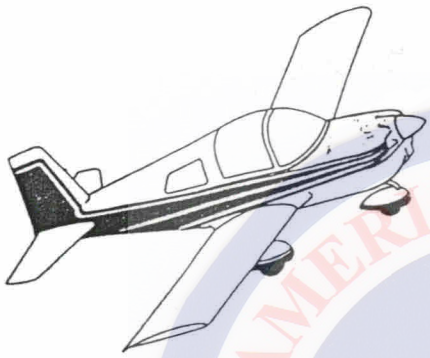
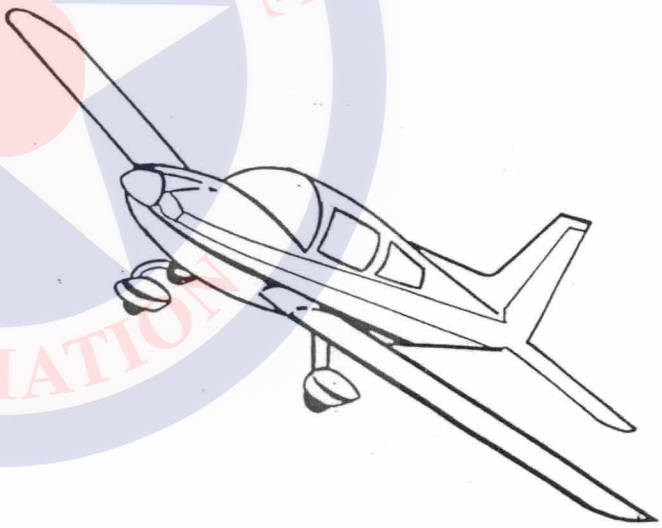
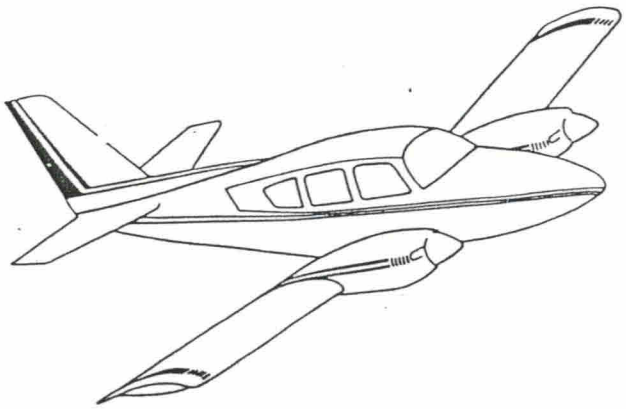
# PRE-PURCHASE INSPECTION GUIDELINES

AYA CONVENTION---1990
VISALIA, CA.

PRESENTED BY:
DAVID FLETCHER
PRESIDENT, FLETCHAIR, INC.







# BLUEBOOK AIRCRAFT RATING SCALE

## EXTERIOR

10 - Aircraft is new.

9 - Paint is new. Airframe and paint are in excellent condition with no scratches or dents.

8 - Paint and airframe are in near new condition. Minor scratches (shallow, short and less than 1 or 2 per square foot) are detectable only on close inspection (inspecting aircraft while standing at less than an arms' length from it). Paint on often used fasteners and screws may be chipped.

7 - Paint has high gloss. Small number (less than 3 or 4 per square foot) of scratches are apparent, mostly on leading edges due to abrasion. Close inspection reveals only a few small dents or chips (less than 1 or 2 per sq. ft.). Windows are clear with no crazing or discoloration.

6 - Paint is shiny. Several small scratches, chips, or dents ( 4 to 6 per sq. ft.) can be found, mostly around high use areas (fuel caps, doors,struts). Some crazing or small stress cracks (less than 2 or 3 hairline cracks per sq. ft.) are visible in plastic and fiberglass structures. Several windows may be milky at edges.

5 - Paint is sound (no corrosion apparent). Slight oxidation can easily be polished out leaving paint shiny again. Two or three small areas (rounded corner of cowling, part of leading edge) of crazing can be found in paint. Paint on leading edges is rough from abrasion. Touched up or repaired areas may be seen on close inspection. Small number (3 or 4 per sq. ft.) of short cracks can be found in fiberglass wingtips and cowlings due to normal wear or hangar rash. Cowling seals are faded. Many (less than half) windows have milky edges. Several windows may be crazed or lightly scratched. Aircraft looks attractive to most people during walk around.

4 - Paint is generally sound. Small areas require special attention (touch up or repair by trained individual) due to oxidation, peeling, chipping, corrosion or crazing. Paint is dull in many (less than half) areas. Most windows are crazed and scratched.

3 - Paint is not shiny and has peeled in many areas. Most leading edges and upper surfaces are crazed and oxidized. Moderate number ( 5 to 6 per sq. ft.) of chips, cracks or dents can be found. All window surfaces are scratched. Even after touch up and polishing, aircraft still looks unsightly.

2 - Aircraft looks terrible. Paint is badly oxidized, peeled and blemished. It is well beyond the touch up and polish stage. Corrosion, dents and cracks require extensive work.

1 - Exterior is so full of corrosion, heavy dents or tears that it will not pass an annual without repairs.

## INTERIOR

10 - Aircraft is new.

9 - Interior is new. There are no scratches, cracks, crazing, or other evidence of use.

8 - Interior is in near new condition. Any smell, dirt or matting can be removed by simple cleaning. Some evidence of use can be found only on close inspection.

7 - A small amount of wear is apparent. Small, shallow, scratches and/or stains ( 1 or 2 per seat) can be found on seats or carpet. Stain remover and shampooing removes almost all the stains. Headliner is clean with no stains.

6 - Headliner may have a couple of dirty spots that can be removed almost completely with cleaning. Matting in high use areas does not vacuum out completely. Steaming or shampooing improves interior considerably, but a couple of small, limited areas (doorway, beneath rudder pedals) remain looking worn or stained. No frayed or torn fabric is apparent. Leather or vinyl has no cracks, but small scratches or creases ( 4 to 6 per seat) are obvious. Seats operate smoothly. Scratches in scuff plates around doorways are obvious. Interior still looks attractive when cleaned thoroughly.

5 - High use areas ( doorway, beneath rudder pedals) still look worn (fibers appear shorter than surrounding carpet) after thorough shampooing. Headliner may have several stains but is not torn. Minor ( 2 or 3 instances per seat) fraying, staining or cracking is apparent on less than half of the seats. The seats do not operate smoothly. Interior can be made to look clean, but it lacks sparkle in many areas.

4- Scratches, stains and frayed fabric are seen on seats. More than half of the leather or vinyl seats may have small cracks. Carpet has numerous stains, snags or other irregularities. Interior has two or three tears. The seats do not operate smoothly. Several cracks in scuff plates around doorways are obvious. Interior can not be made to look clean or smell fresh.

3 - Tears, snags and stains are clearly visible in many areas. Several cigarette burns can be found. Most seats do not operate smoothly. Interior looks and smells dirty even after cleaning.

2 - Cracks, stains, tears,and snags are the norm. Many seats have exposed foam. Interior is dirty and foul smelling even after thorough cleaning.

1 - Interior is so dirty and worn that most people would be hesitant about sitting down for fear of damaging their clothing.

# PRE PURCHASE INSPECTION

1. Check engine compartment for leaks and stains. Difficult to push in primers require cylinder nozzle cleaning. They may also indicate excessive cylinder deposits and a rich running engine.

2. Start engine. Check oil pressure. It should be between 60-90 PSI with a minimum of 25 PSI when idling.

3. Lean mixture appropriately, especially AA5B. Check rise at idle_____Off idle_____

4. Check magneto RPM drop. The maximum drop on either magneto should be 175 RPM with no more than 50 RPM difference between mags.

5. Check the static RPM:
   AA1–prop 53 or 54" 2250 to 2400 RPM
   AA1–prop 57" 2150 to 2300 RPM
   AA1C–prop 7256 2125 to 2275 RPM
   AA1C–prop 7252 2325 to 2475 RPM
   AA5, 5A–prop 57" 2250 to 2348 RPM
   AA5, 5A–prop 59" 2250 to 2375 RPM
   AA5B–prop 7563 2150 to 2275 RPM

6. Check idle speed:
   AA1 600 to 650 RPM
   AA5, 5A 600 to 650 RPM
   AA5B 500 to 650 RPM

7. Check ammeter, aircraft voltage should be 13.6 to 14.1

8. Check suction gage, should be 4.6 to 5.4 in. Hg.

9. Check fuel selector operation in all positions.

10. Check carb heat drop.

11. Watch engine response to change in power.

12. Check radios, speakers. Cycle trim, flaps, fuel gage operation and interior lights.

13. AA5B with McCauley propeller requires Service Bulletin, dye check every 100 hours. AD dye check every 200 hours.

14. Inspect prop blades for erosion, scratches, nicks and cracks.

15. Check front crankshaft seal for leaks. Insure that seal does not move inside crank case or rotate w/prop.

16. Check run out. 1/16" maximum.

17. Check oil and fuel lines for flexibility, and dates. Maximum age for lines is 5 years or 2000 hours. Check oil cooler for corrosion. Check AD notes.

18. Check engine cylinder compression.
1_____2_____3_____4_____
Note is leakage is from breather, exhaust or intake.

19. Check date and time on magnetos. Slick recommends removing all 4050 and 4051 magnetos from service.

20. Check AA5B air induction hose to see that it is not crushed or soft where it passes between engine mount tubes.

21. AA5B's must have Service Bulletin A-1-78 (mixture shaft retainer) installed. Check for stiff throttle, if stiff comply with A2-78 or SL79-3.

22. Check throttle shaft for excessive wear.

23. Check muffler tailpipe, risers, clamps, gaskets, and exhaust system for cracks, leaks, and secure mounting. Check for exhaust stains on spark plugs and intake tubes.

24. Excess play in valve guides may be roughly checked by placing a large screwdriver on each side of valve spring and retainer and rocking the assembly from side to side.

25. Inspect seat tracks for bending or missing bearings.

26. Check windshield, windows and canopy for cracks and secure mounting.

27. Check nose gear torque tubes, mounting brackets, and bond joints.

28. Check flap actuator for secure mounting.

29. Check for cracked flap motor mount. Check flap indicator cable is not doubled up. Check flap torque tube bearings for play.

30. Inspect exterior surfaces for condition and damage.

31. Inspect bond lines for any indication of damage.

32. Check horizontal and vertical stabilizers for damage and secure mounting. Check dorsal fin for cracks. (AA5)

33. Check elevator, elevator bearings, rudder, rudder bearings for travel, damage, and proper operation. Maximum allowable torque tube wear limit at bearing supports is 0.030 inch reduction in wall thickness.

34. Visually inspect interior and exterior bond lines for any indication of damage, peeling, or cracking.

35. Check ailerons, aileron bearings and stops, flaps, and flap bearings for secure mounting, and damage. Maximum allowable aileron torque tube wear limit at bearing supports is 0.030 inch reduction in wall thickness.

36. Check for interior corrosion of skin indicated by a white flaking ash.

37. Check brake disc. Minimum thickness .205"

38. Inspect the upper main mounting brackets and spar attaching supports (center spar to fuselage) for wear, cracks and loose bolts. "L" shaped spar bracket is subject to intergrandular corrosion mostly on the lower inside surface and upper spar if wing walk makes contact.

39. Check rubber strut covers are completely bonded to top and bottom of strut.

40. Check nose gear strut for deformation.

41. Check alternator output.

42. Check radio for proper operation.

43. Check fuel quantity gages for condition and proper operation.

44. Check stall warning device for operation.

45. Check to see if all FAA Airworthiness Directives have been complied with.

46. Check to see that aircraft papers are in order. Check logbook entries.

## CABLE RIGGING CHART

| RIGGING | AA5 | AA5A,5B | AA1 |
|---|---|---|---|
| FLAP UP | 0 +/- 1 | 0 +/- 1 | 0 +/- 2 |
| FLAP DOWN (HELD UP) | 30° +/- 3 | 45° +/- 2 | 30° +/- 2 |
| AILERONS UP | 15° + 2 - 0 | 15° + 2 - 0 | 25 +/- 2° |
| AILERONS DOWN | 7.5 +2.5 - 0 | 7.5 + 2.5 - 0 | 20 +/- 2° |
| CABLE 30 LBS. | | | 25 +/- 5 LBS. |
| ELEVATOR UP | 30 +/- 2 | 23 +/- 1 | 12° +/- 1° |
| ELEVATOR DOWN | 20° +/- 2 | 17 +/- 2 | 28 +/- 2° |
| CABLE 35 + 0 - 5 ALL | | | |
| TRIM TAB<br>UP THROW<br>DOWN THROW | 19° +/- 2 | 29° +/- 1 | <br><br>15° +/- 2 |
| RUDDER | 25° +/- 2 | 25° +/- 2 | 25° +/- 2 |
| 7" WOOD BLOCK FIREWALL | | | 7.5" LH<br>7.5" RH<br>5° RH RUDDER |