

REFERENCE/PROCEDURES CHECKLIST  
1976 C172M GDZQ

**REFERENCE**

Empty Wt. ....	1441 lbs
Gross Wt. ....	2300 lbs
Engine Lycoming .....	0-320
Power .....	160 HP
Oil 20w50 .....	6-8 qts
Static Range .....	2300 - 2420 RPM

**TAKE-OFF**

Normal Climb (Sea Level) .....	80-90 KIAS
Normal Climb (10 000ft) .....	70-80 KIAS
50' Obstacle Clearance - No Flap .....	59 KIAS
Vx - SL64/10K62 .....	63 KIAS
Vy - SL78/10K68 .....	76 KIAS
Best Glide (Flaps UP) .....	65 KIAS
Best Glide (Flaps DOWN) .....	60 KIAS

**ENROUTE**

Cruise, 75% Power (Sea Level) .....	112 KTAS
Cruise, 75% Power (4000ft) .....	116 KTAS
Cruise, 75% Power (8000ft) .....	120 KTAS
Max Speed (Sea Level) .....	125 KTAS

**SPEEDS**

Va - Maneuvering Speed .....	2300 lbs-97 KIAS
	1950 lbs-89 KIAS
	1600 lbs-80 KIAS
Vs - Stall .....	47 KIAS
Vso - Stall/Flaps .....	41 KIAS
Vne - Never Exceed Speed .....	160 KIAS
Vno - Max. Structural Cruising speed .....	128 KIAS

**APPROACH**

Vfe - Flaps Extended .....	85 KIAS
Flaps up .....	60-70 KIAS
40° Flap .....	55-65 KIAS

**PROCEDURES**

**SHORT-FIELD TAKE-OFF**

Take-off checklist .....	Complete
Taxi .....	Max runway
Brakes .....	Set and hold
Flaps .....	10°
Throttle .....	Full
Brakes .....	Release
Climb .....	57 KIAS
Flaps .....	Retract when clear
Airspeed .....	67 KIAS

**SHORT-FIELD LANDING**

Pre-landing check .....	Complete
Approach .....	62 KIAS
Flaps .....	30°
Throttle .....	Maintain glide
Touchdown .....	Power Off
Flaps .....	Up
Elevator .....	Full up
Braking .....	Heavy as required

**SOFT-FIELD TAKE-OFF**

Take-off checklist .....	Complete
Flaps .....	10°
Taxi .....	keep rolling
Climb .....	54 KIAS
Flaps .....	retract
Airspeed .....	67 KIAS

**SOFT-FIELD LANDING**

Pre-landing check .....	Complete
Throttle .....	1500 RPM
Flaps .....	10°
Airspeed .....	60 KIAS
Touchdown .....	Main first, softly
Landing roll .....	Nose wheel up
Elevator .....	Up
Braking .....	As required

**BALKED LANDING/OVERSHOOT**

Power .....	Full Throttle
Carb Heat .....	Off
Establish Pitch Attitude .....	Arrest Descent
Flaps .....	Retract to 20°
Airspeed .....	55 KIAS
Confirm .....	Static RPM (Over 2300)
Engine instruments .....	Ts/Ps in the Green
Safe Alt. + 300' AGL .....	Confirm Positive Rates
Flaps .....	Retract Slowly (White arc)
Climb Speed .....	70-80 KIAS (Normal)

**PRE-FLIGHT CHECKLIST**  
1976 C172M GDZQ

**PRE-FLIGHT INSPECTION - COCKPIT**

- Aircraft docs (ARROW) ..... Check
- Weight & Balance ..... Check
- Control wheel lock ..... Remove
- Ignition ..... Off
- Avionics Power Switch ..... Off
- Master Switch ..... On
- Fuel quantity indicators ..... Confirm Quantity
- Flaps ..... Extend
- Pitot Heat/Lights ..... On/Check/Off
- Master ..... Off
- Fuel Valve ..... On/Both
- Fire Extinguisher/First Aid Kit ..... Check

**FUSELAGE & EMPENNAGE**

- Baggage Door ..... Closed & Locked
- Rivets ..... Check
- Tail Tie-Down ..... Disconnect
- Control surfaces ..... Free & Secure
- Trim Tab ..... Check Security
- Antennas ..... Check Security

**RIGHT WING**

- Wing tie-down ..... Disconnect
- Aileron ..... Free and Secure
- Flaps ..... Free and Secure
- Lights & Wingtip ..... Check
- Leading Edge ..... Check
- Main wheel tire & brake ..... Check
- Fuel tank sump ..... Sample
- Fuel Quantity ..... Check
- Fuel Filler cap ..... Secure

**NOSE**

- Oil - 7QTs ..... 6 MIN/8 MAX
- Fuel strainer ..... Sample
- Propeller and spinner ..... Check
- Carburetor air filter ..... Check
- Landing lights ..... Check
- Nose wheel strut & tire ..... Check
- Nose-Tie down ..... Disconnect
- Static source opening ..... Check

**LEFT WING**

- Wing tie-down ..... Disconnect
- Aileron ..... Free and Secure
- Flaps ..... Free and Secure
- Lights & Wingtip ..... Check
- Leading Edge ..... Check
- Main wheel tire & brake ..... Check

- Fuel tank sump ..... Sample
- Fuel Quantity ..... Check
- Fuel Filler cap ..... Secure
- Pitot tube ..... Uncover and Check
- Stall warning ..... Check
- Landing/Taxi Light(s) ..... Clean/Cond

**BEFORE START**

- Preflight inspection ..... Complete
- Passenger Briefing ..... Complete
- Seats/Belts/Shoulder Harness ..... Secure
- Doors ..... Closed & Locked
- Circuit breakers ..... Check In
- Electrical Equip ..... Off
- Avionics ..... Off
- Brakes ..... Test & Set
- Fuel Selector ..... Both
- Fuel shutoff valve ..... On (In)

**ENGINE START**

- Mixture ..... Rich
- Carb Heat ..... Cold
- Primer 2-6 Strokes ..... In + Locked
- Throttle ..... In 1/8"
- Master ..... On
- Beacon Light ..... On
- Prop Area ..... CLEAR!
- Ignition Switch ..... Start
- Throttle ..... 1000 RPM
- Oil Pressure ..... Green
- Flaps ..... Retract
- Radio/Electronics ..... On
- Transponder ..... Standby
- ATIS ..... Record
- Flight Instruments Set ..... D.G. / A.I. / Alt
- Switches/Circuit Breakers ..... Check

**TAXI**

- Parking Brake ..... Off
- Brakes ..... Check
- Wind Control Inputs ..... Check/Set
- Rolling Instruments ..... Check on
- Radio Call ..... As Required

### Run Up/Before Take Off

Park A/C ..... Into Wind  
 Parking Brake ..... Set  
 Flight Controls ..... Free/Correct  
 Elevator Trim ..... Take-Off  
 Engine Instruments ..... Ts/Ps in the Green  
 Fuel Selector ..... Both  
 Mixture ..... Rich  
 Throttle ..... 1700 RPM  
 Mixture ..... Lean Check  
 Magnetos ..... 125RPM Max Drop  
 Left/Both/Right/Both ..... 50 RPM Difference  
 Carb Heat ..... Check(RPM Drop)  
 Suction ..... 4.6-5.4"Hg  
 Engine Instruments ..... Ts/Ps in the Green  
 Alternator ..... Load Check  
 Carb heat ..... Hot  
 Throttle ..... Idle and back to 1000RPM  
 Carb heat ..... Cold  
 Flight Instruments Set ..... D.G. / A.I. / Alt  
 Review ..... Departure/EmergencyProcedures  
 Parking Brake ..... Off  
 Doors/Windows ..... Closed + Locked

### IN-FLIGHT

#### TAKE-OFF

Time ..... Record  
 Lights ..... As required  
 Transponder ..... Set Alt  
 Flaps ..... Set for Take-Off  
 Radio Call ..... As Required  
 Carb Heat ..... Cold  
 Mixture ..... Rich  
 Power ..... Full Throttle  
 Confirm ..... Static RPM (over 2300)  
 Engine Instruments ..... Ts/Ps in the Green  
 Airspeed Alive ..... Rotate 55 KIAS (Normal)  
 Climb Speed ..... 70-80 KIAS (Normal)  
 Safe Alt. + 300' AGL ..... Confirm Positive Rates  
 Flaps ..... Zero

#### CRUISE AT DESIRED ALTITUDE

Power ..... 2200-2400 RPM  
 Trim ..... Adjust  
 Mixture ..... Lean for Max RPM  
 Carb Heat ..... Check  
 Heading Indicator ..... Set  
 Engine Instruments ..... Ts/Ps in the Green  
 Ammeter ..... Check  
 Switches/Circuit Breakers ..... Check  
 Radio Call ..... As Required

### APPROACH/DESCENT

Review ..... Approach/Land Procedure  
 Flight Instruments Set ..... D.G. / A.I. / Alt  
 Mixture ..... Rich  
 Power ..... As Required  
 Carb Heat ..... As Required

### PRE-LANDING

Radio Call ..... As Required  
 Passenger Brief ..... Belts/Doors/Windows  
 Fuel Selector ..... Both  
 Mixture ..... Rich  
 Carb Heat ..... Hot  
 Switches/Circuit Breakers ..... Check  
 Mags ..... BOTH  
 Primer ..... In + Locked  
 Engine Instruments ..... Ts/Ps in the Green  
 Brakes ..... Check for Pressure  
 Flaps ..... White Arc/As Required  
 Airspeed - Flaps up ..... 60-70 KIAS  
 Airspeed - Flaps down ..... 55-65 KIAS

### AFTER LANDING

Flaps ..... Retract  
 Carb Heat ..... Cold  
 Runway ..... Taxi Clear/Hold Short  
 Radio ..... Ground Monitor  
 Time ..... Record  
 Transponder ..... Standby  
 Lights ..... As Required

### SECURE AIRCRAFT

Radios/Equip ..... Off  
 Throttle ..... < 1000 RPM  
 Live Mag Check ..... Off/Both  
 Mixture ..... Idle Cut-Off  
 Ignition ..... Off  
 Master ..... Off  
 Fuel Selector ..... Off  
 Control Lock ..... Install

**REJECTED TAKEOFF**

Throttle..... Idle  
 Brakes..... Apply  
 Flaps..... Retract  
**ENGINE SECURE**..... As Required  
 Mixture..... Idle Cut Off  
 Fuel Selector..... Off  
 Ignition..... Off  
 Master Switch..... Off

**ENGINE FIRE**

**DURING START ON GROUND**

Starter Ignition..... Continue Cranking

**IF ENGINE STARTS:**

Power..... 1700 RPM for a few minutes  
 Engine..... Shut Down + Inspect for Damage

**IF ENGINE FAILS TO START:**

Throttle..... Full Open  
 Mixture..... Idle Cut-Off  
 Ignition..... Continue Cranking 2-3 minutes

**ENGINE SECURE:**

Ignition..... Off  
 Master Switch..... Off  
 Fuel Selector..... Off  
 Fire Extinguisher..... Obtain  
 Aircraft..... Evacuate  
 Fire..... Extinguish  
 Damage..... Inspect

**ENGINE FIRE On Ground**

Mixture..... Idle Cut Off  
 Fuel Selector..... Off  
 Ignition..... Off  
 Master Switch..... Off  
 Fire Extinguisher..... Obtain  
 Aircraft..... Evacuate  
 Fire..... Extinguish  
 Damage..... Inspect

**ENGINE FIRE IN FLIGHT**

Mixture..... Idle Cut Off  
 Fuel Selector..... Off  
 Ignition..... Off  
 Master Switch..... Off  
 Cabin Heat / Air..... Off  
 Airspeed..... 100 KIAS to Extinguish  
 Forced Landing..... Execute

(Refer to Emergency Landing without Power)

CAUTION: FLAPS INOPERABLE WITH MASTER OFF

**ELECTRICAL/CABIN FIRE IN FLIGHT**

Master Switch..... Off  
 All Other Switches (Except Ignition)..... Off  
 Vents / Cabin Air / Heat..... Off  
 Fire Extinguisher..... Activate  
**IF SMOKE PERSISTS:**  
 Land..... As soon as possible  
 Damage..... Inspect  
**IF SMOKE/FIRE STOPPED:**  
 Cabin..... Ventilate  
 Circuit Breakers..... Check, Do NOT Reset  
 Avionics Master..... Confirm Off  
 Electrical Switches..... Confirm Off  
**IF ELECTRICAL POWER REQUIRED:**  
 Master Switch..... On  
 Circuit Breakers..... Do NOT Reset  
 Avionics Master..... On  
 Radio / Electrical Switches..... On, ONE at a Time  
 Land..... As soon as possible

CAUTION: PLAN A FLAPLESS LANDING AND NORDO PROCEDURES IF ELECTRICAL POWER REMAINS OFF

**WING FIRE**

Landing / Taxi Lights..... Off  
 NAV Lights..... Off  
 Beacon/Strobe Light..... Off  
 Pitot Heat..... Off  
 Sideslip..... Perform  
 Land..... As soon as possible  
 Damage..... Inspect

CAUTION: ENSURE SIDESLIP PERFORMED KEEPS FIRE AWAY FROM FUEL TANK AND CABIN  
 REMEMBER: "STEP ON THE FIRE"

**ENGINE FAILURE**

Best Glide..... Establish  
 Flaps UP: 65 KIAS  
 Flaps DOWN: 60 KIAS  
 Mixture..... Rich  
 Carb Heat..... Hot  
 Best Field..... Select  
**ALTITUDE INSUFFICIENT::**  
 Mixture..... Idle Cut Off  
 Fuel Selector..... Off  
 Ignition..... Off  
 Flaps..... As Required  
 Master Switch..... Off  
 Doors..... Unlatch  
**ALTITUDE SUFFICIENT: CAUSE CHECK**  
 Fuel Selector..... Both  
 Mixture..... Confirm Rich  
 Carb Heat..... Confirm Hot  
 Throttle..... Set  
 Master..... As Required  
 Ignition..... Both / Start (If propeller stopped)  
 Primer..... In + Locked

**FORCED LANDING WITHOUT ENGINE POWER**

Mixture..... Idle Cut Off  
 Fuel Selector..... Off  
 Ignition..... OFF  
 Flaps..... As Required  
 Master Switch..... Off  
 Doors..... Unlatch  
 Touchdown..... Slightly Tail Low  
 Brakes..... Apply

**DITCHING**

Radio Call..... MAYDAY 121.5  
 Heavy Objects..... Secure or Jettison  
**APPROACH:**  
 Flaps..... 20°-40°  
 Power..... Establish 300ft/min + 55KIAS  
 If NO Power..... Establish Best Glide  
 High Winds, Heavy Seas..... INTO WIND  
 Light Winds, Heavy Swells..... PARALLEL SWELLS  
 Doors..... Unlatch  
 Touchdown..... Level Attitude  
 Brace..... Cushion Face  
 Aircraft..... Evacuate  
 Life Vest/Raft..... Inflate

CAUTION: OPEN WINDOWS IF REQUIRED TO EQUALIZE CABIN PRESSURE TO OPEN DOORS

**ABNORMAL CHECKLIST**  
1976 C172M GDZQ

**PRECAUTIONARY LANDING WITH ENGINE POWER**

Aerodrome / Best Field ..... Select  
Wind / Landing Direction ..... Determine  
Configuration ..... Normal Downwind

**HIGH-LEVEL INSPECTION**

COWLS Check ..... Complete  
Pre- Landing Checklist ..... Complete  
Radio Call ..... As Required  
PANPAN Call ..... As Required  
Low-Level Inspection ..... Safe/As Required  
If Unable ..... Confirm Final Checks

**NOTE: Situationally Dependent**

**LOW-LEVEL INSPECTION**

Flaps ..... 20°  
Airspeed ..... 60 KIAS  
COWLS Check ..... Complete  
Overshoot ..... Complete  
Return to Land ..... Confirm Safe

**RETURN TO LAND**

Downwind ..... Join  
Pre-Landing Checklist ..... Complete  
Radio Call ..... As Required  
PANPAN Call ..... As Required

**FINAL CHECKS:**

\*\*Radios/Electrical Equipment ..... Off  
Flaps (on final) ..... 40°  
Airspeed ..... 60 KIAS  
\*\*Master Switch ..... Off  
\*\*Doors ..... Unlatched  
Landing Procedure ..... Normal / Short / Soft  
Touchdown ..... Tail Slightly Low  
\*\*Ignition ..... Off

**\*\*NOTE: Actions to be made for an unprepared surface.  
Situationally Dependent.**

**EXCESSIVE RATE OF CHARGE**

Master(Alt+Batt) ..... Off  
Master(Alt+Batt) ..... On  
Over Voltage Light/Ammeter ..... Check

**IF PROBLEM PERSISTS:**

Alternator Switch ..... Off  
Electrical Load ..... Reduce  
Non-Essential Electrical Equipment ..... Off  
Flight ..... Terminate as soon as possible

**INSUFFICIENT RATE OF CHARGE**

ALT FIELD Circuit Breaker ..... Check In  
Alternator ..... Off  
Electrical Load ..... Reduce  
Non-Essential Electrical Equipment ..... Off  
Flight ..... Terminate as soon as possible

**CAUTION: TIME OPERATED ON BATTERY POWER IS  
LIMITED.**

**COMMUNICATION FAILURE**

Radios ..... Check Frequency, Volume, Squelch  
Headsets ..... Check Jacks  
Master (Alt/Batt) ..... Off  
Radios/ Electrical Equipment ..... Off  
Circuit Breakers ..... Check  
Master (Alt/Batt) ..... On  
Radios/ Electrical Equipment ..... On  
Transponder ..... 7600  
Alternate Communication Method ..... Attempt  
Kelowna Tower ..... 250-765-3426  
NORDO Procedures ..... Follow Light Gun Signals  
OR Divert to an Alternate Aerodrome

**NOTE: Continue transmitting intentions on correct frequency.**

**ERRONEOUS INSTRUMENT READING**

Attitude/ Heading Indicator ..... Shows erroneous readings  
Vacuum Gauge ..... Check  
**NOTE: If the vacuum system fails, discontinue use of attitude and heading Instruments.**

Altimeter / Airspeed / VSI ..... Shows erroneous readings  
Alternate Static Source ..... Check + Pull On  
Airspeed ..... Consult POH

**NOTE: For airspeed calibrations, refer to chart found in  
Section 5: Performance of the C172M POH**

**LANDING WITH A FLAT MAIN TIRE**

Approach ..... Normal  
Touchdown ..... Good Main Tire First/ Hold off Bad Tire

**ROUGH ENGINE OPERATION OR LOSS OF POWER**

**CARBURETTOR ICING SUSPECTED:**

Throttle ..... Open, as Required  
Carb Heat ..... Hot  
**NOTE: Return to normal operations once engine runs smoothly**

**CONTINUOUS CARB HEAT OPERATION:**

Mixture ..... Lean for Max RPM

**SPARK PLUG FOULING SUSPECTED:**

Magnetos ..... Check L / R  
Mixture ..... Lean

**IF ROUGHNESS PERSISTS:**

Mixture ..... Enrichen for smoothest Operation  
Aircraft ..... Land at Nearest Suitable Airport

**MAGNETO MALFUNCTION SUSPECTED:**

Magnetos ..... Check L / R  
Mixture / Throttle ..... Set for Smoothest Operation  
Aircraft ..... Land at Nearest Suitable Airport

**LOW OIL PRESSURE:**

Oil Pressure Gauge ..... Check  
Oil Temperature Gauge ..... Check  
Aircraft ..... Land at Nearest Suitable Airport

**LOW OIL PRESSURE AND HIGH OIL TEMPERATURE:**

Throttle ..... Reduce Power  
Aircraft ..... Land at Nearest Suitable Airport

**CAUTION: BE PREPARED FOR AN ENGINE FAILURE.**

**INADVERTENT FLIGHT INTO ICING**

Exit icing ..... As soon as possible  
Find above freezing OAT–Turn back 180° or change altitude

**IF ICING PERSISTS:**

Cabin Heat ..... Pull On  
Throttle ..... Open  
Carb Heat ..... As Required  
Mixture ..... Lean for Max RPM  
Aircraft ..... Land as soon as possible  
Flaps ..... DO NOT EXTEND  
Approach ..... 65-75 KIAS  
Visibility ..... Scrape Ice/Slip as Required

**CAUTION: With Ice accumulation be prepared for a significant  
increase in stall speed.**