



# Aircraft Checklist

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POH/AFM takes priority over this checklist.

**CESSNA 172M MPH**

**G5S**

## NORMAL OPERATIONS EMERGENCY PROCEDURES (REVERSE)

Updated October 8th, 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 ..... 65 MPH "ROTATE"  
Climb ..... 90 MPH

### SHORT FIELD TAKEOFF

Flaps ..... UP  
Brakes ..... HOLD  
Throttle ..... FULL  
Engine Instruments ..... "GREEN"  
Engine RPM ..... AT LEAST "2200 RPM"  
Brakes ..... RELEASE  
Airspeed ..... "ALIVE"  
Rotate ..... 60 MPH "ROTATE"  
Pitch ..... 15°  
Climb ..... 72 MPH  
Obstacle ..... CLEARED  
Flaps ..... UP  
Climb ..... 90 MPH

### 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 70 MPH  
Flaps ..... UP  
Climb ..... 90 MPH

### AFTER TAKEOFF (400' AGL)

Airspeed ..... 90 MPH  
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  
• Engine Instruments ..... GREEN

### 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 ..... 75 MPH  
Touch Down ..... MAIN WHEELS FIRST  
Brakes ..... MINIMUM REQUIRED

### SHORT FIELD LANDING

Flaps ..... FULL  
Airspeed ..... 70 MPH  
Touch Down ..... MAIN WHEELS FIRST  
Flaps ..... UP  
Brakes ..... MAXIMUM  
Control Wheel ..... FULL AFT

### SOFT FIELD LANDING

Flaps ..... FULL 30°  
Airspeed ..... 75 MPH  
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<sub>R</sub> ..... 65 MPH  
V<sub>X</sub> ..... 72 MPH  
V<sub>Y</sub> ..... 90 MPH  
V<sub>FE</sub> ..... 100 MPH  
V<sub>A</sub> (2300 lb) ..... 122 MPH  
V<sub>S</sub> ..... 57 MPH  
V<sub>SO</sub> ..... 49 MPH  
Pattern ..... 105 MPH  
Abeam Numbers ..... 95 MPH  
Base ..... 85 MPH  
Final ..... 75 MPH  
V<sub>G</sub> ..... 75 MPH  
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 Starts**Throttle ..... 1700 RPM FOR 20 SEC  
Engine ..... SHUTDOWN AND INSPECT**If Engine Fails To Start**Throttle ..... FULL OPEN  
Mixture ..... IDLE CUTOFF  
Cranking ..... CONTINUE  
Fuel Selector Valve ..... 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 ..... 80 MPH  
Airspeed Flaps Down ..... 75 MPH  
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, 75 mph**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 Valve ..... OFF  
Master Switch ..... OFF  
Cabin Heat and Air ..... OFF  
Airspeed ..... INCREASE / 120+ MPH  
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 ..... 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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## PREFLIGHT CHECKLIST

Updated October 8th, 2022

### 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  
Hobbs Meter ..... RECORD  
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  
Top G5 ..... VERIFY ON  
Fuel Quantity ..... SET  
Alternate Static Source ..... CHECK IN  
Fuel Selector ..... BOTH  
Elevator Trim ..... SET T.O.  
Flaps ..... EXTEND  
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  
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  
Rudder ..... INSPECT  
Hinges ..... SECURE  
Cables ..... SECURE  
Tail Tie Down ..... REMOVE  
Right Elevator ..... INSPECT  
Cables ..... SECURE  
Trim Tab ..... INSPECT  
Hinges ..... SECURE  
Weight ..... SECURE  
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  
Flaps ..... INSPECT  
Rod ..... INSPECT

### NOSE AND COWLING

Windshield ..... CLEAN  
Oil Level ..... CHECK  
Cold:  $\geq 6$  Qts, Warm:  $\geq 5 \frac{1}{2}$  Qts  
 $\leq 10$  hrs to mx:  $\geq 5$  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

<b>PASSENGER BRIEF</b>		<b>TAXI</b>		<b>RUNWAY ENTRY</b>	
<b>S</b> – Seatbelts ..... USAGE <i>Fastened during taxi, takeoff, landing. Recommended always.</i>		Taxi Area ..... CLEAR		<i>Time for Lights, Camera, Action, Traffic</i>	
<b>A</b> – Air vents ..... USAGE <i>Sick? Loosen clothing, use air, look at point on horizon. Location of sick sacks.</i>		Brakes ..... CHECK <i>Check for dip in Attitude Indicator</i>		Timer ..... START	
<b>F</b> – Fire extinguisher ..... USAGE		Controls ..... POSITION FOR WIND		Lights ..... LANDING & STROBES ON	
P – Pull pin		Flight Instruments ..... CHECK IN TURNS		Transponder ..... VERIFY CODE/ALT	
A – Aim at base of fire		<b>ENGINE RUNUP</b>		Mixture ..... RICH	
S – Squeeze		Aircraft ..... POSITION INTO WIND		Carb Heat ..... COLD	
S – Sweep		Parking Brake ..... SET		Traffic ..... VERIFY RWY/APCH CLEAR	
<b>E</b> – Exits ..... LOCATION/USAGE		Seats and Seat Belts ..... SECURE		Runway Number ..... CONFIRM	
<b>T</b> – Traffic ..... EXPLAIN <i>Clock Position / Who's looking</i>		Cabin Doors ..... CLOSED AND LOCKED		Heading/Compass ..... MATCHES RWY	
<b>Y</b> – Yak (Sterile Cockpit) <i>No extraneous conversation under cruise or 10,000' MSL (whichever is lower)</i>		Flight Controls ..... FREE & CORRECT		<b>NORMAL TAKEOFF</b>	
<b>Y</b> – Yoke <i>3 way positive exchange of flight controls. Stay clear of active flight controls.</i>		Flight Instruments ..... CHECK		Flaps ..... UP	
<b>Y</b> – Any questions?		Standby Flight Instruments ..... CHECK		Throttle ..... FULL	
<b>BEFORE START</b>		Fuel Quantity ..... CHECK		Engine Instruments ..... "GREEN"	
Preflight ..... COMPLETE		Fuel Selector Valve ..... RECHECK BOTH		Engine RPM ..... AT LEAST "2200 RPM"	
Passenger Briefing ..... COMPLETE		Elevator Trim ..... SET FOR TAKEOFF		Airspeed ..... "ALIVE"	
Seats and Belts ..... ADJUSTED/LOCKED		Throttle ..... 1700 RPM		Rotate ..... 65 MPH "ROTATE"	
Fuel Selector Valve ..... BOTH		Magnetos ..... R, B, L, B <i>Drop less than 150 and 50 between mags</i>		Climb ..... 90 MPH	
Avionics Master Switch ..... OFF		Carb Heat ..... CHECK RPM DROP		<b>SHORT FIELD TAKEOFF</b>	
Brakes ..... TEST AND SET <i>Test both sides and look for drips.</i>		Engine Instruments ..... GREEN		Flaps ..... UP	
Circuit Breakers ..... CHECK IN		Ammeter ..... ZERO OR POSITIVE		Brakes ..... HOLD	
Beacon ..... ON		Throttle ..... CHECK IDLE		Throttle ..... FULL	
Nav Lights ..... ON AT NIGHT/IFR		Throttle ..... 800 RPM		Engine Instruments ..... "GREEN"	
<b>ENGINE START</b>		Throttle Friction Lock ..... ADJUST		Engine RPM ..... AT LEAST "2200 RPM"	
Mixture ..... RICH		Radios ..... SET		Brakes ..... RELEASE	
Carb Heat ..... COLD		GPS Flight Plan ..... VERIFY		Airspeed ..... "ALIVE"	
<i>Prime Engine for Cold Start or as req'd</i>		2nd Radio ..... 121.5		Rotate ..... 60 MPH "ROTATE"	
Throttle / Primer ..... PRIME <i>Try Throttle First, Then Use Primer</i>		XPDR ..... VERIFY CODE/ALT		Pitch ..... 15°	
Primer ..... IN & LOCKED		CDI Softkey ..... SELECT NAV SOURCE		Climb ..... 72 MPH	
Master Switch ..... ON		Wing Flaps ..... SET		Obstacle ..... CLEARED	
Throttle ..... 1/4"		Cabin Windows ..... CLOSED & LOCKED		Flaps ..... UP	
Prop Area ..... CLEAR		Brakes ..... RELEASE		Climb ..... 90 MPH	
Ignition Switch ..... ENGAGE <i>Do NOT Crank for &gt; 10 secs. Allow 20 secs between start attempts!</i>		<b>TAKEOFF BRIEF</b>		<b>SOFT FIELD TAKEOFF</b>	
Throttle ..... 800 RPM		Conditions		Flaps ..... 10°	
Oil Pres. .... ABOVE RED LINE (30 SEC)		Weather (Wind, Ceilings, Etc.)		Brakes ..... NONE	
Mixture ..... LEAN 1"		Hazards		Control Wheel ..... FULL AFT	
<b>AFTER START</b>		Weather, Terrain, Wildlife, Traffic, etc.		Throttle ..... SLOWLY ADVANCE FULL	
Flaps ..... UP		Runway		Engine Instruments ..... "GREEN"	
Avionics Master Switch ..... ON		Number (L/R), Length		Engine RPM ..... AT LEAST "2200 RPM"	
GPS Database ..... CHECK DATES		Return/Emergency Procedures		Airspeed ..... "ALIVE"	
Radios ..... TUNE, GET ATIS/AWOS		• Before Rotation		Main Gear ..... LIFT OFF	
Altimeters ..... SET <i>Top G5, Standby</i>		• After Rotation w/ Sufficient Rwy		Pitch ..... NOSE OVER	
Heading Indicator ..... BUG WIND		• Below 1000' AGL		Ground Effect ..... MAINTAIN TO 70 MPH	
Clearance ..... OBTAIN		• Above 1000' AGL		Flaps ..... UP	
Transponder ..... SET/ALT		• Establish PIC in emergency		Climb ..... 90 MPH	
G5 Alt Sel ..... SET		Takeoff (Brief)			
GPS Flight Plan ..... SET		• Normal, Short, Soft?			
		• From Runway			
		• Wind speed and direction			
		• Speeds: rotate, initial/enroute climb			
		Departure (Brief)			