

CESSNA INSTRUMENT PANEL PROJECT 1962 C182E

1. EXISTING INSTRUMENT PANEL(S)

The existing instrument panel actually consists of three (3) individual panels: Pilot, Co-Pilot, and Pilot-side sub-panel ("panels"). The Pilot panel is shock-mounted to protect installed gyro instruments and is attached to the two (2) upper shock mounts and attached directly to the lower structure. The Co-Pilot and Pilot sub-panels are not shock-mounted and merely attached to the sub-structure. Covering both Pilot and Co-Pilot panels are plastic overlays attached using Velcro to the underlying aluminum panels. The center structure between the Pilot and Co-Pilot panels accommodate the installation of radio and associated avionics equipment. (See photographs)

Inspection of the three (3) panels reveals they are 2024T3 Alclad aluminum .063 thick with an anodic protective coating. The panels are further described the Cessna C182E Illustrated Parts Catalog ("IPC"), Figure 53.

2. PROPOSED INSTRUMENT PANEL REVISION

- A. Remove all existing overlays, instruments, and radio/avionics equipment.
- B. Remove all three (3) existing panels exposing the underlying frame structure. (See photographs)
- C. Overlay Plexiglas sheets over the Pilot and Co-Pilot underlying structure to indicate where instrument positions are available without any underlying interference. (See photographs)
- D. Purchase an appropriate amount of 2024T3 Alclad .063 thick sheet aluminum to specification QQ-A-250/5 receiving appropriate material certifications. (Ref. Cessna Structural Repair Manual ("SRM") ATA 51-30-00, section 2.
- E. Using the completed Plexiglas overlays, fabricate each of the three (3) panels from the purchased material.
- F. The completed three (3) panels will be powder-coated using Tiger Drylac Polyester TGIC, #38/30033, Boysenberry color with a matte finish, compliant with AAMA 2604. (Ref. <https://www.tiger-coatings.com/us/products-specifications/tiger-drylac-products#/show/38-30033>)
- G. Reattach the three (3) panels back onto the existing frame structure as were the original panels except the Pilot panel to use AN515B8R20 brass screws in the shock mounts per the IPC, Figure 53, item 44, and reinstall the instruments, radios and avionics as required per the Cessna C182E Service Manual, any revised equipment to be added through the Supplemental Type Certificate ("STC") process, and any other components considered "Minor" as defined in Federal Aviation Regulations ("FAR") Part 1 and Part 21.93, and Part 43, Appendix A.

3. ADVISORY CIRCULAR REFERENCES

AC 23-27

AC 43-210A

AC 20-62

AC 43-18

AC 43.13-1B (par. 4-22 pars a&b)

AC 43.13-2B (pars. 106, 113, 114, 201, 202, 203, 1100, 1103)