Lights                                               |
| D DI .....        | Check DI with compass                                                                      |
| A Altimeter ..... | Correct pressure setting and altitude                                                      |
| C Carb Heat.....  | On for 10 seconds, check stable, then OFF                                                  |

## IN-FLIGHT NAVIGATION CHECK

TTTTT

### Twist, Turn, Time Talk, Task (gross error check, FREDAC)

## PRE-STALL CHECKS

**HASELL**

|                         |                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>H HEIGHT</b> .....   | Recover by 3,000ft agl (solo) or 2,000ft (instr)                                                                         |
| <b>A AIRFRAME</b> ..... | Flaps (as required)                                                                                                      |
| <b>S SECURITY</b> ..... | Coaming clear, footwells clear, harness<br>Secure, door 2 latches, no loose articles                                     |
| <b>E ENGINE</b> .....   | Ts & Ps GREEN, Charging, Warning lights<br>Mixture RICH, Fuel Pump on                                                    |
| <b>L LOCATION</b> ..... | Clear of:<br>A – Aerodromes<br>B – Built-up areas<br>C – Controlled Airspace<br>C – Cloud<br>D - Danger/Restricted Areas |
| <b>L LOOKOUT</b> .....  | 2 x 90° or 180° turn to clear area                                                                                       |

**PRE-LANDING CHECKS**

**BUMFILCH**

|                                   |                                          |
|-----------------------------------|------------------------------------------|
| <b>B Brakes</b> .....             | Toe brakes have pressure, handbrake off  |
| <b>U Undercarriage</b> .....      | Fixed                                    |
| <b>M Mixture</b> .....            | Rich                                     |
| <b>F Fuel</b> .....               | Pump ON, fullest tank                    |
| <b>I Instruments</b> .....        | Set QFE, T's/P's, warning lights         |
| <b>L Landing Light</b> .....      | ON                                       |
| <b>C Carb Heat</b> .....          | ON – check RPM stable (min 10 sec) – OFF |
| <b>H Hatches and Harnesses</b> .. | Secure                                   |

**At 300ft on APPROACH**

|                           |                                          |
|---------------------------|------------------------------------------|
| <b>T Toes</b> .....       | Clear of brakes (and rudders for pax)    |
| <b>C Carb Heat</b> .....  | OFF                                      |
| <b>P Permission</b> ..... | to Land, Touch & Go... if not, Go Around |

**RECOMMENDED SPEEDS AND POWER SETTINGS****TAKE OFF**

|             |                       |                                    |
|-------------|-----------------------|------------------------------------|
| Normal      | V <sub>r</sub> 65 kts | Full Power – Flap up               |
| Short Field | V <sub>r</sub> 55 kts | Full Power – Flap 25° (two stages) |

**CLIMB**

|                     |                       |                      |
|---------------------|-----------------------|----------------------|
| Climb Normal        | V <sub>y</sub> 80 kts | Full Power – Flap up |
| Best Angle of Climb | V <sub>x</sub> 65 kts | Full Power – Flap up |

**CRUISE**

|                            |             |                                         |
|----------------------------|-------------|-----------------------------------------|
| Max and Max continuous RPM |             | 2700 rpm                                |
| Normal                     | 95 kts      | 2200-2400 rpm                           |
| Endurance                  | 65 kts      | Approx 1900 rpm – Flap up               |
| Bad Weather                | 75 - 80 kts | Approx 2100 rpm - Flap 25° (two stages) |

**DESCENT**

|        |           |                         |
|--------|-----------|-------------------------|
| Cruise | 95 kts    | 2000 rpm – Carb heat on |
| Glide  | 70-75 kts | Idle RPM – Carb heat on |

*Gliding range propeller windmilling, clean 75 kts = 1.5 nm per 1,000 feet*

**APPROACH**

|          |             |              |                         |
|----------|-------------|--------------|-------------------------|
| Normal   | 75 kts      | Base Leg     | Flap 25° (two stages)   |
| Normal   | 65 – 70 kts | Final Leg    | Flap 40° (three stages) |
| Flapless | 75 kts      | Base & Final | Clean                   |
| Glide    | 70-75 kts   | Base & Final | Optional                |

**STALLING (POWER OFF)**

|        |        |                         |
|--------|--------|-------------------------|
| Approx | 50 kts | Clean                   |
| Approx | 45 kts | Flap 40° (three stages) |

**SPEED LIMITATIONS**

|                                              |                                |
|----------------------------------------------|--------------------------------|
| Never Exceed speed (V <sub>ne</sub> )        | 160 kts                        |
| Maximum Normal Speed (V <sub>no</sub> )      | 126 kts                        |
| Maximum Manoeuvre Speed (V <sub>a</sub> )    | 111 kts                        |
| Maximum Flap Extend Speed (V <sub>fe</sub> ) | 103 kts (for all flap configs) |
| Maximum Demonstrated Crosswind               | 17 kts                         |

## **ENGINE FIRE ON THE GROUND**

|                                            |                                                  |
|--------------------------------------------|--------------------------------------------------|
| <b>Mixture .....</b>                       | <b>CUT OFF</b>                                   |
| <b>Throttle .....</b>                      | <b>FULLY OPEN, then SHUT when engine stopped</b> |
| <b>Fuel Pump .....</b>                     | <b>OFF</b>                                       |
| <b>Magneto/starter switch .....</b>        | <b>OFF</b>                                       |
| <b>Fuel Selector .....</b>                 | <b>OFF</b>                                       |
| <b>Brakes .....</b>                        | <b>OFF</b>                                       |
| <b>Battery and Alternator Switches ...</b> | <b>OFF</b>                                       |

**EVACUATE AIRCRAFT**

## **CABIN FIRE DRILL (AIR OR GROUND)**

|                                |                    |
|--------------------------------|--------------------|
| <b>Electrics .....</b>         | <b>OFF</b>         |
| <b>Heater/Demister .....</b>   | <b>Both OFF</b>    |
| <b>Air Vents .....</b>         | <b>Both CLOSED</b> |
| <b>Fire Extinguisher .....</b> | <b>OPERATE</b>     |

**Ventilate cabin after using fire extinguisher**

## **DOOR OPENS in the AIR**

**It is unlikely that the door can be successfully closed in flight.** Door will remain in the slightly open position until taxiing at very low speed.

Ensure loose articles moved away from open door.  
Land as soon as practicable.

## **LOW VOLT LIGHT ON**

Ammeter ..... Check reading

**If Ammeter showing charge** ..... Note and continue flight

### **If Ammeter ZERO:**

|                                  |                     |
|----------------------------------|---------------------|
| Alternator Switch .....          | OFF                 |
| Electrical Loads .....           | REDUCE to minimum   |
| Alternator Circuit Breaker ..... | Trip and RESET once |
| Alternator Switch .....          | ON                  |

If power is NOT restored, Alternator Switch ..... OFF

Land as SOON as PRACTICABLE as battery is the only source of electrical power.

### **AMMETER OVERLOAD (+20 amps more than expected)**

Electrical Load ..... REDUCE  
If Ammeter load does NOT reduce, Alternator Switch .... OFF

Land as SOON as PRACTICABLE as battery is the only source of electrical power.

### **ENGINE FIRE in the AIR**

**Glide ..... @ 75kts and TRIM**  
**Choose a landing area ..... INTO WIND**  
**Throttle ..... CLOSED**  
**Fuel Selector ..... OFF**  
**Fuel Pump ..... OFF**  
**Once engine cuts ..... MIXTURE CUT OFF**

Magneto/starter switch ..... OFF  
Heater/Demister ..... Both OFF  
MAYDAY Call / 7700 ..... "Nature, Intention, Position"

Carry out CRASH / EFATO Checks  
**LAND AS SOON AS POSSIBLE.**

### **ENGINE FAILURE in the AIR**

*Actions marked with \* carry out only if time available*

**Carb heat on**  
**Glide @ 75kts and TRIM**  
**Choose a landing area – INTO WIND**

\*Fuel Selector ..... Change Tanks  
\*Magnetos ..... Both  
\*Primer ..... LOCKED  
\*Mixture ..... RICH  
\*Carb Heat ..... ON  
\*Fuel Pump ..... ON  
\*Attempt restart with key ..... Until battery flat

MAYDAY CALL / 7700 "Nature, Intention, Position"  
Carry Out Crash / EFATO Checks

## CRASH / EFATO CHECKS

**MAYDAY Call..... Completed**  
**Throttle ..... CLOSED**  
**Mixture ..... IDLE CUT OFF**  
**Fuel Pump ..... OFF**  
**Magneto/starter switch ..... OFF**  
**Fuel Selector ..... OFF**  
**Harnesses ..... Secure**  
**Door ..... Unlatch**  
**Battery and Alternator Switches .. OFF**

### DEPARTURE From KEMBLE

Kemble Information, G-XXXX, Radio Check  
 G-XXXX, Strength x Pass your message  
 G-XXXX, PA28 at Woodside, X POB,  
 Request airfield information and taxi  
 instructions for a:  
 "Local Flight" / To Destination, departing N,  
 S, E or W with duration of flight and whether  
 returning today  
 G-XXXX runway X, QNH/QFE X, TAXY X  
**(Read back info), G-XXXX**

Once run-up and pre take off checks  
 complete:  
 G-XX, ready for Departure  
 G-XXXX Hold / Cleared / Line up / Take off  
 at your discretion  
**(Read back info), G-XXXX**  
 G-XX (When about to roll) Taking off

### REQUESTING A SERVICE

YYY Radar, G-XXXX, Request Basic  
 service  
 G-XXXX, YYY Radar, pass your message  
 G-XXXX, PA28, with X POB  
 Departure point & destination  
 Present Position  
 Level/QNH  
 Additional information / request:  
 e.g. Routing relevant to ATC unit  
 Request BASIC / TRAFFIC SERVICE  
*Service Issued (to be read back)*

### DEPARTURE ONCE CLEAR OF THE ATZ

G-XX, Departing the Zone, request basic  
 service/frequency change

### JOINING AT AN AFIS AIRFIELD

YYY Information, G-XXXX, PA28, X POB,  
 Presently X miles to the N/E/S/W, XXXX ft  
 On XXXX (QNH), request airfield  
 information  
 G-XX, YYY Information, Runway XX, QFE  
 XXX, Reported traffic info  
 G-XX, Runway XX, QFE XXX, Joining  
 overhead /downwind/base leg  
 G-XX, Roger, Report  
 downwind/overhead/base leg  
 G-XX, Wilco

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b><u>RECOVERY to KEMBLE (local flight)</u></b><br/> Kemble Information, G-XXXX, recovering from the N/E/S/W (X) Miles, request airfield information<br/> <b><u>RECOVERY to KEMBLE (Dif Dep a/field)</u></b><br/> Standard Initial Call<br/> G-XXXX, Kemble Information Using Runway XX, QFE XXX, Traffic .....<br/> G-XX (READ BACK Rwy, QFE)<br/> G-XX, &lt;Intention: For Overhead Join / Downwind / L/R Base etc&gt;<br/> G-XX, Downwind / Base, Touch &amp; Go / Full Stop.<br/> G-XX, Surface Wind, xxx/xx knots<br/> G-XX. Roger<br/> G-XX, Final<br/> G-XX, Continue / cleared Touch &amp; Go / Land at your discretion / Go-Around. Wind xxx<br/> G-XX Continue or Roger</p> | <p><b><u>ZONE CROSSING / MATZ Penetration</u></b><br/> YYY Radar this is G-XXXX<br/> G-XXXX, YYY Radar, pass your message<br/> YYY Approach, G-XXXX<br/> PA28<br/> Departure point &amp; destination<br/> Present Position &amp; Level on XXXX (QNH)<br/> Routing .... E.g routing relevant to ATC unit<br/> Request zone transit / MATZ penetration<br/> G-XX Squawk ZZZZ<br/> G-XX (Readback and set Squawk)<br/> Once Radar identified – Clearance Issued (to be read back!)</p> |
| <p><b><u>JOINING A CLOSED AIRFIELD WITH NO RADIO SERVICE</u></b><br/> Use callsign YYY Traffic,<br/> G-XXXX, intentions</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p><b><u>EMERGENCY</u></b><br/> 'MAYDAY' or 'PAN-PAN' x 3, G-XXXX, PA28<br/> Nature of Emergency<br/> Intentions<br/> Position<br/> Pilot Quals if relevant (eg Student pilot)<br/> POB X</p>                                                                                                                                                                                                                                                                                       |
| <p><b><u>EMERGENCY SQUAWKS</u></b><br/> Distress 7700<br/> Radio Failure 7600</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>VFR Radio Failure: Join through dead-side to 500ft, wagging wings or flashing landing light to get attention. Join circuit and wait for flare or light signal on finals.<br/> Green flare = cleared to land<br/> Red flare = do not land, give way and continue circling</p>                                                                                                                                                                                                     |

## **TROUBLESHOOTING**

### **Starting Engine When Cold**

If the engine has fired and stopped ensure Mixture is Rich, re-prime and restart.

If the engine has not fired within 5-10 seconds, disengage the starter, prime the engine and repeat the starting procedure.

### **Starting Engine when Flooded**

The throttle lever should be fully "OPEN". Turn "ON" the master switch and ensure electric fuel pump is "OFF". Move the mixture control lever to idle cut-off and engage the starter by rotating the magneto switch clockwise. When the engine fires, release the magneto switch, advance the mixture and close the throttle.

If engine stops, re-start in accordance with normal checklist (Page 4).

## **AUTOPILOT CHECK (G-VICC ONLY)**

1. AP Master Switch – Move to TEST position
  - a) Observe all lights and annunciators illuminate
  - b) Observe the following light sequence of the trim indicators: (Sequence requires 9 seconds)
    - 1) Initially both trim UP and DN lights illuminate
    - 2) UP light extinguishes momentarily and relights
    - 3) DN light then extinguishes and will remain off
2. AP Master Switch – Move to ON position, observe RDY light illuminates
3. Depress ON/OFF switch – STB annunciator illuminates. Rotate turn knob left and right, observe control wheel moves in corresponding direction. Centre turn knob
4. Centralise heading bug on G5. Push turn knob to engage HDG mode. Observe HDG annunciator. Move HDG bug left and right and observe proper control wheel motion.
5. Overpower test – grasp the control wheel and overpower roll servo left and right. Overpower action should be smooth with no noise or jerky feel. If unusual sound or excessive play is detected, disengage and do NOT use autopilot.
6. Move control wheel to level flight position – engage ALT mode. Move control wheel fore and aft to overpower pitch servo clutch. Overpower action should be smooth with no noise or jerky feel. If an unusual sound or excessive play is detected, disengage and do NOT use autopilot.
7. Trim check – manually apply back pressure to the control wheel for 2-3 seconds, observe the DN trim light illuminates. Apply forward pressure to the control wheel for 2-3 seconds observe the UP trim light illuminates. Move control wheel to centre, observe both lights extinguish.
8. Hold control wheel and depress ON/OFF switch on control wheel – note the roll and pitch servo release. Check full and free motion on controls.



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