HoneyBee Air

VH-WGZ

Cessna 172 M

C172

Quick Reference Handbook

Version 1.0 / April 2026

Serial Number : 17265151

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Content

Normal Checklists

BEFORE START

1. Wheel chocks / Tie Downs / Pitot Cover ..... REMOVED
2. Maintenance Release / AFM ..... ON BOARD
3. Seat & Harnesses ..... ADJUSTED & LOCKED
4. Fuel Tank Selector ..... BOTH
5. Trims ..... SET FOR TAKEOFF
6. Flaps .....RETRACTED
7. Park Brake ..... TEST & SET
8. Circuit Breakers ..... CHECKED IN
9. Carb Heat .....OFF
10. Battery Master ..... OFF
11. Beacon Light ..... ON

>> --------- Proceed to Start Procedure (Cold or Hot) ---------<<

---------- NOTE ----------

VDO Count by Master Switch. Do not turn on Master if unnecessary.

AFTER START

1. Throttle ..... SET 1000
2. Oil Pressure ..... CHECK (GREEN < 30 s)
3. Mixture ..... LEAN AS REQ'D
4. Alternator Output ..... POSITIVE
5. Circuit Breakers ..... IN
6. Radio / Intercom ..... SET & CHECKED

TAXI

1. Brakes ..... CHECKED
2. Steering .....CHECKED
3. Flight Instruments ..... CHECKED
4. Radios / Navaids ..... CHECKED

---------- CAUTION ----------

Do not operate Engine at High RPM when Running up or Taxying over Loose Ground due to the Potential Damage for Propeller Damage

RUN-UP

1. Park Brake ..... SET ON
2. Fuel Selector ..... BOTH
3. Primer ..... IN & LOCKED
4. Engine Instruments ..... CHECKED
5. Mixture ..... FULL RICH

>> --------- Conduct Run-up Procedure ---------<<

6. Engine Instruments ..... CHECKED
7. AMPS Output ..... CHECKED
8. Suction .....CHECKED
9. Carb Heat ..... CHECKED & OFF
10. Magnetos ..... CHECKED & BOTH ON
11. Slow Idle ..... CHECKED

BEFORE TAKE-OFF

1. Flight Instruments ..... CHECKED
2. Radios & NAVAIDS ..... SET & CHECKED
3. Primer ..... IN & LOCKED
4. Throttle Friction ..... SET & CHECKED
5. Seatbelts & Harnesses ..... SECURE
6. Trim ..... SET FOR TAKEOFF
7. Flaps ..... SET FOR TAKEOFF
8. Flight Controls ..... FREE / FULL MOVEMENT
9. Door / Window ..... LATCHED

>> --------- Conduct Departure Briefing ---------<<
>> ------- Conduct Takeoff Safety Briefing -------<<

LINE-UP

1. Flight Instruments ..... CHECKED
2. Strobes / Landing Lights ..... ON
3. Transponder ..... ON / ALT

AFTER TAKE-OFF (300ft)

1. Flaps ..... UP
2. Engine Instruments ..... GREEN
3. Landing Lights ..... OFF
4. Power ..... CHECKED

CRUISE

1. Power ..... SET / Mixture LEANED
2. Engine Instruments ..... GREEN
3. Fuel (Quantity & Balance) ..... CHECKED
4. DI / Compass ..... ALIGNED
5. Altimeter ..... QNH SET

DESCENT & APPROACH

1. Mixture ..... RICH
2. Altimeter ..... QNH SET
3. Radios & NAVAIDS ..... SET
4. Transponder ..... SET
5. Seatbelts & Harnesses ..... SECURED
6. Landing Lights .....ON
7. Approach Briefing ..... COMPLETED

PRE - LANDING

1. Brakes ..... PRESSURE CHECKED & OFF
2. Undercarriage ..... FIXED
3. Mixture .....FULL RICH
4. Fuel QTY & Balance ..... Sufficient & FULLEST TANK
5. Instruments ..... GREEN
6. Switches (Landing Lights / Magnetos)..... ON
7. Harnesses ..... SECURED

FINAL APPROACH

>> ----- Stable by 300ft ----- <<

1. Flaps ..... AS REQUIRED
2. Carburettor Heat ..... OFF

AFTER LANDING

1. Transponder ..... Ground / OFF
2. Pitot Heat ..... OFF
3. Landing Lights ..... OFF
4. Trim ..... Neutral
5. Flaps ..... RETRACTED

AFTER SHUTDOWN

1. Park Brake ..... SET
2. Alternator ..... OFF & CHECKED
3. Intercom ..... OFF
4. Mixture ..... IDLE CUT OFF
5. Magnetos ..... BOTH OFF
6. All switches ..... OFF
6. Battery Master ..... OFF
7. Cabin ..... CLEANED

Normal Procedures

PREFLIGHT

Initial

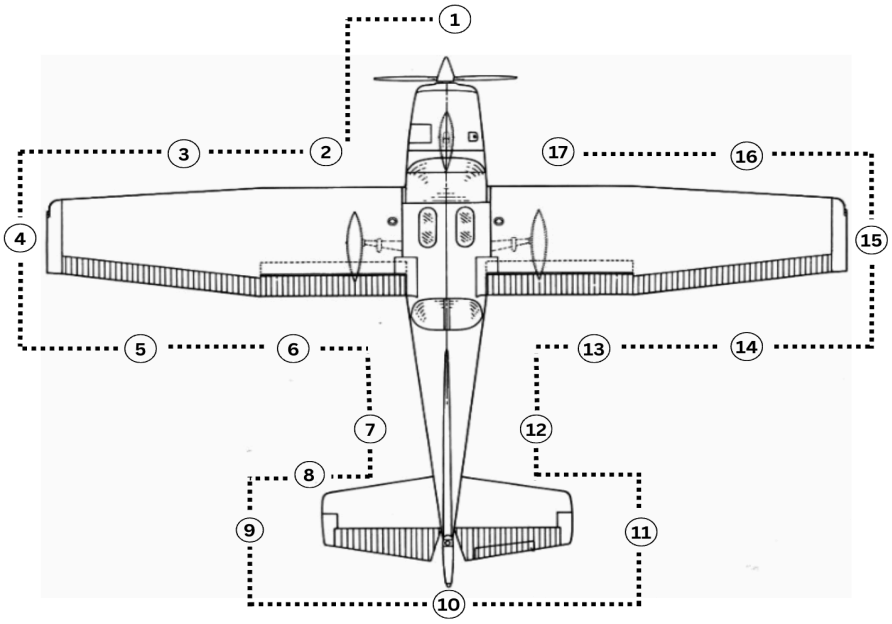
1. General Appearance..... CHECKED
2. Position & Taxi Path ..... CHECKED
3. Tie Downs, Locks, Chocks & Covers ..... REMOVED & STOWED

Cockpit

4. Controls ..... UNLOCKED
5. Flight Manual ..... CHECKED & STOWED
6. Interior ..... TIDY & EQUIPMENT STOWED
7. Windscreen..... CHECK CLEAN
8. Park Brake ..... CHECK & SET ON
9. Heater / Demister ..... OFF
10. Magnetos .....OFF / KEY REMOVED
11. Throttle ..... CLOSED
12. Mixture .....IDLE CUT OFF
13. NAV Lights & Instrument Lights ..... OFF
14. Overhead Cabin Light ..... OFF
15. Master Switch..... ON
16. Fuel Gauges .....CONTENTS CHECKED
17. Landing & Navigation Lights/ Strobes / Beacon ..... CHECK
18. Flaps ..... SET FLAP 40 DEG
19. Master Switch ..... OFF

>> --------- Conduct External Inspection ---------<<

20. Master Switch..... ON
21. Flaps ..... RETRACTED
22. Master Switch..... OFF
23. Oil Quantity (range 5 – 7 Quarts) ..... CHECKED
24. Fuel Drains (3x)..... CONTAMINATES CHECKED
25. Fuel Quantity ..... VISUALLY CHECKED
26. VDO Card ..... START NUMBERS RECORDED
27. Maintenance Release..... RELEASED & SIGNED



EXTERNAL CHECK

1. Prop Spinner - Condition
   Prop Blade - Condition
   Nose Gear Struct / Tyre
2. Engine Cowling - Brake Fluid Level
   Gear Struct
   Tyres - Condition / Inflation
   Nose Gear Tyre
3. Wing leading edge
   Wing Surface
   Stall warning
   Pitot tube - Cover / Condition
4. Wing Tip Condition
   Nav lights / Strobe
5. Ailerons Condition & movement
   Wing Surface
6. Flaps Condition & Movement
7. Empennage
   Radio Aerials Secure
8. Stabilator Condition
9. Stabilator Movement
10. Stabilator Trim - Anti Servo Tab
    Underside Fuselage
11. Stabilator Movement
12. Empennage
    Remove Chocks
    Baggage Door
13. Flaps Condition & Movement
    Wing Surface
14. Ailerons Condition & Movement
15. Wing Tip Condition
    Nav lights / Strobe
16. Wing leading edge
    Wing Surface
17. Gear Struct
    Tyres - Condition / Inflation
    Nose Gear Tyre
    Engine Cowling

START PROCEDURE (COLD)

1. Throttle ..... 1 cm OPEN
2. Mixture ..... FULL RICH
3. Primer ..... PRIME x 3 - 4
4. Master Switch ..... ON
5. Outside ..... CLEAR
6. Starter..... ENGAGE

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7. Throttle ..... SET 1000 RPM
8. Oil Pressure (rising < 30 s) ..... CHECK RISING

START PROCEDURE (HOT)

1. Throttle ..... 1 cm OPEN
2. Mixture ..... FULL RICH
3. Primer ..... PRIME x 0 (very hot) - 2 (warm)
4. Master Switch ..... ON
5. Outside ..... CLEAR
6. Starter..... ENGAGE

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7. Throttle ..... SET 1000 RPM
8. Oil Pressure (rising < 30 s) ..... CHECK RISING

START PROCEDURE (FLOOD)

1. Throttle ..... FULL OPEN
2. Mixture ..... IDLE CUT OFF
3. Master Switch ..... ON
4. Outside ..... CLEAR
5. Starter..... ENGAGE
6. Mixture ..... ADVANCED TO FULL RICH

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7. Throttle ..... SET 1000 RPM
8. Oil Pressure (rising < 30 s) ..... CHECK RISING

EXTERNAL POWER ENGINE START

1. Battery Master ..... OFF
2. All Electrical Equipment ..... OFF
3. Battery Cart Power ..... ON
4. External Power Plug ..... INSERT IN FUSELAGE
5. Battery Master ..... ON

>> --------- Proceed with normal start ---------<<

6. Battery Master ..... OFF
7. Throttle ..... IDLE
8. External Power Plug ..... DISCONNECT FROM FUSELAGE
9. Battery Master ..... ON
10. Ammeter ..... CHECK CHARGE

DO NOT ATTEMPT FLIGHT IF THERE IS NO ALTERNATOR OUTPUT

RUN-UP PROCEDURE

>> ----Aeroplane positioned into wind & clear behind----<<

1. Throttle ..... 1700 RPM

>> --------- Confirm Aircraft not Moving ---------<<

2. Engine Instruments ..... GREEN
3. Amp Output ..... POSITIVE CHARGE
4. Sunction ..... 4.6 - 5.4 " Hg
5. Carburettor Heat ..... OPERATION CHECKED
6. Magnetos (L/Both/R/Both)..... CHECK / MAX DROP 175 RPM
   MAX DIFFERENCE 50RPM
7. Slow Idle ..... CHECKED > 600 - 800 RPM
8. Throttle ..... 1000 RPM

---------- CAUTION ----------

If engine is cold, increase RPM slowly above 1200 RPM and Ensure Oil Pressure does not exceed the Maximum RED Line limit.

Operation on one Magnetos SHOULD NOT EXCEED 10 seconds.

If RPM drop is excessive, lean the mixture at 2000RPM, run for 1 min and recheck.

Avoid Prolonged Ground Operation with Carb Heat "ON" Due to unfiltered air.

CLIMBING

>> ----Every 1000 feet on Climb----<<

1. Engine Instruments ..... GREEN
2. Lower the nose or clear airspace (traffic) ..... COMPLETED

CLEAROFF CHECKS (10 - 20 MIN)

1. Compass / HSI ..... ALIGNED
2. Flight Log ..... COMPLETED & REVIEWED
3. Engine Instruments ..... GREEN
4. Altitude / Airspace ..... CONSIDERED
5. Radios & NAVAIDS ..... SET
6. Orientation ..... CONSIDERED
7. Fuel (QTY / Balance / Log) ..... CHECKED
8. Force Landing Area / Diversion ..... CONSIDERED

BEFORE MANOEUVRES (H A S E L)

1. **H** eight ..... SUFFICIENT
2. **A** rea ..... SUITABLE
3. **S** ecurity ..... CABIN SECURE / SEAT / HARNESSES
4. **E** ngine Instruments ..... GREEN
   FUEL CONTENT CHECKED
   POWER & MIXTURE CHECKED
   FUEL PUMP ON / PRESSURE CHECKED
5. **L**ookout ..... AREA CLEAR 360°

PARKING & SHUTDOWN

1. Park Brake ..... SET
2. Throttle ..... SET 1000 RPM
3. Alternator ..... CHECK
4. Magnetos ..... CHECKED
5. Mixture ..... IDLE CUT OFF
6. Throttle (After Engine Stops) ..... IDLE
7. Magnetos ..... OFF & KEY REMOVED
8. All Switches ..... OFF
9. Master Switch ..... OFF

POST FLIGHT ACTIONS

1. VDO / Airswitch Record Book .....COMPLETED
2. Seat ..... FULLY AFT
3. Cabin ..... TIDY / Rubbish Removed
4. Controls ..... SECURED
5. Seatbelts ..... DRESSED
6. Aeroplane Door & Windows ..... CLOSED & SECURED
7. Fuel Tanks ..... DIPPED / QTY CHECKED

LAST FLIGHT OF THE DAY

8. Throttle Lock ..... INSTALLED IF OUTSIDE
9. Aeroplane ..... TIED DOWN / CHOCKED

PASSENGER BRIEFING

- Location of
- Seat adjustment
- Seat belt usage / When seat belts are to worn
- Stowage of loose items
- Ventilation Outlets & Controls
- Remain clear of flight controls
- Emergency equipment & how to use
- No smoking policy
- How to exit aeroplane during an emergency
- Flight detail

DEPARTURE BRIEFING

- **C** harts / Departure procedure
- **T** errain / obstacles
- **W** eather / ATIS / TAF
- **O** perations / Take-off performance & speed
- **+ O** ther Enviromental factors / Threats associated with the flight

APPROACH BRIEFING

- **C** harts / Arrival & Approach procedure
- **T** errain / obstacles
- **W** eather / ATIS / TAF
- **O** perations / Take-off performance & speed
- **+ O** ther Enviromental factors / Threats associated with the flight

TAKE-OFF SAFETY BRIEFING

- If the engine fails on the runway, I will close the throttle, apply full and even braking and stop.
- If the engine fails after take-off with runway or overrun remaining, I will close the throttle, lower the nose, land and stop the aeroplane on the available surface.
- If the engine fails after take-off with no runway remaining, I will lower the nose, adopt a **65kt glide**, select a field 30° either side of the nose and carry out the remaining Engine Failure After Take-off checklist actions.
    - Above 300ft AGL I will select a field 60° either side of the nose. I will not consider turning back to the runway unless I am above 1,000ft or established on the downwind leg.

Aeroplane Type Information

ENGINE & SYSTEMS

Power Plant

- Engine Type ..... Lycoming O-320-E2D
- Max power output ..... 150 HP @ 2700 RPM MSL / ISA
- Take-off & Max. Continuous Power ..... Full Throttle / 2700 RPM
- Normal RPM Range..... 500 - 2700 RPM
- RPM Limitations..... 2700 RPM Red line

Fuel System & Specifications

- Minimum Grade ..... AVGAS 100LL or 100 / 130
- Total Capacity..... 198 LTS / 52 USG
- Usable Capacity..... 182 LTS / 48 USG
- Fuel Pressure Green Arc ..... 0.5 - 8 PSI
- Fuel Pressure Red Line ..... 0.5 PSI (MIN) / 8 PSI (MAX)

Propeller

- Propeller Manufacturer ..... McCauley
- Type 1C160/DTM7553
- Diameter ..... 75 Inch
- Static RPM (at 150 hp) ..... 2320 (± 50) RPM

Electrical

- Alternater ..... 14V / 36 Amp
- Battery ..... 12 V / 32 Ampere Hour

ENGINE & SYSTEMS

Oil System and Specification

- Oil Quantity ..... MIN 6 QTS / MAX 8 QTS
- Oil Grade ..... SAE 50 / AERO 100
- Oil Temp / Green Arc ..... 75°F - 245°F
- Oil Temp / Red Line ..... MAX 245°F
- MIN Oil Temp Take-off ..... 75°F
- Oil Pressure / Green Arc ..... 60 - 90 PSI
- Oil Pressure / Yellow Arc (Idle RPM) ..... 25 - 60 PSI
- Oil Pressure / Red Line (MIN) ..... 25 PSI
- Oil Pressure / Red Line (MAX) ..... 90 PSI
- Oil Pressure (GRD Run-up only < 1200 RPM) .....100 PSI

Undercarriage

- Main Gear Wheels ..... 29 PSI Inflation
- Nose Gear Struct (Oil / Air Oleo / Extension) ..... 45 PSI Inflation
- Nose Gear Wheels ..... 26 PSI Inflation

Suction / Vacuum

- Normal Operating Range ..... 4.6 - 5.4 “ Hg @ 1700RPM

AIRSPEEDS - NORMAL OPERATIONS

- V_{NE} ..... 158 KIAS
- V_{NO} ..... 126 KIAS
- V_A (@ 1044kg) ..... 97 KIAS
  (@ 907kg) ..... 90 KIAS
- V_{FE} ..... 88 KIAS
- V_{s1} ..... 50 KIAS
- V_{s0} ..... 43 KIAS
- V_R ..... 60 KIAS
- V_{TOSS} (Flaps 0) ..... 60 KIAS
- V_{TOSS} (Flaps 10) ..... 57 KIAS
- Vx ..... 65 KIAS
- Vy ..... 74 KIAS
- Max Demonstrated Crosswind Component .....15 KIAS

AIRSPEEDS - NON NORMAL OPERATIONS

- V GLIDE MAX RANGE (CLEAN)..... 65 KIAS
- V Short Field Approach ..... 65 KIAS

STALLING SPEEDS @MTOW

Flaps Setting	Angle of Bank			
	0°	20°	40°	60°
0°	50 KIAS	51 KIAS	56 KIAS	70 KIAS
10°	45 KIAS	47 KIAS	51 KIAS	65 KIAS
40°	43 KIAS	44 KIAS	49 KIAS	60 KIAS

AEROPLANE WEIGHT & FLIGHT LOAD LIMITS

Aeroplane Weights General

- Max Ramp Weight ..... 1044 KG
- Max Take-Off Weight ..... 1044 KG
- Max Landing Weight ..... 1044 KG
- Max Weight Utility Category (T/O & Landing) ..... 907 KG
- Max Combined Baggage Compartment ..... 55 KG
- Max Baggage Aft of Baggage door latch ..... 22 KG
- Max Load on a Seat ..... 77 KG

Maneouvre Load Factor

- Normal Category (1044kg)
  - Flaps Up ..... + 3.8 g & - 1.52 g
  - Flaps Down ..... + 3.0 g
- Utility Category (907kg)
  - Flaps Up ..... + 4.4 g & - 1.76 g
  - Flaps Down ..... + 3.0 g

Permitted Manoeuvres - Normal Category

Operations Shall be Limited to Normal Flying Manoeuvres
But may Include Straight & Steady Stalls & Level Turns in which the
Angle of Bank does not exceed 60°

---------- **WARNING** ----------

ALL AEROBATIC MANOEUVRES INCLUDING INTENTIONAL SPINS ARE PROHIBITED

AEROPLANE WEIGHT & FLIGHT LOAD LIMITS

Permitted Manoeuvres - Utility Category ONLY

Approved Manoeuvres for Bank Angles Exceeding 60° AOB

- Steep Turns ..... ENTRY SPEED 97 KIAS
- Lazy Eights .....ENTRY SPEED 104 KIAS
- Chandelles ..... ENTRY SPEED 104 KIAS
- Spin ..... ENTRY SPEED - SLOW DECELERATION

---------- **WARNING** ----------

NO OTHER AEROBATIC MANOEUVRES OR SPINS ARE PERMITTED
IN THE UTILITY CATEGORY

Permitted Manoeuvres - Utility Category ONLY

The datum used is Station 0.0 , being the engine firewall, front face, lower portion

Centre of Gravity - Normal Category ONLY

- Forward Limit ..... Below 1044 KG : 978 mm Aft of Datum
  Below 839 KG : 889 mm Aft of Datum
- Rear Limit ..... Below 1044 KG : 1201 mm Aft of Datum

Centre of Gravity - Utility Category ONLY

- Forward Limit ..... Below 907 KG : 978 mm Aft of Datum
  Below 839 KG : 889 mm Aft of Datum
- Rear Limit ..... Below 907 KG : 1201 mm Aft of Datum

Aeroplane Performance Data

TAKE-OFF DISTANCE				Weight KG		
				1044 kg	907 kg	771 kg
VTOSS- IAS at 50 feet				59 KIAS	54 KIAS	50 KIAS
S/L	TODR (m)	ISA	Paved	535	384	273
			Grass	572	411	293
		ISA +5	Paved	554	398	283
			Grass	592	425	303
		ISA +10	Paved	573	411	293
			Grass	613	440	313
2500ft	TODR (m)	ISA	Paved	669	464	322
			Grass	716	497	345
		ISA +5	Paved	693	481	334
			Grass	742	515	357
		ISA +10	Paved	717	498	346
			Grass	768	532	370
5000ft	TODR (m)	ISA	Paved	869	570	384
			Grass	930	609	411
		ISA +5	Paved	900	590	398
			Grass	963	631	425
		ISA +10	Paved	931	610	411
			Grass	997	653	440
7500ft	TODR (m)	ISA	Paved	1351	755	480
			Grass	1446	808	514
		ISA +5	Paved	1400	782	497
			Grass	1497	837	532
		ISA +10	Paved	1448	809	515
			Grass	1549	866	551

All distance is factored 1.15 as per CAO 20.7.4

Values in Table based upon FLAPS UP and NIL wind

CRUISE PERFORMANCE				
MTOW + Lean Mixture to max RPM + ISA Maximum cruise is normally limited to 75% Power				
Altitude	RPM	% BHP	TAS KNOT	Litres / Hour
2500ft	2700	87	118	36
	2600	78	113	33
	2500	70	109	30
	2400	63	104	27
	2300	57	100	25
	2200	51	94	24
5000ft	2700	81	117	34
	2600	73	113	31
	2500	66	109	29
	2400	60	103	26
	2300	54	98	25
	2200	48	92	23
7500ft	2700	76	117	32
	2600	69	113	29
	2500	63	107	27
	2400	57	101	25
	2300	51	96	24
10000ft	2700	72	117	30
	2600	66	112	28
	2500	59	106	26
	2400	54	100	25
	2300	48	94	23

Recommended navigation flight planning block figures in green. TAS = 109 KTAS and FF = 30 L/H leanded for max RPM, at 2500 RPM

Non - Normal Procedures

ENGINE FIRE DURING START

1. Engine Starter ..... CONTINUE CRANKING ENGINE
2. Mixture ..... IDLE CUT OFF
3. Throttle ..... FULL OPEN\
4. Fuel Selector ..... OFF

>> Abandon Aeroplane if Fire Continues & Use Extinguisher <<

ENGINE FIRE IN FLIGHT

1. Fuel Selector ..... OFF
2. Throttle ..... CLOSED
3. Mixture ..... IDLE CUT OFF
4. Heater & Defroster ..... OFF

---------- WARNING ----------

>> IF FIRE NOT OUT - LAND IMMEDIATELY <<
Sideslip where necessary to avoid smoke and fumes
Consider Emergency Descent to a suitable field ASAP

>> Follow the applicable engine failure procedures after engine shutdown and land <<

ELECTRICAL SMOKE OR FIRE

1. Master Switch ..... OFF
2. Cabin Vents ..... OPEN
3. Cabin Heat ..... OFF

---------- NOTE ----------

To aid in Smoke Evacuation,
Open Pilot's Storm Window if required

>> LAND AS SOON AS PRACTICAL <<

ENGINE FAILURE - GROUND ROLL (RTO)

1. **Throttle** ..... **IDLE**
2. If Airborne ..... MANOEUVRE AS REQUIRED TO LAND
3. Flaps ..... AS SITUATIONS REQUIRES
4. Toe Brakes ..... MAX (After landing)
5. If Insufficient Runway Remains ..... EMERGENCY SHUTDOWN

ENGINE FAILURE AFTER TAKE-OFF

When Runway / Over-run Available

1. Engine Failure - Ground Roll (RTO) ..... EXECUTE

When NO Runway / Over-run Available

2. Control the Aeroplane and Establish Glide ..... 65 KIAS
3. Force landing Area ..... SELECT

If Time Permits

4. Emergency Restart ..... ATTEMPT

If Restart Unsuccessful

5. Mayday Call ..... TRANSMIT
6. Emergency Engine Shutdown ..... EXECUTE
7. Flaps ..... SET

EMERGENCY ENGINE SHUTDOWN

1. Fuel Selector ..... OFF
2. Mixture ..... IDLE CUT OFF
3. Magnetos .....BOTH OFF
4. Master Switch ..... OFF (IF FLAPS ARE SET)
5. Seatbelts & Harnesses ..... SECURE

ENGINE FAILURE IN FLIGHT

PHASE 1 - IMMEDIATE MEMORY ACTIONS

1. **Control the Aeroplane & Establish the Glide**
2. IF Fire or Smoke ..... EMERGANCY ENGINE SHUTDOWN
3. IF NO Fire or Smoke ..... ENERGENCY RESTART (IN-FLIGHT)

IF Emergency Re-start unsuccessful

4. Wind Direction..... ASCERTAIN & CONFIRM
5. Force Landing Area ..... SELECT
6. Transponder ..... CODE 7700
7. ELT ..... MANUALLY SET ON
8. Mayday Call ..... TRANSMIT

Trouble Checks (ONLY IF TIME PERMITS)

9. (**F**) Fuel Selection & Quantity ..... CHECKED
10. (**M**) Mixture ..... OPERATE THROUGH RANGE
11. (**O**) Engine Instruments ..... CHECKED
12. (**S**) Magentos ..... CHECK / L / BOTH / R / BOTH
13. (**T**) Throttle ..... OPERATE THROUGH RANGE

Safety Check (When Committed to Force Landing)

14. PAX Safety Briefing..... CONDUCT IF TIME PERMITS
15. Emergency Engine Shutdown..... EXECUTE

---------- NOTE ----------

During practice forced landings, to prevent shock cooling of the engine & plug fouling, smoothly operate the throttle momentarily (to normal power settings) at least every 1,000ft on descent.
This will also confirm that the engine is operating normally.

EMERGENCY RESTART (IN-FLIGHT)

PHASE 2 - FOLLOW UP ACTIONS

1. Carburettor Heat ..... FULL HOT POSITION
2. Fuel Selector ..... CHANGE TANK
3. Mixture ..... FULL RICH
4. Primer ..... CHECK IN & LOCKED
5. Magnetos ..... CHECK L / Both / R / BOTH

>> IF engine re-starts proceed to nearest suitable aerodrome <<

>> IF engine does NOT re-start,
Execute the remainder of
Engine Failure in Flight Checklist <<

PASSENGER SAFETY BRIEFING

- We are experiencing a technical problem, we will be landing _____ (location)
- Please fasten our seat belts tightly
- Remove sharp objects from your pockets, glasses and dentures
- Stow loose items in the back for safe keeping
- Your exit is this main door
- Once we have landed, and come to a complete stop, do not wait for me, get out & I will meet you behind the back of the aeroplane

LOW OIL PRESSURE

1. Oil Pressure ..... CHECK
2. Oil Temperature ..... CHECKED

---------- NOTE ----------

If low oil pressure is accompanied by normal oil temperature, there is a possibility oil pressure gauge or relief valve is malfunctioning.

>> LAND AS SOON AS POSSIBLE <<

LOSS OF OIL PRESSURE

1. Oil Pressure ..... CHECK
2. Oil Temperature ..... CHECKED
3. Power ..... REDUCE TO MINIMUM
4. **Anticipate ENGINE FAILURE IN FLIGHT**

---------- WARNING ----------

Leave the engine running at low power during the approach, using only the Minimum power required to reach the desired touchdown spot

>> LAND AS SOON AS POSSIBLE <<

ENGINE OIL TEMPERATURE HIGH

1. Oil Pressure Gauge & Annunciator ..... CROSS CHECKED
2. Power ..... REDUCE TO MINIMUM
3. Airspeed ..... INCREASE IF POSSIBLE
4. **Anticipate ENGINE FAILURE IN FLIGHT**

>> LAND AS SOON AS POSSIBLE <<

CARBURETTOR ICING

1. Carburettor Heat ..... HOT
2. Mixture .....ADJUST FOR MAX SMOOTHNESS

SPARK PLUG FOULING - GROUND

---------- NOTE ----------

If engine runs smooth on both while run rough
when conducting magento checks, likely it is caused by
Sparking plug fouling due cold engine

Magnetos ..... BOTH ON
Throttle ..... 2000 RPM
Mixture ..... LEAN TILL ROUGH THEN SLIGHTLY RICHEN

>> ALLOW ENGINE TO RUN FOR (1) ONE MINUTE <<

Magnetos ..... CHECK L / BOTH / R / BOTH
Mixture ..... FULL RICH

---------- WARNING ----------

If engine continues to run rough, **TERMINATE** the flight

ENGINE ROUGHNESS - IN FLIGHT

1. Carburettor Heat ..... HOT
2. Primer ..... CONFIRM IN & LOCKED

>> IF ROUGHNESS CONTINUES AFTER (1) ONE MINUTE <<

3. Carburettor Heat ..... COLD
4. Mixture .....ADJUST FOR MAX SMOOTHNESS

>> IF ROUGHNESS CONTINUES AFTER (2) TWO MINUTE <<

5. Mixture ..... FULL RICH
6. Magnetos .....,..... CHECK L / BOTH / R / BOTH

---------- NOTE ----------

If situation stabilises on one magneto continue on that magneto
with mixture FULL RICH to the nearest suitable airport
if situation deteriorates further prepare for power off landing

ILLUMINATION OF OVER VOLTAGE WARNING LIGHT

IN THE EVENT OF THE ILLUMINATION OF WARNING LIGHT

1. Master Switch (Both Sides) ..... OFF
2. Master Switch (Both Sides) ..... ON

>> IF PROBLEM RETURNS <<

The flight should be terminated and the current drain on the battery minimised, by turning of non-essential items

---------- WARNING ----------

The battery is the only remaining source of electrical power

>> Anticipate Complete Loss of Electrical Power <<
>> LAND AS SOON AS POSSIBLE <<

AMMETER DISCHARGE - IN FLIGHT

---------- NOTE ----------

A broken alternator drive belt or wiring is most likely the cause of Alternator failures, although damaged or improperly adjust voltage Regulator can also cause malfunctions.

1. Master Switch (Both Sides) ..... OFF
2. Master Switch (Both Sides) ..... ON

>> IF still sows discharge <<

3. Master Switch (Alternator half only) ..... OFF

---------- WARNING ----------

If the alternator is not producing a charge, then it should be switched off as the alternator field circuit may be placing an unnecessary load on the battery.
The battery is the only remaining source of electrical power

>> Anticipate Complete Loss of Electrical Power <<
>> LAND AS SOON AS POSSIBLE <<

ELECTRICAL OVERLOAD

---------- NOTE ----------

This procedure is to be used when the ALTERNATOR is outputting OVER 20 AMPS (or more) above the known Electrical Load

1. ALT Switch ..... ON
2. Battery Switch ..... OFF

If ALT load is reduced this indicates a malfunction of the Battery and / or Electrical Wiring:

1. Electrical load ..... REDUCE TO MINIMUM

>> LAND AS SOON AS PRACTICAL <<

---------- WARNING ----------

Due to increased System voltage & Radio Frequency Noise, operation with the ALT switch ON & BATTERY switch OFF should be made only when required by an electrical failure.

If ALT load is reduced this indicates a malfunction of the Battery and / or Electrical Wiring:

1. ALT Switch ..... OFF
2. Battery Switch ..... AS REQUIRED
3. Electrical load ..... REDUCE TO MINIMUM

---------- WARNING ----------

The battery is the only remaining source of electrical power

>> Anticipate Complete Loss of Electrical Power <<

>> LAND AS SOON AS POSSIBLE <<

POST LOST OF CONTROL CHECKS

1. Safe Altitude ..... CONFIRM & CLIMB IF REQUIRED
2. Airframe ..... CHECK FOR DAMAGE
3. Flaps ..... CONFIRM RETRACTED - NO DAMAGE
4. Engine Instruments ..... GREEN
5. Orientation ..... POSITION CHECKED

---------- NOTE ----------

These Checks Should Be Performed
Following Recovery from Unusual Attitudes (Including Training)
or Following Recovery From an Inadvertent Spin

SPIN RECOVERY

1. Throttle ..... CLOSED
2. Aileron ..... NEUTRALISE
3. Rudder ..... OPPOSITE OF SPIN DRIECTION
4. Elevator ..... FULL FORWARD

When rotation stops ..... CONTROLS CENTRAL

>> CONDUCT POST LOST OF CONTROL CHECKS <<

EMERGENCY DESCENT

1. Throttle ..... CLOSED
2. Airspeed ..... WHITE ARC
3. Flaps ..... SET 40°
4. Airspeed ..... 75 KIAS

Intentionally Blank