



Aircraft Checklist

danielwiese.com

POH/AFM takes priority over this checklist.

CESSNA 172M KNOTS G5S, SUREFIRE ELEC R MAG NORMAL OPERATIONS EMERGENCY PROCEDURES (REVERSE)

Updated October 12th, 2022

RUNWAY ENTRY

Time for Lights, Camera, Action, Traffic

Timer START
Lights LANDING & STROBES ON
Transponder VERIFY CODE/ALT
Mixture RICH
Carb Heat COLD
Traffic VERIFY RWY/APCH CLEAR
Runway Number CONFIRM
Heading/Compass MATCHES RWY

NORMAL TAKEOFF

Flaps UP
Throttle FULL
Engine Instruments "GREEN"
Engine RPM AT LEAST "2200 RPM"
Airspeed "ALIVE"
Rotate 55 KIAS "ROTATE"
Climb 75 KIAS

SHORT FIELD TAKEOFF

Flaps UP
Brakes HOLD
Throttle FULL
Engine Instruments "GREEN"
Engine RPM AT LEAST "2200 RPM"
Brakes RELEASE
Airspeed "ALIVE"
Rotate 50 KIAS "ROTATE"
Pitch 15°
Climb 68 KIAS
Obstacle CLEARED
Flaps UP
Climb 75 KIAS

SOFT FIELD TAKEOFF

Flaps 10°
Brakes NONE
Control Wheel FULL AFT
Throttle SLOWLY ADVANCE FULL
Engine Instruments "GREEN"
Engine RPM AT LEAST "2200 RPM"
Airspeed "ALIVE"
Main Gear LIFT OFF
Pitch NOSE OVER
Ground Effect MAINTAIN TO 60 KIAS
Flaps UP
Climb 75 KIAS

AFTER TAKEOFF (400' AGL)

Airspeed 75 KIAS
Flaps UP
Engine Instruments GREEN
Landing/Taxi Light AS REQ'D

CRUISE

Throttle 2300-2400 RPM
Trim AS REQUIRED
Engine Instruments CHECK
Mixture LEAN AS REQUIRED
EGT 50°F/30°C Rich of Peak

PRE-MANEUVER CHECKS

Clear the area CHECK
Heading ESTABLISHED & BUGGED
Altitude ESTABLISHED & BUGGED
Place to land CHECK
Set Power & Config. CHECK
• Fuel Selector BOTH
• Mixture RICH
• Lights ON

DESCENT / APPROACH

ATIS/AWOS CHECK
Altimeters SET
Top G5, Standby
Clearance OBTAIN
Radios/GPS TUNE/IDENT
Approach Briefing COMPLETE
Fuel Selector BOTH
Lights AS REQUIRED
Mixture SLIGHTLY ENRICH

PRE-LANDING

Fuel Selector BOTH
Mixture RICH
Carb Heat ON BELOW 2000 RPM
Lights AS REQUIRED
Flaps AS REQUIRED
Seatbelts FASTENED

NORMAL LANDING

Flaps 30°
Airspeed 65 KIAS
Touch Down MAIN WHEELS FIRST
Brakes MINIMUM REQUIRED

SHORT FIELD LANDING

Flaps FULL
Airspeed 60 KIAS
Touch Down MAIN WHEELS FIRST
Flaps UP
Brakes MAXIMUM
Control Wheel FULL AFT

SOFT FIELD LANDING

Flaps FULL
Airspeed 65 KIAS
Carb Heat COLD ON SHORT FINAL
Touch Down NOSE HIGH WITH PWR
Brakes NONE
Control Wheel FULL AFT

AFTER LANDING

Flaps UP
Mixture LEAN 1"
Carb Heat COLD
Elevator Trim SET FOR TAKEOFF
Lights LANDING / STROBES OFF
Radios CONTACT GND / CALL CLR
Flight Plan CLOSE IF REQ'D

SHUTDOWN / SECURE

Brakes AS REQUIRED
Avionics Master OFF
Mixture IDLE/CUTOFF
Wait for engine to shut off
Magnetos OFF / REMOVE KEY
Master Switch OFF
Fuel Selector LEFT OR RIGHT
Control Wheel Lock INSTALLED
Aircraft TIE DOWN
Aircraft Log COMPLETE
Cowl Plugs/Covers INSTALLED
Windshield CLEAN AS REQ'D
Chocks AS REQ'D

SPEEDS

V_R 55 KIAS
V_X 62 KIAS
V_Y 78 KIAS
V_{FE} 86 KIAS
V_A (2300 lb) 97 KIAS
V_S 47 KIAS
V_{SO} 41 KIAS
Pattern 95 KIAS
Abeam Numbers 85 KIAS
Base 75 KIAS
Final 65 KIAS
V_G 65 KIAS
Glide distance 1.5 NM / 1000 FT.

FREQUENCIES

Potomac Approach
Potomac (SFRA West) 127.325
Potomac 128.525
KHEF (Manassas)
ATIS 125.175
Tower 133.1
Ground 121.8
KHWY (Warrenton)
AWOS 120.35
CTAF 122.70
KCJR (Culpeper)
AWOS 119.32
CTAF 123.07
CSN (Casanova VORTAC)
CSN 116.30

ENGINE FIRE DURING START

Cranking CONTINUE

If Engine StartsThrottle 1700 RPM FOR 20 SEC
Engine SHUTDOWN AND INSPECT**If Engine Fails To Start**Throttle FULL OPEN
Mixture IDLE CUTOFF
Cranking CONTINUE
Fuel Selector OFF
Fire Extinguisher OBTAIN
Engine MASTER AND IGNITION OFF
Aircraft EVACUATE
Fire EXTINGUISH
Damage INSPECT**ENGINE FAILURE PRIOR TO TAKEOFF**Throttle IDLE
Brakes APPLY
Flaps RETRACT
Mixture IDLE CUTOFF
Ignition Switch OFF
Radio Call IF ABLE
Master Switch OFF**ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF**Airspeed Flaps Up 70 KIAS
Airspeed Flaps Down 65 KIAS
Landing Site SELECT
Mixture IDLE CUTOFF
Fuel Selector OFF
Ignition Switch OFF
Flaps AS REQUIRED
Radio Call IF ABLE
Master Switch OFF
Doors UNLATCH**ENGINE FAILURE DURING FLIGHT****A. AIRSPEED**
3 turns nose-up trim, 65 KIAS**B. BEST PLACE TO LAND****C. CHECKLIST**Fuel Selector BOTH
Mixture RICH
Throttle ADJUST
Carb Heat ON
Mags L/R/BOTH
Primer IN AND LOCKED**D. DECLARE**Mayday ON 121.5
Squawk 7700**E. PREPARE TO EXIT**Fuel Selector OFF
Mixture OFF
Mags OFF
Master Switch OFF WHEN ABLE
Doors UNLATCH
Passenger Brief COMPLETE**ENGINE FIRE IN FLIGHT**Mixture IDLE CUTOFF
Fuel Selector OFF
Master Switch OFF
Cabin Heat and Air OFF
Airspeed INCREASE / 100+ KIAS
Forced Landing EXECUTE**CABIN FIRE**Master Switch OFF
Air Vents and Windows CLOSED
Fire Extinguisher ACTIVATE
Cabin VENTILATE
Land AS SOON AS POSSIBLE**WING FIRE**Nav Lights OFF
Pitot Heat OFF
Strobe Lights OFF*Side slip to keep flames away from the fuel tank and land as soon as possible. Only use flaps as required for final approach and touchdown***OVER VOLTAGE LIGHT**Master Switch (ALT Only) OFF
Electrical Load REDUCE AS FOLLOWS
Avionics OFF
Pitot Heat OFF
All Lights OFF
Comm 1 and Nav 1 TUNE TO ACTIVE
Land AS SOON AS PRACTICAL**AMMETER DISCHARGE (ABOVE 1700 RPM)**Master (ALT Only) OFF
Alternator Circuit Breaker CHECK IN
Master Switch ON
Ammeter CHECK
BATT Volts CHECK 27.5 MIN
Ammeter CHECK CHARGING (+)
If Amp Discharge Remains
Master Switch (ALT Only) OFF
Electrical Load REDUCE AS FOLLOWS
Avionics Master OFF
Pitot Heat OFF
All Lights OFF
Comm 1 and Nav 1 TUNE TO ACTIVE
Land AS SOON AS PRACTICAL**ELECTRICAL FIRE IN FLIGHT**Master Switch OFF
Vents/Cabin Air/Heat OFF
Fire Extinguisher ACTIVATE
Avionics Master Switch OFF
All Other Switches OFF
Cabin VENTILATE
Master Switch ON
Circuit Breakers CHECK
Avionics Master ON
Electrical Equip ON ONE AT A TIME**ADAHRS SYSTEM FAILURE***Check ADAHRS Circuit Breakers and Reset. If it Opens again, do not reset and use standby instruments.***LIGHT SIGNALS (GROUND)**Cleared for Takeoff STEADY GREEN
Cleared to Taxi FLASHING GREEN
Stop STEADY RED
Taxi clear of runway FLASHING RED
Return to airport starting point FLASHING WHITE
General Warning, Exercise Caution ALTERNATING RED AND GREEN**LIGHT SIGNALS (FLIGHT)**Cleared to Land STEADY GREEN
Return to Land FLASHING GREEN
Give way and Circle STEADY RED
Do not land FLASHING RED
General Warning, Exercise Caution ALTERNATING RED AND GREEN**POWER SETTINGS***Power settings to be used as a guide only
Carb Heat should be used below 2000RPM*Climb FULL POWER
Cruise 2300-2400 RPM
Descent 2100 RPM
Precision Approach 1800 RPM
Non-Precision Approach 1500 RPM
Pattern 2100 RPM
Abeam Numbers 1500 RPM*Yellow highlighted items are immediate action items that should be committed to memory.***PIVOTAL ALTITUDE**

Groundspeed		Approximate Pivotal Altitude
Knots	MPH	
87	100	670
91	105	735
96	110	810
100	115	885
104	120	960
109	125	1050
113	130	1130



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CESSNA 172M KNOTS G5S, SUREFIRE ELEC R MAG PREFLIGHT CHECKLIST

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COCKPIT SAFETY CHECK

Magnetos OFF, KEY OUT
Mixture IDLE CUTOFF
Throttle CLOSED

PREFLIGHT PREPARATION

Weather CHECK
Inspections/ADs/Squawks CHECK
Flight Plan FILED
Weight and Balance COMPUTE
Fuel Quantity CHECK / CALL

Master MUST Be Off During Fueling

Aircraft Cover REMOVE
Cowl Plugs REMOVE
Pitot Tube Cover REMOVE
Chocks REMOVE
Engine Preheat BELOW 0 °C/32 °F
Wings CHECK FOR ICE/FROST

CABIN

Keys PLACE ON DASH
Documents S.P.A.(R).J.R.O.W.
Supplements CHECK
Placards CHECK
Airworthiness Cert VISIBLE
Radio Station Lic INT'L FLIGHT
Registration VALID
P.O.H/A.F.M. CHECK
W&B Info IN BINDER
Fire Extinguisher GREEN/SECURE
Control Wheel Lock REMOVE
Ignition Switch OFF
Mixture IDLE CUTOFF
Throttle CLOSED
Carburetor heat COLD
Avionics Master Switch OFF
Master Switch ON
Flaps EXTEND
Top G5 VERIFY ON
Hobbs Meter RECORD
Located on Engine Indicator
Fuel Quantity SET
Alternate Static Source CHECK IN
Fuel Selector BOTH
Elevator Trim SET T.O.
Pitot Heat CHECK AS REQ'D
Exterior Lights CHECK AS REQ'D
Master Switch OFF

LEFT WING

Door Pins INSPECT
Cabin Vents and Inlets INSPECT
Leading Edge INSPECT
Wing Tie Down REMOVE
Main Gear/Tire/Brakes INSPECT
Pitot Tube CHECK UNBLOCKED
Stall Horn CHECK UNBLOCKED
Fuel Vent CHECK UNBLOCKED
Wing Tip/Nav Lights INSPECT
Left Aileron INSPECT
Hinges (x3) BOLTS SECURE
Weights INSPECT
Static Wicks (x2) INSPECT
Flaps INSPECT
Rod INSPECT

EMPENNAGE

Baggage Door LOCKED
Skin and Rivets INSPECT
Vertical Stabilizer INSPECT
Left Horizontal Stabilizer INSPECT
Left Elevator INSPECT
Weight SECURE
Hinges SECURE
Cables SECURE
Static Wicks SECURE (X2)
Rudder INSPECT
Hinges SECURE
Cables SECURE
Static Wicks SECURE (X2)
Tail Tie Down REMOVE
Right Elevator INSPECT
Cables SECURE
Trim Tab INSPECT
Hinges SECURE
Weight SECURE
Static Wicks SECURE (X2)
Right Horizontal Stabilizer INSPECT
Antennas INSPECT
Underside INSPECT

RIGHT WING

Door Pins INSPECT
Cabin Vents and Inlets INSPECT
Leading Edge INSPECT
Wing Tie Down REMOVE
Main Gear/Tire/Brakes INSPECT
Wing Tip/Nav Lights INSPECT
Right Aileron INSPECT
Hinges (x3) BOLTS SECURE
Weights INSPECT
Static Wicks (x2) INSPECT
Flaps INSPECT
Rod INSPECT

NOSE AND COWLING

Windshield CLEAN
Oil Level CHECK
*Cold: ≥ 6 Qts, Warm: ≥ 5 1/2 Qts
≤ 10 hrs to mx: ≥ 5 Qts
Do Not Over Tighten Oil Cap*
Oil Access Door SECURE
Engine Cowling SECURE
No Consecutive Fasteners Missing
Prop/Spinner INSPECT
No Cracks, No Screws Missing
Cowling Inlets CHECK
Alternator Belt CHECK TENSION
Air Filter CHECK
Exhaust CHECK FOR CRACKS
Nose Gear/Tire/Strut INSPECT
Static Port CHECK UNBLOCKED

FINAL CHECK

Fuel Sumps DRAIN
Left Wing (1) DRAIN
Right Wing (1) DRAIN
Nose (1) PULL & DRAIN
Fuel Quantity VISUAL CHECK
Fuel Caps SECURE
Last 360° Walk Around COMPLETE
Chocks CONFIRM REMOVED
Tie Downs CONFIRM REMOVED
Cowl Plugs CONFIRM REMOVED
Pitot Cover CONFIRM REMOVED
Preflight COMPLETE

PERSONAL CHECKLIST

PAVE to perceive hazards
Pilot CHECK
• Experience/recency CHECK
• Physical condition SEE IMSAFE
Aircraft CHECK
• Fuel reserves CHECK
• Performance CHECK
• Equipment CHECK
EnVironment CHECK
• Weather CHECK
External Pressures CHECK
IMSAFE to check pilot phys. condition
Injury CHECK
Medication CHECK
Stress CHECK
Alcohol CHECK
Fatigue CHECK
Emotion CHECK

PASSENGER BRIEF

S – Seatbelts USAGE
*Fastened during taxi, takeoff, landing.
Recommended always.*

A – Air vents USAGE
*Sick? Loosen clothing, use air, look at point on
horizon. Location of sick sacks.*

F – Fire extinguisher USAGE
P – Pull pin
A – Aim at base of fire
S – Squeeze
S – Sweep

E – Exits LOCATION/USAGE

T – Traffic EXPLAIN
Clock Position / Who's looking

Y – Yak (Sterile Cockpit)
*No extraneous conversation under cruise or
10,000' MSL (whichever is lower)*

Y – Yoke
*3 way positive exchange of flight controls.
Stay clear of active flight controls.*

Y – Any questions?

BEFORE START

Preflight COMPLETE
Passenger Briefing COMPLETE
Seats and Belts ADJUSTED/LOCKED
Fuel Selector Valve BOTH
Avionics Master Switch OFF
Brakes TEST AND SET
Test both sides and look for drips.

Circuit Breakers CHECK IN

Beacon ON

Nav Lights ON AT NIGHT/IFR

ENGINE START

Mixture RICH
Carb Heat COLD

Prime Engine for Cold Start or as req'd
Throttle / Primer PRIME
Try Throttle First, Then Use Primer

Primer IN & LOCKED
Master Switch ON
Fuel Quantity SET
Throttle 1/4"
Prop Area CLEAR
Ignition Switch ENGAGE
*Do NOT Crank for > 10 secs. Allow 20 secs
between start attempts!*

Throttle 800 RPM
Oil Pres. ABOVE RED LINE (30 SEC)
Mixture LEAN 1"

AFTER START

Flaps UP
Avionics Master Switch ON
GPS Database CHECK DATES
Radios TUNE, GET ATIS/AWOS
Altimeters SET
Top G5, Standby

Heading Indicator BUG WIND
Clearance OBTAIN
Transponder SET/ALT
G5 Alt Sel SET
GPS Flight Plan SET

TAXI

Taxi Area CLEAR

Brakes CHECK
Check for dip in Attitude Indicator

Controls POSITION FOR WIND

Flight Instruments CHECK IN TURNS

ENGINE RUNUP

Aircraft POSITION INTO WIND

Parking Brake SET

Seats and Seat Belts SECURE

Cabin Doors CLOSED AND LOCKED

Flight Controls FREE & CORRECT

Flight Instruments CHECK

Standby Flight Instruments CHECK

Fuel Quantity CHECK

Fuel Selector Valve RECHECK BOTH

Elevator Trim SET FOR TAKEOFF

Throttle 1700 RPM

Engine Instruments GREEN

Ammeter ZERO OR POSITIVE

Carb Heat CHECK RPM DROP

Magnetos L, B, R

*Drop less than 150 and 50 between mags
Do NOT go back to Both After R Mag Check
> 1000 RPM. Doing so may cause a backfire!*

Throttle CHECK IDLE

Throttle 800 RPM

Magnetos B (BOTH)

Throttle Friction Lock ADJUST

Radios SET

GPS Flight Plan VERIFY

2nd Radio 121.5

XPDR VERIFY CODE/ALT

Wing Flaps SET

Cabin Windows CLOSED & LOCKED

Brakes RELEASE

TAKEOFF BRIEF

Conditions

Weather (Wind, Ceilings, Etc.)

Hazards

Weather, Terrain, Wildlife, Traffic, etc.

Runway

Number (L/R), Length

Return/Emergency Procedures

- Before Rotation
- After Rotation w/ Sufficient Rwy
- Below 1000' AGL
- Above 1000' AGL
- Establish PIC in emergency

Takeoff (Brief)

- Normal, Short, Soft?
- From Runway
- Wind speed and direction
- Speeds: rotate, initial/enroute climb

Departure (Brief)

RUNWAY ENTRY

Time for Lights, Camera, Action, Traffic

Timer START

Lights LANDING & STROBES ON

Transponder VERIFY CODE/ALT

Mixture RICH

Carb Heat COLD

Traffic VERIFY RWY/APCH CLEAR

Runway Number CONFIRM

Heading/Compass MATCHES RWY

NORMAL TAKEOFF

Flaps UP

Throttle FULL

Engine Instruments "GREEN"

Engine RPM AT LEAST "2200 RPM"

Airspeed "ALIVE"

Rotate 55 KIAS "ROTATE"

Climb 75 KIAS

SHORT FIELD TAKEOFF

Flaps UP

Brakes HOLD

Throttle FULL

Engine Instruments "GREEN"

Engine RPM AT LEAST "2200 RPM"

Brakes RELEASE

Airspeed "ALIVE"

Rotate 50 KIAS "ROTATE"

Pitch 15°

Climb 68 KIAS

Obstacle CLEARED

Flaps UP

Climb 75 KIAS

SOFT FIELD TAKEOFF

Flaps 10°

Brakes NONE

Control Wheel FULL AFT

Throttle SLOWLY ADVANCE FULL

Engine Instruments "GREEN"

Engine RPM AT LEAST "2200 RPM"

Airspeed "ALIVE"

Main Gear LIFT OFF

Pitch NOSE OVER

Ground Effect MAINTAIN TO 60 KIAS

Flaps UP

Climb 75 KIAS