

# **CHECKLISTS BY RED SKY VENTURES**

**These checklists have been developed for use in light aircraft general aviation operations.**

**With the exception of the run-up, these are checklists, that is checks to be completed after completion of normal cockpit actions by way of flow patterns or acronyms.**

**Checklists are provided in open document format to allow modification to suit your aircraft or operation. Some page formatting may be required for different page and printer settings.**

**The procedures in the aircraft's approved flight manual, including all applicable STCs and supplements must be followed!**

## NORMAL CHECKLIST

### Before Start

Preflight Inspection..... Complete  
Tach/Hobbs/Time..... Recorded  
Passenger Briefing..... Complete  
Seats / Seatbelts..... Adjust, Lock  
Fuel Selector Valve..... Both  
Cowl Flaps..... Open  
Brakes..... Set/Hold  
Avionics..... Off  
Electrical..... Off  
Circuit Breakers..... Check In

### Normal Engine Start

Magnetos..... Both  
Master..... On  
Mixture..... Rich  
Propeller..... High RPM  
Power..... ½ Centimeter  
Carburetor Heat..... Cold  
Prime..... 1-3 as req'd  
Rotating Beacon..... On  
Area..... Clear

### After start

Mixture..... Set for Taxi  
Engine Instruments..... Check  
Taxi, Nav. Lights..... As Required  
Flaps..... Retracted  
Transponder..... Standby

### Taxi

Brakes..... Release, Check  
Avionics and Flight Instruments.... Check/Set  
Nav instruments ..... Test

### Run Up

Parking Brake..... Set  
Fuel Selector..... Both  
Mixture ..... Set  
Engine Instruments..... Green  
Cowls..... Open

Power..... Set  
Mixture..... Set  
Carb Heat..... Check  
Magnetos..... Check Left, Both, Right, Both  
Propeller Governor ..... Cycle  
Engine Instruments..... Check  
Vacuum..... Check  
Ammeter..... Check with load  
DI ..... Set to Compass  
Throttle friction lock..... Set  
Idle..... Check

## Pre-Takeoff

Trim..... Set for takeoff  
Mixture..... Set for takeoff  
Magnetos ..... Both  
Propeller Pitch ..... Full fine  
Flight Controls..... Free and Correct  
Autopilot..... Off  
Fuel..... Correct Tank, Qty, Primer locked  
Flaps..... Set for takeoff  
Cowl Flaps ..... Open  
Instruments..... Checked and Set  
Radios..... Set for Departure  
Navigation / GPS..... Set for Departure  
Hatches ..... Closed, Locked  
Harnesses..... Secure  
Engine Runup..... Complete  
Engine Instruments..... Checked  
Electrics..... CB's Checked  
Emergency & Dep. brief..... Completed

### Line Up

(REmember What To Do Last)

Runway Area..... Clear  
Engine Parameters..... Green  
Wind..... Check  
Transponder..... Set to altitude  
DI..... Aligned with Compass, Rwy  
Landing light, strobes..... On

### After Takeoff (above 1000' AGL)

Brakes..... Check  
Undercarriage..... Retracted/Fixed  
Power/Pitch..... Set  
Mixture..... Adjust  
Fuel..... Checked  
Flaps..... Up  
Engine Parameters..... Green  
Lights..... As required

### Cruise

Power/Prop..... Set  
Elevator/Rudder trim..... Adjust  
Mixture..... Lean for altitude  
Cowl Flaps..... Closed/As Req'd

### Descent

Fuel ..... Correct Tank, Qty checked  
Radios..... Set  
Approach Briefing..... Complete  
Cowl Flaps..... Closed  
Mixture..... Set  
Power/Prop..... Set  
Icing..... As required  
Lights..... On/as req'd

## Downwind

Brakes.....Check  
Undercarriage.....Down/Fixed  
Power/Prop.....Set  
Mixture.....Set  
Fuel.....Correct Tank  
Flaps.....Set  
Engine Parameters.....Green  
Lights.....As required  
Seats / Seatbelts.....Check Secure  
Fuel Selector.....As Required  
Carb Heat.....As Required

## Final

Cowl Flaps.....Open  
Carb Heat.....Off  
Undercarriage.....Down & Locked/Fixed  
Propeller Pitch.....Full fine

## After Landing

Cowl Flaps.....Open  
Trim.....Takeoff  
Flaps.....Retract  
Carb Heat.....Off  
Land, Strobe lights.....Off  
Transponder.....Standby

## Shutdown and Securing

Power.....Idle  
Avionics and Switches.....Off  
Mixture.....Idle Cutoff  
Mags.....Off  
Master.....Off  
Control Lock.....In  
Hobbs and Tach.....Record  
Tie Downs/Screens/Covers.....Fitted

## Abnormal maneuvers

(HASELL)

Complete prior to conducting stalls, spins and approved aerobatic maneuvers

Height.....Sufficient for recovery  
.....Above 3000ft AG  
Airframe.....Limitations Reviewed  
.....Configuration Reviewed  
Security.....Seatbelts/Passengers/Load  
Engine.....Temperatures/Pressures  
.....Power/Pitch Mixture Checked  
Location.....Not over built up areas,  
airfields or controlled airspace High Terrain  
Within proximity of suitable landing areas  
Lookout.....Complete a lookout turn

## REFERENCE INFORMATION

Fill in for your aircraft as required

## Speeds

### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.

$V_R$ ..... KIAS  
 $V_X$  – Best Angle of Climb ..... KIAS  
 $V_Y$  – Best Rate of Climb.....  $V_{Y_{SI}}$  KIAS  
.....  $V_{Y_{10,000ft}}$  KIAS  
Normal approach..... KIAS  
 $V_{ref}$ ..... KIAS  
 $V_A$  – Maneuvering Speed..... KIAS

### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc ..... KIAS  
 $V_{NE}$  – Red Line (Never Exceed)..... KIAS

$V_{SO}$  – Stall landing configuration..... KIAS  
 $V_S$  – Stall Clean ..... KIAS

$V_{FE}$  – Max. Flap Extension 10-40°..... KIAS  
 $V_{FE}$  – Max. Flap Extension 0-10 °..... KIAS

### EMERGENCY OPERATION

Best glide Speed..... KIAS  
Slow Safe Cruise..... KIAS  
Ditching..... KIAS  
Engine failure after takeoff..... KIAS  
Engine Failure in flight flap up..... KIAS  
Engine Failure in flight flap down..... KIAS

## Operating performance

Fuel Capacity (useable).....  
Fuel Consumption Block.. /Hr  
Plan Cruise speed..... KTAS

## Other Information

### Transponder Codes:

Unlawful Interference.....7500  
Loss of Communication .....7600  
Emergency .....7700  
Unassigned.....2000

### Radio Frequencies

Emergency Frequencies.....121.5/243  
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.....

## Loading

Maximum TO/Ldg Weight ..... lbs  
Standard Empty Weight ..... lbs

Load limits.....  
.....

## EMERGENCIES

### ENGINE FAILURE

#### IMMEDIATE ACTIONS

**Airspeed** ..... **Best Glide**  
**Carb Heat**..... **ON**  
**Field**..... **Select**  
**Approach**..... **Plan**

#### FAULT FINDING (*Altitude permitting*):

**Carb Heat**..... **ON**  
**Primer** ..... **IN & Locked**  
**Fuel Shutoff valve**..... **ON**  
**Mixture**..... **RICH**  
**Ignition**..... **BOTH (or START)**

#### COMMUNICATE

**Mayday**..... **Transmit on Active or 121.5**  
**Transponder**..... **7700**  
**Passengers**..... **Brief**

#### SECURE

**Mixture** ..... **cutoff**  
**Fuel shutoff valve**..... **off**  
**Ignition**..... **off**

#### FINAL APPROACH

**Flaps**..... **as required**  
**Master switch**..... **Off**  
**Doors** ..... **unlatch**  
**Touchdown**..... **tail low**

Note: **Bold Items are immediate recall items, other times may be followed up by the use of the AFM checklist.** It is recommended that entire engine failure during flight procedures be committed to memory

### Engine Fire During Flight

**Mixture**..... **IDLE cut-off**  
**Fuel** ..... **OFF**  
**Master** ..... **OFF**  
**Cabin Air**..... **OFF**  
**Sideslip**..... **Initiate if required**  
Proceed with Engine Failure in Flight Action

### Cabin Fire

**Master Switch**..... **OFF**  
**Cabin Vents/Air/Heat**..... **Closed**  
**Fire Extinguisher**..... **Activate**  
**Cabin Vents/Windows**..... **Open**

If in flight, Once Fire is extinguished:

**Electrics/Avionics**..... **Off**  
**Master** ..... **ON**  
**Avionics/Electrics**..... **On, one at a time**  
**Land at the nearest Suitable Airfield**

## Electrical Fire

### Unknown Source

**Master Switch**..... **OFF**  
**Avionics and Electrics**..... **OFF**  
**Circuit Breakers**..... **PULL**  
If Smoke Ceases:  
**Master Switch**..... **ON**  
**Essential Electrical/Avionics**..... **On, One at a time**

## Carburetor Icing

**Carb Heat**..... **Fully ON**  
**Mixture**..... **Adjust**  
Once icing/roughness has cleared;  
**Carb Heat**..... **Cold**  
**Mixture**..... **Reset**

## Engine Roughness

**Magnetos**..... **Check**  
**Mixture**..... **Adjust**  
**Temperatures/Pressures**..... **Check**  
If roughness continues, plan to land at nearest suitable airfield.

## NORMAL CHECKLIST

### Before Start

Preflight Inspection..... Complete  
Tach/Hobbs/Time..... Recorded  
Passenger Briefing..... Complete  
Seats / Seatbelts..... Adjust, Lock  
Fuel Selector Valve..... Both  
Cowl Flaps..... Open  
Brakes..... Set/Hold  
Avionics..... Off  
Electrical..... Off  
Circuit Breakers..... Check In

### Normal Engine Start

Magnetos..... Both  
Master..... On  
Mixture..... Rich  
Propeller..... High RPM  
Power..... ½ Centimeter  
Carburetor Heat..... Cold  
Prime..... 1-3 as req'd  
Rotating Beacon..... On  
Area..... Clear

### After start

Mixture..... Set for Taxi  
Engine Instruments..... Check  
Taxi, Nav. Lights..... As Required  
Flaps..... Retracted  
Transponder..... Standby

### Taxi

Brakes..... Release, Check  
Avionics and Flight Instruments.... Check/Set  
Nav instruments..... Test

### Run Up

Parking Brake..... Set  
Fuel Selector..... Both  
Mixture..... Set  
Engine Instruments..... Green  
Cows..... Open

Power..... Set  
Mixture..... Set  
Carb Heat..... Check  
Magnetos..... Check Left, Both, Right, Both  
Propeller Governor..... Cycle  
Engine Instruments..... Check  
Vacuum..... Check  
Ammeter..... Check with load  
DI..... Set to Compass  
Throttle friction lock..... Set  
Idle..... Check

## NORMAL CHECKLIST

### Pre-Takeoff

Trim..... Set for takeoff  
Mixture..... Set for takeoff  
Magnetos..... Both  
Propeller Pitch..... Full fine  
Flight Controls..... Free and Correct  
Autopilot..... Off  
Fuel..... Correct Tank, Qty, Primer locked  
Flaps..... Set for takeoff  
Cowl Flaps..... Open  
Instruments..... Checked and Set  
Radios..... Set for Departure  
Navigation / GPS..... Set for Departure  
Hatches..... Closed, Locked  
Harnesses..... Secure  
Engine Run-up..... Complete  
Engine Instruments..... Checked  
Electrics..... CB's Checked  
Emergency & Dep. brief..... Completed

### Line Up

(REmember What To Do Last)

Runway Area..... Clear  
Engine Parameters..... Green  
Wind..... Check  
Transponder..... Set to altitude  
DI..... Aligned with Compass, Rwy  
Landing light, strobes..... On

### After Takeoff (above 1000' AGL)

Brakes..... Check  
Undercarriage..... Retracted/Fixed  
Power/Pitch..... Set  
Mixture..... Adjust  
Fuel..... Checked  
Flaps..... Up  
Engine Parameters..... Green  
Lights..... As required

### Cruise

Power/Prop..... Set  
Elevator/Rudder trim..... Adjust  
Mixture..... Lean for altitude  
Cowl Flaps..... Closed/As Req'd

# NORMAL CHECKLIST

## Descent

Fuel .....Correct Tank, Qty checked  
 Radios.....Set  
 Approach Briefing.....Complete  
 Cowl Flaps.....Closed  
 Mixture.....Set  
 Power/Prop.....Set  
 Icing.....As required  
 Lights.....On/as req'd

## Downwind

Brakes.....Check  
 Undercarriage.....Down/Fixed  
 Power/Prop.....Set  
 Mixture.....Set  
 Fuel.....Correct Tank  
 Flaps.....Set  
 Engine Parameters.....Green  
 Lights.....As required  
 Seats / Seatbelts.....Check Secure  
 Fuel Selector.....Both  
 Carb Heat.....As Required

## Final

Cowl Flaps.....Open  
 Carb Heat.....Off  
 Undercarriage.....Down & Locked/Fixed  
 Propeller Pitch.....Full fine

## After Landing

Cowl Flaps.....Open  
 Trim.....Takeoff  
 Flaps.....Retract  
 Carb Heat.....Off  
 Land, Strobe lights.....Off  
 Transponder.....Standby

## Shutdown and Securing

Power.....Idle  
 Avionics and Switches.....Off  
 Mixture.....Idle Cutoff  
 Mags.....Off  
 Master.....Off  
 Control Lock.....In  
 Hobbs and Tach.....Record  
 Tie Downs.....Attached

### CAUTION:

**Performance and operational figures vary between models of C152, refer to the aircraft's flight manual and use a fine marker pen to indicate any significant differences.**

# REFERENCE INFORMATION

## Speeds

### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.  
 $V_R$ .....55 KIAS  
 $V_{T0}$  – Max performance.....60KIAS  
 $V_X$  – Best Angle of Climb .....60 KIAS  
 $V_Y$  – Best Rate of Climb..... $V_{Ysl}$  80 KIAS  
 ..... $V_{Y10,000R}$  70 KIAS  
 Normal approach.....65-75 KIAS  
 $V_{ref}$ .....60 KIAS  
 $V_A$  – Maneuvering Speed.....80-95 KIAS  
 Maximum demonstrated crosswind.....15kts

### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc .....128 KIAS  
 $V_{NE}$  – Red Line (Never Exceed).....160 KIAS  
  
 $V_{SO}$  – Stall landing configuration.....45 KIAS  
 $V_S$  – Stall Clean .....50 KIAS

$V_{FE}$  – Max. Flap Extension 0-40°.....85 KIAS

### EMERGENCY OPERATION

Best glide Speed.....65 KIAS  
 Precautionary landing:  
 Slow Safe Cruise.....80-95 KIAS  
 Approach (flaps full).....60 KIAS  
 Ditching.....65 KIAS  
 Engine failure after takeoff.....65 KIAS  
 Engine Failure in flight flap up.....65 KIAS  
 Engine Failure in flight flap down.....60 KIAS

## Operating performance

Plan Block Consumption.....40lt/hr  
 Plan Block Cruise speed.....100KTAS

## Other Information

### Transponder Codes:

Unlawful Interference.....7500  
 Loss of Communication .....7600  
 Emergency .....7700  
 Unassigned.....2000

### Radio Frequencies

Emergency Frequencies.....121.5/243

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# NORMAL CHECKLIST

## Descent

Fuel .....Correct Tank, Qty checked  
 Radios.....Set  
 Approach Briefing.....Complete  
 Cowl Flaps.....Closed  
 Mixture.....Set  
 Power/Prop.....Set  
 Icing.....As required  
 Lights.....On/as req'd

## Downwind

Brakes.....Check  
 Undercarriage.....Down/Fixed  
 Power/Prop.....Set  
 Mixture.....Set  
 Fuel.....Correct Tank  
 Flaps.....Set  
 Engine Parameters.....Green  
 Lights.....As required  
 Seats / Seatbelts.....Check Secure  
 Fuel Selector.....Both  
 Carb Heat.....As Required

## Final

Cowl Flaps.....Open  
 Carb Heat.....Off  
 Undercarriage.....Down & Locked/Fixed  
 Propeller Pitch.....Full fine

## After Landing

Cowl Flaps.....Open  
 Trim.....Takeoff  
 Flaps.....Retract  
 Carb Heat.....Off  
 Land, Strobe lights.....Off  
 Transponder.....Standby

## Shutdown and Securing

Power.....Idle  
 Avionics and Switches.....Off  
 Mixture.....Idle Cutoff  
 Mags.....Off  
 Master.....Off  
 Control Lock.....In  
 Hobbs and Tach.....Record  
 Tie Downs.....Attached

### CAUTION:

**Performance and operational figures vary between models of C152, refer to the aircraft's flight manual and use a fine marker pen to indicate any significant differences.**

# REFERENCE INFORMATION

## Speeds

### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.

$V_R$  ..... 50 KIAS  
 $V_{to}$  – Max performance ..... 55 KIAS  
 $V_X$  – Best Angle of Climb ..... 55 KIAS  
 $V_Y$  – Best Rate of Climb .....  $V_{y_{sl}}$  67 KIAS  
 .....  $V_{y_{10,000ft}}$  63 KIAS  
 Normal approach ..... 60-70 KIAS  
 $V_{ref}$  ..... 55 KIAS  
 $V_A$  – Maneuvering Speed ..... xxxxx KIAS  
 Maximum demonstrated crosswind ..... 15 kts

### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc ..... KIAS  
 $V_{NE}$  – Red Line (Never Exceed) ..... KIAS  
  
 $V_{SO}$  – Stall landing configuration ..... KIAS  
 $V_S$  – Stall Clean ..... KIAS  
  
 $V_{FE}$  – Max. Flap Extension 0-40° ..... KIAS

### EMERGENCY OPERATION

Best glide Speed ..... 65 KIAS  
 Precautionary landing:  
 Slow Safe Cruise ..... 70-85 KIAS  
 Approach (flaps full) ..... 55 KIAS  
 Ditching ..... 55 KIAS  
 Engine failure after takeoff ..... 60 KIAS  
 Engine Failure in flight flap up ..... 65 KIAS  
 Engine Failure in flight flap down ..... 60 KIAS

## Operating performance

Plan Block Consumption ..... 25lt/hr  
 Plan Block Cruise speed ..... 95 KTAS

## Other Information

### Transponder Codes:

Unlawful Interference ..... 7500  
 Loss of Communication ..... 7600  
 Emergency ..... 7700  
 Unassigned ..... 2000

### Radio Frequencies

Emergency Frequencies ..... 121.5/243

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## NORMAL CHECKLIST

### Before Start

Preflight Inspection..... Complete  
Tach/Hobbs/Time..... Recorded  
Passenger Briefing..... Complete  
Seats / Seatbelts..... Adjust, Lock  
Fuel Selector Valve..... Both  
Cowl Flaps..... Open  
Brakes..... Set/Hold  
Avionics..... Off  
Electrical..... Off  
Circuit Breakers..... Check In

### Normal Engine Start

Magnetos..... Both  
Master..... On  
Mixture..... Rich  
Propeller..... High RPM  
Power..... ½ Centimeter  
Carburetor Heat..... Cold  
Prime..... 1-3 as req'd  
Rotating Beacon..... On  
Area..... Clear

### After start

Mixture..... Set for Taxi  
Engine Instruments..... Check  
Taxi, Nav. Lights..... As Required  
Flaps..... Retracted  
Transponder..... Standby

### Taxi

Brakes..... Release, Check  
Avionics and Flight Instruments.... Check/Set  
Nav instruments..... Test

### Run Up

Parking Brake..... Set  
Fuel Selector..... Both  
Mixture..... Set  
Engine Instruments..... Green  
Cows..... Open

Power..... Set  
Mixture..... Set  
Carb Heat..... Check  
Magnetos..... Check Left, Both, Right, Both  
Propeller Governor..... Cycle  
Engine Instruments..... Check  
Vacuum..... Check  
Ammeter..... Check with load  
DI..... Set to Compass  
Throttle friction lock..... Set  
Idle..... Check

## NORMAL CHECKLIST

### Pre-Takeoff

Trim..... Set for takeoff  
Mixture..... Set for takeoff  
Magnetos..... Both  
Propeller Pitch..... Full fine  
Flight Controls..... Free and Correct  
Autopilot..... Off  
Fuel..... Correct Tank, Qty, Primer locked  
Flaps..... Set for takeoff  
Cowl Flaps..... Open  
Instruments..... Checked and Set  
Radios..... Set for Departure  
Navigation / GPS..... Set for Departure  
Hatches..... Closed, Locked  
Harnesses..... Secure  
Engine Run-up..... Complete  
Engine Instruments..... Checked  
Electrics..... CB's Checked  
Emergency & Dep. brief..... Completed

### Line Up

(REmember What To Do Last)

Runway Area..... Clear  
Engine Parameters..... Green  
Wind..... Check  
Transponder..... Set to altitude  
DI..... Aligned with Compass, Rwy  
Landing light, strobes..... On

### After Takeoff (above 1000' AGL)

Brakes..... Check  
Undercarriage..... Retracted/Fixed  
Power/Pitch..... Set  
Mixture..... Adjust  
Fuel..... Checked  
Flaps..... Up  
Engine Parameters..... Green  
Lights..... As required

### Cruise

Power/Prop..... Set  
Elevator/Rudder trim..... Adjust  
Mixture..... Lean for altitude  
Cowl Flaps..... Closed/As Req'd



## NORMAL CHECKLIST

### Descent

Fuel .....Correct Tank, Qty checked  
Radios.....Set  
Approach Briefing.....Complete  
Cowl Flaps.....Closed  
Mixture.....Set  
Power/Prop.....Set  
Icing.....As required  
Lights.....On/as req'd

### Downwind

Brakes.....Check  
Undercarriage.....Down/Fixed  
Power/Prop.....Set  
Mixture.....Set  
Fuel.....Correct Tank  
Flaps.....Set  
Engine Parameters.....Green  
Lights.....As required  
Seats / Seatbelts.....Check Secure  
Fuel Selector.....Both  
Carb Heat.....As Required

### Final

Cowl Flaps.....Open  
Carb Heat.....Off  
Undercarriage.....Down & Locked/Fixed  
Propeller Pitch.....Full fine

### After Landing

Cowl Flaps.....Open  
Trim.....Takeoff  
Flaps.....Retract  
Carb Heat.....Off  
Land, Strobe lights.....Off  
Transponder.....Standby

### Shutdown and Securing

Power.....Idle  
Avionics and Switches.....Off  
Mixture.....Idle Cutoff  
Mags.....Off  
Master.....Off  
Control Lock.....In  
Hobbs and Tach.....Record  
Tie Downs.....Attached

### CAUTION:

**Performance and operational figures vary between models of C172, refer to the aircraft's flight manual and use a fine marker pen to indicate any significant differences.**

## REFERENCE INFORMATION

### Speeds

#### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.

$V_R$  ..... 55 KIAS  
 $V_{T0}$  – Max performance ..... 60 KIAS  
 $V_X$  – Best Angle of Climb ..... 60 KIAS  
 $V_Y$  – Best Rate of Climb .....  $V_{Ysl}$  80 KIAS  
.....  $V_{Y10,000R}$  70 KIAS  
Normal approach ..... 65-75 KIAS  
 $V_{ref}$  ..... 60 KIAS  
 $V_A$  – Maneuvering Speed ..... 80-95 KIAS  
Maximum demonstrated crosswind ..... 15 kts

#### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc ..... 128 KIAS  
 $V_{NE}$  – Red Line (Never Exceed) ..... 160 KIAS

$V_{SO}$  – Stall landing configuration ..... 45 KIAS  
 $V_S$  – Stall Clean ..... 50 KIAS

$V_{FE}$  – Max. Flap Extension 0-40° ..... 85 KIAS

#### EMERGENCY OPERATION

Best glide Speed ..... 65 KIAS  
Precautionary landing:  
Slow Safe Cruise ..... 80-95 KIAS  
Approach (flaps full) ..... 60 KIAS  
Ditching ..... 65 KIAS  
Engine failure after takeoff ..... 65 KIAS  
Engine Failure in flight flap up ..... 65 KIAS  
Engine Failure in flight flap down ..... 60 KIAS

### Operating performance

Plan Block Consumption ..... 40lt/hr  
Plan Block Cruise speed ..... 100KTAS

### Other Information

#### Transponder Codes:

Unlawful Interference ..... 7500  
Loss of Communication ..... 7600  
Emergency ..... 7700  
Unassigned ..... 2000

#### Radio Frequencies

Emergency Frequencies ..... 121.5/243

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# NORMAL CHECKLIST

## Descent

Fuel .....Correct Tank, Qty checked  
 Radios.....Set  
 Approach Briefing.....Complete  
 Cowl Flaps.....Closed  
 Mixture.....Set  
 Power/Prop.....Set  
 Icing.....As required  
 Lights.....On/as req'd

## Downwind

Brakes.....Check  
 Undercarriage.....Down/Fixed  
 Power/Prop.....Set  
 Mixture.....Set  
 Fuel.....Correct Tank  
 Flaps.....Set  
 Engine Parameters.....Green  
 Lights.....As required  
 Seats / Seatbelts.....Check Secure  
 Fuel Selector.....Both  
 Carb Heat.....As Required

## Final

Cowl Flaps.....Open  
 Carb Heat.....Off  
 Undercarriage.....Down & Locked/Fixed  
 Propeller Pitch.....Full fine

## After Landing

Cowl Flaps.....Open  
 Trim.....Takeoff  
 Flaps.....Retract  
 Carb Heat.....Off  
 Land, Strobe lights.....Off  
 Transponder.....Standby

## Shutdown and Securing

Power.....Idle  
 Avionics and Switches.....Off  
 Mixture.....Idle Cutoff  
 Mags.....Off  
 Master.....Off  
 Control Lock.....In  
 Hobbs and Tach.....Record  
 Tie Downs.....Attached

### CAUTION:

**Performance and operational figures vary between models of C172, refer to the aircraft's flight manual and use a fine marker pen to indicate any significant differences.**

# REFERENCE INFORMATION

## Speeds

### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.

$V_R$  ..... 55 KIAS  
 $V_{to}$  – Max performance ..... 60 KIAS  
 $V_X$  – Best Angle of Climb ..... 60 KIAS  
 $V_Y$  – Best Rate of Climb .....  $V_{y_{sl}}$  80 KIAS  
 .....  $V_{y_{10,000ft}}$  70 KIAS  
 Normal approach ..... 65-75 KIAS  
 $V_{ref}$  ..... 60 KIAS  
 $V_A$  – Maneuvering Speed ..... 80-95 KIAS  
 Maximum demonstrated crosswind ..... 15 kts

### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc ..... 128 KIAS  
 $V_{NE}$  – Red Line (Never Exceed) ..... 160 KIAS

$V_{SO}$  – Stall landing configuration ..... 45 KIAS  
 $V_S$  – Stall Clean ..... 50 KIAS

$V_{FE}$  – Max. Flap Extension 0-40° ..... 85 KIAS

### EMERGENCY OPERATION

Best glide Speed ..... 65 KIAS  
 Precautionary landing:  
 Slow Safe Cruise ..... 80-95 KIAS  
 Approach (flaps full) ..... 60 KIAS  
 Ditching ..... 65 KIAS  
 Engine failure after takeoff ..... 65 KIAS  
 Engine Failure in flight flap up ..... 65 KIAS  
 Engine Failure in flight flap down ..... 60 KIAS

## Operating performance

Plan Block Consumption ..... 40lt/hr  
 Plan Block Cruise speed ..... 100KTAS

## Other Information

### Transponder Codes:

Unlawful Interference ..... 7500  
 Loss of Communication ..... 7600  
 Emergency ..... 7700  
 Unassigned ..... 2000

### Radio Frequencies

Emergency Frequencies ..... 121.5/243

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## NORMAL CHECKLIST

### Before Start

Preflight Inspection..... Complete  
Tach/Hobbs/Time..... Recorded  
Passenger Briefing..... Complete  
Seats / Seatbelts..... Adjust, Lock  
Fuel Selector Valve..... Both  
Cowl Flaps..... Open  
Brakes..... Set/Hold  
Avionics..... Off  
Circuit Breakers..... Check In

### Normal Engine Start

Magnetos..... Both  
Master..... On  
Mixture..... Rich  
Propeller..... High RPM  
Power..... ½ Centimeter  
Carburetor Heat..... Cold  
Prime..... 1-3 as req'd  
Rotating Beacon..... On  
Area..... Clear

### After start

Mixture..... Set for Taxi  
Engine Instruments..... Check  
Taxi, Nav. Lights..... As Required  
Flaps..... Retracted  
Transponder..... Standby

### Taxi

Brakes..... Release, Check  
Avionics and Flight Instruments..... Check/Set  
Nav instruments..... Test

### Run Up

Parking Brake..... Set  
Fuel Selector..... Both  
Mixture..... Set  
Engine Instruments..... Green  
COWLS..... Open

Power..... Set  
Mixture..... Set  
Carb Heat..... Check  
Magnetos..... Check Left, Both, Right, Both  
Propeller Governor..... Cycle  
Engine Instruments..... Check  
Vacuum..... Check  
Ammeter..... Check with load  
DI..... Set to Compass  
Throttle friction lock..... Set  
Idle..... Check

## NORMAL CHECKLIST

### Pre-Takeoff

Trim..... Set for takeoff  
Mixture..... Set for takeoff  
Magnetos..... Both  
Propeller Pitch..... Full fine  
Flight Controls..... Free and Correct  
Autopilot..... Off  
Fuel..... Correct Tank, Qty, Primer locked  
Flaps..... Set for takeoff  
Cowl Flaps..... Open  
Instruments..... Checked and Set  
Radios..... Set for Departure  
Navigation / GPS..... Set for Departure  
Hatches..... Closed, Locked  
Harnesses..... Secure  
Engine Runup..... Complete  
Engine Instruments..... Checked  
Electrics..... CB's Checked  
Emergency & Dep. brief..... Completed

### Line Up

(REmember What To Do Last)

Runway Area..... Clear  
Engine Parameters..... Green  
Wind..... Check  
Transponder..... Set to altitude  
DI..... Aligned with Compass, Rwy  
Landing light, strobes..... On

### After Takeoff (above 1000' AGL)

Brakes..... Check  
Undercarriage..... Retracted/Fixed  
Power/Pitch..... Set  
Mixture..... Adjust  
Fuel..... Checked  
Flaps..... Up  
Engine Parameters..... Green  
Lights..... As required

### Cruise

Power/Prop..... Set  
Elevator/Rudder trim..... Adjust  
Mixture..... Lean for altitude  
Cowl Flaps..... Closed/As Req'd

### Descent

Fuel..... Correct Tank, Qty checked  
Radios..... Set  
Approach Briefing..... Complete  
Cowl Flaps..... Closed  
Mixture..... Set  
Power/Prop..... Set  
Icing..... As required  
Lights..... On/as req'd

# NORMAL CHECKLIST

## Downwind

Brakes.....Check  
 Undercarriage.....Down/Fixed  
 Power/Prop.....Set  
 Mixture.....Set  
 Fuel.....Correct Tank  
 Flaps.....Set  
 Engine Parameters.....Green  
 Lights.....As required  
 Seats / Seatbelts.....Check Secure  
 Fuel Selector.....Both  
 Carb Heat.....As Required

## Final

Cowl Flaps.....Open  
 Carb Heat.....Off  
 Undercarriage.....Down & Locked/Fixed  
 Propeller Pitch.....Full fine

## After Landing

Cowl Flaps.....Open  
 Trim.....Takeoff  
 Flaps.....Retract  
 Carb Heat.....Off  
 Land, Strobe lights.....Off  
 Transponder.....Standby

## Shutdown and Securing

Power.....Idle  
 Avionics and Switches.....Off  
 Mixture.....Idle Cutoff  
 Mags.....Off  
 Master.....Off  
 Control Lock.....In  
 Hobbs and Tach.....Record  
 Tie Downs.....Attached

### **CAUTION:**

Performance and operational figures vary between models of C182, refer to the aircraft's flight manual and use a fine marker pen to indicate any significant differences.

# REFERENCE INFORMATION

## Speeds

### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.  
 $V_R$ .....55 KIAS  
 $V_X$  – Best Angle of Climb .....65 KIAS  
 $V_Y$  – Best Rate of Climb..... $V_{y_{sl}}$  80 KIAS  
 ..... $V_{y_{10,000ft}}$  75 KIAS  
 Normal approach.....70-80 KIAS  
 $V_{ref}$ .....65 KIAS  
 $V_A$  – Maneuvering Speed.....90-110 KIAS  
 Maximum demonstrated crosswind.....15kts

### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc .....140 KIAS  
 $V_{NE}$  – Red Line (Never Exceed).....167 KIAS  
  
 $V_{SO}$  – Stall landing configuration.....52 KIAS  
 $V_S$  – Stall Clean .....58 KIAS  
  
 $V_{FE}$  – Max. Flap Extension 10-40° ....110 KIAS  
 $V_{FE}$  – Max. Flap Extension 0-10 °.....140 KIAS

### EMERGENCY OPERATION

Best glide Speed.....70 KIAS  
 Precautionary  
 Slow Safe Cruise.....90-105 KIAS  
 Approach (flaps up).....70 KIAS  
 Approach (flaps full).....65 KIAS  
 Ditching.....65 KIAS  
 Engine failure after takeoff.....70 KIAS  
 Engine Failure in flight flap up.....70 KIAS  
 Engine Failure in flight flap down.....65 KIAS

## Operating performance

Plan Block Consumption.....55 lt/hr  
 Plan Block Cruise speed.....125KTAS

## Other Information

### Transponder Codes:

Unlawful Interference.....7500  
 Loss of Communication .....7600  
 Emergency .....7700  
 Unassigned.....2000

### Radio Frequencies

Emergency Frequencies.....121.5/243  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# NORMAL CHECKLIST

## Downwind

Brakes.....Check  
 Undercarriage.....Down/Fixed  
 Power/Prop.....Set  
 Mixture.....Set  
 Fuel.....Correct Tank  
 Flaps.....Set  
 Engine Parameters.....Green  
 Lights.....As required  
 Seats / Seatbelts.....Check Secure  
 Fuel Selector.....Both  
 Carb Heat.....As Required

## Final

Cowl Flaps.....Open  
 Carb Heat.....Off  
 Undercarriage.....Down & Locked/Fixed  
 Propeller Pitch.....Full fine

## After Landing

Cowl Flaps.....Open  
 Trim.....Takeoff  
 Flaps.....Retract  
 Carb Heat.....Off  
 Land, Strobe lights.....Off  
 Transponder.....Standby

## Shutdown and Securing

Power.....Idle  
 Avionics and Switches.....Off  
 Mixture.....Idle Cutoff  
 Mags.....Off  
 Master.....Off  
 Control Lock.....In  
 Hobbs and Tach.....Record  
 Tie Downs.....Attached

### CAUTION:

Performance and operational figures vary between models of C182, refer to the aircraft's flight manual and use a fine marker pen to indicate any significant differences.

# REFERENCE INFORMATION

## Speeds

### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.  
 $V_R$ .....55 KIAS  
 $V_X$  – Best Angle of Climb .....65 KIAS  
 $V_Y$  – Best Rate of Climb..... $V_{Y_{SI}}$  80 KIAS  
 .....  $V_{Y_{10,000ft}}$  75 KIAS  
 Normal approach.....70-80 KIAS  
 $V_{ref}$ .....65 KIAS  
 $V_A$  – Maneuvering Speed.....90-110 KIAS  
 Maximum demonstrated crosswind.....15kts

### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc .....140 KIAS  
 $V_{NE}$  – Red Line (Never Exceed).....167 KIAS  
  
 $V_{SO}$  – Stall landing configuration.....52 KIAS  
 $V_S$  – Stall Clean .....58 KIAS  
  
 $V_{FE}$  – Max. Flap Extension 10-40° ....110 KIAS  
 $V_{FE}$  – Max. Flap Extension 0-10 °.....140 KIAS

### EMERGENCY OPERATION

Best glide Speed.....70 KIAS  
 Precautionary  
 Slow Safe Cruise.....90-105 KIAS  
 Approach (flaps up).....70 KIAS  
 Approach (flaps full).....65 KIAS  
 Ditching.....65 KIAS  
 Engine failure after takeoff.....70 KIAS  
 Engine Failure in flight flap up.....70 KIAS  
 Engine Failure in flight flap down.....65 KIAS

## Operating performance

Plan Block Consumption.....55 lt/hr  
 Plan Block Cruise speed.....125KTAS

## Other Information

### Transponder Codes:

Unlawful Interference.....7500  
 Loss of Communication .....7600  
 Emergency .....7700  
 Unassigned.....2000

### Radio Frequencies

Emergency Frequencies.....121.5/243

.....  
 .....  
 .....

## NORMAL CHECKLIST

### Before Start

Preflight Inspection.....Complete  
Tach/Hobbs/Time.....Recorded  
Passenger Briefing.....Complete  
Seats / Seatbelts.....Adjust, Lock  
Fuel Selector Valve.....Both  
Cowl Flaps.....Open  
Brakes.....Set/Hold  
Avionics.....Off  
Electrical.....Off  
Circuit Breakers.....Check In

### Normal Engine Start

Magnetos.....Both  
Mixture.....Rich  
Propeller.....High RPM  
Undercarriage.....Down  
Rotating Beacon.....On  
Master.....On  
Prime.....50-60lbs/as Required  
Power.....½ Centimeter  
Area.....Clear

### After start

Mixture.....Set for Taxi  
Engine Instruments.....Check  
Taxi, Nav. Lights.....As Required  
Flaps.....Retracted  
Transponder.....Standby

### Taxi

Brakes.....Release, Check  
Avionics and Flight Instruments.....Check/Set  
Nav instruments.....Test

### Run Up

Parking Brake.....Set  
Fuel Selector.....Both  
Mixture.....Set  
Engine Instruments.....Green  
Cows.....Open

Power.....Set  
Mixture.....Set  
Magnetos.....Check Left, Both, Right, Both  
Propeller Governor.....Cycle  
Engine Instruments.....Check  
Vacuum.....Check  
Ammeter.....Check with load  
DI.....Set to Compass  
Throttle friction lock.....Set  
Idle.....Check

## NORMAL CHECKLIST

### Pre-Takeoff

Trim.....Set for takeoff  
Mixture.....Set for takeoff  
Magnetos.....Both  
Propeller Pitch.....Full fine  
Flight Controls.....Free and Correct  
Autopilot.....Off  
Fuel.....Correct Tank, Qty Sufficient  
Fuel Pump.....Off  
Flaps.....Set for takeoff  
Cowl Flaps.....Open  
Instruments.....Checked and Set  
Radios.....Set for Departure  
Navigation / GPS.....Set for Departure  
Hatches.....Closed, Locked  
Harnesses.....Secure  
Engine Runup.....Complete  
Engine Instruments.....Checked  
Electrics.....CB's Checked  
Emergency & Dep. brief.....Completed

### Line Up

(Remember What To Do Last)

Runway Area.....Clear  
Engine Parameters.....Green  
Wind.....Check  
Transponder.....Set to altitude  
DI.....Aligned with Compass, Rwy  
Landing light, strobes.....On

### After Takeoff (above 1000' AGL)

Brakes.....Check  
Undercarriage.....Up, Orange Light  
Power/Pitch.....Set  
Mixture.....Adjust  
Fuel.....Checked  
Flaps.....Up  
Engine Parameters.....Green  
Lights.....As required

### Cruise

Power/Prop.....Set  
Elevator/Rudder trim.....Adjust  
Mixture.....Lean for altitude  
Cowl Flaps.....Closed/As Required

### **NOTE FOR MODELS WITH TIPTANKS:**

**TIP TANK Operation:** Transfer from only one tip tank at a time. Ensure sufficient space is available in main tank prior to transfer (main tank should be not more than approximately half full).

# NORMAL CHECKLIST

## Descent

Fuel ..... Correct Tank, Qty checked  
 Radios ..... Set  
 Approach Briefing ..... Complete  
 Cowl Flaps ..... Closed  
 Mixture ..... Set  
 Power/Prop ..... Set  
 Icing ..... As required  
 Lights ..... On/as req'd

## Downwind

Brakes ..... Check  
 Undercarriage ..... Down, Green Light  
 Power/Prop ..... Set  
 Mixture ..... Set  
 Fuel ..... Correct Tank  
 Flaps ..... Set  
 Engine Parameters ..... Green  
 Lights ..... As required  
 Seats / Seatbelts ..... Check Secure  
 Fuel Selector ..... Both

## Final

Cowl Flaps ..... Open  
 Undercarriage ..... Down, One Green Light  
 Propeller Pitch ..... Full fine

## After Landing

Cowl Flaps ..... Open  
 Trim ..... Takeoff  
 Flaps ..... Retract  
 Land, Strobe lights ..... Off  
 Transponder ..... Standby

## Shutdown and Securing

Power ..... Idle  
 Avionics and Switches ..... Off  
 Mixture ..... Idle Cutoff  
 Mags ..... Off  
 Master ..... Off  
 Control Lock ..... In  
 Tach/Hobbs/Time ..... Recorded  
 Tie Downs ..... Attached

### CAUTION:

Performance and operational figures vary between models of C210, refer to the aircraft's flight manual and use a fine marker pen to indicate any significant differences.

# REFERENCE INFORMATION

## Speeds

### NORMAL OPERATION

Unless otherwise stated the following speeds are for MAUW, Sea Level, ISA conditions.

$V_R$  ..... 70 KIAS  
 $V_X$  – Best Angle of Climb ..... **80 KIAS**  
 $V_Y$  – Best Rate of Climb .....  $V_{Y_{SI}}$  97 KIAS  
 .....  $V_{Y_{10,000ft}}$  93 KIAS  
 Normal approach ..... 80-85 KIAS  
 $V_{ref}$  ..... 75 KIAS  
 $V_A$  – Maneuvering Speed ..... 115-135 KIAS  
 Maximum demonstrated crosswind ..... 15kts

### PLACARD/ASI LIMITATIONS

$V_{NO}$  – Top of Green Arc ..... 195 KIAS  
 $V_{NE}$  – Red Line (Never Exceed) ..... 165 KIAS  
  
 $V_S$  – Stall Clean ..... 70 KIAS  
 $V_{SO}$  – Stall landing configuration ..... 65 KIAS

$V_{FE}$  – Max. Flap Extn 10-30° ..... 105 KIAS  
 $V_{FE}$  – Max. Flap Extn 0-10 ° ..... 140-165 KIAS\*  
 $V_{LE}$  – Max. Gear Extension ..... 135-165 KIAS\*  
 $V_{LR}$  – Min. Gear Retraction ..... 80 KIAS  
 \*Speed varies significantly between models

### EMERGENCY OPERATION

Best glide Speed ..... 75-85 KIAS  
 Precautionary  
 Slow Safe Cruise ..... 90-110 KIAS  
 Approach (flaps up) ..... 85 KIAS  
 Approach (flaps full) ..... 75 KIAS  
 Ditching ..... 75 KIAS  
 Engine failure after takeoff ..... 80 KIAS  
 Engine Failure in flight flap up ..... 90 KIAS  
 Engine Failure in flight flap down ..... 85 KIAS

## Operating performance

Planning ..... 65lt/hr  
 Plan Cruise speed ..... 145KTAS

## Other Information

### Transponder Codes:

Unlawful Interference ..... 7500  
 Loss of Communication ..... 7600  
 Emergency ..... 7700  
 Unassigned ..... 2000

### Radio Frequencies

Emergency Frequencies ..... 121.5/243

.....  
 .....  
 .....

# NORMAL CHECKLIST

## Before Start

Preflight Inspection.....Complete  
 Tach/Hobbs/Time.....Recorded  
 Passenger Briefing.....Complete  
 Seats / Seatbelts.....Adjust, Lock  
 Fuel Selector Valve.....Both  
 Cowl Flaps.....Open  
 Brakes.....Set/Hold  
 Avionics.....Off  
 Electrical.....Off  
 Circuit Breakers.....Check In

## Normal Engine Start

Mixture.....Rich  
 Propeller.....High RPM  
 Power.....½ Centimeter  
 Carburetor Heat.....Cold  
 Prime.....1-3 as req'd  
 Rotating Beacon.....On  
 Area.....Clear

## After start

Mixture.....Set for Taxi  
 Engine Instruments.....Check  
 Taxi, Nav. Lights.....As Required  
 Flaps.....Retracted  
 Transponder.....Standby

## Taxi

Brakes.....Release, Check  
 Avionics and Flight Instruments.....Check/Set  
 Nav instruments.....Test

## Run Up

Parking Brake.....Set  
 Fuel Selector.....Both  
 Mixture.....Set  
 Engine Instruments.....Green  
 Cowls.....Open

Power.....Set  
 Mixture.....Set  
 Carb Heat.....Check  
 Magnetos.....Check Left, Both, Right, Both  
 Propeller Governor.....Cycle  
 Engine Instruments.....Check  
 Vacuum.....Check  
 Ammeter.....Check with load  
 DI.....Set to Compass  
 Throttle friction lock.....Set  
 Idle.....Check

## Pre-Takeoff

Trim.....Set for takeoff  
 Mixture.....Set for takeoff  
 Magnetos.....Both  
 Propeller Governor.....Full fine  
 Flight Controls.....Free and Correct  
 Flaps.....Set for takeoff  
 Cowl Flaps.....Open  
 Instruments.....Checked and Set  
 Radios.....Set for Departure  
 Navigation / GPS.....Set for Departure  
 Hatches.....Closed, Locked  
 Harnesses.....Secure  
 Engine Runup.....Complete  
 Engine Instruments.....Checked  
 Electrics.....CB's Checked  
 Emergency & Dep. brief.....Perform

## Line Up

(Remember What To Do Last)

Runway Area.....Clear  
 Engine Parameters.....Green  
 Wind.....Check  
 Transponder.....Set to altitude  
 DI.....Aligned with Compass, Rwy  
 Landing light, strobes.....On

## After Takeoff (above 1000' AGL)

Brakes.....Check  
 Undercarriage.....Retracted/Fixed  
 Power/Pitch.....Set  
 Mixture.....Adjust  
 Fuel.....Checked  
 Flaps.....Up  
 Engine Parameters.....Green  
 Lights.....As required

## Cruise

Power/Prop.....Set  
 Elevator/Rudder trim.....Adjust  
 Mixture.....Lean for altitude  
 Cowl Flaps.....Closed/As Req'd

## Descent

Fuel.....Correct Tank, Qty checked  
 Radios.....Set  
 Approach Briefing.....Complete  
 Cowl Flaps.....Closed  
 Mixture.....Set  
 Power/Prop.....Set  
 Icing.....As required  
 Lights.....On/as req'd

## Downwind

Brakes.....Check  
 Undercarriage.....Down/Fixed  
 Power/Prop.....Set  
 Mixture.....Set  
 Fuel.....Correct Tank  
 Flaps.....Set  
 Engine Parameters.....Green  
 Lights.....As required  
 Seats / Seatbelts.....Check Secure  
 Fuel Selector.....Both  
 Carb Heat.....As Required

## Final

Cowl Flaps.....Open  
 Carb Heat.....Off  
 Undercarriage.....Down & Locked/Fixed  
 Propeller Pitch.....Full fine

## After Landing

Cowl Flaps.....Open  
 Trim.....Takeoff  
 Flaps.....Retract  
 Carb Heat.....Off  
 Land, Strobe lights.....Off  
 Transponder.....Standby

## Shutdown and Securing

Power.....Idle  
 Avionics and Switches.....Off  
 Mixture.....Idle Cutoff  
 Mags.....Off  
 Master.....Off  
 Control Lock.....In  
 Hobbs and Tach.....Record  
 Tie Downs/Screens/Covers.....Fitted

## Briefings

### Passenger Briefing:

Welcome on board, if I can have your attention for a brief you on the safety requirements and emergency equipment. Keep your seat belts fastened during flight, especially for take off and landing the seat belt is locked/fastened by..... (demonstrate). The door opens/locks..... (demonstrate). There is a Crash Axe ....., a fire extinguisher....., and a first aid kit..... (indicate positions). Should there be an emergency ensure any items that may cause damage are removed from your body and brace against the seat/glare shield, if you have any queries during the flight except during take-off or landing please ask.

### Takeoff Crew Briefing:

In the event of an emergency during take-off with insufficient runway left we will select a field within 30 degrees of the runway centerline, maintain \_\_\_ kts, secure the aircraft and inform ATC/Traffic. The normal departure will be with: Takeoff power set at \_\_\_mp/rpm, Rotate at \_\_\_ kts and climb out at \_\_\_kts, At \_\_\_ ft turn L/R to \_\_\_ deg magnetic.

## REFERENCE INFORMATION

Fill in for your aircraft as required

## Speeds

### NORMAL OPERATION

Except where stated the following speeds are for MAUW, Sea Level, ISA conditions.  
 V<sub>R</sub>..... KIAS  
 V<sub>X</sub> – Best Angle of Climb..... KIAS  
 V<sub>Y</sub> – Best Rate of Climb..... V<sub>YSL</sub>..... KIAS  
 V<sub>Y10,000ft</sub>..... KIAS  
 Normal approach..... KIAS  
 V<sub>ref</sub>..... KIAS  
 V<sub>A</sub> – Maneuvering Speed..... KIAS

### PLACARD/ASI LIMITATIONS

V<sub>NO</sub> – Top of Green Arc..... KIAS  
 V<sub>NE</sub> – Red Line (Never Exceed)..... KIAS  
 V<sub>SO</sub> – Stall landing configuration..... KIAS  
 V<sub>S</sub> – Stall Clean..... KIAS  
 V<sub>FE</sub> – Max. Flap Extension \_\_\_\_°..... KIAS  
 V<sub>FE</sub> – Max. Flap Extension \_\_\_\_°..... KIAS

### EMERGENCY OPERATION

Best glide Speed..... KIAS  
 Slow Safe Cruise..... KIAS  
 Ditching..... KIAS  
 Engine failure after takeoff..... KIAS  
 Engine Failure in flight flap up..... KIAS  
 Engine Failure in flight flap down..... KIAS

### Operating performance

Fuel Capacity (usable).....  
 Fuel Consumption Block.... /Hr  
 Plan Cruise speed..... KTAS

### Other Information

**Transponder Codes:**  
 Unlawful Interference.....7500  
 Loss of Communication.....7600  
 Emergency.....7700  
 Unassigned.....2000

**Radio Frequencies**  
 Emergency Frequencies.....121.5/243

### Loading

Maximum TO/Ldg Weight..... lbs  
 Standard Empty Weight..... lbs  
 Load limits.....

### Signals

Signal	On Ground	In Flight
Green Steady	Takeoff	Land
Green Flashing	Taxi	Return to land
Red Steady	Stop	Give way
Red Flashing	Clear runway	Do not land
White Flashing	Return to ramp	--
Red/Green Alternating	WARNING – use Caution	



## EMERGENCY PROCEDURES

### Engine failure

#### TAKEOFF

**NOTE: Bold Items are immediate recall items, other times may be followed up by the use of the AFM checklist.**

Throttle.....IDLE  
Brakes.....Apply  
Flaps.....UP  
Mixture.....IDLE cut-off  
Ignition.....OFF  
Master switch.....OFF

#### AFTER TAKEOFF

Airspeed.....KIAS Flaps Up  
.....KIAS Flaps Down  
Mixture.....Idle Cut-off  
Fuel shutoff valve.....OFF  
Ignition.....OFF  
Flaps.....as required  
Master switch.....OFF

#### DURING FLIGHT

##### IMMEDIATE ACTIONS

Airspeed.....Recommended Speed  
Carb Heat.....ON  
Field.....Select  
Approach.....Plan

##### FAULT FINDING

Carb Heat.....ON  
Primer.....IN & Locked  
Fuel Shutoff valve.....ON  
Mixture.....RICH  
Ignition.....BOTH (or START)

##### COMMUNICATE

Mayday.....Transmit Active or 121.5  
Transponder.....7700  
Passengers.....Brief

##### SECURE

Mixture.....cut-off  
Fuel shutoff valve.....off  
Ignition.....off

##### FINAL

Flaps.....as required  
Master switch.....Off  
Doors.....unlatch  
Touchdown.....tail low

### Engine Fire

#### during start

Starter.....Crank  
To draw away flames, If Engine Starts:  
Power.....1700rpm  
For a few minutes until flames appear to be extinguished, or if engine does not start:  
Mixture.....IDLE cut-off  
Ignition.....OFF  
Master.....OFF

#### Inspect damage during flight

Mixture.....IDLE cut-off  
Fuel.....OFF  
Master.....OFF  
Cabin Air.....OFF  
Sideslip.....Initiate if required  
Proceed with Engine Failure in Flight Actions

### Cabin Fire

#### On the Ground

Master Switch.....OFF  
Cabin Vents/Air/Heat.....Closed  
Fire Extinguisher.....Activate  
Cabin Vents/Windows.....Open

#### During flight

Follow Above Procedure, Once Fire is extinguished:  
Electrics/Avionics.....Off  
Master.....ON  
Avionics/Electrics.....On, one at a time  
Land at the nearest Suitable Airfield

### Electrical Fire

#### Unknown Source

Master Switch.....OFF  
Avionics and Electrics.....OFF  
Circuit Breakers.....PULL  
If Smoke Ceases:  
Master Switch.....ON  
Essential Electrical/Avionics.....On, One at a time

### Electrical failure/Overload

Load.....verify  
.....Reduce to minimum  
Alternator.....OFF  
Alternator CB.....Trip&Reset  
Alternator.....ON  
Load/Power.....OK?  
If Not:

Master.....OFF  
Master.....ON  
IF LOAD still not does not return to normal:  
PLAN To land at nearest suitable airfield,  
Conserve Battery as much as possible,  
All non essential electrics off, if necessary  
Inform ATC and turn master off until approaching circuit.  
Be prepared for implications of electrical failures on systems(flaps/gear)

### Carburetor Icing

Carb Heat.....Fully ON  
Mixture.....Adjust  
Once icing/roughness has cleared;  
Carb Heat.....Cold  
Mixture.....Reset

### Engine Roughness

Magnetos.....Check  
Mixture.....Adjust  
Temperatures/Pressures.....Check  
If roughness continues, plan to land at nearest suitable airfield.

### Spin Recovery

Ailerons.....NEUTRAL  
Throttle.....IDLE  
Confirm direction  
RUDDER.....FULL OPPOSITE  
Elevator.....Forward to break stall  
Rudder.....Neutralise when spinning stops  
Pitch.....Ease out of dive

## ABNORMAL PROCEDURES

### Short field take-off

Wing Flaps.....Takeoff  
Brakes.....APPLY  
Power.....Maximum  
Mixture.....Set for Field Elevation  
Brakes.....RELEASE  
Elevator Control.....Slightly Tail Low Climb  
Speed.....Vx kts  
Accelerate.....Vy kts  
Wing Flaps.....RETRACT  
Power.....Set for climb

**Note: Do not reduce power until wing flaps and landing gear have been retracted.**

### Soft field take-off

Wing Flaps.....Maximum for field  
Line up.....Do not stop rolling  
Takeoff roll.....Nose high  
Lift-off.....Minimum speed  
After Takeoff.....Accelerate Vx/Vy As req'd

### Crosswind take-off

Wing Flaps.....Minimum for field  
Takeoff roll.....Ailerons Into wind  
Lift-off.....Ailerons Neutral  
After takeoff.....Crab into wind for drift

### Maximum Performance Climb

Wing Flaps.....Up  
Power.....Maximum Climb  
Pitch.....Maximum Continuous  
Note: for an after takeoff climb or in an emergency full power may be used, for normal operations ensure time limits are not exceeded  
Mixture.....Set for Field Elevation  
Airspeed.....Vy<sub>sl</sub> KIAS (sea level)  
.....Vy<sub>10,000</sub> KIAS (10,000ft)  
Cowl Flaps.....Open  
Note: Vy will provide maximum rate of climb, when performance is limiting such that less than 200fpm is achieved, the reduction to best angle of climb may result in zero or negative rate of climb.

### Short field landing

Flaps.....Full  
Airspeed.....kts  
Touchdown Positive, Main Wheels First  
Nose Wheel.....Lower  
Braking.....Maximum Steady Braking  
Flaps.....Retract

### Soft field landing

Flaps.....Full  
Airspeed.....kts  
Touchdown,.....Softly Main Wheels First  
Nose Wheel.....Lower gently  
Elevator.....Full up  
Braking.....Gently, minimum required  
Flaps.....Leave down until clear of rwy

### Crosswind landing

Wing Flaps.....minimum for field length  
(and as required by strength of wind)  
Approach.....crab into wind  
Touchdown Nose straight, on into wind wheel  
After landing.....Ailerons into wind

### Go-around

Mixture/Pitch/Throttle.....Forward  
Wing Flaps.....Retract to Takeoff  
Brakes.....APPLY  
Once a Positive Climb is achieved and above Vr:  
Landing Gear.....RETRACT  
After obstacles are cleared and above Vx:  
Wing Flaps.....RETRACT  
Power.....Set for climb  
Note: Do not reduce power until wing flaps and landing gear have been retracted.

### Abnormal Maneuvers

Height.....Sufficient for recovery  
.....Above 3000ft AG  
HASELL : Complete prior to conducting stalls, spins and approved aerobatic maneuvers  
Airframe.....Limitations Reviewed  
Configuration Reviewed  
Security.....Seatbelts/Passengers/Load  
Engine.....Temperatures/Pressures  
.....Power/Pitch Mixture Checked  
Location.....Not over built up areas, airfields or controlled airspace High Terrain  
Within proximity of suitable landing areas  
Lookout.....Complete a lookout turn