

CHECKLIST CESSNA 172P N781FM, N782FM



Fort Meade Flight Activity, Inc.
7509 General Aviation Drive, Fort Meade, MD 20755
(410) 672-0080



**DO NOT REMOVE FROM
AIRCRAFT**

EMERGENCY CONTACT NUMBERS

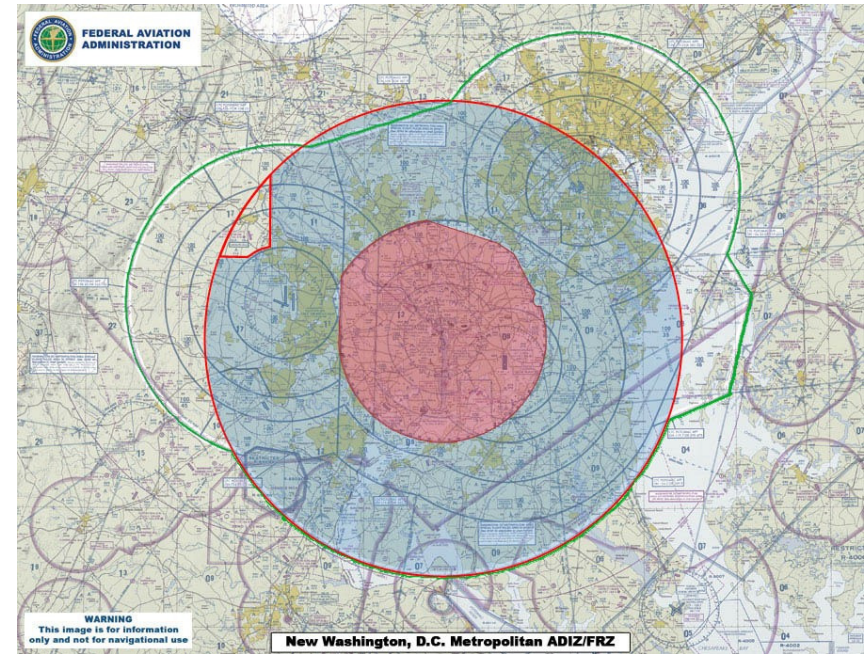
Sue Hall (443) 690-2627 (cell)
Co-manager

Frank Turney (443) 499-1287 (cell)
Co-manager

Transponder Codes

7500 Hijacked
7600 Lost Communications
7700 Emergency

Aircraft ID N781FM	Flight Rule IFR	Flight Type G	No. of Aircraft 1	Aircraft Type C172	Wake Turbulence L	Aircraft Equipment SG
Departure KFME	Airport Info Area Brief	Departure Date & Time 05/22/2020 HHMM UTC 1-120 Apply Minutes From Now	Evaluate	Cruising Speed N0110	Level VFR/013	Optimize Surveillance Equipment EB2
Route of Flight DCT		Other Information (Optional) RMK/DC SFRA				
Destination PALEO	Airport Info Area Brief	Est Elapsed Time 0020	Alternate 1 (Optional) Airport Info Area Brief	Alternate 2 (Optional) Airport Info Area Brief	Pilot In Command (Optional)	
Fuel Endurance 0400	Persons on Board 2	Aircraft Color & Markings (Optional) W.O:BR	Supplemental Remarks (Optional)		Pilot Contact Information	
Emergency Radios <input type="checkbox"/> UHF <input checked="" type="checkbox"/> VHF <input type="checkbox"/> ELBA	Survival Equipment <input type="checkbox"/> Polar <input type="checkbox"/> Desert <input type="checkbox"/> Maritime <input type="checkbox"/> Jungle	Jackets <input type="checkbox"/> Light <input type="checkbox"/> Fluorescent <input type="checkbox"/> UHF <input type="checkbox"/> VHF	Dinghies (Optional) Number Capacity Color Covered			



Washington SFRA

ATC COMMUNICATIONS AND SQUAWK CODE REQUIRED

**FSS: 1-800-WX-BRIEF (1-800-992-7433)
(SFRA flight plan & weather briefing)**

**Potomac TRACON: 1-866-429-5882
(squawk code & frequency)**

**Potomac TRACON: 1-540-351-6129
(close SFRA flight plan after pattern work)**

AIRSPEEDS FOR SAFE OPERATION (KIAS)

V_{SO}	40
V_{SI}	50
V_R	55
V_X	62
V_Y	76
V_F	85*
V_A (MGW)	105
V_{NO}	127
V_{NE}	158
V_{ref} (flaps up/down)	70/55-60
V_G	65

*10 degrees of flaps may be extended at airspeeds up to 110 KIAS.

Maximum demonstrated crosswind component 15 kt

Sample Weight & Balance

FAA Tail No.	N781FM		Color	W/BR
Flight Plan Designator	C172/G		Useable Fuel	40.0 gal
Year of Manufacture	1980		Make/Model	Cessna 172P-180
	⌘	Weight	Arm	Moment
Basic Empty	15-Nov-2016	1520.79	37.252	56652.03
Fuel (Gal):	40.0	240.00	48.000	11520.00
Pilot		200.00	37.000	7400.00
Copilot		200.00	37.000	7400.00
Passenger 1		170.00	73.000	12410.00
Passenger 2		170.00	73.000	12410.00
Baggage 1		20.00	95.000	1900.00
Baggage 2		15.00	123.000	1845.00
		Weight	Arm	Moment
Ramp		2535.79	43.99	111537.03
Takeoff		2524.79	43.98	111047.43
No Fuel		2295.79	43.57	100017.03

Notes: Source -- 1982 Cessna Model 172P AFM dtd 5/12/1981, Air Plains AFM Supplement dtd 2/3/2012

1. MGW for Normal Operation is 2550 lbs. and for Utility Operation is 2100 lbs.

1. BEW includes Unusable Gas of 3 gallons

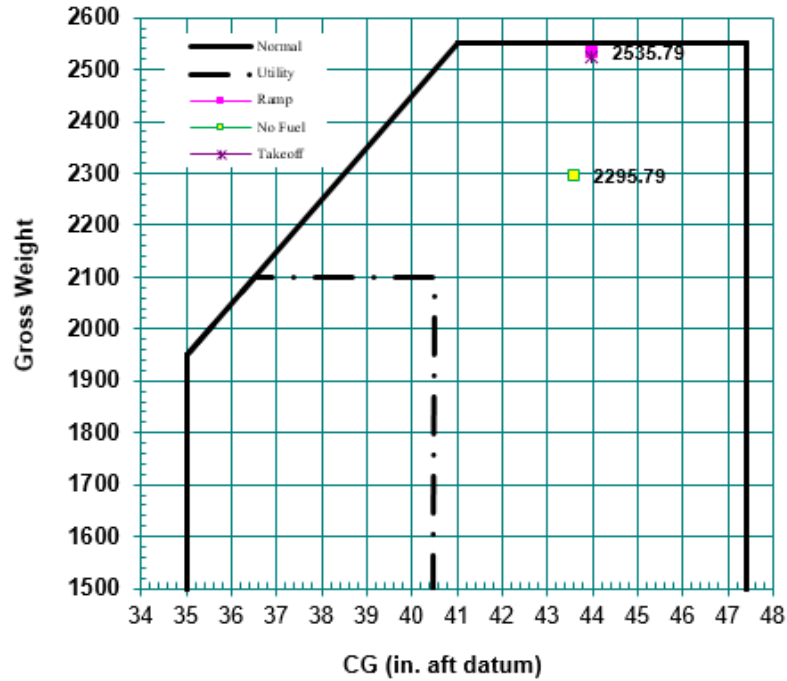
2. Total Fuel Volume is 43 gallons

3. Usable Fuel all flight conditions is 40 gallons

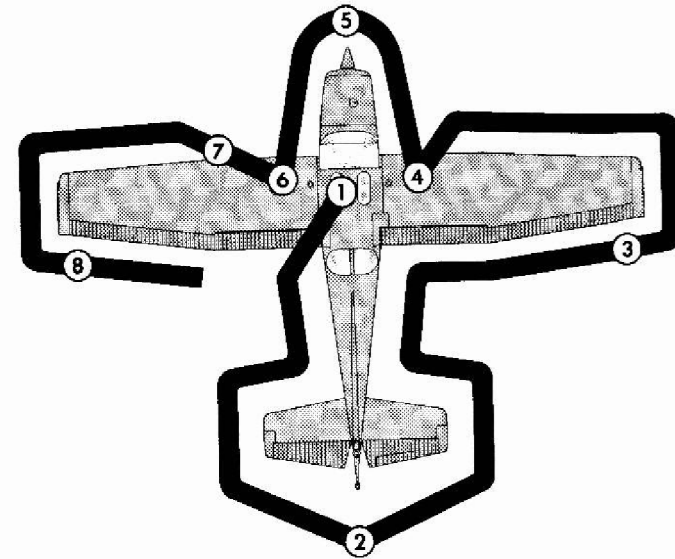
4. Maximum Baggage Area 1 = 120 lbs

5. Maximum Baggage Area 2 = 50 lbs

N781FM Center of Gravity Limits



PREFLIGHT INSPECTION



COCKPIT

- Cowl plugs REMOVE
- Ignition Key ON DASH
- Hobbs, Tach Times NOTE
- Publications (AROW) CHECK
- Control Lock REMOVE
- Fuel Selector Valve BOTH
- Trim Tab TAKEOFF RANGE
- Mixture FULL LEAN
- Throttle CLOSED
- Carburetor Heat OFF
- Circuit Breakers CHECK
- Avionics Master OFF
- Master Switch ON
- Fuel Gauges CHECK
- Lights CHECK
- Flaps DOWN
- Master Switch OFF

FUSELAGE

Skin Condition CHECK
Antennas CHECK
Baggage Door CHECK

EMPENNAGE

Control Surfaces CHECK
Static Wicks CHECK
Trim Tab.....
CHECK
Lights CHECK
Antennas CHECK
Tiedown REMOVED

RIGHT WING

Flap and Aileron CHECK
Static Wicks CHECK
Wing Tip, Light and Leading Edge.....
CHECK
Tiedown, Chocks REMOVE
Wheel Strut, Tire, Brakes CHECK
Fuel Sump DRAIN
Fuel Quantity CHECK, THEN CAP SECURE

NOSE

Oil (5–7quarts) CHECK
Fuel Strainer Knob DRAIN
Engine Compartment CHECK
Cowling, Intakes, Spinner, Propeller CHECK
Landing Light CHECK
Nosewheel Strut, Tire, Linkage CHECK
Chocks, Towbar REMOVED
Windshield CHECK
Static Port CHECK
Oil Sump Heater DISCONNECT

LEFT WING

Fuel Quantity CHECK, THEN CAP SECURE
Fuel Sump DRAIN
Wheel Strut, Tire, Brakes CHECK
Tiedown, Chocks REMOVE
Fuel Vent CLEAR
Pitot Tube CHECK
Stall Warning Opening CHECK
Leading Edge, Wing Tip and Light CHECK
Aileron and Flap CHECK
Static Wicks CHECK

BEFORE ENGINE START

Doors and Windows SECURED
Seats, Belts, Harnesses SECURED
Brakes TEST AND SET
Fuel Selector BOTH
Mixture RICH
Throttle OPEN 1/8 INCH
Carburetor Heat OFF
Beacon ON
Avionics Master Switch OFF
Keys IGNITION
Battery Master Switch ON
Review Type of Start Checklist COMPLETE

ENGINE START

Primer As REQUIRED
Primer IN AND LOCKED
Throttle OPEN 1/8 INCH
Mixture RICH
Propeller Area CLEAR
Starter ENGAGE

ENGINE START (FLOODED)

Primer IN AND LOCKED
Throttle FULL OPEN
Mixture IDLE CUT-OFF
Propeller Area CLEAR
Starter ENGAGE
Mixture ADVANCE AS ENGINE FIRES
Throttle RETARD

AFTER START/BEFORE TAXI

Throttle 1000 RPM
Oil Pressure CHECK
Alternator ON
Avionics Master Switch ON
Mixture LEAN FOR TAXI
Flaps UP
Transponder Code SET/ALT
GPS/Radios PROGRAM/SET
Lights AS REQUIRED
Controls POSITION FOR WIND
Brakes TEST

ENGINE RUN-UP

Nosewheel CENTERED
Brakes SET/HELD
Mixture FULL RICH
Throttle 1700 RPM
Suction Gauge CHECK
Engine Instruments CHECK
Ammeter CHECK
Primer IN AND LOCKED
Magnetos CHECK (125 MAX DROP, 50 DIFF)
Circuit Breakers CHECK
Carburetor Heat CHECK

Mixture CHECK, THEN FULL RICH
Throttle IDLE, THEN 1000 RPM
Flight Controls FREE & CORRECT
Flight Instruments CHECK AND SET

BEFORE TAKEOFF

Doors and Windows CLOSED
Seats, Belts and Harnesses SECURE
Fuel BOTH
Trim SET
Carburetor Heat OFF
Mixture RICH
Throttle Friction Lock ADJUST
Lights AS REQUIRED
Transponder Code/ALT VERIFIED
Radios SET/CHECKED
Emergency Briefing COMPLETE
Review Type of Takeoff COMPLETE

NORMAL TAKEOFF

Throttle FULL OPEN
Engine Instruments CHECK
Brakes RELEASE
Rotation Speed 55 KIAS (Vr)
Climb Speed 76 KIAS (Vy)

SHORT FIELD TAKEOFF

Flaps 10 DEGREES
Brakes SET
Throttle FULL OPEN
Engine Instruments CHECK
Brakes RELEASE
Rotation Speed 50 KIAS
Climb Speed 57 KIAS until obstacles cleared
Climb Speed 76 KIAS (Vy)

Flaps (above 65 KIAS)RETRACT

SOFT FIELD TAKEOFF

Flaps 10 DEGREES
Elevator FULL NOSE UP
Throttle FULL OPEN
Engine Instruments CHECK
Liftoff SpeedMINIMUM SPEED
Climb Speed 57 KIAS until clear of obstacles
Climb Speed 76 KIAS (Vy)
Flaps (above 65 KIAS) RETRACT

CLIMB (1000 FEET)

Airspeed 75-85 KIAS
Lights AS REQUIRED
Flaps UP
Flight Plan (If Filed)ACTIVATE/SFRA

CRUISE

Power AS REQUIRED
Trim SET LEVEL FLIGHT
Mixture LEAN ($\leq 75\%$ power)

DESCENT

Fuel SelectorBOTH
Mixture ENRICH
ATIS/AWOS CHECK
Altimeter SET

BEFORE LANDING (GUMPSB)

Fuel SelectorBOTH
Mixture RICH
Carburetor Heat ON
Seats, Belts, and Harnesses SECURE
BrakesTEST
Lights AS REQUIRED

NORMAL LANDING

Power AS REQUIRED
FlapsFULL DOWN
Airspeed 65-75 KIAS CLEAN / 60-70 KIAS FLAP DN
Brakes AS REQUIRED

SHORT FIELD LANDING

Power AS REQUIRED
FlapsFULL DOWN
Airspeed62 KIAS
Brakes AS REQUIRED
FlapsRETRACT

AFTER LANDING

FlapsUP
Mixture LEAN FOR TAXI
Carburetor HeatOFF
Trim SET TAKEOFF
Lights AS REQUIRED
TransponderON/ALT

SECURING AIRCRAFT

Throttle 1000 RPM
Avionics MasterOFF
Electrical Equipment (Except Beacon)OFF
Mixture IDLE CUT-OFF
MagnetosOFF
Ignition Key ON DASH/BINDER
Master SwitchOFF
Fuel Selector Valve LEFT OR RIGHT
Control Lock INSTALL
Hobbs/Tach Times, Fuel, SquawksNOTE
Flight Plan (If Filed)CLOSE
Chocks and Tiedowns INSTALL

EMERGENCY PROCEDURES

ENGINE FIRE DURING START

Starter CRANK ENGINE
 If engine starts:
 Power 1700 RPM
 Engine (after several minutes) SHUT DOWN & INSPECT
 If engine fails to start:
 Throttle FULL OPEN
 Mixture IDLE CUT-OFF
 Cranking CONTINUE
 Master Switch OFF
 Ignition Switch OFF
 Fuel Selector OFF
 Aircraft ABANDON
 Fire EXTINGUISH

ENGINE FIRE IN FLIGHT

Mixture IDLE CUT-OFF
 Fuel Selector OFF
 Master Switch OFF
 Heater and Defroster OFF
 Airspeed 100 KIAS
 Proceed with power off landing procedure

ELECTRICAL FIRE (SMOKE IN CABIN)

Master Switch OFF
 Electrical Switches OFF
 Vents CLOSED
 Cabin Heat OFF
 Fire EXTINGUISH
 Land as soon as practical.

WING FIRE

Navigation/Strobe LightsOFF
Pitot HeatOFF
Sideslip to keep flames away from fuel tank and cabin.
Land as soon as possible; use flaps only as required.

ENGINE FAILURE DURING TAKEOFF RUN

Throttle CLOSED
Brakes APPLY
Wing Flaps RETRACT
Mixture IDLE CUT-OFF
Ignition SwitchOFF
Master SwitchOFF

ENGINE FAILURE DURING INITIAL CLIMB

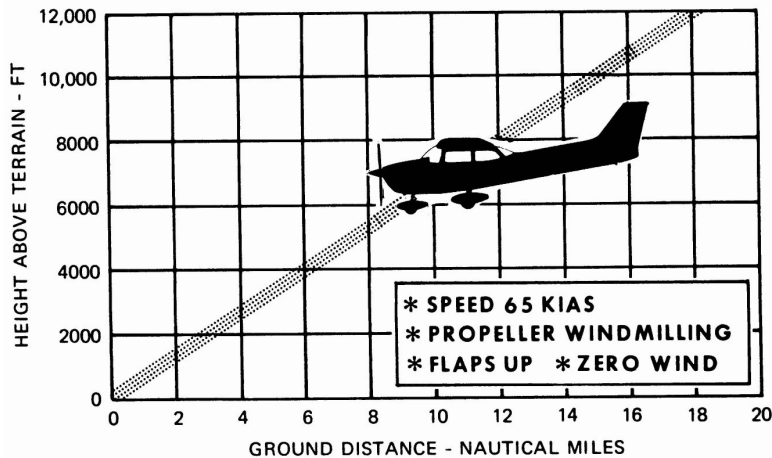
Airspeed 65 KIAS (FL UP) / 60 KIAS (FL DN)
Mixture IDLE CUT-OFF
Fuel SelectorOFF
IgnitionOFF
Flaps AS REQUIRED
Master SwitchOFF

ENGINE FAILURE IN FLIGHT

Airspeed65 KIAS
Carburetor Heat ON
Fuel Selector BOTH
Mixture FULL RICH
Ignition BOTH
Starter ENGAGE
If unable to restart engine, proceed with power off landing procedure.

POWER OFF LANDING

Airspeed 70 KIAS (FL UP) / 65 KIAS (FL DN)
 Mixture IDLE CUT-OFF
 Throttle CLOSED
 Fuel Selector OFF
 Ignition OFF
 Seat belts and harnesses SECURE
 Doors UNLATCH
 Flaps AS REQUIRED
 Master Switch OFF



LOSS OF OIL PRESSURE AND/OR HIGH OIL TEMPERATURE

Land as soon as possible. Prepare for power off landing.

ELECTRICAL FAILURE (LOW VOLTAGE LIGHT)

Ammeter CONFIRM
 Avionics OFF
 Master Switch (ALT and BAT) OFF
 Master Switch ON
 Low Voltage Light CHECK OFF
 Avionics ON
 If low-voltage light illuminates again:
 Alternator OFF
 Nonessential Electric Equipment OFF
 Land as soon as practical.

SPIN RECOVERY

Throttle IDLE
 Ailerons NEUTRAL
 Rudder FULL OPPOSITE
 Elevator FORWARD
 Rudder (when rotation stops) NEUTRAL
 Recover from dive.

TAKEOFF DISTANCE MAXIMUM WEIGHT 2400 LBS

SHORT FIELD

CONDITIONS:

Flaps 10°
Full Throttle Prior to Brake Release
Paved, Level, Dry Runway
Zero Wind

NOTES:

1. Short field technique as specified in Section 4.
2. Prior to takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
4. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

WEIGHT LBS	TAKEOFF SPEED KIAS		PRESS ALT FT	0°C			10°C			20°C			30°C			40°C		
	LIFT OFF	AT 50 FT		GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	
																		51
2400	51	56	795	1460	860	1570	925	1685	995	1810	1065	1945	1065	1810	1065	1945		
			875	1605	940	1725	1015	1860	1090	2000	1170	2155	1170	2000	1170	2155		
			960	1770	1035	1910	1115	2060	1200	2220	1290	2395	1290	2220	1290	2395		
			1055	1960	1140	2120	1230	2295	1325	2480	1425	2685	1425	2480	1425	2685		
			1165	2185	1260	2365	1355	2570	1465	2790	1575	3030	1575	2790	1575	3030		
			1285	2445	1390	2660	1500	2895	1620	3160	1745	3455	1745	3160	1745	3455		
			1425	2755	1540	3015	1665	3300	1800	3620	1940	3990	1940	3620	1940	3990		
			1580	3140	1710	3450	1850	3805	2000	4220	---	---	---	4220	---	---		
			1755	3615	1905	4015	2060	4480	---	---	---	---	---	4480	---	---		

NOTE: There is no take-off performance data for the STC 180 hp conversion. This data is for the 160 hp version.

LANDING DISTANCE - SHORT FIELD

CONDITIONS:

Flaps 30°

NOTES:

4. If a landing with flaps up is necessary, increase approach speed by 9 KIAS and allow for 35% longer distance.

Weight LBS	Speed At 50 Ft KIAS	Press Alt Ft	0°C			10°C			20°C			30			40°C		
			GRND ROLL Ft	Total Ft To Clear 50 Ft Obs	GRND ROLL Ft	Total Ft To Clear 50 Ft Obs	GRND ROLL Ft	Total Ft To Clear 50 Ft Obs	GRND ROLL Ft	Total Ft To Clear 50 Ft Obs	GRND ROLL Ft	Total Ft To Clear 50 Ft Obs	GRND ROLL Ft	Total Ft To Clear 50 Ft Obs			
															545	1290	565
2550	62	S.L.	545	1290	565	1320	585	1350	605	1385	625	1420	650	1455	670	1490	
		1000	565	1320	585	1350	605	1385	625	1420	650	1455	670	1490	695	1530	
		2000	585	1355	610	1385	630	1420	650	1455	670	1490	695	1530	725	1570	
		3000	610	1385	630	1425	655	1460	675	1495	700	1535	725	1570	750	1615	
		4000	630	1425	655	1460	675	1495	700	1535	725	1575	750	1615	780	1660	
		5000	655	1460	680	1500	705	1535	725	1575	750	1620	780	1660	810	1705	
		6000	680	1500	705	1540	730	1580	755	1620	785	1665	810	1705	840	1755	
		7000	705	1545	730	1585	760	1625	785	1665	815	1715	840	1755			
		8000	735	1585	760	1630	790	1670	815	1715	840	1755					