

CHECKLIST CESSNA 172P N781FM, N782FM



Fort Meade Flight Activity, Inc.
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(410) 672-0080



EMERGENCY CONTACT NUMBERS

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

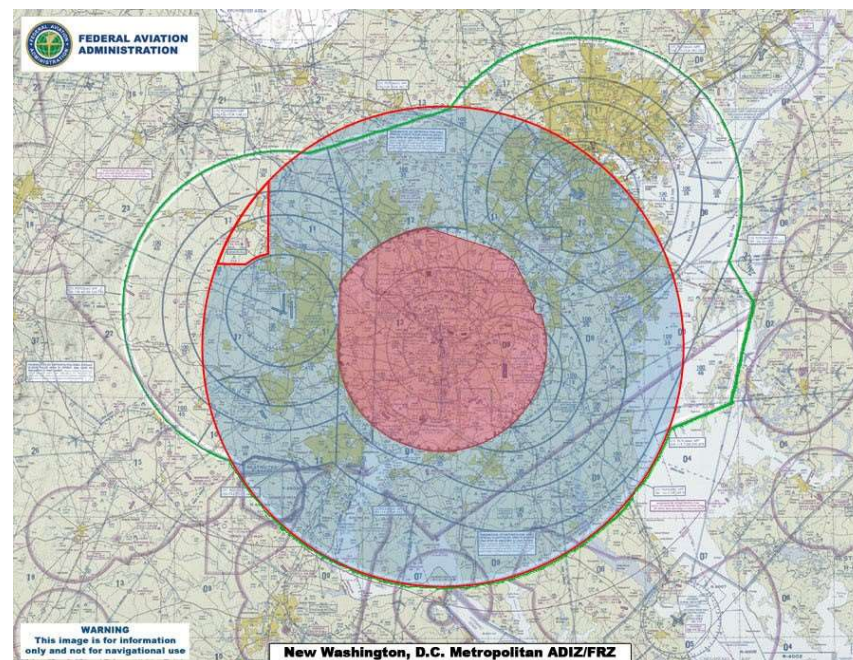
Frank Turney (443) 499-1287 (cell)
Co-manager

Transponder Codes

7500 Hijacked
7600 Lost Communications
7700 Emergency

DO NOT REMOVE FROM AIRCRAFT

Aircraft ID N781FM	Flight Rule IFR	Flight Type G	No. of Aircraft 1	Aircraft C172	Aircraft Type C172	Wake Turbulence L	Aircraft Equipment SG
Departure KFME	Airport Info Area Brief	Departure Date & Time 05/22/2020 HHMM 1-120 Apply Minutes From Now	Evaluate UTC	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				
Fuel Endurance 0400	Persons on Board 2	Aircraft Color & Markings (Optional) W/O:BR	Supplemental Remarks (Optional)				
Emergency Radios ☐ UHF ☒ VHF ☐ ELBA	Survival Equipment ☐ Polar ☐ Desert ☐ Maritime ☐ Jungle	Jackets ☐ Light ☐ Fluorescent ☐ UHF ☐ VHF	Dinghies (Optional) Number Capacity Color Covered				
Pilot Contact Information							



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

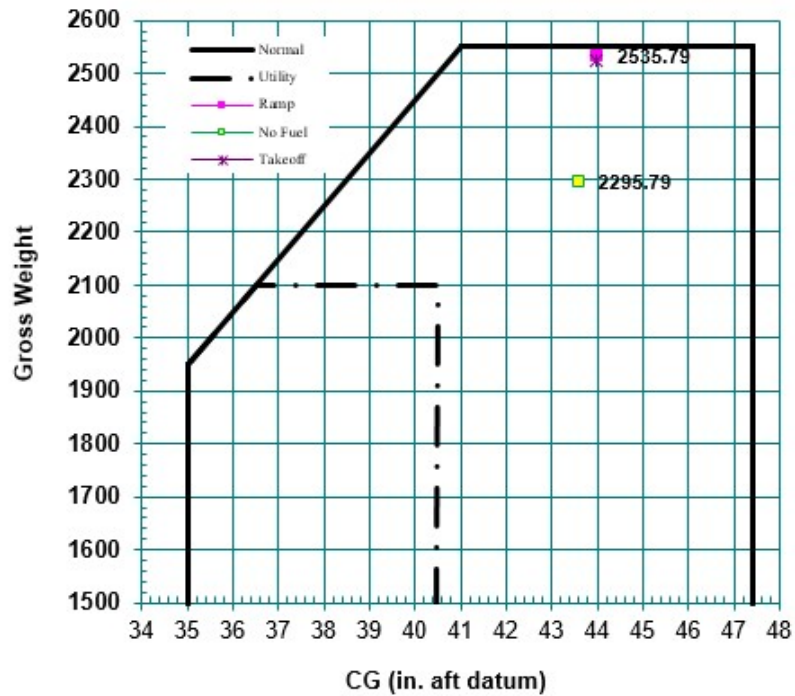
FAA Tail No.	N781FM		Color	W/BR
Flight Plan Designator	C172/G		Useable Fuel	40.0 gal
Year of Manufacture	1980		Make/Model	Cessna 172P-180
	⌘	Weight	Arm	Moment
Basic Empty	15-Nov-2016	1520.79	37.252	56652.03
Fuel (Gal):	40.0	240.00	48.000	11520.00
Pilot		200.00	37.000	7400.00
Copilot		200.00	37.000	7400.00
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

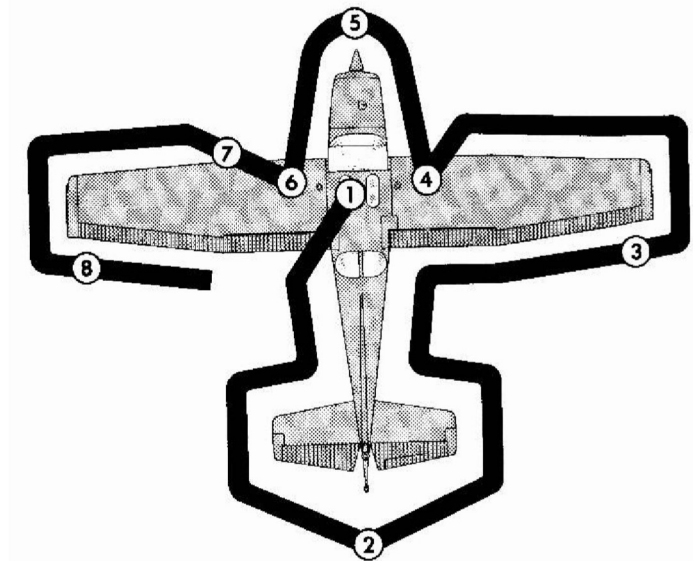
1. MGW for Normal Operation is 2550 lbs. and for Utility Operation is 2100 lbs.

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
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
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 (V_r)
Climb Speed..... 76 KIAS (V_y)

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 (V_y)
Flaps (above 65 KIAS) RETRACT

SOFT FIELD TAKEOFF

Flaps 10 DEGREES
Elevator..... FULL NOSE UP
Throttle..... FULL OPEN
Engine Instruments..... CHECK
Liftoff Speed..... MINIMUM 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 Selector BOTH
Mixture..... ENRICH
ATIS/AWOS..... CHECK
Altimeter SET

BEFORE LANDING (GUMPSB)

Fuel Selector BOTH
Mixture..... RICH
Carburetor Heat..... ON
Seats, Belts, and Harnesses SECURE
Brakes TEST
Lights AS REQUIRED

NORMAL LANDING

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

SHORT FIELD LANDING

Power AS REQUIRED
Flaps FULL DOWN
Airspeed 62 KIAS
Brakes AS REQUIRED
Flaps RETRACT

AFTER LANDING

Flaps..... UP
Mixture..... LEAN FOR TAXI
Carburetor Heat..... OFF
Trim..... SET TAKEOFF
Lights AS REQUIRED
Transponder ON/ALT

SECURING AIRCRAFT

Throttle..... 1000 RPM
Avionics Master..... OFF
Electrical Equipment (Except Beacon) OFF
Mixture..... IDLE CUT-OFF
Magnetos..... OFF
Ignition Key..... ON DASH/BINDER
Master Switch OFF
Fuel Selector Valve..... LEFT OR RIGHT
Control Lock..... INSTALL
Hobbs/Tach Times, Fuel, Squawks NOTE
Flight Plan (If Filed)..... CLOSE
Chocks and Tiedowns..... INSTALL
Cowl Plugs..... 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 Lights..... OFF
Pitot Heat..... OFF
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 Switch..... OFF
Master Switch OFF

ENGINE FAILURE DURING INITIAL CLIMB

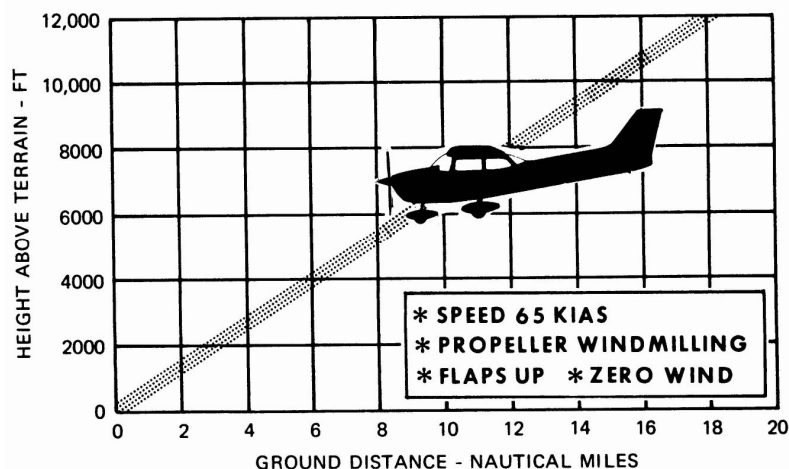
Airspeed.....65 KIAS (FL UP) / 60 KIAS (FL DN)
Mixture.....IDLE CUT-OFF
Fuel Selector.....OFF
IgnitionOFF
Flaps.....AS REQUIRED
Master SwitchOFF

ENGINE FAILURE IN FLIGHT

Airspeed 65 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:

- Short field technique as specified in Section 4.
- Prior to takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
- Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
- 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		
				GRND ROLL	TO CLEAR 50 FT OBS	TOTAL	GRND ROLL	TO CLEAR 50 FT OBS	TOTAL	GRND ROLL	TO CLEAR 50 FT OBS	TOTAL	GRND ROLL	TO CLEAR 50 FT OBS	TOTAL	GRND ROLL	TO CLEAR 50 FT OBS	TOTAL
2400	51	56	S.L.	795	1460	860	1570	925	1685	995	1810	1065	1945	1065	1945	1065	1945	1065
			1000	875	1605	940	1725	1015	1860	1090	2000	1170	2155	1170	2155	1170	2155	1170
			2000	960	1770	1035	1910	1115	2060	1200	2220	1290	2395	1290	2395	1290	2395	1290
			3000	1055	1960	1140	2120	1230	2295	1325	2480	1425	2685	1425	2685	1425	2685	1425
			4000	1165	2185	1260	2365	1355	2570	1465	2790	1575	3030	1575	3030	1575	3030	1575
			5000	1285	2445	1390	2660	1500	2895	1620	3160	1745	3455	1745	3455	1745	3455	1745
			6000	1425	2755	1540	3015	1665	3300	1800	3620	1940	3990	1940	3990	1940	3990	1940
			7000	1580	3140	1710	3450	1850	3805	2000	4220	2155	4695	2155	4695	2155	4695	2155
			8000	1755	3615	1905	4015	2060	4480	2220	4850	2385	5315	2385	5315	2385	5315	2385

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

LANDING DISTANCE - SHORT FIELD

CONDITIONS:

Flaps 30°

NOTES:

- 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
2550	62	S.L.	545	1290	565	1320	1320	585	1350	1350	1380	605	1415	1415	625	1450	1450
		1000	565	1320	585	1350	1350	605	1385	1385	1420	625	1455	1455	650	1490	1490
		2000	585	1355	610	1385	1385	630	1420	1420	1455	650	1490	1490	675	1530	1530
		3000	610	1385	630	1425	1425	655	1460	1460	1495	675	1530	1530	700	1570	1570
		4000	630	1425	655	1460	1460	680	1500	1500	1535	700	1570	1570	725	1615	1615
		5000	655	1460	680	1500	1500	705	1540	1540	1575	725	1615	1615	750	1660	1660
		6000	680	1500	705	1540	1540	730	1585	1585	1620	750	1660	1660	780	1705	1705
		7000	705	1545	730	1585	1585	760	1630	1630	1665	785	1715	1715	810	1755	1755
		8000	735	1585	760	1630	1630	790	1670	1670	1715	815	1755	1755	840	1800	1800