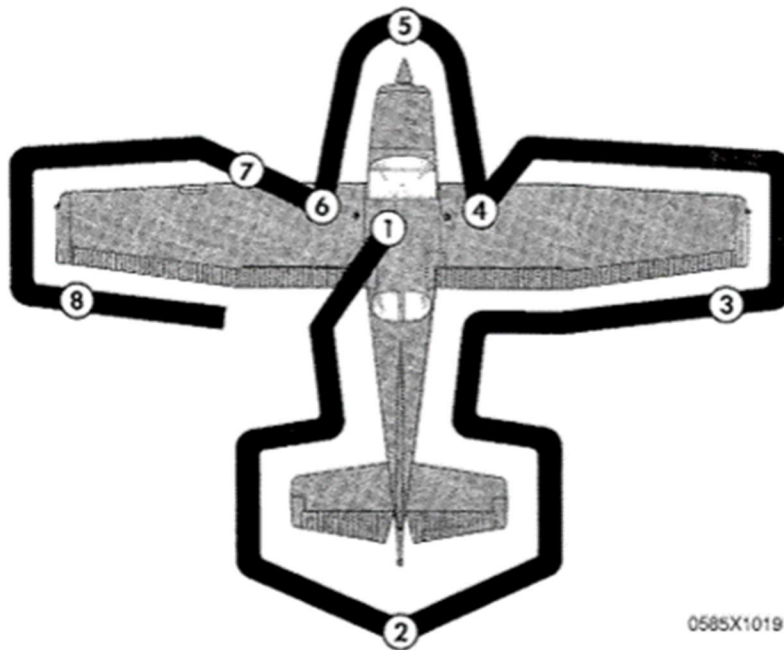


CHECKLIST / N552SP / C-172SP

CONTAINS STANDARD CHECKLIST PLUS ADDITIONAL ITEMS FROM THESE SUPPLEMENTS:

1. KAP 140 2 AXIS AUTOPILOT
2. Garmin GTX 345 Transponder with ADS-B
3. Garmin 430W GPS
4. Aspen Avionics EFD1000 Primary Flight Display
5. SureFly Ignition Module (replacement for left magneto)

BLUE CHANGE BAR USED TO IDENTIFY THE ADDITIONAL CHECKLIST ITEMS



0585X1019

- Go to www.PilotCraig.com for electronic copy.
- CHECK www.PilotCraig.com FOR UPDATED CHECKLIST AFTER ANY NEW EQUIPMENT IS INSTALLED.

Consult POH checklist, amplified procedures, and supplements for all available information. **Do not rely solely on this checklist.**

AIRSPEEDS

AIRSPEEDS FOR NORMAL OPERATION

Unless otherwise noted, the following speeds are based on a maximum weight of 2550 pounds and may be used for any lesser weight.

Takeoff:

Normal Climb Out.....	75-85 KIAS
Short Field Takeoff, Flaps 10°, Speed at 50 Feet.....	56 KIAS

Enroute Climb, Flaps Up:

Normal, Sea Level.....	75-85 KIAS
Normal, 10,000 Feet.....	70-80 KIAS
Best Rate-of-Climb, Sea Level.....	74 KIAS
Best Rate-of-Climb, 10,000 Feet.....	72 KIAS
Best Angle-of-Climb, Sea Level.....	62 KIAS
Best Angle-of-Climb, 10,000 Feet.....	67 KIAS

Landing Approach:

Normal Approach, Flaps Up.....	65-75 KIAS
Normal Approach, Flaps 30°	60-70 KIAS
Short Field Approach, Flaps 30°	61 KIAS

Balked Landing (Go-Around)

Maximum Power, Flaps 20°	60 KIAS
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Maximum Recommended Turbulent Air Penetration Speed:

2550 Lbs.....	105 KIAS
2200 Lbs.....	98 KIAS
1900 Lbs.....	90 KIAS

Maximum Demonstrated Crosswind Velocity:

Takeoff or Landing.....	15 KNOTS
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PREFLIGHT INSPECTION

1) CABIN

1. Pitot Tube Cover – REMOVE. Check for pitot blockage.
2. Pilot's Operating Handbook - AVAILABLE IN THE AIRPLANE.
3. Airplane Weight and Balance – CHECKED.
4. Parking Brake – SET.
5. Control Wheel Lock – REMOVE.
6. Ignition Switch – OFF.
7. Avionics Master Switch – OFF.
8. Aspen Avionics EFD1000 Switch – OFF.

WARNING

WHEN TURNING ON THE MASTER SWITCH, USING AN EXTERNAL POWER SOURCE, OR PULLING THE PROPELLER THROUGH BY HAND, TREAT THE PROPELLER AS IF THE IGNITION SWITCH WERE ON. DO NOT STAND, NOR ALLOW ANYONE ELSE TO STAND, WITHIN THE ARC OF THE PROPELLER, SINCE A LOOSE OR BROKEN WIRE OR A COMPONENT MALFUNCTION COULD CAUSE THE PROPELLER TO ROTATE.

9. Master Switch – ON.
10. Fuel Quantity Indicators – CHECK QUANTITY and ENSURE LOW FUEL ANNUNCIATORS (L LOW FUEL R) ARE EXTINGUISHED.
11. Avionics Master Switch – ON.
12. Avionics Cooling Fan – CHECK AUDIBLY FOR OPERATION.
13. Avionics Master Switch – OFF.
14. Static Pressure Alternate Source Valve – OFF.
15. Annunciator Panel Switch – PLACE AND HOLD IN TST POSITION and ensure all annunciators illuminate.
16. Annunciator Panel Test Switch – RELEASE. Check that appropriate annunciators remain on.

NOTE

When Master Switch is turned ON, some annunciators will flash for approximately 10 seconds before illuminating steadily. When panel TST switch is toggled up and held in position, all remaining lights will flash until the switch is released.

17. Fuel Selector Valve – BOTH.
18. Fuel Shutoff Valve – ON (Push Full In).
19. Flaps – EXTEND.
20. Pitot Heat – ON (Carefully check that pitot tube is warm to touch within 30 seconds).
21. Pitot Heat – OFF.
22. Master Switch – OFF.
23. Elevator Trim – SET for takeoff.
24. Baggage Door – CHECK, lock with key.
25. Autopilot Static Source Opening – CHECK for blockage.
26. Aspen Avionics EFD1000 Remote Sensor Module (RSM)
 - a. RSM – Check for condition and security.
 - b. RSM Vent Hole – Check Clear of obstructions.
 - c. RSM Lightning Tape – Check for condition and security.

2) EMPENNAGE

1. Rudder Gust Lock (if installed) – REMOVE.
2. Tail Tie-Down – DISCONNECT.
3. Control Surfaces – CHECK freedom of movement and security.
4. Trim Tab – CHECK security.
5. Antennas – CHECK for security of attachment and general condition.

3) RIGHT WING Trailing Edge

1. Aileron – Check freedom of movement and security.
2. Flap – CHECK for security and condition.

4) RIGHT WING

1. Wing Tie-Down – DISCONNECT.
2. Main Wheel Tire – CHECK for proper inflation and general condition (weather checks, tread depth and wear, etc...).
3. Fuel Tank Sump Quick Drain Valves (5 total) – DRAIN at least a cupful of fuel (using sampler cup) from each sump location to check for water, sediment, and proper fuel grade before each flight and after each refueling. If water is observed, take further samples until clear and then gently rock wings and lower tail to the ground to move any additional contaminants to the sampling points. Take repeated samples from **all** fuel drain points until **all** contamination has been removed. If contaminants are still present, refer to WARNING below and do not fly airplane.

WARNING

IF, AFTER REPEATED SAMPLING, EVIDENCE OF CONTAMINATION STILL EXISTS, THE AIRPLANE SHOULD NOT BE FLOWN. TANKS SHOULD BE DRAINED AND SYSTEM PURGED BY QUALIFIED MAINTENANCE PERSONNEL. ALL EVIDENCE OF CONTAMINATION MUST BE REMOVED BEFORE FURTHER FLIGHT.

4. Fuel Quantity – CHECK VISUALLY for desired level.
5. Fuel Filler Cap – SECURE and VENT UNOBSTRUCTED.

5) NOSE

1. (3 fuel drains) Fuel Strainer Quick Drain Valve (Located on bottom of fuselage) – DRAIN at least a cupful of fuel (using sampler cup) from valve to check for water, sediment, and proper fuel grade before each flight and after each refueling. If water is observed take further samples until clear and then gently rock wings and lower tail to the ground to move any additional contaminants to the sampling points. Take repeated samples from **all** fuel drain points, including the fuel reservoir and fuel selector, until **all** contamination has been removed. If contaminants are still present, refer to WARNING above and do not fly the airplane.

2. Engine Oil Dipstick/Filler Cap – CHECK oil level, then check dipstick/filler cap SECURE. **Do not operate with less than five quarts.** Fill to eight quarts for extended flights.
3. Engine Cooling Air Inlets – CLEAR of obstructions.
4. Propeller and Spinner – CHECK for nicks and security.
5. Air Filter – CHECK for restrictions by dust or other foreign matter.
6. Nose Wheel Strut and Tire – CHECK for proper inflation of strut and general condition (weather checks, tread depth and wear, etc...) of tire.
7. Left Static Source Opening – CHECK for blockage.

6) LEFT WING

1. Fuel Quantity – CHECK VISUALLY for desired level.
2. Fuel Filler Cap – SECURE and VENT UNOBSTRUCTED.
3. Fuel Tank Sump Quick Drain Valves (5 total) – DRAIN at least a cupful of fuel (using sampler cup) from each sump location to check for water, sediment, and proper fuel grade before each flight and after each refueling. If water is observed, take further samples until clear and then gently rock wings and lower tail to the ground to move any additional contaminants to the sampling points. Take repeated samples from **all** fuel drain points until **all** contamination has been removed. If contaminants are still present, refer to WARNING (previous page) and do not fly airplane.
4. Main Wheel Tire – CHECK for proper inflation and general condition (weather checks, tread depth and wear, etc...).

7) LEFT WING Leading Edge

1. Fuel Tank Vent Opening – CHECK for blockage.
2. Stall Warning Opening – CHECK for blockage. To check the system, place a clean handkerchief over the vent opening and apply suction; a sound from the warning horn will confirm system operation.
3. Wing Tie-Down – DISCONNECT.
4. Landing/Taxi Light(s) – CHECK for condition and cleanliness of cover.

8) LEFT WING Trailing Edge

1. Aileron – CHECK for freedom of movement and security.
2. Flap – CHECK for security and condition.

BEFORE STARTING ENGINE

1. Preflight Inspection – COMPLETE.
2. Passenger Briefing – COMPLETE.
3. Seats and Seat Belts – ADJUST and LOCK. Ensure inertia reel locking.
4. Brakes – TEST and SET.
5. Circuit Breakers – CHECK IN.
6. Electrical Equipment – OFF.

CAUTION

THE AVIONICS MASTER SWITCH MUST BE OFF DURING ENGINE START TO PREVENT POSSIBLE DAMAGE TO AVIONICS.

7. Avionics Master Switch – OFF.
8. Aspen Avionics EFD1000 Switch – OFF.
9. Fuel Selector Valve – BOTH.
10. Fuel Shutoff Valve – ON.
11. Avionics Circuit Breakers – CHECK IN.

STARTING ENGINE (With Battery)

1. Throttle – OPEN ¼ INCH.
2. Mixture – IDLE CUTOFF.
3. Propeller Area – CLEAR.
4. Master Switch – ON.
5. Flashing Beacon – ON.

NOTE

If engine is warm, omit priming procedure of steps 6,7, and 8 below.

6. Auxiliary Fuel Pump Switch – ON.
7. Mixture – SET to FULL RICH (full forward) until stable fuel flow is indicated (usually 3 to 5 seconds), then set to IDLE CUTOFF (full aft) position.
8. Auxiliary Fuel Pump Switch – OFF.
9. Ignition Switch – START (release when engine starts).
10. Mixture – ADVANCE smoothly to RICH when engine starts.

NOTE

If engine floods (engine has been primed too much), turn off auxiliary fuel pump, place mixture to idle cutoff, open throttle ½ to full, and motor (crank) engine. When engine starts, set mixture to full rich and close throttle promptly.

11. Oil Pressure – CHECK.
12. Navigation Lights – ON as required.
13. Avionics Master Switch – ON (Verify all radios on).
14. Aspen Avionics EFD1000 Switch – ON.
15. Flaps – Retract.
16. Garmin GTX 345 Transponder
 - a. GTX Mode – VERIFY ALT.
 - b. NO 1090ES TX – CONSIDERED.
 - c. If applicable, Bluetooth pair to iPad.
17. Garmin 430W GPS
 - a. Database – REVIEW EFFECTIVE DATES.
 - b. Self Test – VERIFY OUTPUTS TO NAV INDICATORS.
 - c. Self Text – GPS Remote Annunciator.
18. KAP 140 2 AXIS AUTOPILOT
 - a. Power Application and Self Test Complete – Verify PFT with increasing number followed by Disconnect Tone Sounding.
19. Pre-Taxi Radios and Avionics – SET.

WARNING

IF PITCH TRIM LIGHT STAYS ON, THEN THE AUTOTRIM DID NOT PASS THE PREFLIGHT TEST. THE AUTOPILOT CIRCUIT BREAKER MUST BE PULLED. MANUAL ELECTRIC TRIM AND AUTOPILOT ARE INOPERATIVE.

STARTING ENGINE (With External Power)

1. REFER TO POH FOR PROCEDURE ON PAGES 4-13, 4-14, AND 7-36

BEFORE TAKEOFF

1. Parking Brake – SET.
2. Passenger Seat Backs – MOST UPRIGHT POSITION.
3. Seats and Seat Belts – CHECK SECURE.
4. Cabin Doors – CLOSED and LOCKED.
5. Flight Controls – FREE and CORRECT.
6. Flight Instruments – CHECK and SET.
7. Fuel Quantity – CHECK.
8. Mixture – RICH.
9. Fuel Selector Valve – RECHECK BOTH.
10. Throttle – 1800 RPM.
 - a. Magneto (RIGHT IGNITION SWITCH) – CHECK (150 RPM max drop).
 - b. SureFly (LEFT IGNITION SWITCH) – CHECK (150 RPM max drop) and within 50 differential between SureFly drop and Magneto drop.
 - c. Vacuum Gage – CHECK.
 - d. Engine Instruments and Ammeter – CHECK.
11. Annunciator Panel – Ensure no annunciators are illuminated.
12. Throttle – CHECK IDLE.
13. Throttle – 1000 RPM or LESS.
14. Throttle Friction Lock – ADJUST.
15. Strobe Lights – AS DESIRED.
16. Pre-Takeoff Radios and Avionics – SET.
17. KAP 140 AUTOPILOT – OFF (Press A/P DISC/TRIM INT Switch).
18. Manual Electric Trim – CHECK.

- a. LH SWITCH – PUSH FORWARD – Verify no Movement.
- b. LH SWITCH – PULL AFT – Verify no Movement.
- c. RH SWITCH – PUSH FORWARD 5 seconds– Verify no Movement and red “PR” light above AP button.
- d. RH SWITCH – PULL AFT 5 seconds– Verify no Movement and red “PR” light above AP button.
- e. LH and RH Switch – PUSH FORWARD SIMULTANEOUSLY and HOLD. OBSERVE MOVEMENT of Elevator Trim Wheel (nose down). While holding LH and RH, PRESS and HOLD A/P DISC/TRIM INT Switch OBSERVE NO MOVEMENT of Trim Wheel. Continue to hold LH and RH Switches and RELEASE A/P DISC/TRIM INT Switch. OBSERVE MOVEMENT of Elevator Trim Wheel. Release Switches.
- f. LH and RH Switch – PULL AFT – REPEAT tasks described in “e” above for nose up direction of travel.
- g. FLASHING BARO SETTING – SET proper baro setting (if not completed earlier).
- h. AUTOPILOT – ENGAGE by pressing AP button.
- i. FLIGHT CONTROLS – MOVE fore, aft, left and right to verify the autopilot can be overpowered (THIS DOES NOT TAKE MUCH FORCE OR MOVEMENT TO ACCOMPLISH – *Thanks*). 😊
- j. A/P DISC/TRIM INT Switch – PRESS. Verify that the autopilot disconnects.

19. Elevator Trim – SET for takeoff manually.

20. Wing Flaps – SET for takeoff (0°-10°).

21. Garmin GTX 345 Transponder

- a. 1090ES TX CTL – VERIFY ON.
- b. NO 1090ES TX – EXTINGUISHED.

22. Garmin 430W GPS

- a. System Messages and Annunciators – CONSIDERED.

23. Aspen Avionics EFD1000

- a. PFD – Configure for departure.

24. Brakes – RELEASE.

TAKEOFF

NORMAL TAKEOFF

1. Wing Flaps – 0°-10°.
2. Throttle – FULL OPEN.
3. Mixture – RICH (above 3000 feet, LEAN to obtain maximum RPM).
4. Elevator Control – LIFT NOSE WHEEL (at 55 KIAS).
5. Climb Speed – 70-80 KIAS.
6. Wing Flaps – RETRACT.

SHORT FIELD TAKEOFF

1. Wing Flaps -- 10°.
2. Brakes – APPLY.
3. Throttle – FULL OPEN.
4. Mixture – RICH (above 3000 feet, LEAN to obtain maximum RPM).
5. Brakes – RELEASE.
6. Elevator Control – SLIGHTLY TAIL LOW.
7. Climb Speed – 56 KIAS (until all obstacles are cleared).
8. Wing Flaps – RETRACT slowly after reaching 60 KIAS.

ENROUTE CLIMB

1. Airspeed – 70-85 KIAS.
2. Throttle – FULL OPEN.
3. Mixture – RICH (above 3000 feet, LEAN to obtain maximum RPM).
4. Elevator Trim – VERIFY or SET trimmed condition prior to Autopilot engagement.
5. Airspeed and Rate of Climb – STABILIZED.
6. OBSERVE AUTOPILOT 800' AGL LIMITATION (200' AGL DURING INSTRUMENT APPROACH OPERATIONS).
7. AP Button – Press. Note ROL and VS annunciator on.
 - a. Set/Operate per KAP 140 supplement.
 - b. BEFORE LANDING – A/P DISC/TRIM INT Switch – PRESS to disengage AP.

WARNING

WHEN OPERATING AT OR NEAR THE BEST RATE OF CLIMB AIRSPEED, AT CLIMB POWER SETTINGS, AND USING VERTICAL SPEED (VS) MODE, CONTINUED OPERATION IN VERTICAL SPEED MODE CAN RESULT IN AN AIRPLANE STALL.

DO NOT HELP THE AUTOPILOT OR HAND-FLY THE AIRPLANE WITH THE AUTOPILOT ENGAGED AS THE AUTOPILOT WILL RUN THE PITCH TRIM TO OPPOSE CONTROL WHEEL MOVEMENT.

CRUISE

1. Power – 2100-2700 RPM (No more than 75% is recommended).
2. Elevator Trim – ADJUST.
3. Mixture – LEAN.

DESCENT

1. Power – AS DESIRED.
2. Mixture – ADJUST for smooth operation (full rich for idle power).
3. Altimeter – SET.
4. Aspen Avionics EFD1000.
 - a. PFD – Configure for arrival.
5. Fuel Selector Valve – BOTH.
6. Wing Flaps – AS DESIRED (0°-10° below 110 KIAS, 10°-30° below 85 KIAS).

BEFORE LANDING

1. Pilot and Passenger Seat Backs – MOST UPRIGHT POSITION.
2. Seats and Seat Belts – SECURED and LOCKED.
3. Fuel Selector Valve – BOTH.
4. Mixture – RICH.
5. Landing/Taxi Lights – ON.
6. A/P DISC/TRIM INT Switch – PRESS to disengage AP.

LANDING

NORMAL LANDING

1. Airspeed – 65-75 KIAS (flaps up).
2. Wing Flaps – AS DESIRED (0°-10° below 110 KIAS, 10°-30° below 85 KIAS).
3. Airspeed – 60-70 KIAS (flaps down).
4. Touchdown – MAIN WHEELS FIRST.
5. Landing Roll – LOWER NOSE WHEEL GENTLY.
6. Braking – MINIMUM REQUIRED.

SHORT FIELD LANDING

1. Airspeed – 65-75 KIAS (flaps up).
2. Wing Flaps – Full Down (30°).
3. Airspeed – 61 KIAS until flare.
4. Power – REDUCE to idle after clearing obstacle.
5. Touchdown – MAIN WHEELS FIRST.
6. Brakes – APPLY HEAVILY.
7. Wing Flaps – RETRACT.

BALKED LANDING (GO AROUND)

1. Throttle – FULL OPEN.
2. Wing Flaps – Retract to 20°.
3. Climb Speed – 60 KIAS.
4. Wing Flaps – 10° (until obstacles are cleared) RETRACT (after reaching a safe altitude and 65 KIAS).

AFTER LANDING

1. WING FLAPS – UP.

SECURING AIRPLANE

1. Parking Brake – SET.
2. Electrical Equipment, Autopilot – OFF.
3. Avionics Master Switch – OFF.
4. Aspen Avionics EFD1000 Switch – OFF.
5. Mixture – IDLE CUTOFF (pulled full out).
6. Ignition Switch – OFF.
7. Master Switch – OFF.
8. Control Lock – INSTALL.
9. Fuel Selector Valve – LEFT or RIGHT to prevent cross feeding.