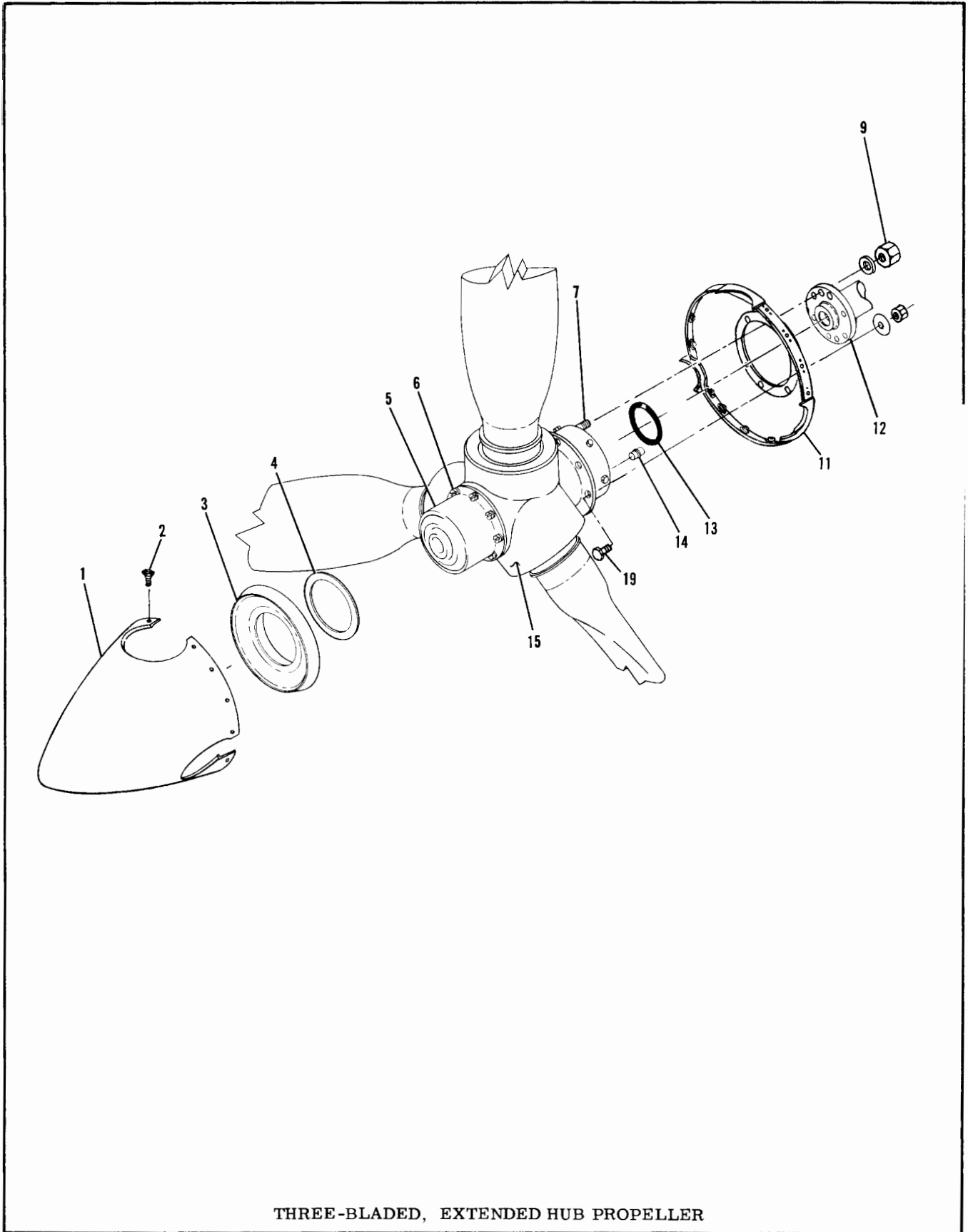


THREE-BLADED PROPELLER

Figure 14-1. Propeller Installation (Sheet 3 of 4)



THREE-BLADED, EXTENDED HUB PROPELLER

Figure 14-1. Propeller Installation (Sheet 4 of 4)

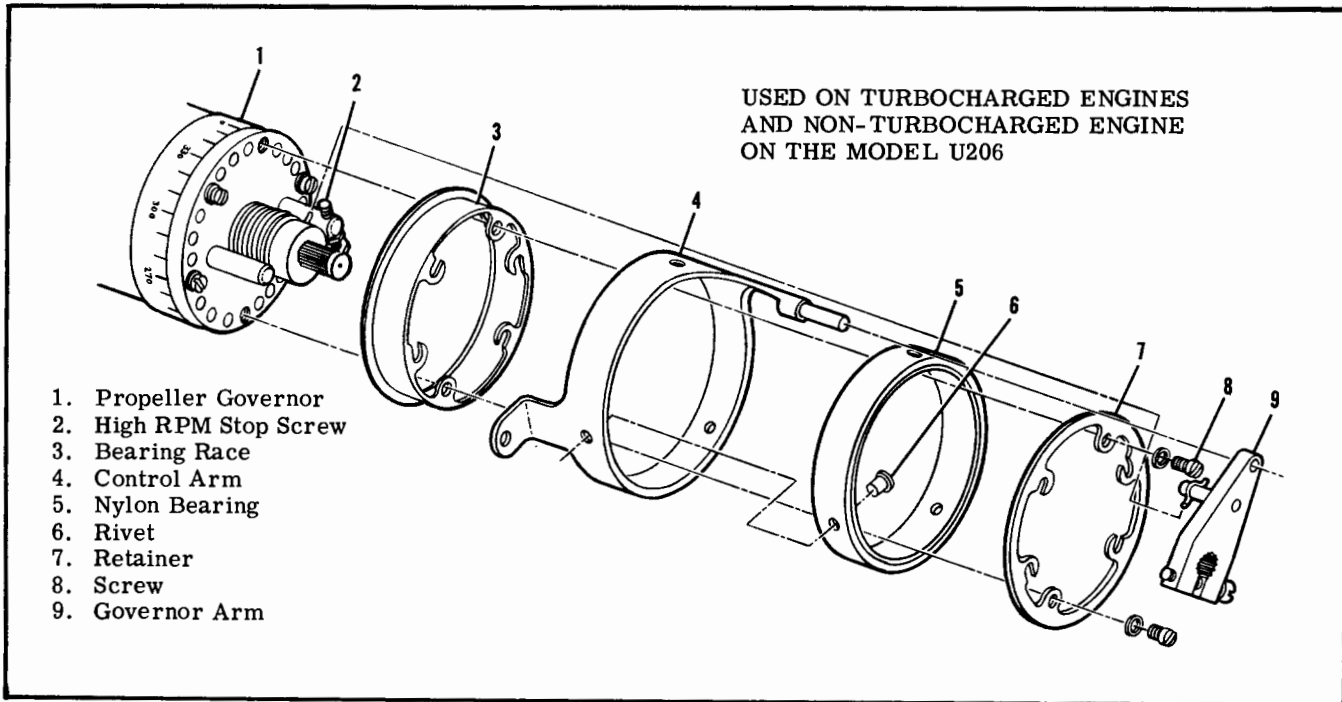


Figure 14-2. Governor Control Arm and Bearing Assembly

14-9. TROUBLE SHOOTING. When trouble shooting the propeller-governor combination, it is recommended that a governor known to be in good condition be installed to check whether the propeller or the governor is at fault. Removal and replacement, rigging, high-speed stop adjustment, desludging and replacement of the governor mounting gasket are not major repairs and may be accomplished in the field. Repairs to propeller governors are classed as propeller major repairs in Federal Aviation Regulations, which also define who may accomplish such repairs.

14-10. REMOVAL.

- a. Remove cowling, nose cap and engine baffles as required for access to governor.
- b. Disconnect governor control from governor.

NOTE

Note EXACT position of all washers so that washers may be installed in the same position on reinstallation.

- c. Disconnect intake manifold balance tube at front of engine and move as required for clearance.
- d. Remove nuts and washers securing governor to engine and pull governor from mounting studs.
- e. Remove gasket from between governor and engine mounting pad.

14-11. CONTROL ARM AND BEARING ASSEMBLY. Refer to figure 14-2.

14-12. REMOVAL AND INSTALLATION.

- a. Using a scribe, make aligning index marks on governor arm (9) and end of governor serrated shaft.

NOTE

The governor arm (9) must be installed on the governor shaft in the same serration or the governor speed will be changed approximately 200 rpm.

- b. Remove safety wire from governor arm screw and from screws attaching governor head to governor.
- c. Remove screws (8) that pass through the non-notched holes in the retainer (7).
- d. Loosen, but do not remove, the four remaining screws so that retainer (7) may be rotated.
- e. Loosen screw in governor arm (9) so that arm may be slipped toward end of serrated shaft.
- f. Slip governor arm toward end of serrated shaft and work retainer (7) and control arm (9) from governor (1).

NOTE

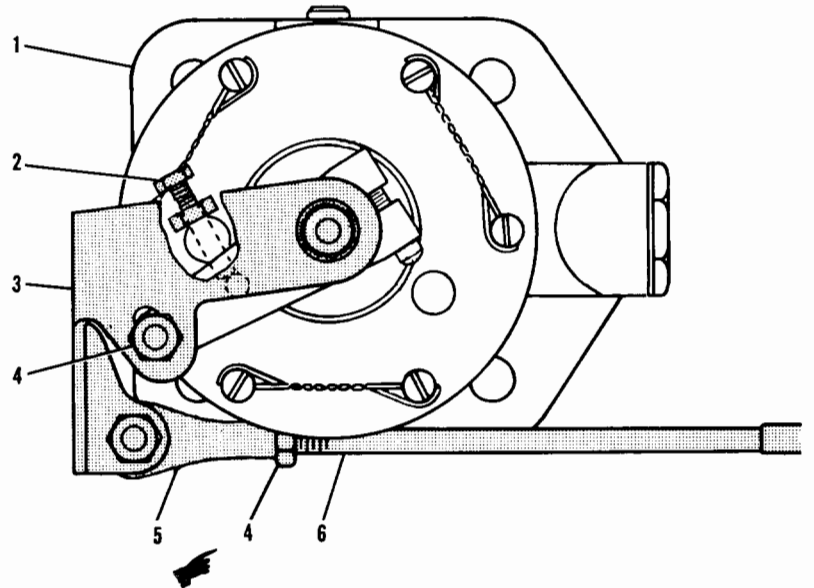
If governor arm (9) becomes disengaged from serrated shaft, align index marks and install arm on serrated shaft. The control arm spring has approximately 1-1/2 turns pre-load.

- g. Rotate and remove bearing race (3) from governor (1).

TYPE A

USED ON NON-TURBOCHARGED
ENGINE ON THE MODEL P206

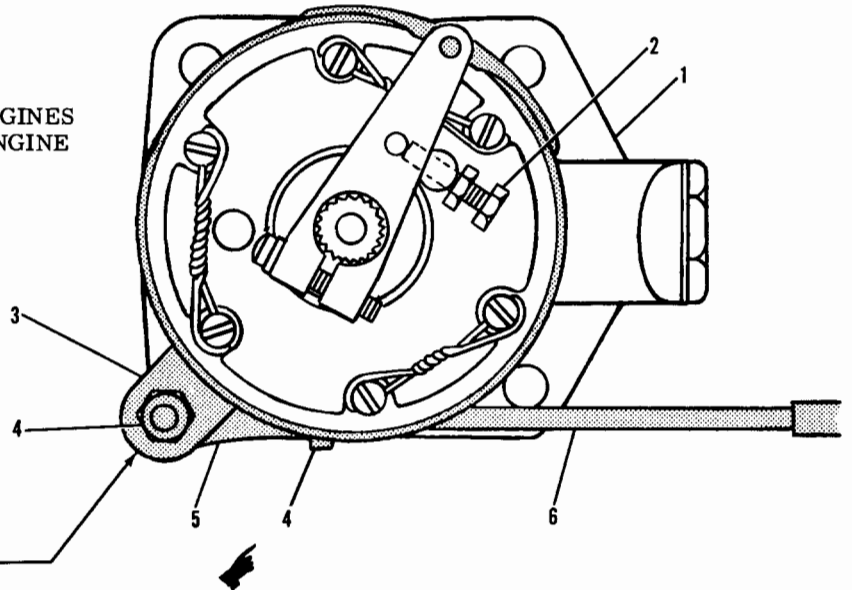
1. Propeller Governor
2. High-RPM Stop Screw
3. Governor Arm Extension
4. Nut
5. Control Rod End
6. Governor Control



TYPE B

USED ON TURBOCHARGED ENGINES
AND NON-TURBOCHARGED ENGINE
ON THE MODEL U206

1. Propeller Governor
2. High-RPM Stop Screw
3. Arm and Bearing Assembly
4. Nut
5. Control Rod End
6. Governor Control



REFER TO FIGURE 14-2

Figure 14-3. Governor and Control Adjustments

h. Reverse the preceding steps for reinstallation.

14-13. INSTALLATION.

- a. Wipe governor and engine mounting pad clean.
- b. Install a new gasket on the mounting studs. Install gasket with raised surface of the gasket screen toward the governor.
- c. Position governor on mounting studs, aligning governor drive splines with splines in the engine and install mounting nuts and washers. Do not force spline engagement. Rotate engine crankshaft slightly and splines will engage smoothly when properly aligned.
- d. Connect governor control to governor and rig control as outlined in paragraph 14-15.
- e. Connect intake manifold balance tube, if removed. Ensure all clamps are tight.
- f. Reinstall all items removed for access.

14-14. HIGH-RPM STOP ADJUSTMENT. Refer to figure 14-3.

- a. Remove engine cowling.
- b. (TYPE B.) Disconnect cabin heater inlet air duct from nose cap.
- c. (TYPE A.) Remove plug button from left front baffle.
- d. Remove safety wire and loosen the high-speed stop screw locknut.
- e. Turn the stop screw IN to decrease maximum rpm and OUT to increase maximum rpm. One full turn of the stop screw causes a change of approximately 25 rpm.
- f. Tighten stop screw locknut, safety wire stop screw and make propeller control linkage adjustment as necessary to maintain full travel.
- g. Install cabin heater inlet air duct or plug button and install cowling.
- h. Test operate propeller and governor.

NOTE

It is possible for either the propeller low pitch (high-rpm) stop or the governor high-rpm stop to be the high-rpm limiting factor. It is desirable for the governor stop to limit

the high-rpm at the maximum rated rpm for a particular aircraft. Due to climatic conditions, field elevation, low-pitch blade angle and other considerations, an engine may not reach rated rpm on the ground. It may be necessary to readjust the governor stop after test flying to obtain maximum rated rpm when airborne.

14-15. RIGGING PROPELLER GOVERNOR CONTROL.

- a. Disconnect control end (5) from governor (1).
- b. Place propeller control in cabin, full forward, then pull it back approximately 1/8 inch and lock in this position. This will allow "cushion" to assure full contact with governor high-rpm stop screw.
- c. Place governor arm against high-rpm stop screw.
- d. Loosen jam nuts and adjust control rod end until attaching holes align while governor arm is against high-rpm stop screw. Be sure to maintain sufficient thread engagement of the control and rod end. If necessary, shift control in the clamps to achieve this.
- e. Attach rod end to the governor. Be sure all washers are installed correctly.
- f. Operate the control to see that the governor arm bottoms out against the low pitch stop and bottoms out against or a maximum of .12" from the high pitch stop on the governor before reaching the end of control cable travel.

NOTE

Non-turbocharged engines on the Model P206 are equipped with an offset extension to the governor arm. The offset extension has an elongated slot to permit further adjustment. The preceding steps may still be used as an outline in the rigging procedure. The result of rigging, in all cases, is full travel of the governor arm (bottom out against both high and low pitch stops) with some "cushion" at both ends of control travel.

- Refer to the inspection chart in Section 2 for inspection and/or replacement interval for the propeller control.

SHOP NOTES:

SECTION 15

UTILITY SYSTEMS

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Description	15-3	Requirements	15-10
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15-1. UTILITY SYSTEMS.

15-2. HEATING SYSTEM.

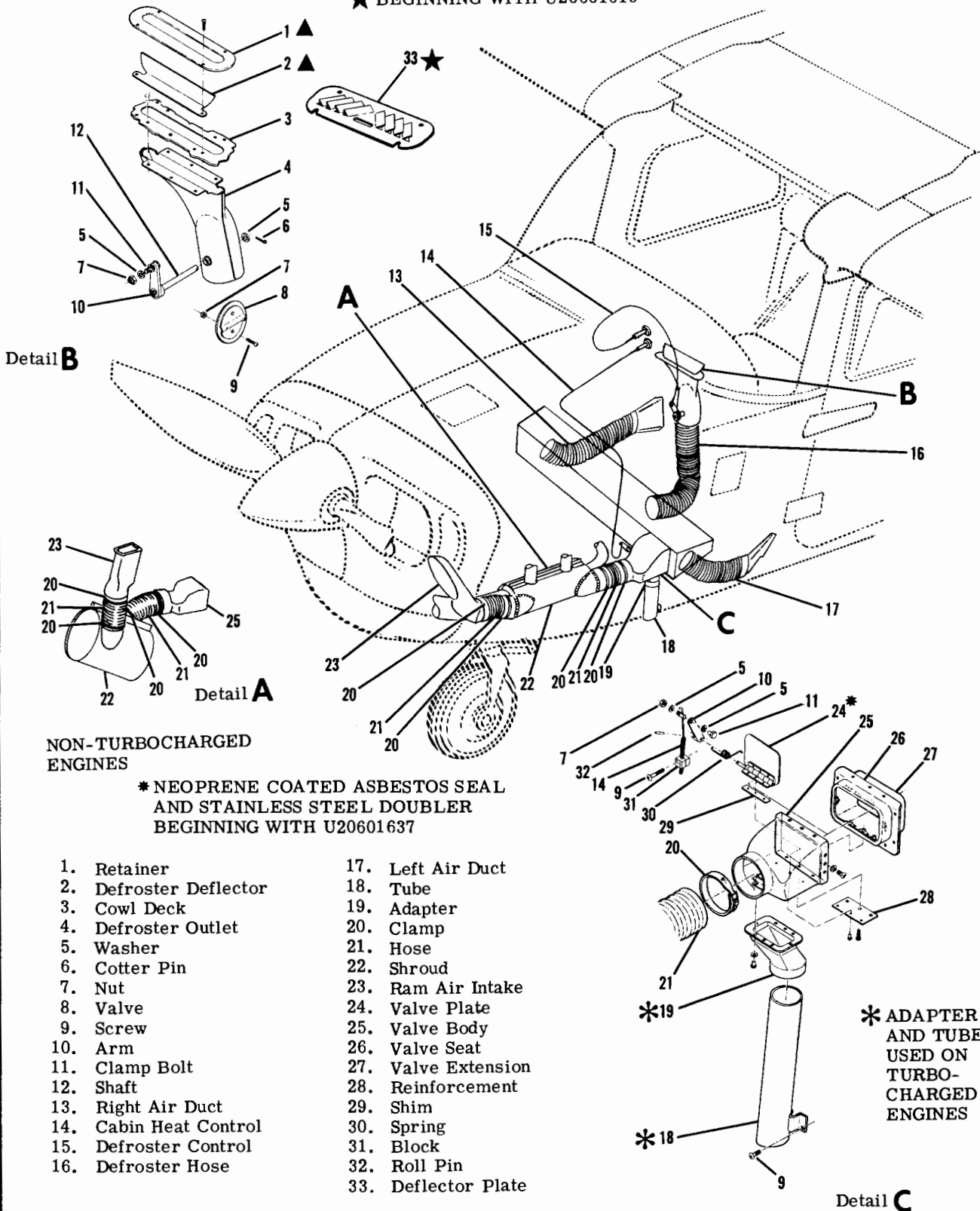
15-3. DESCRIPTION. On non-turbocharged aircraft, the heating system is comprised of the heat exchange section of the left exhaust muffler, a heater valve, mounted on the left forward side of the firewall, a duct across the aft side of the firewall, a push-pull control on the instrument panel, and flexible ducts connecting the system. On aircraft with turbocharged engines, the heating system consists of an opening in the left side of the nose cap, an exhaust shroud, a heater valve, mounted on the left forward side of the firewall, to which is attached an adapter and a tube extending downward and overboard. The system also includes a duct across the aft side of the firewall, a push-pull control on the instrument panel, and flexible ducts connecting the system.

15-4. HEATER OPERATION. On airplanes with non-turbocharged engines, ram air is ducted through an engine baffle and the heat exchange section of the left exhaust muffler, to the heater valve at the firewall. On aircraft with turbocharged engines, ram air is ducted through an opening in the left side of the nose cap, through an exhaust shroud, to the heater valve at the firewall. On both models, heated air flows from the heater valve into a duct across the aft side of the firewall, where it is distributed into the cabin. The heater valve, operated by a push-pull

control marked "CABIN HEAT", located on the instrument panel, regulates the volume of heated air entering the system. Pulling the heater control full out supplies maximum flow, and pushing it in gradually decreases flow, shutting off flow completely when the control is pushed full in.

15-5. TROUBLE SHOOTING. Most of the operational troubles in the heating system are caused by sticking or binding air valves and their controls, damaged air ducting, or defects in the exhaust muffler. In most cases, valves or controls can be freed by proper lubrication. Damaged or broken parts should be repaired or replaced. When checking controls, be sure valves respond freely to control movement, that they move in the correct direction, and that they move through their full range of travel and seal properly. Check that hose are properly secured and replace hose that are burned, frayed or crushed. If fumes are detected in the cabin, a very thorough inspection of the exhaust muffler should be accomplished. Refer to the applicable paragraph in Section 12 for the non-turbocharged engine exhaust system inspection, or for the turbocharged engine, refer to Section 12A. Since any holes or cracks may permit exhaust fumes to enter the cabin, replacement of defective parts is imperative because fumes constitute an extreme danger. Seal any gaps in heater ducts across the firewall with Pro-Seal #700 (Coast Pro-Seal Co., Los Angeles, California) compound, or equivalent compound.

▲ THRU P20600644 & U20601614
 ★ BEGINNING WITH U20601615



NON-TURBOCHARGED
 ENGINES

* NEOPRENE COATED ASBESTOS SEAL
 AND STAINLESS STEEL DOUBLER
 BEGINNING WITH U20601637

- | | |
|------------------------|---------------------|
| 1. Retainer | 17. Left Air Duct |
| 2. Defroster Deflector | 18. Tube |
| 3. Cowl Deck | 19. Adapter |
| 4. Defroster Outlet | 20. Clamp |
| 5. Washer | 21. Hose |
| 6. Cotter Pin | 22. Shroud |
| 7. Nut | 23. Ram Air Intake |
| 8. Valve | 24. Valve Plate |
| 9. Screw | 25. Valve Body |
| 10. Arm | 26. Valve Seat |
| 11. Clamp Bolt | 27. Valve Extension |
| 12. Shaft | 28. Reinforcement |
| 13. Right Air Duct | 29. Shim |
| 14. Cabin Heat Control | 30. Spring |
| 15. Defroster Control | 31. Block |
| 16. Defroster Hose | 32. Roll Pin |
| | 33. Deflector Plate |

* ADAPTER
 AND TUBE
 USED ON
 TURBO-
 CHARGED
 ENGINES

Figure 15-1. Heating and Defrosting Systems (Sheet 1 of 2)

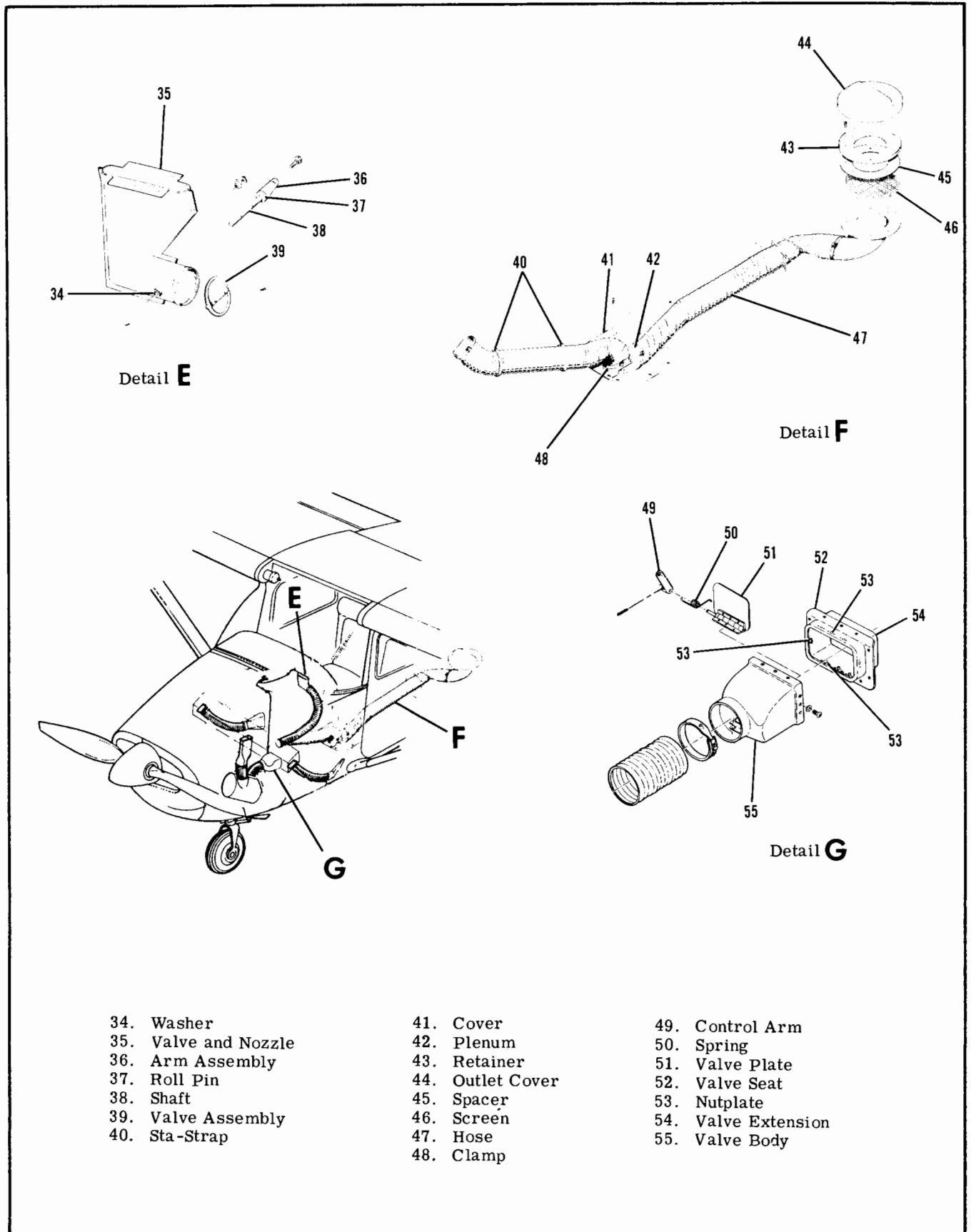


Figure 15-1. Heating and Defrosting Systems (Sheet 2 of 2)

15-6. REMOVAL AND INSTALLATION OF COMPONENTS. Figure 15-1 may be used as a guide for removal and installation of components of the heater system. Cut replacement hose to length and install in the original routing. Trim hose winding shorter than the hose to allow hose clamps to be fitted. Defective heater valves should be repaired or replaced. Check for proper operation of valves and their controls after installation or repair.

15-7. DEFROSTER SYSTEM.

15-8. DESCRIPTION. The system is composed of a duct across the aft side of the firewall, a defroster outlet, mounted in the left side of the cowl deck immediately aft of the windshield, a defroster control knob on the instrument panel, and flexible ducting connecting the system.

15-9. DEFROSTER OPERATION. Air from the duct across the aft side of the firewall flows through a flexible duct to the defroster outlet. The defroster control operates a damper in the outlet to regulate the amount of air deflected across the inside surface of the windshield. The temperature and volume of this air is controlled by the settings of the cabin heating system control.

15-10. TROUBLE SHOOTING. Most of the operational troubles in the defrosting system are caused by sticking or binding of the damper in the defroster outlet or its control. Since the defrosting system depends on proper operation of the cabin heating system, refer to paragraph 15-5 for trouble shooting the heating and defrosting system.

15-11. REMOVAL AND INSTALLATION OF COMPONENTS. Figure 15-1 may be used as a guide for removal and installation of components of the defrosting system. Cut replacement hose to length and install in the original routing. Trim hose winding shorter than the hose to allow hose clamps to be fitted. A defective defroster outlet should be repaired or replaced. Check for proper operation of defroster outlet and its control after installation or repair.

15-12. VENTILATING SYSTEM.

15-13. DESCRIPTION. The system is comprised of two airscoops mounted in the inboard leading edge of each wing, an adjustable ventilator mounted on each side of the cabin near the upper corners of the windshield, two plenum chambers mounted in the left and right rear cabin wing root areas, two fresh airscoop doors, one on each side of the fuselage, just forward of the front seats, a control on the instrument panel for each of these scoop doors and flexible ducting connecting the system.

15-14. VENTILATING SYSTEM OPERATION. Air received from scoops mounted in the inboard leading edges of the wings is ducted to adjustable ventilators mounted on each side of the cabin near the upper corners of the windshield. Rear seat ventilation is provided by plenum chambers mounted in the left and right rear cabin wing root areas. These plenum chambers receive ram air from the airscoops in the

inboard leading edges of the wings. Each plenum chamber is equipped with a valve which meters the incoming cabin ventilation air. This provides a chamber for the expansion of cabin air which greatly reduces inlet air noise. Filters at the air inlets are primarily noise reduction filters. Forward cabin ventilation is provided by two fresh airscoop doors, one on each side of the fuselage, just forward of the front seats. The left scoop door is operated by a control in the instrument panel marked "CABIN AIR," and the right scoop door is operated by a control in the instrument panel marked "AUX CABIN AIR." Fresh air from the scoop doors is routed to the duct across the aft side of the firewall, where it is distributed into the cabin. As long as the "CABIN HEAT" control is pushed full in, no heated air can enter the firewall duct; therefore, when the "CABIN AIR" or "AUX CABIN AIR" controls are pulled out, only fresh air from the scoops will flow through the duct into the cabin. As the "CABIN HEAT" control is gradually pulled out, more and more heated air will blend with the fresh air from the scoops and be distributed into the cabin. All of the controls may be set at any position from full open to full closed.

15-15. TROUBLE SHOOTING. Most of the operational troubles in the ventilating system are caused by sticking or binding of the lever in the inlet scoop door or its control. The spring or plate in the plenum chambers could also bind or stick, requiring repair or replacement of the plenum chamber. Check the filter elements in the airscoops in the leading edges of the wings for obstructions. The elements may be removed and cleaned or replaced. Since air passing through the filters is emitted into the cabin, do not use a cleaning solution which would contaminate cabin air. The filters may be removed to increase air flow. However, their removal will cause a slight increase in noise level.

15-16. REMOVAL AND INSTALLATION OF COMPONENTS. Figure 15-2 may be used as a guide for removal and installation of components of the ventilating system. Cut replacement hose to length and install in the original routing. Trim hose winding shorter than the hose to allow hose clamps to be fitted. A defective plenum chamber should be repaired or replaced. Check for proper operation of ventilating controls after installation or repair.

15-17. OXYGEN SYSTEM.

WARNING

Under NO circumstances should the ON-OFF control on the oxygen regulator be turned to the "ON" position with the outlet (low pressure) ports open to atmosphere. Operation of these units in this manner will induce serious damage to the regulators and having the following results:

1. Loss of outlet set pressure.
2. Loss of oxygen flow through the regulator which will result in inadequate oxygen being fed through the aircraft system.
3. Internal leakage of oxygen through the regulator.

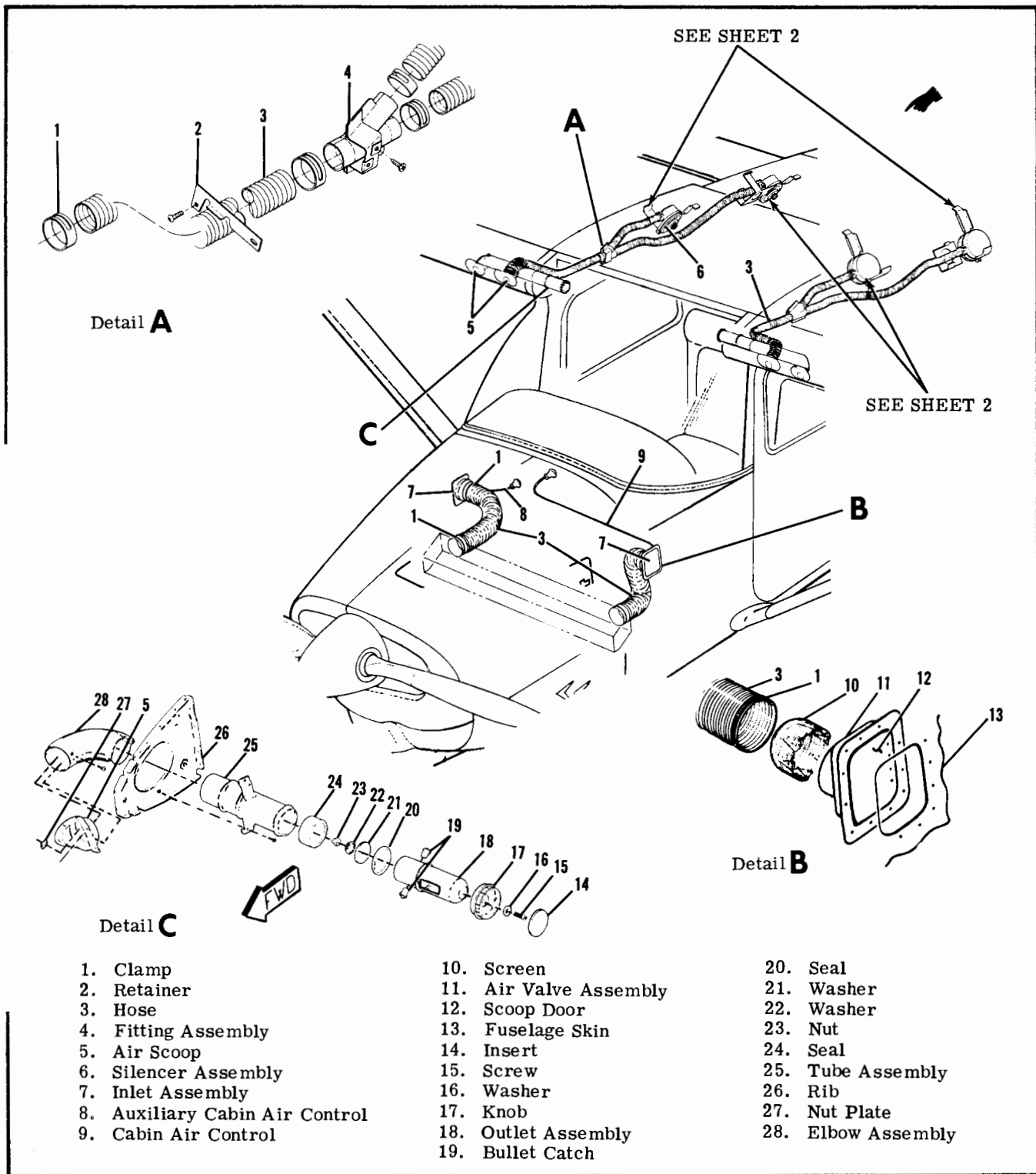


Figure 15-2. Forward and Overhead Ventilating System (Sheet 1 of 2)

Opening of the control lever with the outlet ports open to atmosphere, results in an "overshoot" of the regulator metering device due to the extreme flow demand through the regulator. After overshooting, the metering poppet device goes into oscillation, creating serious damage to the poppet seat and diaphragm metering probe. This condition can

occur even by turning the control lever on and then turning it quickly off.

A potential hazard exists to aircraft in the field where inexperienced personnel might remove the cylinder and regulator assembly from the aircraft and for some reason, attempt to turn the regulator to the "ON"

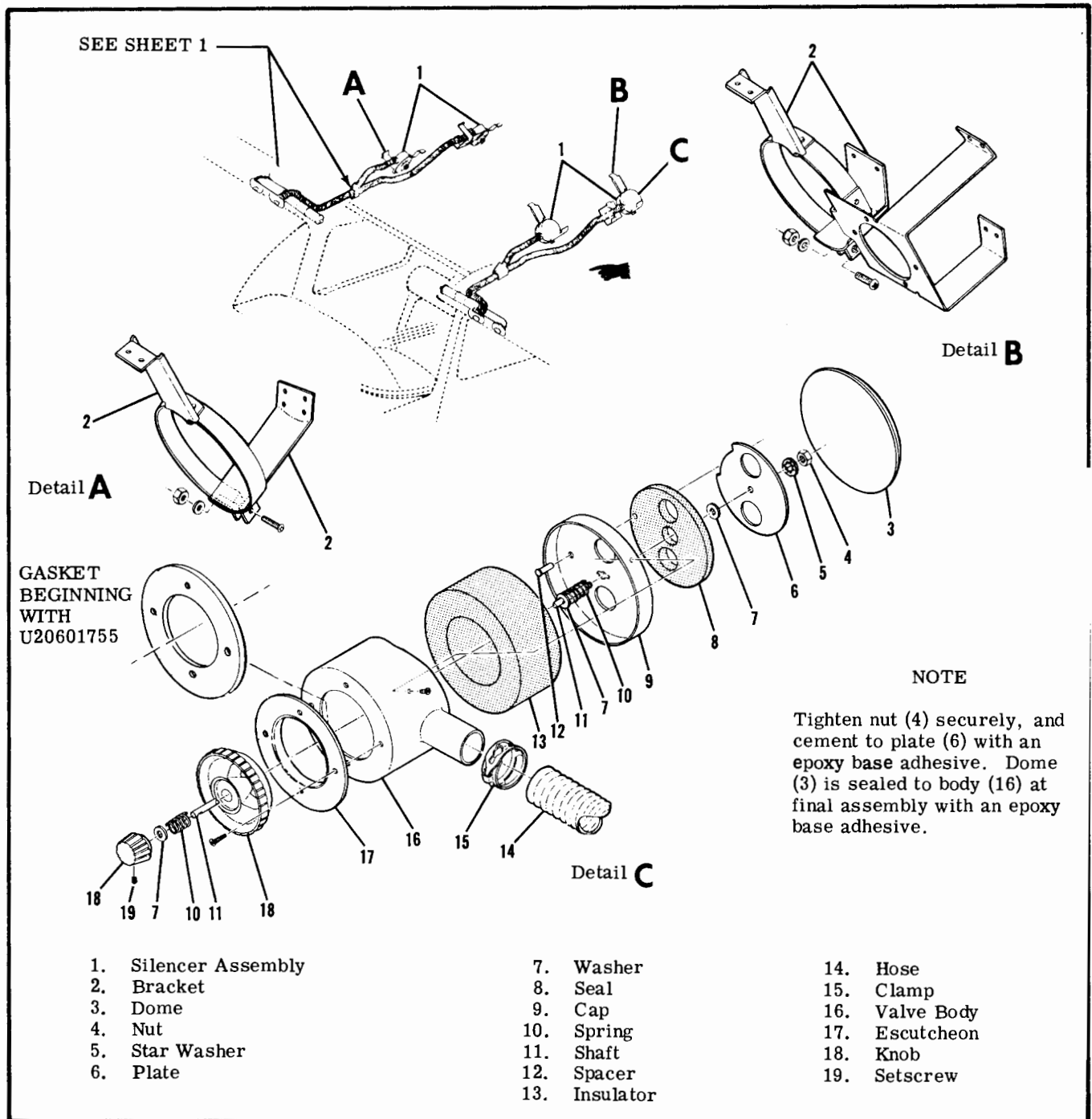


Figure 15-2. Overhead Ventilating System (Sheet 2 of 2)

position with the outlet ports open. Unfortunately, after the units have been improperly operated as noted, there is no outward appearance indicating that damage has occurred.

Testing these regulators should be accomplished only after installation in the aircraft, with the "downstream" low pressure line attached.

15-18. DESCRIPTION. The system is comprised of an oxygen cylinder and regulator assembly, filler valve, pressure lines and six outlets, four in the left

and right cabin wing root areas and two in the overhead console, above the pilot and copilot. Oxygen mask and line assemblies are furnished with the system. The pilot's supply line is designed to provide a greater flow of oxygen than the passenger's lines. The pilot's oxygen mask is equipped with a microphone that is keyed by a switch button on the pilot's control wheel. A pressure gage is mounted in the overhead console above the pilot and copilot. An access plate is provided on the left side of the tailcone, just aft of the baggage door for filler valve access on turbocharged aircraft. On non-turbocharged air-

craft, the filler valve is located on the rear cabin bulkhead thru 1972 Models. Beginning with 1973, the filler valve is located on the left tailcone.

WARNING

Oil, grease or other lubricants in contact with high-pressure oxygen, create a serious fire hazard and such contact should be avoided. Do not permit smoking or open flame in or near aircraft while work is performed on oxygen systems.

15-19. MAINTENANCE PRECAUTIONS.

- a. Working area, tools and hands must be clean.
- b. Keep oil, grease, water, dirt, dust and all other foreign matter from system.
- c. Keep all lines dry and capped until installed.
- d. Use only MIL-T-5542 thread compound or teflon lubricating tape on threads of oxygen valves, tubing connectors, fittings, parts of assemblies which might under any conditions, come in contact with oxygen. The thread compound must be applied sparingly and carefully to only the first three threads of the male fitting. No compound shall be used on aluminum flared fittings or on the coupling sleeves or on the outside of the tube flares. The teflon tape shall be used in accordance with the instructions listed following this step. Extreme care must be exercised to prevent the contamination of the thread compound or teflon tape with oil, grease or other lubricant.
 1. Lay tape on threads close to end of fitting. Clockwise on standard threads, opposite on left hand threads.
 2. Apply enough tension while winding so tape forms into thread grooves.
 3. After wrap is complete, maintain tension and tear tape by pulling apart in direction it was applied. Resulting ragged end is the key to the tape staying in place. (If sheared or cut, tape may unwind.)
 4. Press tape well into threads.
 5. Make connections.
- e. Fabrication of oxygen pressure lines is not recommended. Lines should be replaced by part numbers called out in the aircraft Parts Catalog.
- f. Lines and fittings must be clean and dry. One of the following methods may be used.
 1. Clean by degreasing with stabilized trichlorethylene, conforming to Federal Specifications O-T-634 or MIL-T-27602. These items can be obtained from American Mineral Spirits of Houston, Texas.

NOTE

Most air compressors are oil lubricated, and a minute amount of oil may be carried by the airstream. If only an oil lubricated air compressor is available, drying must be accomplished by heating at a temperature of 250° to 300°F for a suitable period.

NOTE

Cap lines at both ends immediately after drying to prevent contamination.

15-20. REPLACEMENT OF COMPONENTS. Removal, disassembly, assembly and installation of system components may be accomplished while using figure 15-3 as a guide.

CAUTION

The pressure regulator, pressure gage and line and filler valve should be removed and replaced only by personnel familiar with high-pressure fittings. Observe the maintenance precautions listed in the preceding paragraph.

NOTE

Oxygen cylinder and regulator assemblies may not always be installed in the field exactly as illustrated in figure 15-3, which shows factory installation. Important points to remember are as follows.

- a. Before removing cylinder, release low-pressure line by opening cabin outlets. Disconnect push-pull control cable, filler line, pressure gage line and outlet line from regulator. **CAP ALL LINES IMMEDIATELY.**
- b. If it is necessary to replace filler valve O-rings, remove parts necessary for access to filler valve. Remove line from quick-disconnect valve at the regulator, then disconnect chain, but do not remove cap from filler valve. Remove screws securing valve and disconnect pressure line. Referring to applicable figure, cap pressure line and seat. Disassemble valve, replace O-rings and reassemble valve. Install filler valve by reversing procedures outlined in this step.
- c. A cabin outlet is illustrated in figure 15-3. Repair kit, (part no. C166006-0108), available from the Cessna Service Parts Center, may be used for replacement of components of the outlet assembly.
- d. To remove entire oxygen system, headliner must be lowered and soundproofing removed to expose lines. Refer to Section 3 for headliner removal.

15-21. OXYGEN CYLINDER GENERAL INFORMATION. The following information is permanently steel stamped on the shoulder, top head or neck of each oxygen cylinder:

- a. Cylinder specification, followed by service pressure (e.g. "ICC-3AA1800" and "ICC-3HT1850" for standard and light weight cylinders respectively).

NOTE

Effective 1 January, 1970, all newly-manufactured cylinders are stamped "DOT" (Department of Transportation), rather than "ICC" (Interstate Commerce Commission). An example of the new designation would be: "DOT-3HT1850".

- b. Cylinder serial number is stamped below or directly following cylinder specification. The symbol of the purchaser, user or maker, if registered with the Bureau of Explosives, may be located di-

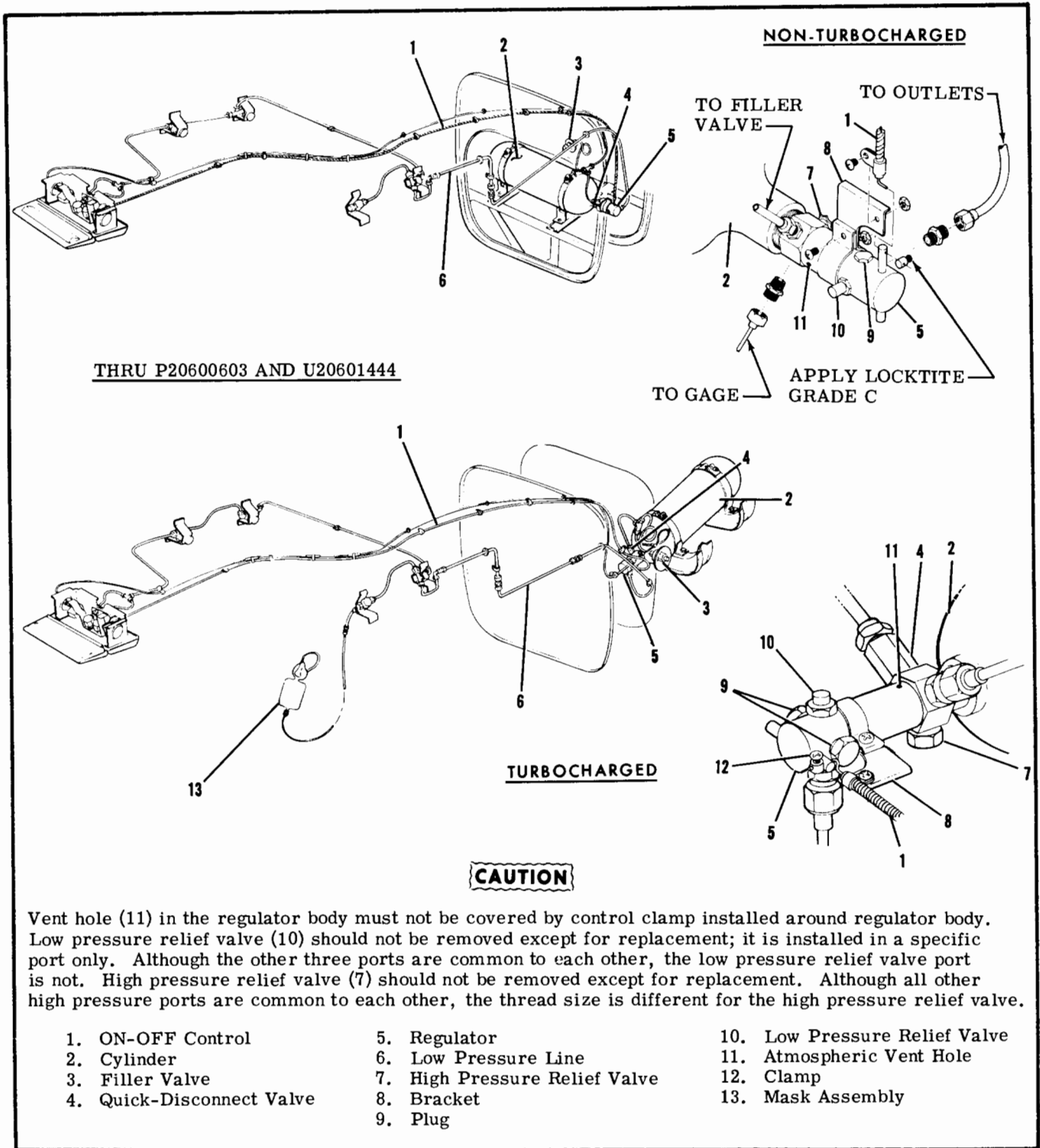


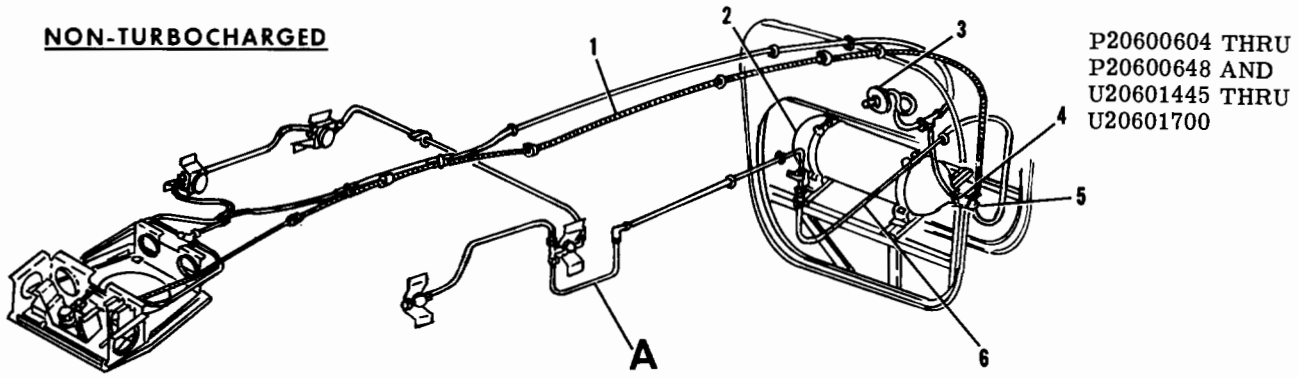
Figure 15-3. Oxygen System (Sheet 1 of 3)

rectly below or following the serial number. The cylinder serial number may be stamped in an alternate location on the cylinder top head.

- c. Inspector's official mark near serial number.
- d. Date of manufacture: This is the date of the

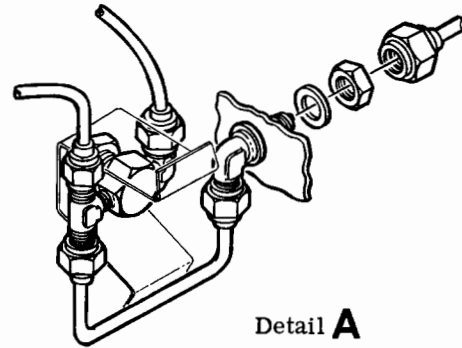
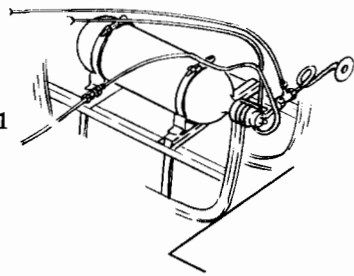
first hydrostatic test (such as 4-69 for April 1969). The dash between the month and the year figures may be replaced with the mark of the testing or inspection agency (e.g. 4L69).

NON-TURBOCHARGED



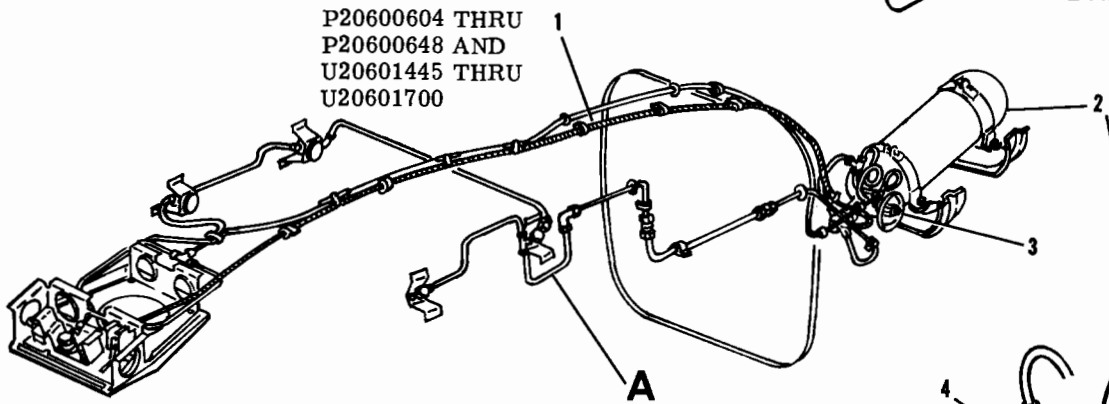
P20600604 THRU
P20600648 AND
U20601445 THRU
U20601700

BEGINNING
WITH U20601701



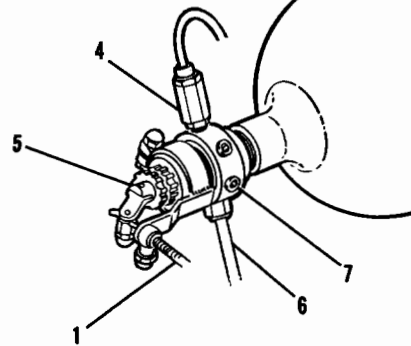
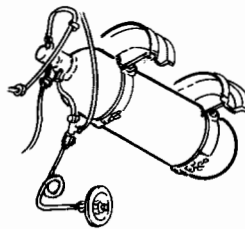
Detail **A**

P20600604 THRU
P20600648 AND
U20601445 THRU
U20601700



TURBOCHARGED

BEGINNING
WITH U20601701

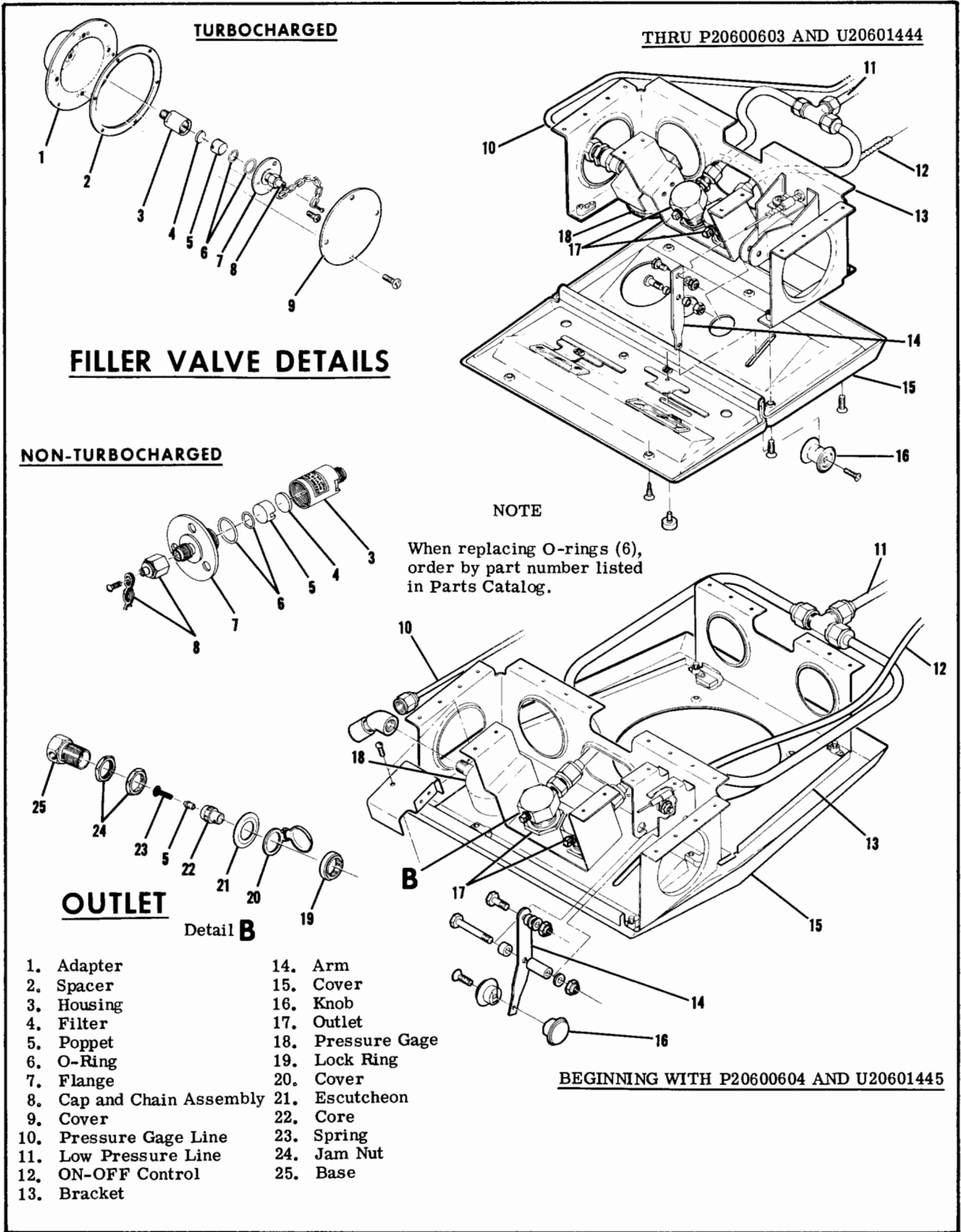


1. ON-OFF Control
2. Cylinder

3. Filler Valve
4. Quick-Disconnect Valve
5. Regulator

6. Low-Pressure Line
7. Plug

Figure 15-3. Oxygen System (Sheet 2 of 3)



- | | |
|---------------------------|-------------------|
| 1. Adapter | 14. Arm |
| 2. Spacer | 15. Cover |
| 3. Housing | 16. Knob |
| 4. Filter | 17. Outlet |
| 5. Poppet | 18. Pressure Gage |
| 6. O-Ring | 19. Lock Ring |
| 7. Flange | 20. Cover |
| 8. Cap and Chain Assembly | 21. Escutcheon |
| 9. Cover | 22. Core |
| 10. Pressure Gage Line | 23. Spring |
| 11. Low Pressure Line | 24. Jam Nut |
| 12. ON-OFF Control | 25. Base |
| 13. Bracket | |

Figure 15-3. Oxygen System (Sheet 3 of 3)

e. Hydrostatic test date: The dates of subsequent hydrostatic tests shall be steel stamped (month and year) directly below the original manufacture date. The dash between the month and year figures can be replaced with the mark of the testing agency.

f. A Cessna identification placard is located near the center of the cylinder body.

g. Halogen test stamp: "Halogen Tested", date of test (month, day and year) and inspector's mark appears directly underneath the Cessna identification placard.

15-22. OXYGEN CYLINDER SERVICE REQUIREMENTS.

a. Hydrostatic test requirements:

1. Standard weight (ICC or DOT-3AA1800) cylinders must be hydrostatically tested to 5/3 their working pressure every five years commencing with the date of the last hydrostatic test.

2. Light weight (ICC or DOT-3HT1850) cylinders must be hydrostatically tested to 5/3 their working pressure every three years commencing with the date of the last hydrostatic test.

b. Service life requirements:

1. Standard weight (ICC or DOT-3AA1800) cylinders have no age life limitations and may continue to be used until they fail hydrostatic test.

2. Light weight (ICC or DOT-3HT1850) cylinders must be retired from service after 12 years or 4,380 filling cycles after date of manufacture, whichever occurs first.

NOTE

These test periods and life limitations are established by the Interstate Commerce Commission Code of Federal Regulations, Title 49, Chapter 1, Para. 73.34.

15-23. OXYGEN CYLINDER INSPECTION REQUIREMENTS.

a. Inspect the entire exterior surface of the cylinder for indication of abuse, dents, bulges and strap chafing.

b. Examine the neck of cylinder for cracks, distortion or damaged threads.

c. Check the cylinders to determine if markings are legible.

d. Check date of last hydrostatic test. If the periodic retest date is past, do not return the cylinder to service until the test has been accomplished.

e. Inspect the cylinder mounting bracket, bracket hold-down bolts and cylinder holding straps for cracks, deformation, cleanliness, and security of attachment.

f. In the immediate area where the cylinder is stored or secured, check for evidence of any types of interference, chafing, deformation or deterioration.

15-24. OXYGEN SYSTEM COMPONENT SERVICE REQUIREMENTS.

a. PRESSURE REGULATOR. The regulator shall be functionally tested every two years or 1,000 hours for aircraft operating under 15,000 ft. and one year for aircraft operating over 15,000 ft. The regulator shall be overhauled every five years or at time of

hydrostatic test.

b. FILLER VALVE. The valve shall be functionally tested every two years and overhauled every five years or at time of hydrostatic test.

c. QUICK-RELEASE COUPLING. The coupling shall be functionally tested every two years and overhauled every five years or at time of hydrostatic test.

d. PRESSURE GAGE. The gage shall be checked for accuracy and overhauled by an FAA approved facility every five years.

e. OUTLETS. The outlets shall be disassembled and inspected and the sealing core replaced, regardless of condition, every five years.

15-25. OXYGEN SYSTEM COMPONENT INSPECTION REQUIREMENTS.

a. Examine all parts for cracks, nicks, damaged threads or other apparent damage.

b. Actuate regulator controls and valve to check for ease of operation.

c. Determine if the gage is functioning properly by observing the pressure build-up and the return to zero when the system oxygen is bled off.

d. Replace any oxygen line that is chafed, rusted, corroded, dented, cracked or kinked.

e. Check fittings for corrosion around the threaded area where lines are joined together. Pressurize the system and check for leaks.

15-26. MASKS AND HOSE.

a. Check oxygen masks for fabric cracks and rough face seals. If the mask is a full-faced model, inspect glass or plastic for cleanliness and state of repair.

b. Flex the mask hose gently over its entirety and check for evidence of deterioration or dirt.

c. Examine mask and hose storage compartment for cleanliness and general condition.

15-27. MAINTENANCE AND CLEANING.

a. Clean and disinfect mask assemblies after use, as appropriate.

NOTE

Use care to avoid damaging microphone assembly while cleaning and sterilizing.

b. Wash mask with a mild soap solution and rinse it with clear water.

c. To sterilize, swab mask thoroughly with a gauze or sponge soaked in a water/merthiolate solution. This solution should contain 1/5 teaspoon of merthiolate per one quart of water. Wipe the mask with a clean cloth and let air dry.

d. Observe that each mask breathing tube end is free of nicks and that the tube end will slip into the cabin oxygen receptacle with ease and will not leak.

e. If a mask assembly is defective (leaks, does not allow breathing or contains a defective microphone) it is advisable to return the mask assembly to the manufacturer or a repair station.

f. Replace hose if it shows evidence of deterioration.

g. Hose may be cleaned in the same manner as the mask.

15-28. SYSTEM PURGING. Whenever components have been removed and reinstalled or replaced, it is advisable to purge the system. Charge oxygen system in accordance with procedures outlined in paragraph 15-31. Plug masks into all outlets and turn the pilot's control to ON position and purge system by allowing oxygen to flow for at least 10 minutes. Smell oxygen flowing from outlets and continue to purge until system is odorless. Refill cylinders as required during and after purging.

15-29. FUNCTIONAL TESTING. Whenever the regulator and cylinder assembly has been replaced or overhauled, perform the following flow and internal leakage tests to check that the system functions properly.

a. Fully charge oxygen system in accordance with procedures outlined in paragraph 15-31.

b. Disconnect line and fitting assembly from pilot's mask and line assembly. Insert outlet end of line and fitting assembly into cabin outlet and attach opposite end of line to a pressure gage (gage should be calibrated in one-pound increments from 0 to 100 PSI). Place control lever in ON position. Gage pressure should read 75 ± 10 PSI.

c. Insert mask and line assemblies into all remaining cabin outlets. With oxygen flowing from all outlets, test gage pressure should still be 75 ± 10 PSI.

d. Place oxygen control lever in OFF position and allow test gage pressure to fall to 0 PSI. Remove all adapter assemblies except the one with the pressure gage. The pressure must not rise above 0 PSI when observed for one minute. Remove pressure gage and adapter from oxygen outlet.

NOTE

If pressures specified in the foregoing procedures are not obtained, the oxygen regulator is not operating properly. Remove and replace cylinder-regulator assembly with another unit and repeat test procedure.

e. Connect mask and line assemblies to each cabin outlet and check each mask for proper operation.

f. Check pilot's mask microphone and control wheel switch for proper operation. After checking, return all masks to mask case.

g. Recharge oxygen system in accordance with procedures outlined in paragraph 15-31.

15-30. SYSTEM LEAK TEST. When oxygen is being lost from a system through leakage, a sequence of steps may be necessary to locate the opening. Leakage may often be detected by listening for the distinct hissing of escaping gas. If this check proves negative, it will be necessary to soap-test all lines and connections with a castile soap and water solution or specially compounded leak-test material. Make the solution thick enough to adhere to the contours of the fittings. At the completion of the leakage test, remove all traces of the leak detector or soap and water solution.

CAUTION

Do not attempt to tighten any connections while the system is charged.

15-31. SYSTEM CHARGING.

WARNING

BE SURE TO GROUND AIRCRAFT AND GROUND SERVICING EQUIPMENT BEFORE CHARGING OXYGEN SYSTEM.

a. Do not attempt to charge oxygen cylinders if servicing equipment fittings or filler valve are corroded or contaminated. If in doubt, clean with stabilized trichlorethylene and let air dry. Do not allow solvent to enter any internal parts.

b. If cylinder is completely empty, do not charge, as the cylinder must then be removed, inspected and cleaned.

CAUTION

A cylinder which is completely empty may well be contaminated. The regulator and cylinder assembly must then be disassembled, inspected and cleaned by an FAA approved facility, before filling. Contamination, as used here, means dirt, dust or any other foreign material, as well as ordinary air in large quantities. If a gage line or filler line is disconnected and the fittings capped immediately, the cylinder will not become contaminated unless temperature variation has created a suction within the cylinder. Ordinary air contains water vapor which could condense and freeze. Since there are very small orifices in the system, it is very important that this condition not be allowed to occur.

c. Connect cylinder valve outlet or outside filler valve to manifold or portable oxygen cascade.

d. Slowly open valve on cascade cylinder or manifold with lowest pressure, as noted on pressure gage, allow pressure to equalize, then close cascade cylinder valve.

e. Repeat this procedure, using a progressively higher pressure cascade cylinder, until system has been charged to the pressure indicated in the chart immediately following step "f" of this paragraph.

f. Ambient temperature listed in the chart is the air temperature in the area where the system is to be charged. Filling pressure refers to the pressure to which aircraft cylinders should be filled. This table gives approximations only and assumes a rise in temperature of approximately 25°F . due to heat of compression. This table also assumes the aircraft cylinders will be filled as quickly as possible and that they will only be cooled by ambient air; no water bath or other means of cooling be used.

Example: If ambient temperature is 70°F ., fill

NOTE

Each interconnected series of oxygen cylinders is equipped with a single gage. The trailer type cascade may also be equipped with a nitrogen cylinder (shown reversed) for filling landing gear struts, accumulators, etc. Cylinders are not available for direct purchase, but are usually leased and refilled by a local compressed gas supplier.

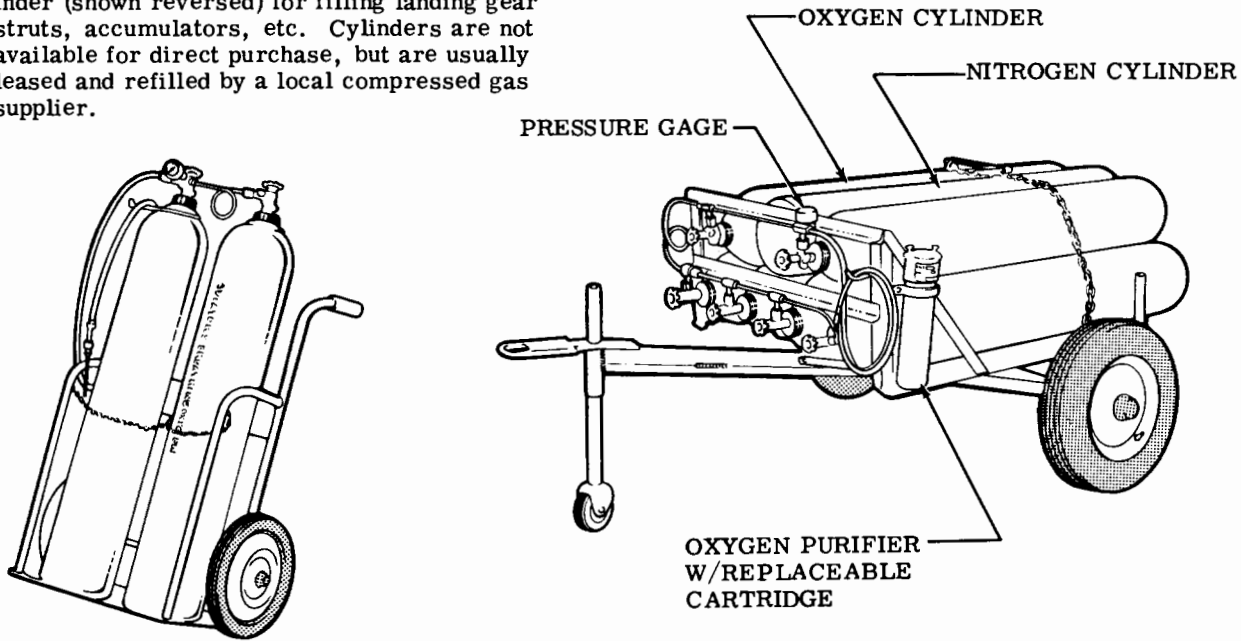


Figure 15-4. Portable Oxygen Cascades

aircraft cylinders to approximately 1,975 psi or as close to this pressure as the gage may read. Upon cooling, cylinders should have approximately 1,850 psi pressure.

TABLE OF FILLING PRESSURES

Ambient Temp. °F	Filling Press. psig	Ambient Temp. °F	Filling Press. psig
0	1650	50	1875
10	1700	60	1925
20	1725	70	1975
30	1775	80	2000
40	1825	90	2050

SHOP NOTES:

SECTION 16

INSTRUMENTS AND INSTRUMENT SYSTEMS

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16-1. INSTRUMENT AND INSTRUMENT SYSTEMS.

16-2. GENERAL. This section describes typical instrument installations and the systems operating them, with emphasis on trouble shooting and corrective measures for the systems themselves. It does NOT deal with specific instrument repairs since this usually requires special equipment and data and should be handled by instrument specialists. Federal Aviation Regulations require malfunctioning instruments be sent to an approved instrument overhaul and repair station or returned to manufacturer for servicing. Our concern here is with preventive maintenance on various instrument systems and correction of system faults which result in instrument malfunctions. The descriptive material, maintenance and trouble shooting information in this section is intended to help the mechanic determine malfunctions

and correct them, up to the defective instrument itself, at which point instrument technicians should be called in. Some instruments, such as fuel quantity and oil pressure gages, are so simple and inexpensive repairs usually will be more costly than a new instrument. On the other hand, aneroid and gyro instruments usually are well worth repairing. The words "replace instrument" in the text, therefore, should be taken only in the sense of physical replacement in aircraft. Whether replacement is to be with a new instrument, an exchange or original instrument is to be repaired must be decided on basis of individual circumstances.

16-3. INSTRUMENT PANEL. (Refer to figure 16-1.)

16-4. DESCRIPTION. The instrument panel assem-

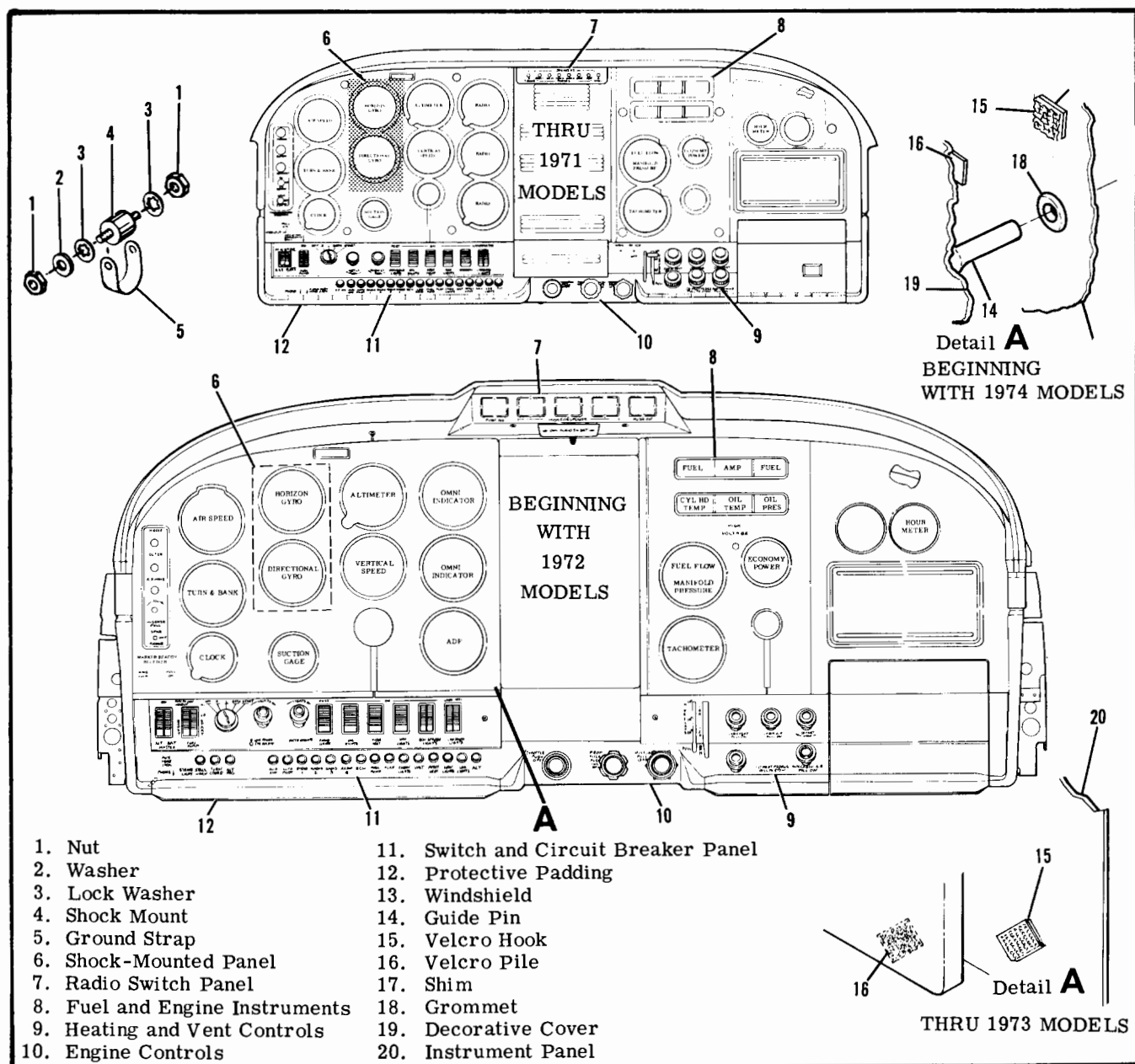


Figure 16-1. Typical Instrument Panel Installation

bly consists of a stationary, removable and shock-mounted panel. The stationary panel, normally NOT considered removable, contains instruments such as tachometer, manifold/fuel pressure, fuel and oil gages. The removable panel contains flight instruments such as airspeed, vertical speed and altimeter which ARE NOT sensitive to vibration. The shock-mounted panel, located in the removable panel, contains the major flight instruments such as horizontal and directional gyros which ARE affected by vibration. Most of the instruments are screw-mounted on the panel.

16-5. REMOVAL AND INSTALLATION. The stationary panel is secured to engine mount stringers and ordinarily not considered removable. The removable panel is secured to the stationary panel with screws.

The shock mounted panel is secured to the removable panel with rubber shock-mounts. To remove flight instrument panel proceed as follows:

- a. Thru 1971 Models remove retainer clips securing decorative cover by carefully prying under clip buttons. Beginning with 1972 Models covers are installed with Velcro fasteners, beginning with 1974 models a combination of Velcro fasteners, guide pins and grommet arrangement is used to install the decorative covers. To remove, pull gently on the cover until released.
- b. Remove control knobs or switches from panel as necessary and remove panel.
- c. Remove screws securing panel to stationary panel, tag and disconnect instrument wiring and plumbing and pull panel straight back.

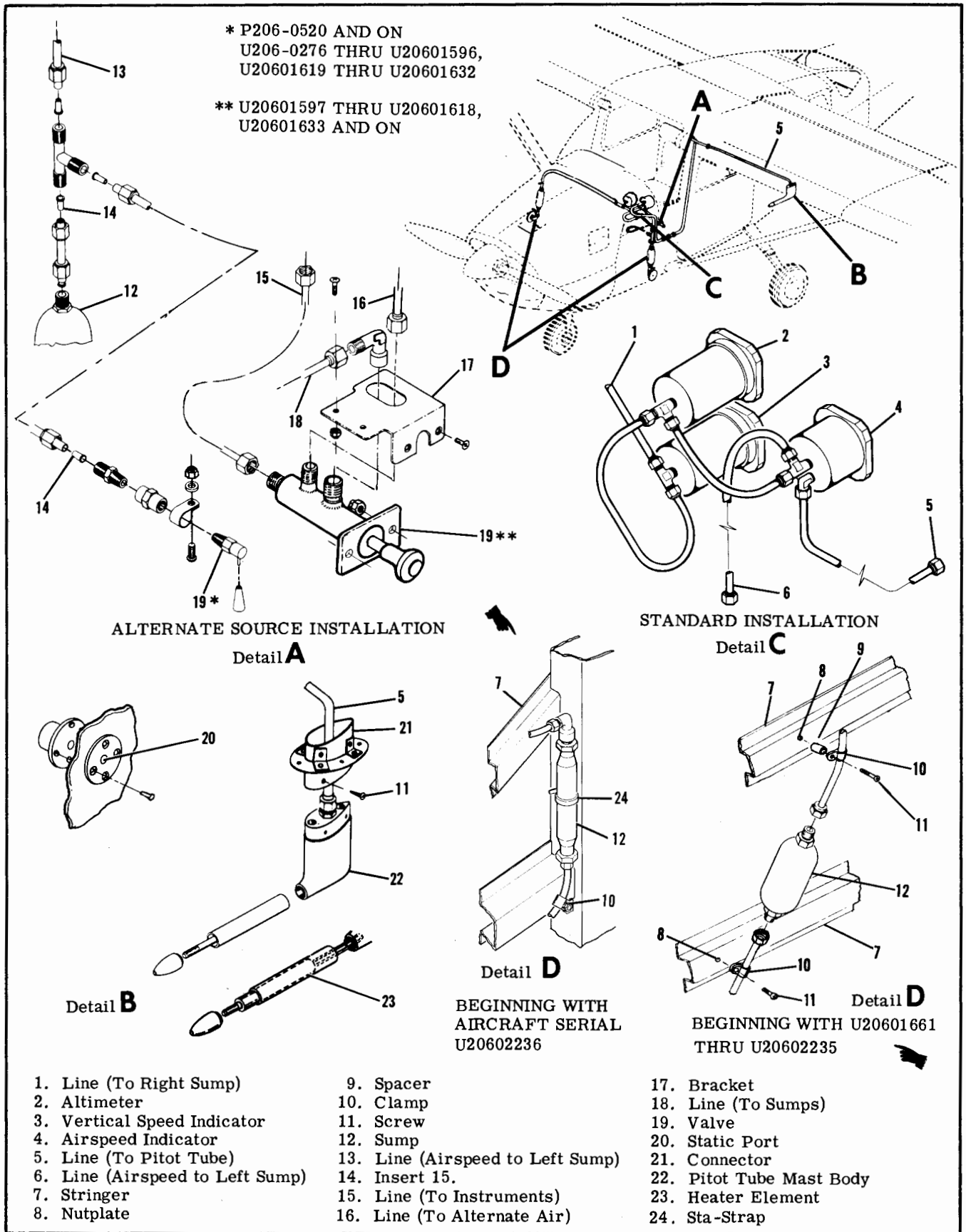


Figure 16-2. Pitot-Static Systems

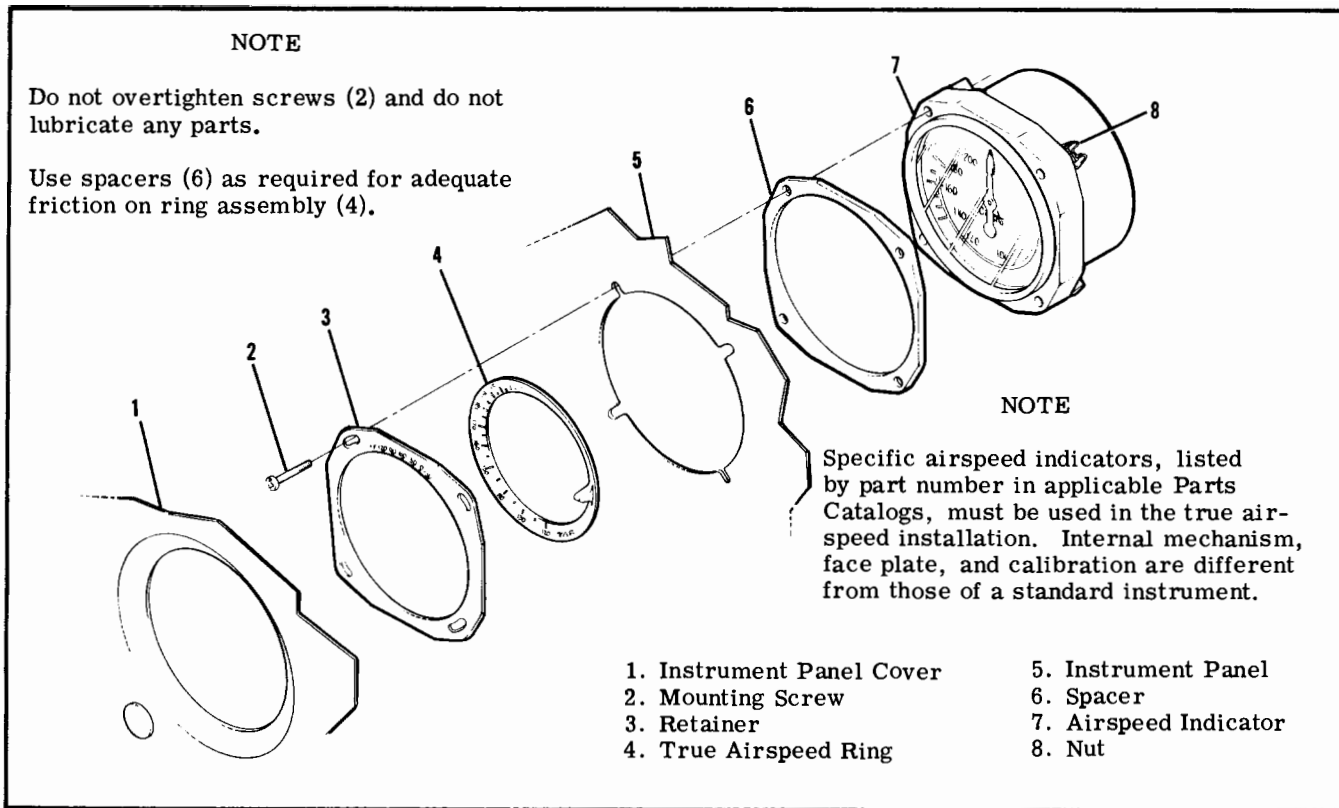


Figure 16-3. True Airspeed Indicator

NOTE

If panel is to be removed from aircraft, remove control wheel.

- d. To remove shock-mounted panel remove nuts from shock mounts and pull panel straight back.
- e. Reverse preceding steps for installation.

NOTE

A light coat of paraffin, beeswax or soap on prongs of retainer clips will ease installation.

16-6. **SHOCK MOUNTS.** Service life of instruments is directly related to adequate shock-mounting of panel. If removal of panel is necessary, check mounts for deterioration and replace as necessary.

16-7. **INSTRUMENTS.** (Refer to figure 16-1.)

16-8. **REMOVAL.** Most instruments are secured to panel with screws inserted through panel face, under decorative cover. To remove an instrument, remove decorative cover, disconnect plumbing or wiring to instrument concerned, remove retainer screws and take instrument out from behind, or, in some cases from front of instrument panel. Instrument clusters are installed as units, secured by a screw on each corner of cluster. Cluster must be removed from panel to replace an individual gage. In all cases when an instrument is removed, lines or wires disconnected from it should be protected. Cap open lines and cover pressure connections on instrument

to prevent thread damage and entrance of foreign matter. Wire terminals should be insulated or tied up so they will not ground accidentally or short-circuit on another terminal.

16-9. **INSTALLATION.** Generally, installation procedure is the reverse of removal procedure. Make sure mounting screw nuts are tightened firmly, but do not overtighten, particularly on instruments having plastic cases. The same rule generally applies to connecting plumbing and wiring.

NOTE

All instruments (gages and indicators), requiring a thread seal or lubricant, shall be installed using teflon tape on male fittings only. This tape is available through Cessna Service Parts Center.

When replacing an electrical gage in an instrument cluster assembly, avoid bending pointer or dial plate. Distortion of dial or back plate could change calibration of gages.

16-10. **PITOT AND STATIC SYSTEMS.** (Refer to figure 16-2.)

16-11. **DESCRIPTION.** The pitot system conveys ram air pressure to the airspeed indicator. The static system vents vertical speed indicator, altimeter and airspeed indicator to atmospheric pressure through plastic tubing connected to static ports.

A static line sump is installed at each source button to collect condensation in static system. Beginning with 1974 models a new smaller diameter static line sump is installed and is located on the firewall. An alternate static source may be installed and is used only in emergencies. When used as a static source on Aircraft Serials thru U20601632 the cabin air becomes another source of static air and the external source is not shut off unless totally obstructed. Beginning with Serial U20601633 the static source valve is so connected to the system that when the control is pulled on the external source is mechanically shut off and the cabin air becomes the only source of static air. When used as a static source, cabin pressure is substituted for atmospheric pressure, causing instrument readings to vary from normal. Refer to Owner's Manual for flight operation using alternate static source pressure. A pitot tube heater and stall warning heater may be installed. The heating elements are controlled by a switch at the instrument panel and powered by the electrical system.

16-12. MAINTENANCE. Proper maintenance of pitot and static system is essential for proper operation of altimeter, vertical speed and airspeed indicators. Leaks, moisture and obstructions in pitot system will result in false airspeed indications, while static system malfunctions will affect readings of all three instruments. Under instrument flight conditions, these instrument errors could be hazardous. Cleanliness and security are the principal rules for system maintenance. The pitot tube and static ports MUST be kept clean and unobstructed.

16-13. STATIC PRESSURE SYSTEM INSPECTION AND LEAKAGE TEST. The following procedure outlines inspection and testing of static pressure system, assuming altimeter has been tested and inspected in accordance with current Federal Aviation Regulations.

- a. Ensure static system is free from entrapped moisture and restrictions.
- b. Ensure no alterations or deformations of airframe surface have been made which would affect the relationship between air pressure in static pressure system and true ambient static air pressure for any flight configuration.
- c. Seal off one static pressure source opening with plastic tape. This MUST be an air-tight seal.
- d. Close static pressure alternate source valve, if installed.
- e. Attach a source of suction to remaining static pressure source opening. Figure 16-4 shows one method of obtaining suction.
- f. Slowly apply suction until altimeter indicates a 1000-foot increase in altitude.

CAUTION

When applying or releasing suction, do not exceed range of vertical speed indicator or airspeed indicator.

- g. Cut off suction source to maintain a "closed" system for one minute. Leakage shall not exceed

100 feet of altitude loss as indicated on altimeter.

- h. If leakage rate is within tolerance, slowly re-lease suction source, then remove tape used to seal static source.

NOTE

If leakage rate exceeds maximum allowable, first tighten all connections, then repeat leakage test. If leakage rate still exceeds maximum allowable, use following procedure.

- i. Disconnect static pressure lines from airspeed indicator and vertical speed indicator. Use suitable fittings to connect lines together so altimeter is the only instrument still connected into static pressure system.
- j. Repeat leakage test to check whether static pressure system or the removed instruments are cause of leakage. If instruments are at fault, they must be repaired by an "appropriately rated repair station" or replaced. If static pressure system is at fault, use following procedure to locate leakage.
- k. Attach a source of positive pressure to static source opening. Figure 16-4 shows one method of obtaining positive pressure.

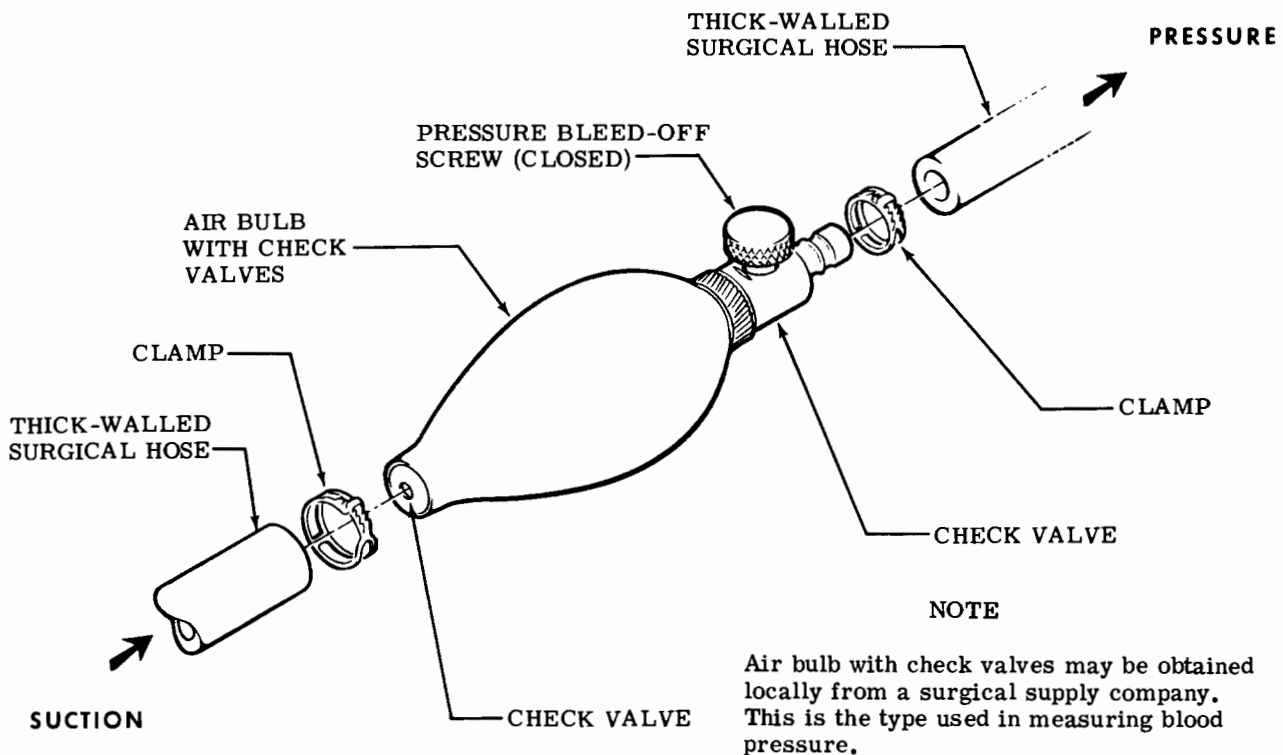
CAUTION

Do not apply positive pressure with airspeed indicator or vertical speed indicator connected to static pressure system.

- l. Slowly apply positive pressure until altimeter indicates a 500-foot decrease in altitude and maintain this altimeter indication while checking for leaks. Coat line connections, static pressure alternate source valve and static source flange with solution of mild soap and water, watching for bubbles to locate leaks.
- m. Tighten leaking connections. Repair or replace parts found defective.
- n. Reconnect airspeed and vertical speed indicators into static pressure system and repeat leakage test per steps "c" thru "h".

16-14. PITOT SYSTEM INSPECTION AND LEAKAGE TEST. To check pitot system for leaks, fasten a piece of rubber or plastic tubing over pitot tube, close opposite end of tubing and slowly roll up tube until airspeed indicator registers in cruise range. Secure tube and after a few minutes recheck airspeed indicator. Any leakage will have reduced the pressure in system, resulting in a lower airspeed indication. Slowly unroll tubing before removing it, so pressure is reduced gradually. Otherwise instrument may be damaged. If test reveals a leak in system, check all connections for tightness.

16-15. BLOWING OUT LINES. Although pitot system is designed to drain down to pitot tube opening, condensation may collect at other points in system and produce a partial obstruction. To clear line, disconnect at airspeed indicator. Using low pressure air, blow from indicator end of line toward pitot tube.



TO APPLY SUCTION:

1. Squeeze air bulb to expel as much air as possible.
2. Hold suction hose firmly against static pressure source opening.
3. Slowly release air bulb to obtain desired suction, then pinch hose shut tightly to trap suction in system.
4. After leak test, release suction slowly by intermittently allowing a small amount of air to enter static system. To do this, tilt end of suction hose away from opening, then immediately tilt it back against opening. Wait until vertical speed indicator approaches zero, then repeat. Continue to admit this small amount of air intermittently until all suction is released, then remove test equipment.

TO APPLY PRESSURE:

CAUTION

Do not apply positive pressure with airspeed indicator or vertical speed indicator connected into static system.

1. Hold pressure hose firmly against static pressure source opening.
2. Slowly squeeze air bulb to apply desired pressure to static system. Desired pressure may be maintained by repeatedly squeezing bulb to replace any air escaping through leaks.
3. Release pressure by slowly opening pressure bleed-off screw, then remove test equipment.

Figure 16-4. Static System Test Equipment

CAUTION

Never blow through pitot or static lines toward instruments.

Like pitot lines, static pressure lines must be kept clear and connections tight. All models have static source sumps which collect moisture and keep system clear. However, when necessary, disconnect static line at first instrument to which it is connected, then blow line clear with low-pressure air.

NOTE

On aircraft equipped with alternate static source, use same procedure, opening alternate static source valve momentarily to clear line, then close valve and clear remainder of system.

Check all static pressure line connections for tightness. If hoses or hose connections are used, check for general condition and clamps for security. Replace hoses which have cracked, hardened or show other signs of deterioration.

16-16. REMOVAL AND INSTALLATION. (Refer to figure 16-2.) To remove pitot mast remove four mounting screws on side of connector (21) and pull mast out of connector far enough to disconnect pitot line (5). Electrical connections to heater assembly (if installed) may be disconnected through wing access plate just inboard of mast. Pitot and static lines are removed in the usual manner, after removing wing access plates, lower wing fairing strip and upholstery as required. Installation of tubing will be simpler if a guide wire is drawn in as tubing is removed from wing. The tubing may be removed intact by drawing it out through cabin and right door. When replacing components of pitot and static pressure systems, use anti-seize compound sparingly on male threads on both metal and plastic connections. Avoid excess compound which might enter lines. Tighten connections firmly, but avoid overtightening and distorting fittings. If twisting of plastic tubing is encountered when tightening fittings, VV-P-236 (USP Petrolatum), may be applied sparingly between tubing and fittings.

16-17. TROUBLE SHOOTING--PITOT STATIC SYSTEM.

TROUBLE	PROBABLE CAUSE	REMEDY
LOW OR SLUGGISH AIRSPEED INDICATION. (Normal altimeter and vertical speed.)	Pitot tube obstructed, leak or obstruction in pitot line.	Test pitot tube and line for leaks or obstructions. Blow out tube and line, repair or replace damaged line.
INCORRECT OR SLUGGISH RESPONSE. (all three instruments.)	Leaks or obstruction in static line.	Test line for leaks and obstructions. Repair or replace line, blow out obstructed line.

16-18. TRUE AIRSPEED INDICATOR. A true airspeed indicator may be installed. This indicator, equipped with a conversion ring, may be rotated until pressure altitude is aligned with outside air temperature, then airspeed indicated on instrument is read as true airspeed on adjustable ring. Refer to figure 16-3 for removal and installation. Upon installation, before tightening mounting screws (2), calibrate the instrument as follows: Rotate ring (4) until 120 mph

on adjustable ring aligns with 120 mph on indicator. Holding this setting, move retainer (3) until 60°F aligns with zero pressure altitude, then tighten mounting screws (2) and replace decorative cover.

NOTE

On indicators graduated in knots, use 105 knots instead of 120 miles per hour in the above calibration procedure.

SHOP NOTES:

16-19. TROUBLE SHOOTING--AIRSPEED INDICATOR.

TROUBLE	PROBABLE CAUSE	REMEDY
HAND FAILS TO RESPOND.	Pitot pressure connection not properly connected to pressure line from pitot tube.	Test line and connection for leaks. Repair or replace damaged line, tighten connections.
	Pitot or static lines clogged.	Check line for obstructions. Blow out lines.
INCORRECT INDICATION OR HAND OSCILLATES. (Refer to Paragraph 16-11)	Leak in pitot or static lines.	Test lines and connections for leaks. Repair or replace damaged lines, tighten connections.
	Defective mechanism or leaking diaphragm.	Substitute known-good indicator and check reading. Replace instrument.
	Leaking diaphragm.	Substitute known-good indicator and check reading. Replace instrument.
	Alternate static source valve open. THRU U20601596, U20601619 THRU U20601632 AND THRU P20601587.	Check visually. Close for normal operation.
HAND VIBRATES.	Excessive vibration.	Check panel shock mounts. Replace defective shock mounts.
	Excessive tubing vibration.	Check clamps and line connections for security. Tighten clamps and connections, replace tubing with flexible hose.

SHOP NOTES:

16-20. TROUBLE SHOOTING--ALTIMETER

TROUBLE	PROBABLE CAUSE	REMEDY
INSTRUMENT FAILS TO OPERATE.	Static line plugged.	Check line for obstructions. Blow out lines.
	Defective mechanism.	Substitute known-good altimeter and check reading. Replace instrument.
INCORRECT INDICATION.	Hands not carefully set.	Reset hands with knob.
	Leaking diaphragm.	Substitute known-good altimeter and check reading. Replace instrument.
	Pointers out of calibration.	Compare reading with known-good altimeter. Replace instrument.
HAND OSCILLATES.	Static pressure irregular.	Check lines for obstruction or leaks. Blow out lines, tighten connections.
	Leak in airspeed or vertical speed indicator installations.	Check other instruments and system plumbing for leaks. Blow out lines, tighten connections.

16-21. TROUBLE SHOOTING--VERTICAL SPEED INDICATOR.

TROUBLE	PROBABLE CAUSE	REMEDY
INSTRUMENT FAILS TO OPERATE.	Static line plugged.	Check line for obstructions. Blow out lines.
	Static line broken.	Check line for damage, connections for security. Repair or replace damaged line, tighten connections.
INCORRECT INDICATION.	Partially plugged static line.	Check line for obstructions. Blow out lines.
	Ruptured diaphragm.	Substitute known-good indicator and check reading. Replace instrument.
	Pointer off zero.	Reset pointer to zero. Reset pointer to zero.
POINTER OSCILLATES.	Partially plugged static line.	Check line for obstructions. Blow out lines.

16-21. TROUBLE SHOOTING--VERTICAL SPEED INDICATOR. (Cont)

TROUBLE	PROBABLE CAUSE	REMEDY
POINTER OSCILLATES. (cont).	Leak in static line.	Test lines and connections for leaks. Repair or replace damaged lines, tighten connections.
	Leak in instrument case.	Substitute known-good indicator and check reading. Replace instrument.
HAND VIBRATES.	Excessive vibration.	Check shock mounts. Replace defective shock mounts.
	Defective diaphragm.	Substitute known-good indicator and check for vibration. Replace instrument.

16-22. TROUBLE SHOOTING--PITOT TUBE HEATER.

TROUBLE	PROBABLE CAUSE	REMEDY
TUBE DOES NOT HEAT OR CLEAR ICE.	Switch turned "OFF."	Turn switch "ON."
	Blown fuse.	Check fuse. Replace fuse.
	Break in wiring.	Test for open circuit. Repair wiring.
	Heating element burned out.	Check resistance of heating element. Replace element.

16-23. VACUUM SYSTEM (Refer to Figure 16-5)

16-24. DESCRIPTION. Through Aircraft Serial U20601956 suction to operate the gyros is provided by an engine-driven vacuum pump, gear-driven through a spline-type coupling. The vacuum pump discharge air passes through an oil separator, where the oil, which passes through the pump for lubrication, is returned to the engine and the air is expelled overboard. Beginning with Aircraft Serial U20601957 a dry vacuum system is installed. This system utilizes a sealed bearing, engine-driven vacuum pump, which eliminates the oil separation components from

the system. A discharge tube is connected to the pump to expell the air from the pump overboard. A suction relief valve is used to control system pressure and is connected between the pump inlet and the instruments. In the cabin, the vacuum line is routed from the gyro instruments to the relief valve at the firewall. A central air filtering system is utilized. The reading of the suction gage indicates net difference in suction before and after air passes through a gyro. This differential pressure will gradually decrease as the central air filter becomes dirty, causing a lower reading on the suction gage.

16-25. TROUBLE SHOOTING--VACUUM SYSTEM --THRU U20601956 (WET SYSTEM)

TROUBLE	PROBABLE CAUSE	REMEDY
HIGH SUCTION GAGE READINGS.	Gyros function normally-relief valve screen clogged, relief valve malfunction.	Check screen, than valve. Compare gage readings with new gage. Clean screen, reset valve. Replace gage.

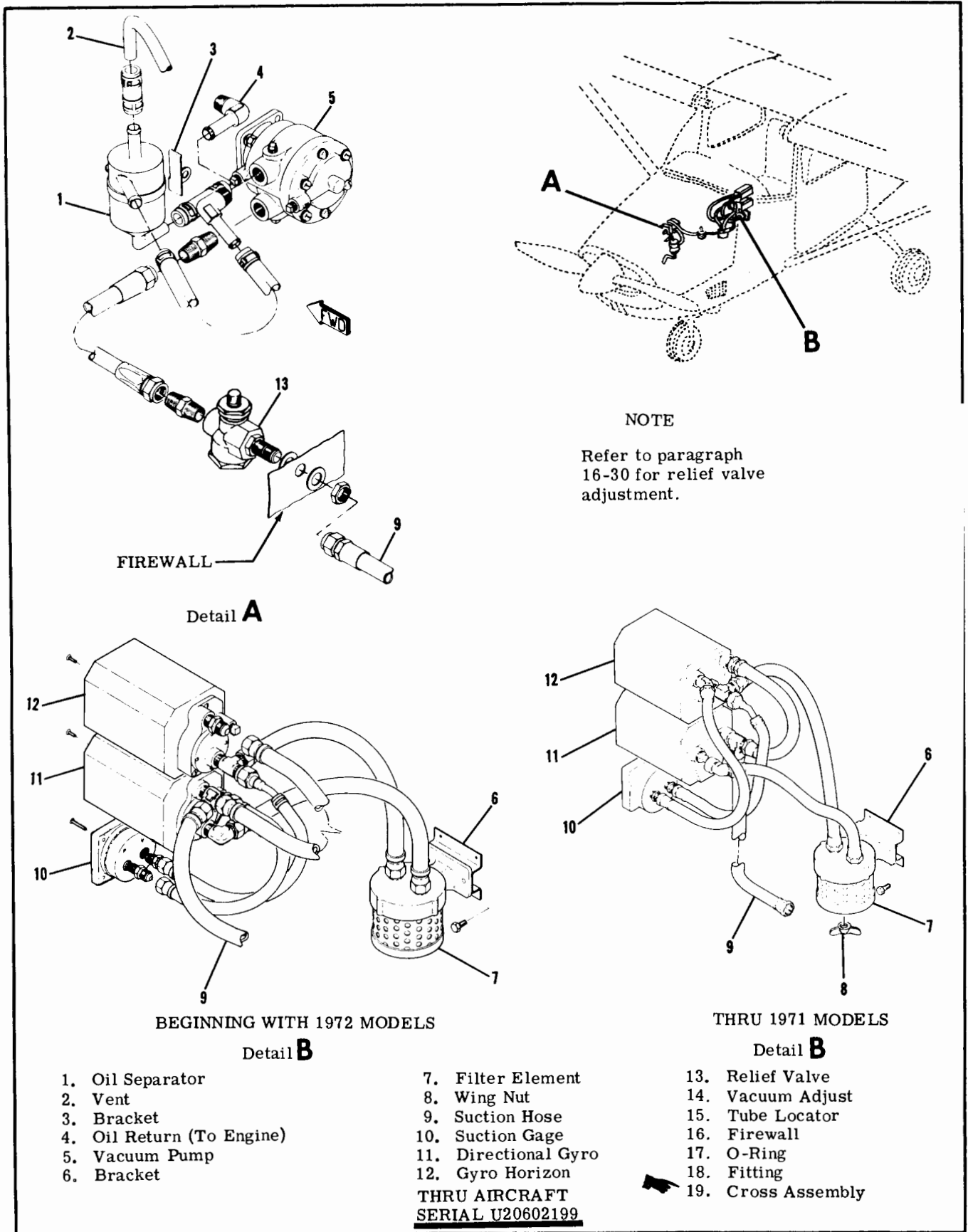
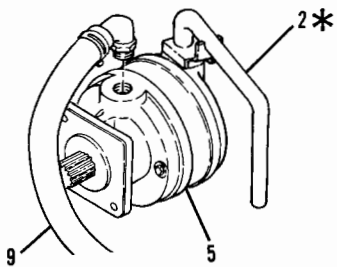
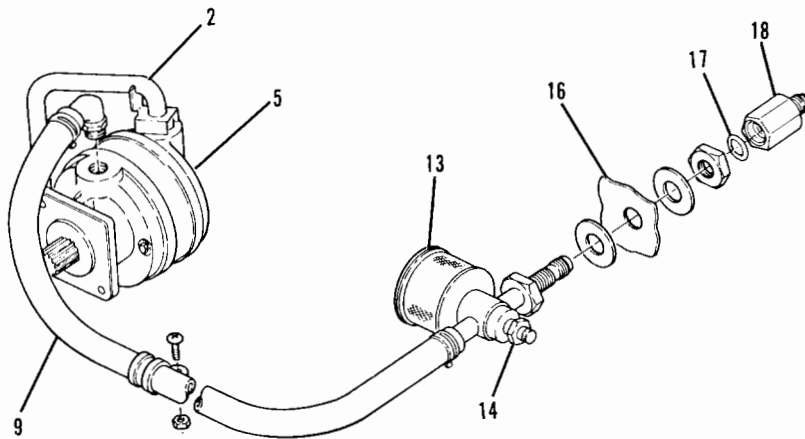
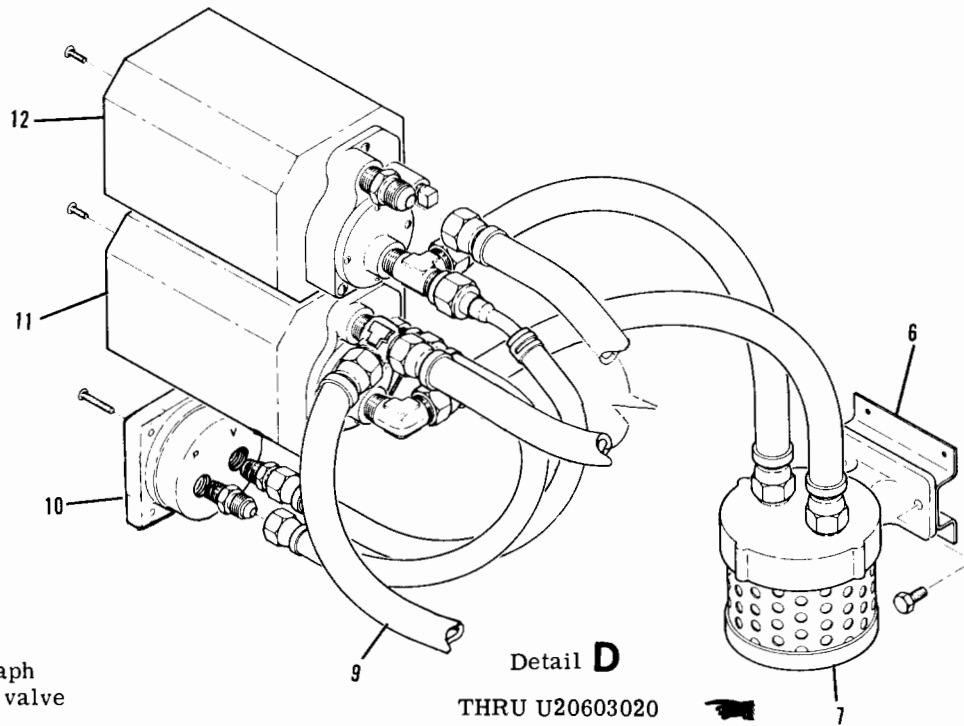
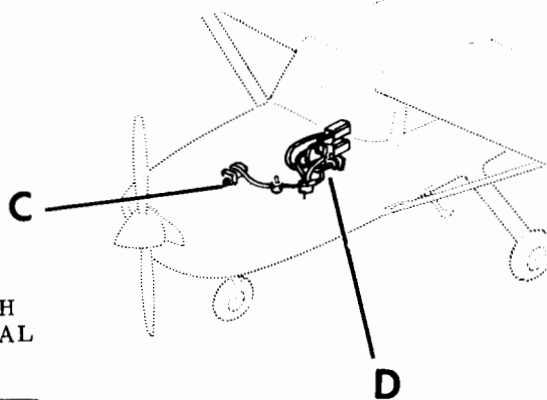


Figure 16-5. Vacuum System (Sheet 1 of 3) Wet System

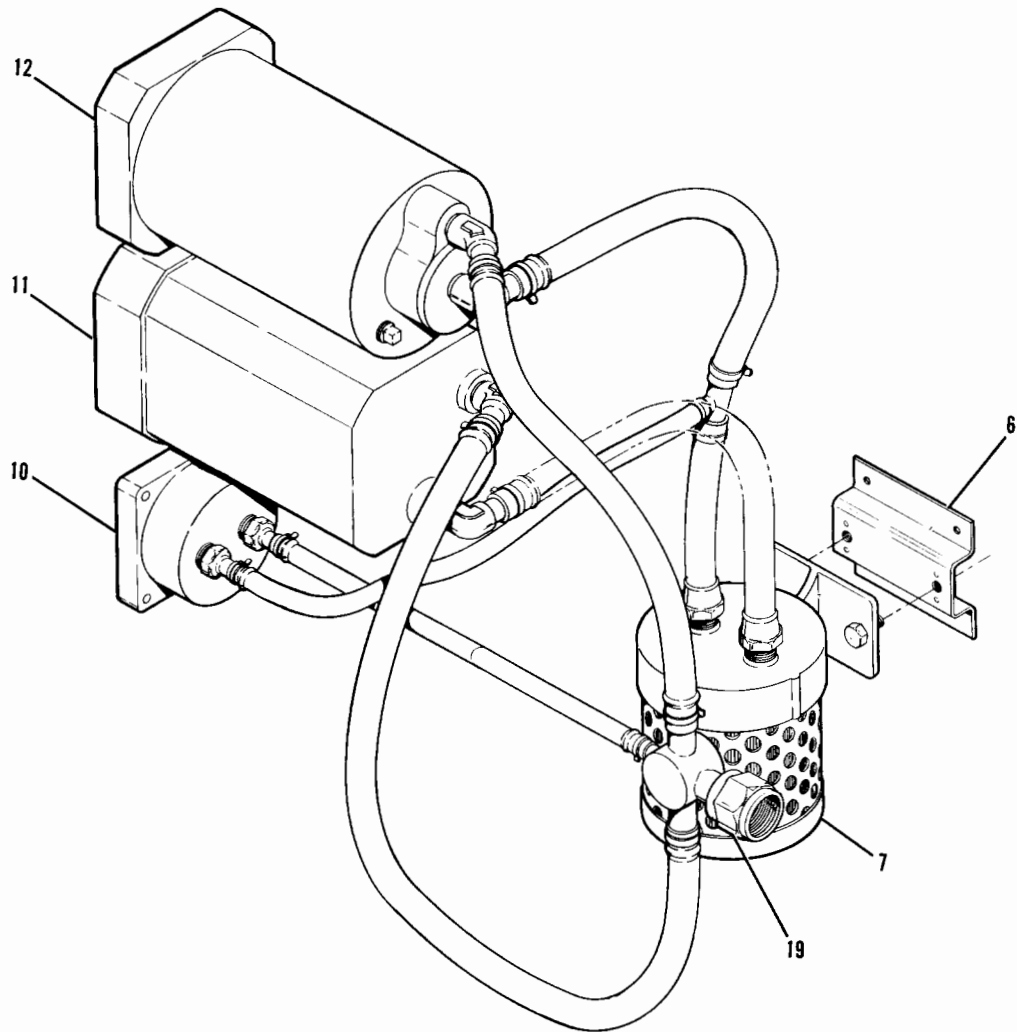


*FOR TU206 MODELS, VENT TUBE IS POSITIONED AS SHOWN



BEGINNING WITH AIRCRAFT SERIAL U20601957 (DRY SYSTEM)

Figure 16-5. Vacuum System (Sheet 2 of 3) Dry System



Detail **D**

BEGINNING WITH U20603021

Figure 16-5. Vacuum System (Sheet 3 of 3) Dry System

16-25. TROUBLE SHOOTING--VACUUM SYSTEM--THRU U20601956 (WET SYSTEM) (cont)

TROUBLE	PROBABLE CAUSE	REMEDY
NORMAL SUCTION GAGE READING, SLUGGISH OR ERRATIC GYRO RESPONSE.	Instrument air filters clogged.	Clean or replace filter as necessary.
LOW SUCTION GAGE READINGS.	Leaks or restriction between instruments and relief valve, relief valve out of adjustment, defective pump, restriction in oil separator or pump discharge line.	Check lines for leaks, disconnect and test pump. Repair or replace lines, adjust or replace relief valve, repair or replace pump. clean oil separator.
	Central air filter dirty.	Clean or replace filter as necessary.
SUCTION GAGE FLUCTUATES.	Defective gage or sticking relief valve.	Check suction with test gage. Replace gage. Clean sticking valve with Stoddard solvent. Blow dry and test. If valve sticks after cleaning, replace valve.
OIL COMES OVER IN PUMP DISCHARGE LINE.	Oil separator clogged, oil return line obstructed, excessive oil flow through pump.	Check oil separator, return line. Check that pump oil return rate does not exceed 120 cc/hour (approx. 8 drops/minute), at 50 psi oil pressure. Clean oil separator with Stoddard solvent, blow dry. Blow out lines. If pump oil consumption is excessive, replace oil metering collar and pin in pump.

16-25A. TROUBLE SHOOTING--VACUUM SYSTEM--BEGINNING WITH U20601957 (DRY SYSTEM)

TROUBLE	PROBABLE CAUSE	REMEDY
HIGH SUCTION GAGE READINGS.	Gyros function normally-relief valve screen clogged, relief valve malfunction.	Check screen, then valve. Compare gage readings with new gage. Clean screen, reset valve. Replace gage.
NORMAL SUCTION GAGE READING, SLUGGISH OR ERRATIC GYRO RESPONSE.	Instrument air filters clogged.	Clean or replace filter as necessary.
LOW SUCTION GAGE READINGS.	Leaks or restriction between instruments and relief valve, relief valve out of adjustment, defective pump.	Check lines for leaks, disconnect and test pump. Repair or replace lines, adjust or replace relief valve, repair or replace pump.
	Central air filter dirty.	Clean or replace filter as necessary

16-25A. TROUBLE SHOOTING--BEGINNING WITH U20601957 DRY SYSTEM (Cont)

TROUBLE	PROBABLE CAUSE	REMEDY
SUCTION GAGE FLUCTUATES.	Defective gage or sticking relief valve.	Check suction with test gage. Replace gage. Clean sticking valve with Stoddard solvent. Blow dry and test. If valve sticks after cleaning, replace valve.

16-26. TROUBLE SHOOTING--GYROS.

TROUBLE	PROBABLE CAUSE	REMEDY
HORIZON BAR FAILS TO RESPOND.	Central filter dirty.	Check filter. Clean or replace filter.
	Suction relief valve improperly adjusted.	Adjust or replace relief valve.
	Faulty suction gage.	Substitute known-good suction gage and check gyro response. Replace suction gage.
	Vacuum pump failure.	Check pump. Replace pump.
	Vacuum line kinked or leaking.	Check lines for damage and leaks. Repair or replace damaged lines, tighten connections.
HORIZON BAR DOES NOT SETTLE.	Defective mechanism.	Substitute known-good gyro and check indication. Replace instrument.
	Insufficient vacuum.	Adjust or replace relief valve.
	Excessive vibration.	Check panel shock-mounts. Replace defective shock-mounts.
HORIZON BAR OSCILLATES OR VIBRATES EXCESSIVELY.	Central filter dirty.	Check filter. Clean or replace filter.
	Suction relief valve improperly adjusted.	Adjust or replace relief valve.
	Faulty suction gage.	Substitute known-good suction gage and check gyro indication. Replace suction gage.
	Defective mechanism.	Substitute known-good gyro and check indication. Replace instrument.
	Excessive vibration.	Check panel shock-mounts. Replace defective shock-mounts.

16-26. TROUBLE SHOOTING--GYROS. (Cont).

TROUBLE	PROBABLE CAUSE	REMEDY
EXCESSIVE DRIFT IN EITHER DIRECTION.	Central air filter dirty.	Check filter. Clean or replace filter.
	Low vacuum, relief valve improperly adjusted.	Adjust or replace relief valve.
	Faulty suction gage.	Substitute known-good suction gage and check gyro indication. Replace suction gage.
	Vacuum pump failure.	Check pump. Replace pump.
	Vacuum line kinked or leaking.	Check lines for damage and leaks. Repair or replace damaged lines, tighten connections.
DIAL SPINS IN ONE DIRECTION CONTINUOUSLY.	Operating limits have been exceeded.	Replace instrument.
	Defective mechanism.	Substitute known-good gyro and check indication. Replace instrument.

16-27. TROUBLE SHOOTING--VACUUM PUMP (Wet System)

TROUBLE	PROBABLE CAUSE	REMEDY
EXCESSIVE OIL IN DISCHARGE.	Damaged engine drive seal.	Replace gasket.
	Oil separator clogged, oil return line obstructed, excessive oil flow through pump.	Clean oil separator with Stoddard solvent, then blow dry. Blow out lines. If pump oil consumption is excessive, replace oil metering pin in pump.
HIGH SUCTION.	Suction relief valve screen clogged.	Clean or replace screen.
LOW SUCTION.	Relief valve leaking.	Replace relief valve.
	Vacuum pump failure.	Replace vacuum pump.

16-27A. TROUBLE SHOOTING -- VACUUM PUMP (Dry System)

TROUBLE	PROBABLE CAUSE	REMEDY
OIL IN DISCHARGE.	Damaged pump drive seal.	Replace gasket.

16-27A. TROUBLE SHOOTING--VACUUM PUMP (Wet System) (Cont)

TROUBLE	PROBABLE CAUSE	REMEDY
HIGH SUCTION.	Suction relief valve screen clogged.	Clean or replace screen.
LOW SUCTION.	Relief valve leaking.	Replace relief valve.
	Vacuum pump failure.	Replace vacuum pump.

16-28. REMOVAL AND INSTALLATION OF COMPONENTS. Through Aircraft Serial U20601956 the various components of the vacuum system are secured by conventional clamps, mounting screws and nuts. To remove a component, remove mounting screws and disconnect inlet and discharge lines. When replacing a vacuum system component, ensure connections are made correctly. Use thread lubricant sparingly and only on male threads. Avoid over-tightening connections. Before reinstalling a vacuum pump, probe oil passages in pump and engine, to make sure they are open. Place mounting pad gasket in position over studs and ensure it does not block oil passages. Coat pump drive splines lightly with a high-temperature grease such as Dow Silicone #30 (Dow-Corning Co., Midland, Mich.). After installing pump, before connecting plumbing, start engine and hold a piece of paper over pump discharge to check for proper lubrication. Proper oil flow through pump is one to four fluid ounces per hour.

16-28A. REMOVAL AND INSTALLATION OF COMPONENTS. Beginning with U20601957 the various components of the vacuum system are secured by conventional clamps, mounting screws and nuts. To remove a component, remove mounting screws and disconnect inlet and discharge lines. Cap open lines and fitting to prevent dirt from entering the system. When replacing a vacuum system component, ensure connections are made correctly. Use no lubricants on any components when assembling a dry vacuum system. Avoid over-tightening connections. Before installing the vacuum pump, place mounting pad gasket in position over studs. Be sure all lines and fittings are open and caps are removed.

SHOP NOTES:

16-29. CLEANING. Low pressure, dry compressed air should be used in cleaning vacuum system components. The suction relief valve should be washed with Stoddard solvent then dried with low-pressure air. Refer to Section 2 for central air filter. Check hose for collapsed inner liners as well as external damage.

CAUTION

Never apply compressed air to lines or components installed in aircraft. The excessive pressures will damage gyros. If an obstructed line is to be blown out, disconnect at both ends and blow from instrument panel out.

16-30. VACUUM RELIEF VALVE ADJUSTMENT. A suction gage reading of 5.3 inches of mercury is desirable for gyro instruments. However, a range of 4.6 to 5.4 inches of mercury is acceptable. To adjust relief valve, remove control air filter, run engine to 2200 rpm on ground and adjust relief valve to $5.3 \pm .1$ inches of mercury.

CAUTION

Do not exceed maximum engine temperature.

NOTE

The relief valve on turbocharged aircraft is altitude compensated by an internal aneroid. Operation of the compensating mechanism is automatic. Standard relief valve adjustment applies to the compensated relief valve.

Be sure filter element is clean before installing. If reading drops noticeably, install new filter element.

16-30. VACUUM RELIEF VALVE ADJUSTMENT. A suction gage reading of 5.3 inches of mercury is desirable for gyro instruments. However, a range of 4.6 to 5.4 inches of mercury is acceptable. To adjust relief valve, remove control air filter, run engine to 2200 rpm on ground and adjust relief valve to $5.3 \pm .1$ inches of mercury.

CAUTION

Do not exceed maximum engine temperature.

Be sure filter element is clean before installing. If reading drops noticeably, install new filter element.

16-31. ENGINE INDICATORS.

16-32. TACHOMETER.

16-33. DESCRIPTION. The tachometer is a mechanical indicator driven at half crankshaft speed by a flexible shaft. Most tachometer difficulties will be found in the drive-shaft. To function properly, the shaft housing must be free of kinks, dents and sharp bends. There should be no bend on a radius shorter than six inches and no bend within three inches of either terminal. If a tachometer is noisy or pointer oscillates, check cable housing for kinks, sharp bends and damage. Disconnect cable at tachometer and pull it out of housing. Check cable for worn spots, breaks and kinks.

16-36. TROUBLE SHOOTING -- FUEL FLOW INDICATOR.

NOTE

Before replacing a tachometer cable in housing, coat lower two thirds with AC Type ST-640 speedometer cable grease or Lubriplate No. 110. Insert cable in housing as far as possible, then slowly rotate to make sure it is seated in engine fitting. Insert cable in tachometer, making sure it is seated in drive shaft, then reconnect housing and torque to 50 pound-inches (at instrument).

16-34. MANIFOLD PRESSURE/FUEL FLOW INDICATOR.

15-35. DESCRIPTION. The manifold pressure and fuel flow indicators are in one instrument case. However, each instrument operates independently. The manifold pressure gage is a barometric instrument which indicates absolute pressure in the intake manifold inches of mercury. The fuel flow indicator is a pressure instrument calibrated in gallons per hour, indicating approximate gallons of fuel metered per hour to the engine. Pressure for operating the indicator is obtained through a hose from the fuel manifold valve. The fuel flow indicator is vented to atmospheric pressure with standard engines and to turbocharger outlet pressure on turbocharged engines.

TROUBLE	PROBABLE CAUSE	REMEDY
DOES NOT REGISTER.	Pressure line clogged.	Blow out line.
	Pressure line broken.	Repair or replace damaged line.
	Fractured bellows or damaged mechanism.	Replace instrument.
	Clogged snubber orifice.	Replace instrument.
	Pointer loose on staff.	Replace instrument.
POINTER FAILS TO RETURN TO ZERO.	Foreign matter in line.	Blow out line.
	Clogged snubber orifice.	Replace instrument.
	Damaged bellows or mechanism.	Replace instrument.
INCORRECT OR ERRATIC READING.	Damaged or dirty mechanism.	Replace instrument.
	Pointer bent, rubbing on dial or glass.	Replace instrument.
	Leak or partial obstruction in pressure or vent line.	Blow out dirty line, repair or tighten loose connections.

16-37. TROUBLE SHOOTING -- MANIFOLD PRESSURE INDICATOR.

TROUBLE	PROBABLE CAUSE	REMEDY
EXCESSIVE ERROR AT EXISTING BAROMETRIC PRESSURE.	Pointer shifted.	Replace instrument.
	Leak in vacuum bellows.	Replace instrument.
	Loose pointer.	Replace instrument.
	Leak in pressure line.	Repair or replace damaged line, tighten connections.
	Condensate or fuel in line.	Blow out line.
JERKY MOVEMENT OF POINTER.	Excessive internal friction.	Replace instrument.
	Rocker shaft screws tight.	Replace instrument.
	Link springs too tight.	Replace instrument.
	Dirty pivot bearings.	Replace instrument.
	Defective mechanism.	Replace instrument.
	Leak in pressure line.	Repair or replace damaged line, tighten connections.
SLUGGISH OPERATION OF POINTER.	Foreign matter in line.	Blow out line.
	Damping needle dirty.	Replace instrument.
	Leak in pressure line.	Repair or replace damaged line, tighten connections.
EXCESSIVE POINTER VIBRATION.	Tight rocker pivot bearings.	Replace instrument.
	Excessive vibration.	Tighten mounting screws.
IMPROPER CALIBRATION.	Faulty mechanism.	Replace instrument.
NO POINTER MOVEMENT.	Faulty mechanism.	Replace instrument.
	Broken pressure line.	Repair or replace damaged line.

16-38. CYLINDER HEAD TEMPERATURE GAGE.

on the gage for calibration purposes.

16-39. DESCRIPTION. The temperature bulb regulates electrical power through the cylinder head temperature gage. The gage and bulb require little or no maintenance other than cleaning, making sure lead is properly supported and all connections are clean, tight and properly insulated. A potentiometer is installed

NOTE

A Cylinder Head Temperature Gage Calibration Unit, SK182-43 is available and may be ordered through the Cessna Service Parts Center.

16-40. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
GAGE INOPERATIVE.	No current to circuit.	Repair electrical circuit.
	Defective gage, bulb or circuit.	Repair or replace defective items.
GAGE FLUCTUATES RAPIDLY.	Loose or broken wire permitting alternate make and break of gage circuit.	Repair or replace defective wire.
GAGE READS TOO HIGH ON SCALE.	High voltage.	Check "A" terminal.
	Gage off calibration.	Recalibrate or replace gage.
GAGE READS TOO LOW ON SCALE.	Low voltage.	Check voltage supply and "D" terminal.
	Gage off calibration.	Recalibrate or replace gage.
GAGE READS OFF SCALE AT HIGH END.	Break in bulb.	Replace bulb.
	Break in bulb lead.	Replace bulb.
	Internal break in gage.	Replace gage.
OBVIOUSLY INCORRECT READING.	Defective gage mechanism.	Replace gage.
	Incorrect calibration.	Recalibrate.

16-41. OIL PRESSURE GAGE.

main oil gallery. The oil pressure line from the instrument to the engine should be filled with kerosene, especially during cold weather operation, to attain an immediate oil indication.

16-42. DESCRIPTION. The Bourdon tube-type oil pressure gage is a direct-reading instrument, operated by a pressure pickup line connected to the engine

16-43. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
GAGE DOES NOT REGISTER.	Pressure line clogged.	Check line for obstructions. Clean line.
	Pressure line broken.	Check line for leaks and damage. Repair or replace damaged line.
	Fractured Bourdon tube.	Replace instrument.
	Gage pointer loose on staff.	Replace instrument.
	Damaged gage movement.	Replace instrument.
GAGE POINTER FAILS TO RETURN TO ZERO.	Foreign matter in line.	Check line for obstructions. Clean line.
	Foreign matter in Bourdon tube.	Replace instrument.
	Bourdon tube stretched.	Replace instrument.
GAGE DOES NOT REGISTER PROPERLY.	Faulty mechanism.	Replace instrument.
GAGE HAS ERRATIC OPERATION.	Worn or bent movement.	Replace instrument.
	Foreign matter in Bourdon tube.	Replace instrument.
	Dirty or corroded movement.	Replace instrument.
	Pointer bent and rubbing on dial, dial screw or glass.	Replace instrument.
	Leak in pressure line.	Check line for leaks and damage. Repair or replace damaged line.

16-44. OIL TEMPERATURE GAGE.

16-45. DESCRIPTION. The oil temperature gage is a Bourdon-type pressure instrument connected by armored capillary tubing to a temperature bulb in the engine. The temperature bulb, capillary tube and gage are filled with fluid and sealed. Expansion and contraction of fluid in the bulb with temperature changes operates gage. Checking capillary tube for damage and fittings for security is the only maintenance required. Since the tube's inside diameter is small, small dents and kinks which would be quite acceptable in larger tubing may partially or completely close off capillary, making gage inoperative.

16-46. FUEL QUANTITY INDICATING SYSTEM.

16-47. DESCRIPTION. The magnetic type fuel quantity indicators are used in conjunction with a float-

operated variable-resistance transmitter in each fuel tank. The full position of float produces a minimum resistance through transmitter, permitting maximum current flow through the fuel quantity indicator and maximum pointer deflection. As fuel level is lowered, resistance in transmitter is increased, producing a decreased current flow through fuel quantity indicator and a smaller pointer deflection. Beginning with Serial U206-01573, a heat sink assembly (Voltage Regulator) is incorporated into the fuel quantity indicating system of aircraft equipped with a 24-volt system. The unit is mounted on top of the glove box thru U20602199 and is located under the glove box beginning with U20602200. The unit converts 28-volt current flow from the bus to a 14-volt current flow to the fuel quantity indicators and transmitters. Refer to the 24-volt part of Section 20 in this Service Manual for a schematic wiring diagram of the Heat Sink Assembly.

16-48. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
FAILURE TO INDICATE.	No power to indicator or transmitter. (Pointer stays below E.)	Check fuse and inspect for open circuit. Replace fuse, repair or replace defective wire.
	Grounded wire. (Pointer stays above F.)	Check for partial ground between transmitter and gage. Repair or replace defective wire.
	Low voltage.	Check voltage at indicator. Correct voltage.
	Defective indicator.	Substitute known-good indicator. Replace indicator.
OFF CALIBRATION.	Defective indicator.	Substitute known-good indicator. Replace indicator.
	Defective transmitter.	Substitute known-good transmitter. Recalibrate or replace.
	Low or high voltage.	Check voltage at indicator. Correct voltage.
STICKY OR SLUGGISH INDICATOR OPERATION.	Defective indicator.	Substitute known-good indicator. Replace indicator.
	Low voltage.	Check voltage at indicator. Correct voltage.
ERRATIC READINGS.	Loose or broken wiring on indicator or transmitter.	Inspect circuit wiring. Repair or replace defective wire.
	Defective indicator or transmitter.	Substitute known-good component. Replace indicator or transmitter.
	Defective master switch.	Replace switch.

16-49. TRANSMITTER CALIBRATION. Chances of transmitter calibration changing in normal service is remote, however, it is possible that float arm or float arm stops may become bent if transmitter is removed from cell. Transmitter calibration is obtained by adjusting float travel. Float travel is limited by float arm stops.

WARNING

Use extreme caution while working with electrical components of fuel system. The possibility of electrical sparks around an "empty" fuel cell creates a hazardous situation.

Before installing transmitter, attach electrical wires and place master switch in "ON" position. Allow float

arm to rest against lower float arm stop and read indicator. The pointer should be on E (empty) position. If not, adjust lower stop so pointer indicator is on E (empty). Raise float until arm is against upper stop and adjust stop to permit indicator pointer to be on F (full). Install transmitter in accordance with Paragraph 16-49A and Section 13.

16-49A. REMOVAL AND INSTALLATION FUEL QUANTITY TRANSMITTERS. (Refer to Section 13, figure 13-5.) Observe precautions of Section 13-3 when working with fuel components.

- a. Drain fuel from cell.
- b. Remove wing root fairing.
- c. Disconnect electrical lead and ground strap from transmitter.
- d. Remove screws through transmitter and wing root rib, and remove transmitter.

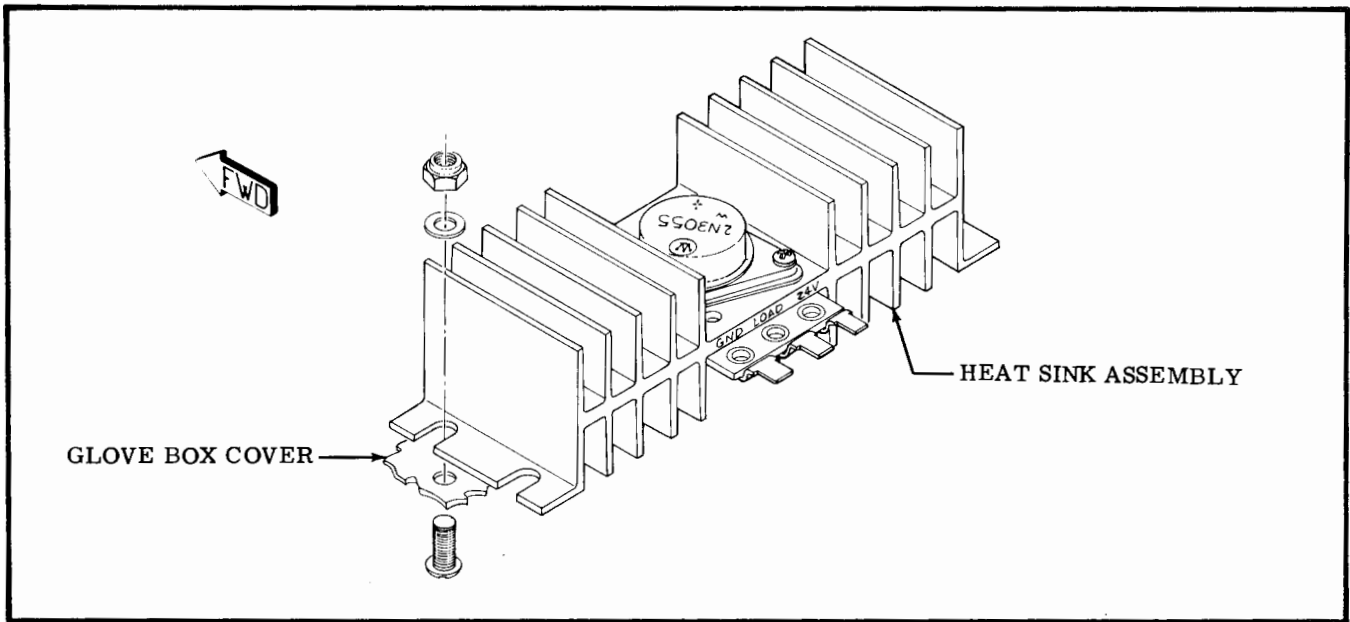


Figure 16-6. Heat Sink Assembly (Voltage Regulator) Installation

- e. Install transmitter by reversing preceding steps. No gasket paste should be used.
- f. Fill fuel cell. Check for leaks and correct fuel quantity indication.

NOTE

Be sure grounding is secure and in accordance with figure 13-5.

16-49B. REMOVAL AND INSTALLATION HEAT SINK. (Refer to figure 16-6.)

- a. Turn off master switch or disconnect battery leads.

- b. Disconnect 3 wires from heat sink assembly and tag for identification.
- c. Remove nuts, screws and washers attaching unit to glove box and remove the unit.
- d. Reverse preceding steps to install the heat sink unit.

16-50. HOURMETER.

16-51. DESCRIPTION. The hourmeter is electrically operated instrument, actuated by a pressure switch in the oil pressure gage line. Electrical power is supplied through a one-amp fuse from the electrical clock circuit, and therefore will operate independent of master switch.

SHOP NOTES:

16-52. ECONOMY MIXTURE INDICATOR.

16-53. DESCRIPTION. The economy mixture indicator is an exhaust gas temperature (EGT) sensing device which is used to aid pilot in selecting most

desirable fuel-air mixture for cruising flight at less than 75% power. Exhaust gas temperature (EGT) varies with ratio of fuel-to-air mixture entering engine cylinders. Refer to Owner's Manual for operating procedure of system.

16-54. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
GAGE INOPERATIVE.	Defective gage, probe or circuit.	Repair or replace defective part.
INCORRECT READING.	Indicator needs calibrating.	Calibrate indicator in accordance with paragraph 15-56.
FLUCTUATING READING.	Loose, frayed or broken lead, permitting alternate make and break of circuit.	Tighten connections and repair or replace defective leads.

16-55. CALIBRATION. A potentiometer adjustment screw is provided behind the plastic cap at the back of the instrument for calibration. This adjustment screw is used to position the pointer over the reference increment line (4/5 of scale) at peak EGT. Establish 65% power in level flight, then carefully lean the mixture to peak EGT. After the pointer has peaked, using the adjustment screw, position pointer over the reference increment line (4/5 of scale).

NOTE

This setting will provide relative temperature indications for normal cruise power settings within range of the instrument.

Turning the screw clockwise increases the meter reading and counterclockwise decreases the meter reading. There is a stop in each direction and damage can occur if too much torque is applied against stops. Approximately 600°F total adjustment is provided. The adjustable yellow pointer on the face of the instrument is a reference pointer only.

16-56. REMOVAL AND INSTALLATION. Removal of the indicator is accomplished by removing the mounting screws and disconnecting the leads. Tag leads to facilitate installation. The thermocouple probe is secured to the exhaust stack with a clamp. When installing probe, tighten clamp to 45 pound-inches and safety as required.

16-57. MAGNETIC COMPASS.

16-58. DESCRIPTION. The magnetic compass is liquid-filled, with expansion provisions to compensate for temperature changes. It is equipped with compensating magnets adjustable from the front of the case. The compass is internally lighted, controlled by the panel lights rheostat. No maintenance is required on the compass except an occasional check on a compass rose and replacement of the lamp. The compass mount is attached by three screws to a base plate which is bonded to the windshield with methylene chloride. A tube containing the compass light wires is attached to the metal strip at the top of the windshield. Removal of the compass is accomplished by removing the screw at the forward end of the compass mount, unfastening the metal strip at the top of the windshield and cutting the two wire splices. Removal of the compass mount is accomplished by removing the outside air temperature probe and removing the three screws attaching mount to the base plate. Access to the inner screw is gained through a hole in the bottom of mount, through which a thin screwdriver may be inserted. When installing the compass, it will be necessary to splice the compass light wires.

16-59. STALL WARNING HORN AND TRANSMITTER.

16-60. DESCRIPTION. The stall warning horn is mounted on the glove box. It is electrically operated

and controlled by a stall warning transmitter mounted on leading edge of left wing. For further information on warning horn and transmitter, refer to Section 17.

16-62. DESCRIPTION. The turn-and-slip indicator is operated by the aircraft electrical system and operates ONLY when the master switch is on. Its circuit is protected by an automatically-resetting circuit breaker.

16-61. TURN-AND-SLIP INDICATOR.

16-63. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
INDICATOR POINTER FAILS TO RESPOND.	Automatic resetting circuit breaker defective.	Check circuit breaker. Replace circuit breaker.
	Master switch "OFF" or switch defective.	Check switch "ON." Replace defective switch.
	Broken or grounded lead to indicator.	Check circuit wiring. Repair or replace defective wiring.
	Indicator not grounded.	Check ground wire. Repair or replace defective wire.
	Defective mechanism.	Replace instrument.
HAND SLUGGISH IN RETURNING TO ZERO.	Defective mechanism.	Replace instrument.
	Low voltage.	Check voltage at indicator. Correct voltage.
POINTER DOES NOT INDICATE PROPER TURN.	Defective mechanism.	Replace instrument.
HAND DOES NOT SIT ON ZERO.	Gimbal and rotor out of balance.	Replace instrument.
	Hand incorrectly sits on rod.	Replace instrument.
	Sensitivity spring adjustment pulls hand off zero.	Replace instrument.
IN COLD TEMPERATURES, HAND FAILS TO RESPOND OR IS SLUGGISH.	Oil in indicator becomes too thick.	Replace instrument.
	Insufficient bearing end play.	Replace instrument.
	Low voltage.	Check voltage at indicator. Correct voltage.
NOISY GYRO.	High voltage.	Check voltage at indicator. Correct voltage.
	Loose or defective rotor bearings.	Replace instrument.

16-64. TURN COORDINATOR.

16-65. DESCRIPTION. The turn coordinator is an electrically operated, gyroscopic, roll-rate turn indicator. Its gyro simultaneously senses rate of

motion roll and yaw axes which is projected on a single indicator. The gyro is a non-tumbling type requiring no caging mechanism and incorporates an a. c. brushless spin motor with a solid state inverter.

16-66. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
INDICATOR DOES NOT RETURN TO CENTER.	Friction caused by contamination in the indicator damping.	Replace instrument.
	Friction in gimbal assembly.	Replace instrument.
DOES NOT INDICATE A STANDARD RATE TURN (TOO SLOW).	Low voltage.	Measure voltage at instrument. Correct voltage.
	Inverter frequency changed.	Replace instrument.
NOISY MOTOR.	Faulty bearings.	Replace instrument.
ROTOR DOES NOT START.	Faulty electrical connection.	Check continuity and voltage. Correct voltage or replace faulty wire.
	Inverter malfunctioning.	Replace instrument.
	Motor shorted.	Replace instrument.
	Bearings frozen.	Replace instrument.
IN COLD TEMPERATURES, HAND FAILS TO RESPOND OR IS SLUGGISH.	Oil in indicator becomes too thick.	Replace instrument.
	Insufficient bearing end play.	Replace instrument.
	Low voltage.	Check voltage at instrument. Correct voltage.
NOISY GYRO.	High voltage.	Check voltage to instrument. Correct voltage.
	Loose or defective rotor bearings.	Replace instrument.

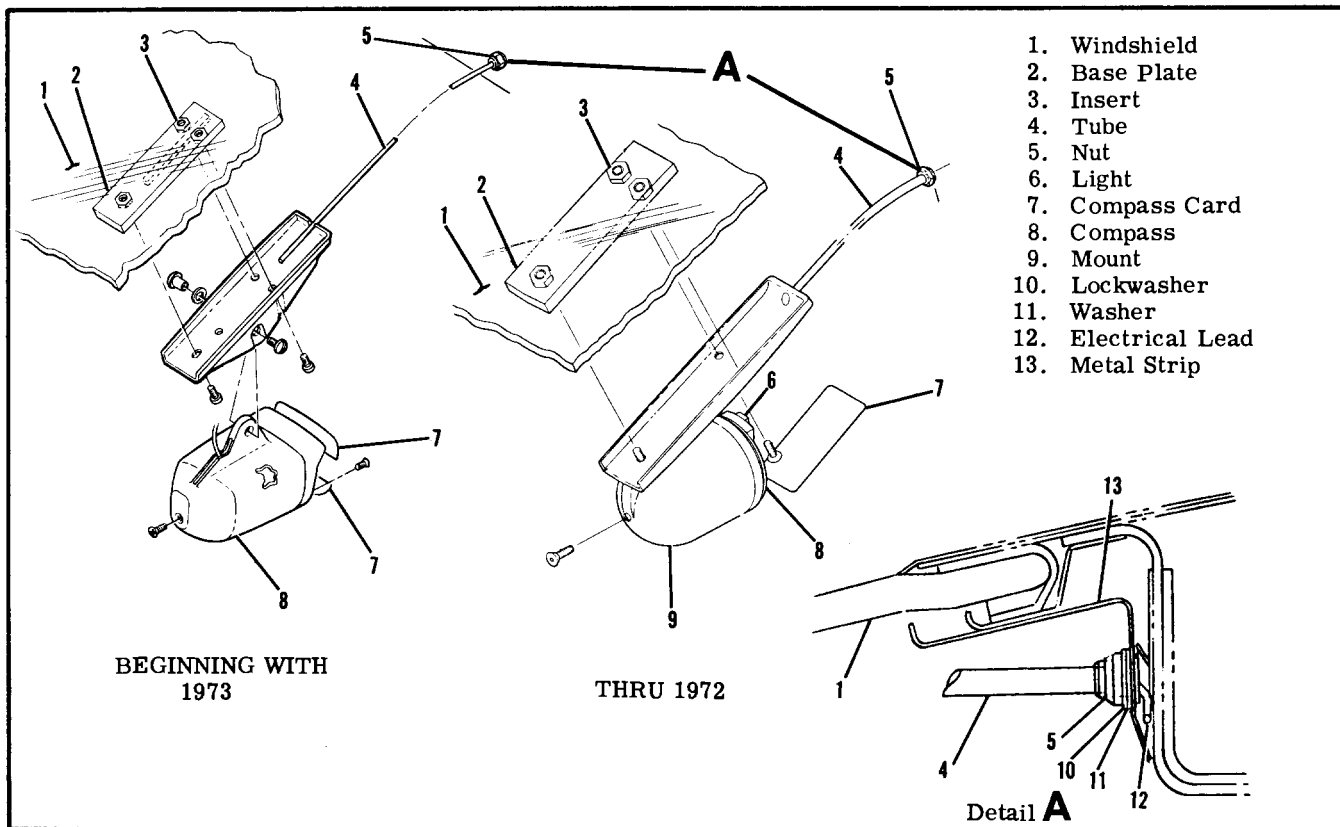


Figure 16-7. Magnetic Compass Installation

16-67. ELECTRIC CLOCK.

16-68. DESCRIPTION. The electric clock is connected to the battery through a one-ampere fuse mounted adjacent to the battery box. The electrical circuit is separate from the aircraft electrical system and will operate when the master switch is OFF.

16-69. WING LEVELER. (Refer to figure 16-8).
THRU AIRCRAFT SERIAL U20602199.

16-70. DESCRIPTION. The wing leveler control system, consisting of a turn coordinator (9), pneumatic servos (3), connecting cables (4) and hose (1 and 2) may be installed. The turn coordinator gyro senses changes in roll attitude, then electrically meters vacuum power from engine-driven vacuum pump to cylinder-piston servos, operating ailerons for lateral stability. Manual control of system is afforded by the roll trim knob (10). Roll trim should not be used to correct faulty rigging or "wing heaviness".

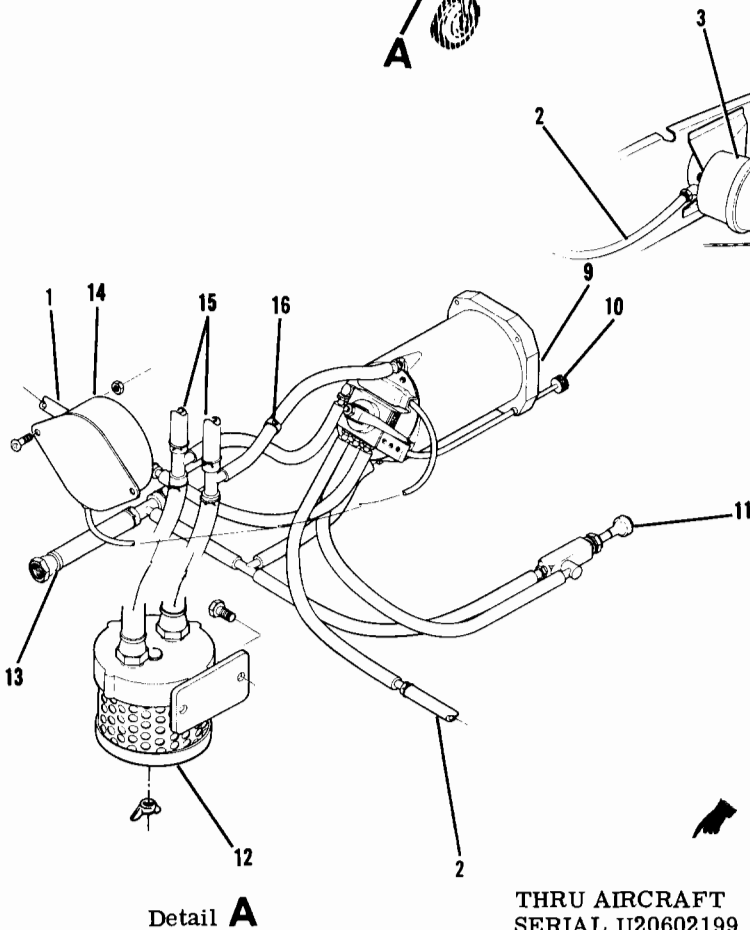
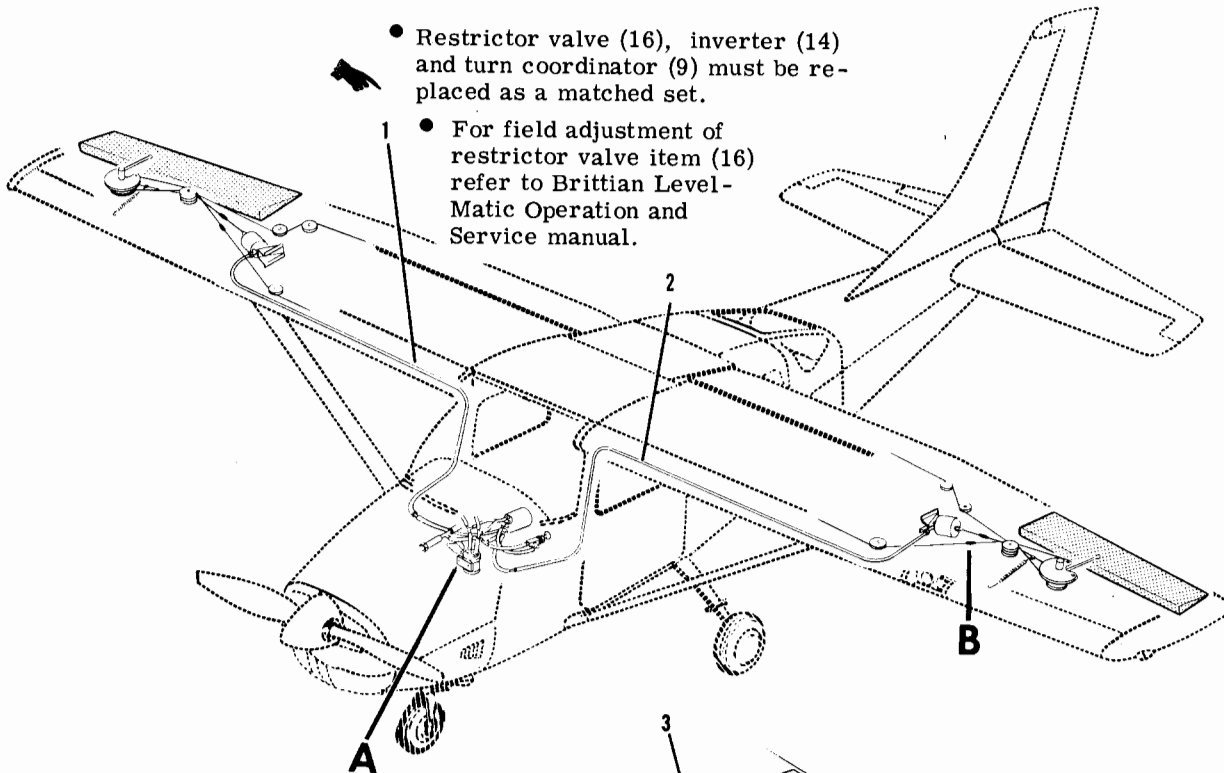
Manual override of the system may be accomplished without damage to the aircraft or system. The ON-OFF valve (11) controls vacuum supply to distributor valve, but does not affect electrically operated turn coordinator gyro. Installation of wing leveler does not change vacuum relief valve settings. Refer to appropriate publication issued by manufacturer for trouble shooting procedures.

16-71. RIGGING.

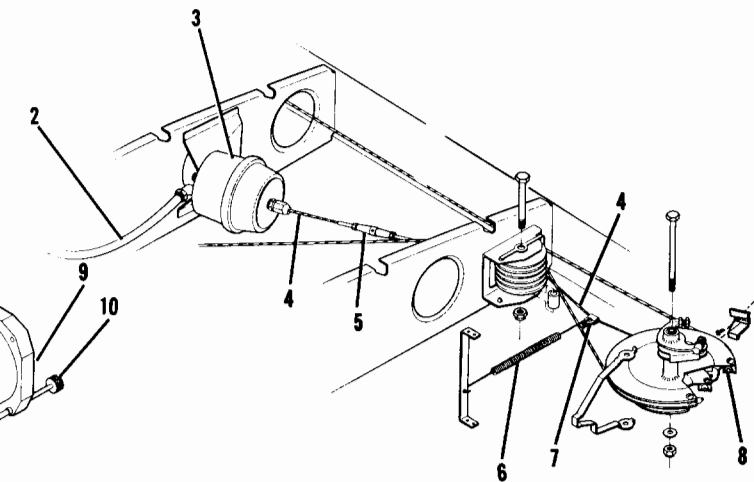
- a. Remove access plates as necessary to expose components.
- b. Check distance between clamp (7) and swaged ball (8). Adjust to 10.94 inches and tighten clamp on cable.
- c. Position aileron in full UP position.
- d. Adjust turnbuckle (5) until servo seal is fully extended but not stretched. Spring (6) should now have cable (4) and clamp (7) pulled away from its normal angle approximately one inch.

NOTE

- Restrictor valve (16), inverter (14) and turn coordinator (9) must be replaced as a matched set.
- For field adjustment of restrictor valve item (16) refer to Brittan Level-Matic Operation and Service manual.



Detail A



Detail B

1. Right Aileron Vacuum Hose
2. Left Aileron Vacuum Hose
3. Servo
4. Servo Cable
5. Turnbuckle
6. Spring
7. Clamp
8. Swaged Ball
9. Turn Coordinator
10. Roll Trim Knob
11. ON-OFF Control
12. Filter
13. Relief Valve Hose
14. Inverter
15. Gyro Hose
16. Restrictor Valve

THRU AIRCRAFT
SERIAL U20602199

Figure 16-8. Wing Leveler Control System

SECTION 17
ELECTRICAL SYSTEMS

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17-1. ELECTRICAL SYSTEMS.

17-2. GENERAL. This section contains service information necessary to maintain the Aircraft Electrical Power Supply System, Battery and External Power Supply System, Alternator Power System, Aircraft Lighting System, Pitot Heater, Stall Warning, Cigar Lighter and Electrical Load Analysis.

17-3. ELECTRICAL POWER SUPPLY SYSTEM.

17-4. DESCRIPTION. Electrical energy for the aircraft is supplied by a 14-volt or optional 24-volt, direct-current, single wire, negative ground electrical system. A single 33 Amp-Hour 12-volt battery or optional 17 Amp-Hour, 24-volt battery supplies power for starting and furnishes a reserve source of power in the event of alternator failure. An engine-driven alternator is the normal source of power during flight and maintains a battery charge controlled by a voltage regulator. An external power source receptacle is offered as optional equipment to supplement the battery alternator system for starting and ground operation.

17-5. SPLIT BUS BAR.

17-6. DESCRIPTION. Electrical power is supplied through a split bus bar. One side of the bus bar supplies power to the electrical equipment while the other side supplies the electronic installations. When the master switch is closed the battery contactor engages and battery power is supplied to the electrical side of the split bus bar. The electrical bus feeds battery power to the electronics bus through a normally-closed relay; this relay opens when the starter switch is engaged or when an external power source is used, preventing transient voltages from damaging the semiconductor circuitry in the electronic installations. (Refer to figure 17-1.)

17-7. SPLIT BUS POWER RELAY.

17-8. DESCRIPTION. A power relay is installed behind the instrument panel on all aircraft utilizing a split bus bar. The relay is a normally-closed type, opening when external power is connected or when the starter is engaged, thus removing battery power from the electronic side of the split bus bar and preventing transient voltages from damaging the electronic installations. (Refer to figure 17-1.)

17-9. MASTER SWITCH.

17-10. DESCRIPTION. On models prior to 1970, the operation of the battery and alternator system is controlled by a single master switch. The switch is a rocker type with double-pole, single-throw contacts. The switch, when operated, connects the battery contactor coil to ground and the alternator field circuit to the battery, activating the power systems. On 1970 models and on, a new master switch is utilized. This switch is an interlocking split rocker with the battery mode on the right hand side and the alternator mode on the left hand side. This arrangement allows the battery to be on the line without the alternator, however, operation of the alternator without the battery on the line is not possible. The switch is labeled "BAT" and "ALT" below the switch and is located on the left hand side of the switch panel.

17-11. AMMETER.

17-12. DESCRIPTION. The ammeter is connected

17-16. TROUBLE SHOOTING.

between the battery and the aircraft bus. The meter indicates the amount of current flowing either to or from the battery. With a low battery and the engine operating at cruise speed the ammeter will show the full alternator output when all electrical equipment is off. When the battery is fully charged and cruise RPM is maintained with all electrical equipment off, the ammeter will show a minimum charging rate.

17-13. BATTERY POWER SYSTEM.

17-14. BATTERY.

17-15. DESCRIPTION. On 14-volt systems, the battery is 12-volts and is approximately 33 ampere-hour capacity. On all 14-volt aircraft the battery is mounted on the forward, left side of the firewall.

On the 1971 & on optional 28-volt systems, the battery is 24-volts and is approximately 17 ampere-hour capacity. On 28-volt aircraft thru 1973 models the battery is mounted below the engine in the nose wheel tunnel. Beginning with 1974 models the battery is mounted on the left hand side of the firewall.

TROUBLE	PROBABLE CAUSE	REMEDY
BATTERY WILL NOT SUPPLY POWER TO BUS OR IS INCAPABLE OF CRANKING ENGINE	Battery discharged.	1. Measure voltage at "BAT" terminal of battery contactor with master switch and a suitable load such as a taxi light turned on. Normal battery will indicate 11.5 volts or more on a 14 volt system or 23 volts or more on a 28 volt system. If voltage is low proceed to step 2. If voltage is normal, proceed to step 3.
	Battery faulty.	2. Check fluid level in cells and charge 12-volt battery at 14 volts or 24-volt battery at 28 volts for approximately 30 minutes or until battery voltage rises to 14 volts on 12-volt battery or 28 volts on 24-volt battery. If tester indicates a good battery, the malfunction may be assumed to be a discharged battery. If the tester indicates a faulty battery, replace the battery.
	Faulty contactor or wiring between contactor and master switch.	3. Measure voltage at master switch terminal (smallest) on contactor with master switch closed. Normal indication is zero volts. If voltage reads zero, proceed to step 4. If a voltage reading is obtained, check wiring between contactor and master switch. Also check master switch.

17-16. TROUBLE SHOOTING. (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
BATTERY WILL NOT SUPPLY POWER TO BUS OR IS INCAPABLE OF CRANKING ENGINE (Cont.)	Open coil on contactor.	4. Check continuity between "BAT" terminal and master switch terminal of contactor. Normal indication on 14 volt aircraft is 16-24 ohms. Normal indication on 28 volt aircraft is 50-70 ohms. If ohmmeter indicates an open coil, replace contactor. If ohmmeter indicates a good coil, proceed to step 5.
	Faulty contactor contacts.	5. Check voltage on "BUS" side of contactor with master switch closed. Meter normally indicates battery voltage. If voltage is zero or intermittent, replace contactor. If voltage is normal, proceed to step 6.
	Faulty wiring between contactor and bus.	6. Inspect wiring between contactor and bus. Repair or replace wiring.

17-17. REMOVAL AND INSTALLATION OF 12 VOLT BATTERY. (Refer to figure 17-2.)

- a. To gain access to the battery, remove the upper left half of cowling.
- b. Remove the battery box lid and disconnect the battery ground cable.

CAUTION

Always remove the ground cable first and connect it last to prevent accidentally shorting the battery to the airframe with tools.

- c. Disconnect the positive cable from the battery and remove the battery from aircraft.
- d. To install a battery, reverse this procedure.

17-18. REMOVAL AND INSTALLATION OF 24 VOLT BATTERY. (Refer to figure 17-2.)

- a. Turn Master Switch to OFF position.
- b. Remove lower cowling access plate from tunnel located under the engine.
- c. Remove drain tube from battery box assembly.
- d. Remove quick disconnect cable assembly from battery box by loosening knob on the cable assembly.

CAUTION

Place a stand under the battery box and support assembly before removing the nuts, washers and bolts securing the battery support assembly to the tunnel. When these nuts, washers and bolts are removed, the complete battery and battery box support assembly will fall free from the aircraft,

thus causing damage to the battery and battery box support assembly.

- e. Remove the upper engine cowling half to gain access to the nuts, washers and bolts securing the battery support assembly and ground strap to the tunnel walls.
- f. Remove the nut securing the ground strap to the right side of the tunnel wall and push the bolt thru the tunnel hole to ensure the ground strap is free for removal.
- g. Remove three nuts and washers from each side of the tunnel which secure the battery support assembly.
- h. Inside the tunnel, remove the three bolts from each side of the tunnel which secure the battery support assembly to the tunnel walls.
- j. To reinstall the battery, reverse this procedure.

17-18A. REMOVAL AND INSTALLATION. (28 VOLT BEGINNING WITH 1974 MODELS.) (Refer to figure 17-2.)

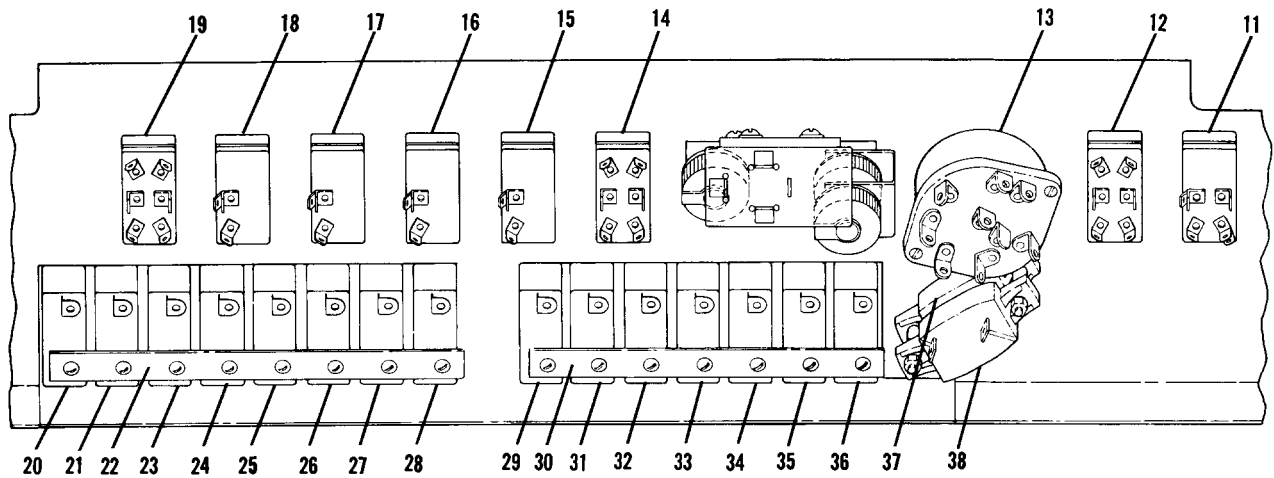
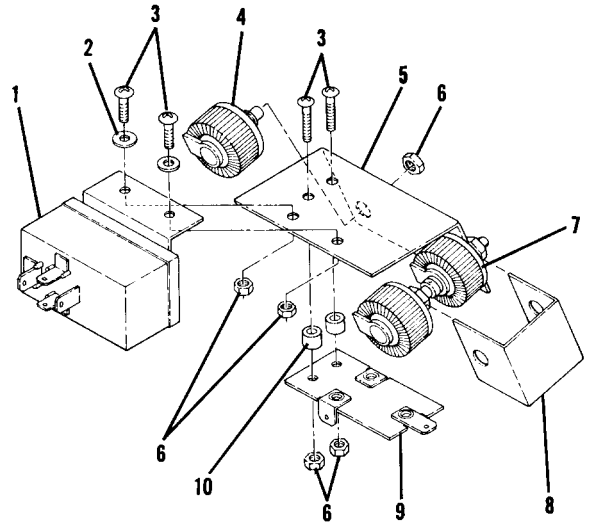
- a. To gain access to the battery, remove the upper left half of the engine cowling.
- b. Remove the battery box lid and disconnect the battery ground cable.

CAUTION

Always remove the ground cable first and connect it last to prevent accidentally shorting the battery to the airframe with tools.

- c. Disconnect the positive cable from the battery and remove the battery from the aircraft.
- d. To install the battery, reverse this procedure.

1. Split Bus Power Relay
2. Washer
3. Screw
4. Radio Light Rheostat
5. Bracket - Relay Mounting
6. Nut
7. Tandem Rheostat Assembly
8. Bracket - Rheostat Mounting
9. Diode Assembly Board
10. Spacer



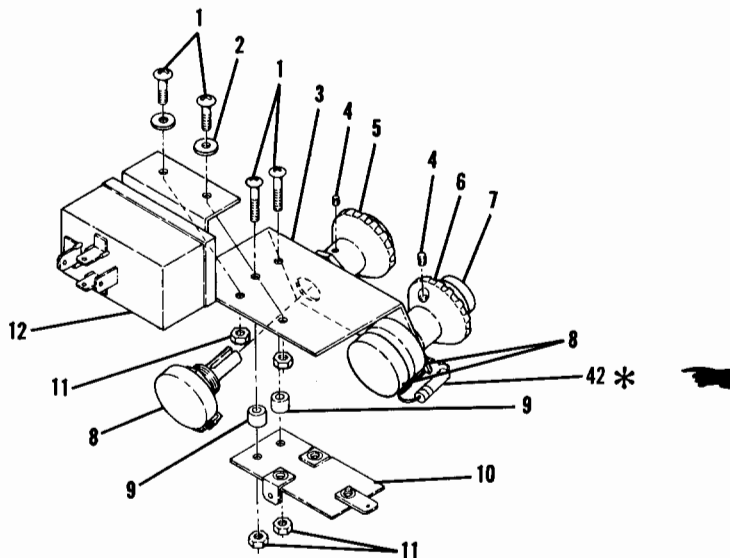
VIEWED FROM THE BACK SIDE OF THE SWITCH PANEL

- | | |
|--|---|
| <ol style="list-style-type: none"> 11. Master Switch 12. Fuel Pump Switch 13. Magneto Switch 14. Console Light Switch (Opt) 15. Oil Dilution Switch (Opt) 16. Pitot Heat Switch (Opt) 17. Navigation Light Switch 18. Flashing Beacon Light Switch 19. Landing Light Switch 20. Generator Circuit Breaker 21. Landing Light Circuit Breaker 22. Primary Bus Bar 23. Navigation Lights Circuit Breaker 24. Pitot Heat Circuit Breaker (Opt) 25. Instrument Light Circuit Breaker | <ol style="list-style-type: none"> 26. Cabin Light Circuit Breaker 27. Flap Circuit Breaker 28. Fuel Pump Circuit Breaker 29. Beacon Light Circuit Breaker 30. Electronics Bus Bar 31. Radio #4 Circuit Breaker (Opt) 32. Radio #3 Circuit Breaker (Opt) 33. Radio #2 Circuit Breaker (Opt) 34. Radio #1 Circuit Breaker (Opt) 35. Auto Pilot Circuit Breaker (Opt) 36. Audio Amp Circuit Breaker (Opt) 37. Automatic Circuit Breaker, Gen. Field 38. Automatic Circuit Breaker, Turn Coordinator and Stall Horn |
|--|---|

THRU 1969 MODELS ONLY

Figure 17-1. Split Bus Bar and Split Bus Power Relay Installation (Sheet 1 of 3)

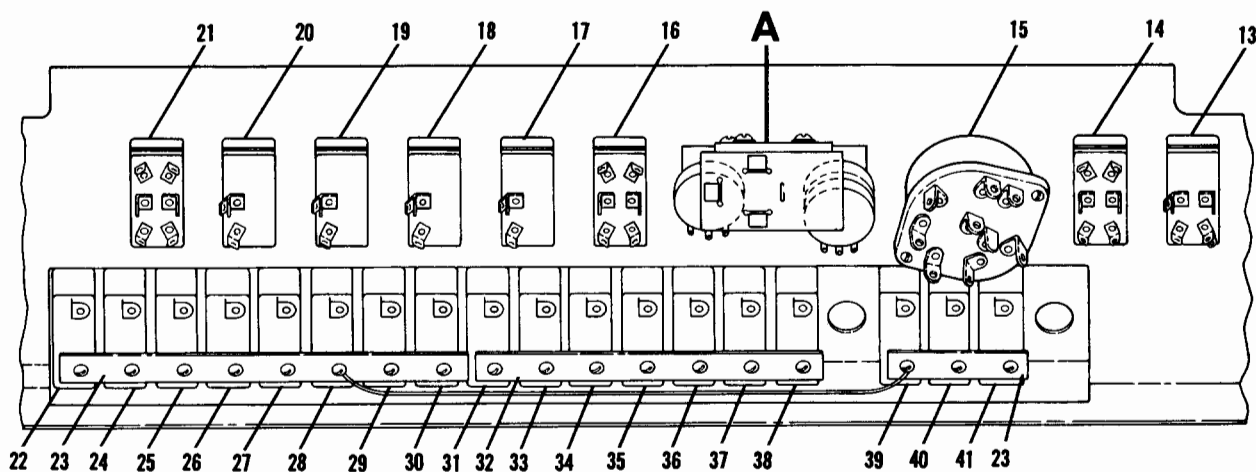
1. Screw
2. Washer
3. Bracket - Relay Mounting
4. Set Screw
5. Instrument Light Control
6. Engine - Radio Light Control
7. Lower Panel Light Control
8. Rheostat
9. Spacer
10. Diode Assembly Board
11. Nut
12. Split Bus Power Relay



*** NOTE**

Beginning with aircraft serials
P20600635 and U20601493.

Detail A



VIEWED FROM THE BACK SIDE OF THE SWITCH PANEL

- | | |
|--|---|
| 13. Master Switch | 28. Cabin Light Circuit Breaker |
| 14. Fuel Pump Switch | 29. Flap Circuit Breaker |
| 15. Magneto Switch | 30. Fuel Pump Circuit Breaker |
| 16. Console Light Switch (Opt) | 31. Flashing Beacon Light Circuit Breaker (Opt) |
| 17. Oil Dilution Switch (Opt) | 32. Electronics Bus Bar |
| 18. Pitot Heat Switch (Opt) | 33. Radio #4 Circuit Breaker (Opt) |
| 19. Navigation Light Switch | 34. Radio #3 Circuit Breaker (Opt) |
| 20. Flashing Beacon Light Switch (Opt) | 35. Radio #2 Circuit Breaker (Opt) |
| 21. Landing Light Switch | 36. Radio #1 Circuit Breaker (Opt) |
| 22. Alternator Circuit Breaker | 37. Auto Pilot Circuit Breaker (Opt) |
| 23. Primary Bus Bar | 38. Audio Amp Circuit Breaker (Opt) |
| 24. Landing Light Circuit Breaker | 39. Alt - Reg Circuit Breaker (Opt) |
| 25. Navigation Lights Circuit Breaker | 40. Turn Coordinator Circuit Breaker (Opt) |
| 26. Pitot Heat Circuit Breaker (Opt) | 41. Stall Warning Circuit Breaker (Opt) |
| 27. Instrument Light Circuit Breaker | 42. Resistor |

1970 MODELS THRU 1973

Figure 17-1. Split Bus Bar and Split Bus Power Relay Installation (Sheet 2 of 3)

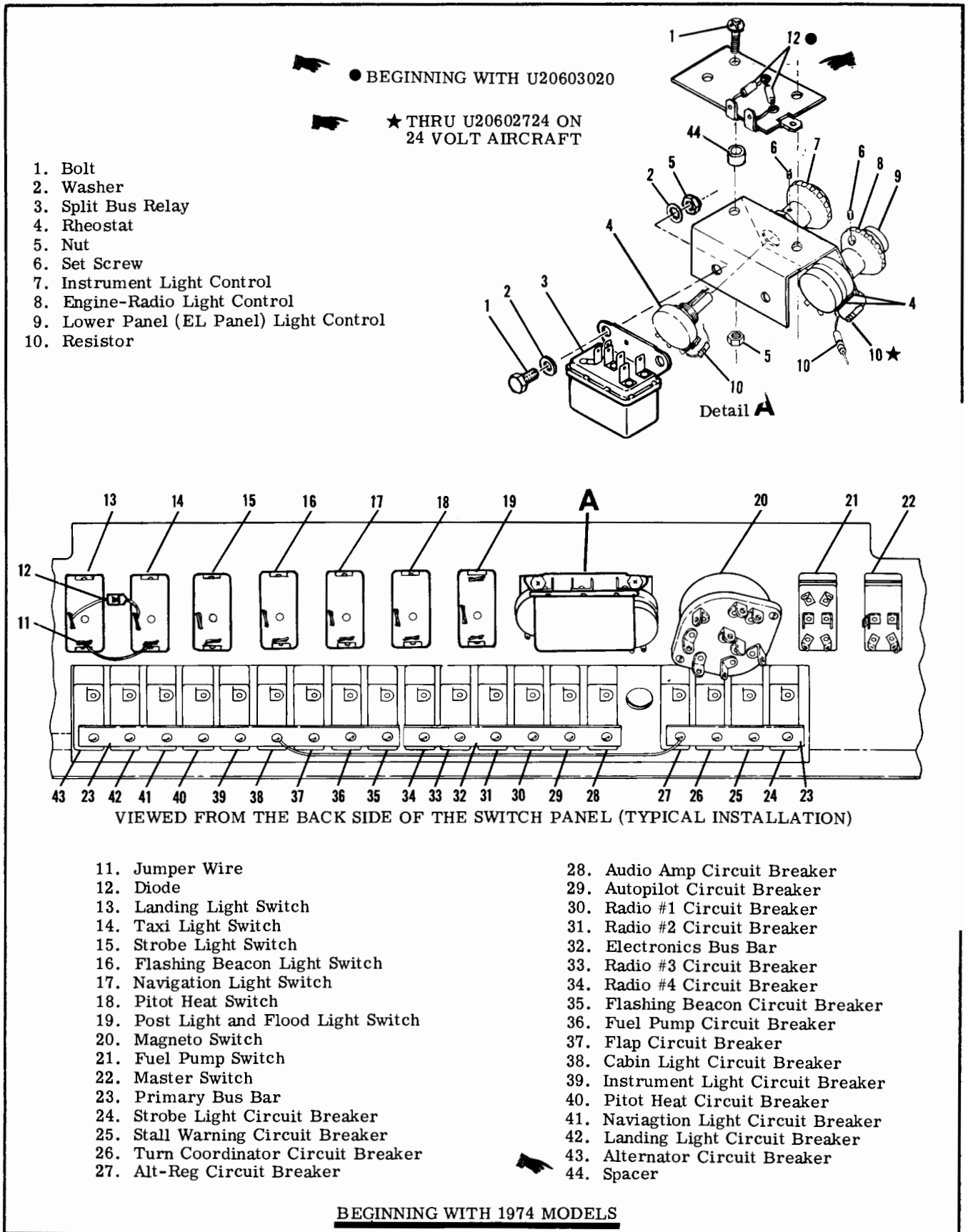
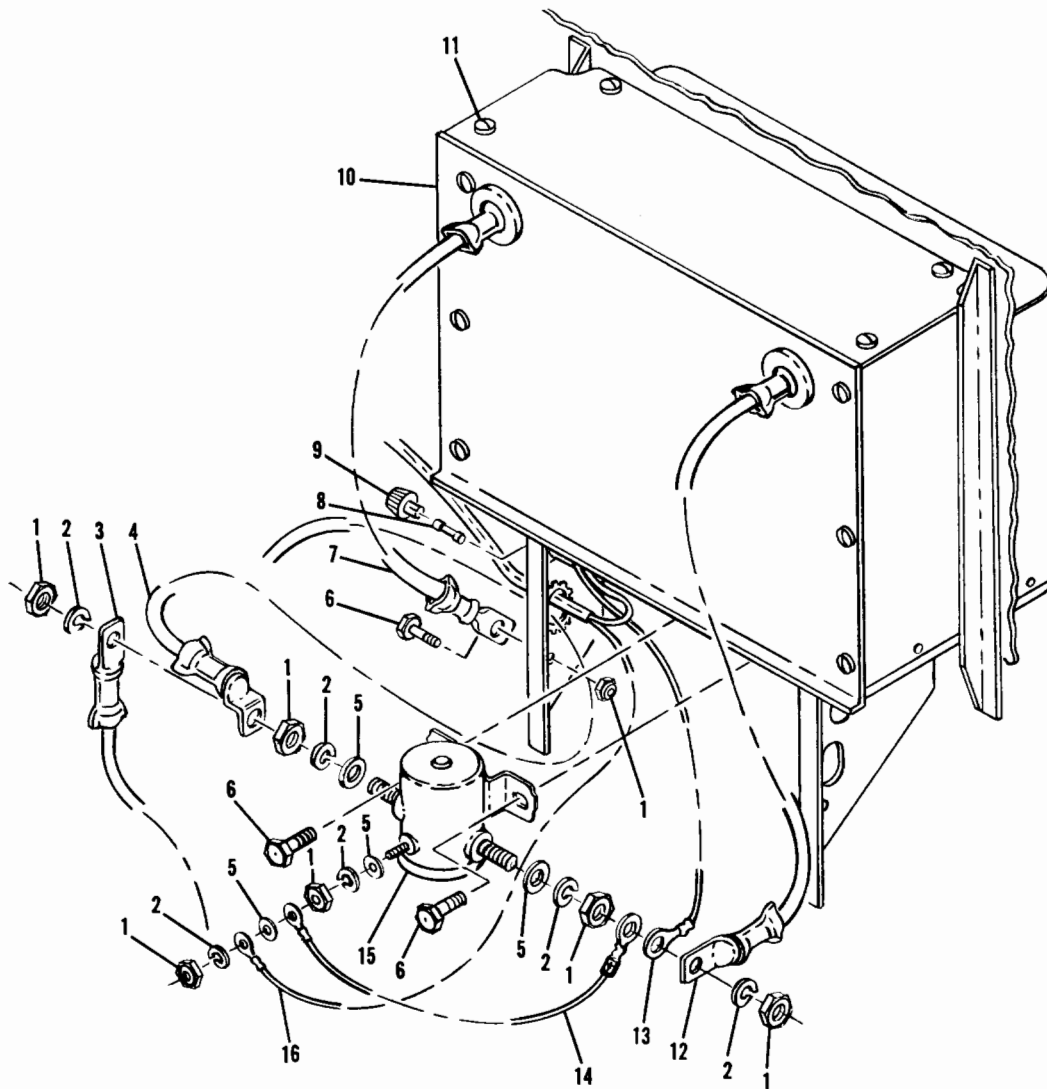


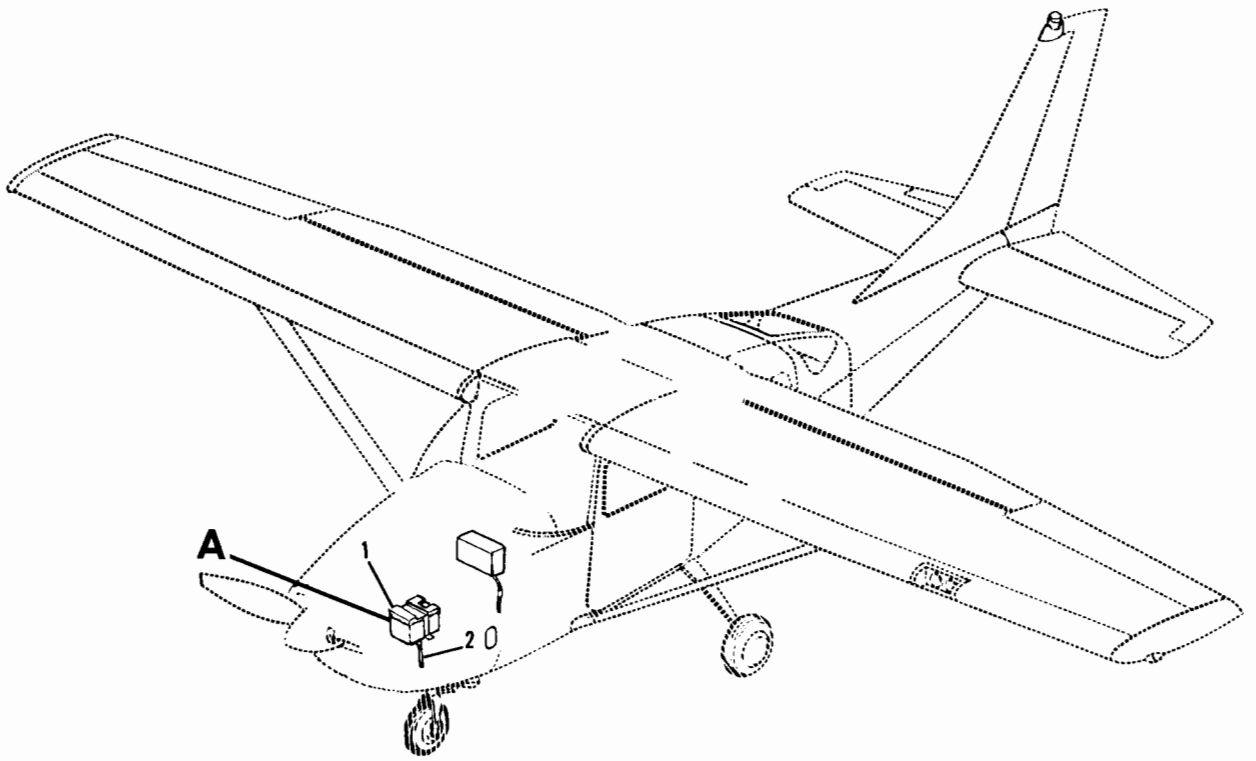
Figure 17-1. Split Bus Bar and Split Bus Power Relay Installation (Sheet 3 of 3)



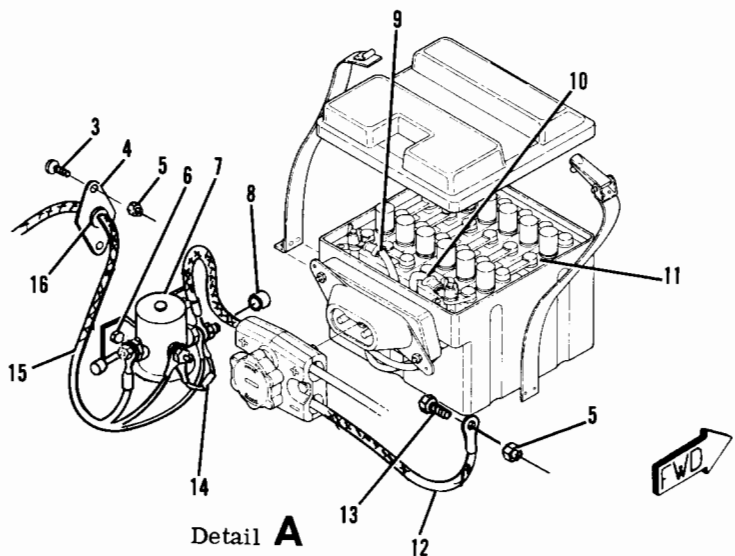
12-VOLT SYSTEMS ONLY

- | | | |
|----------------------------|-----------------|------------------------|
| 1. Nut | 6. Bolt | 12. Power Cable |
| 2. Lockwasher | 7. Ground Cable | 13. Clock Wire |
| 3. Gnd Ser Recpt Cable | 8. Fuse | 14. Diode Wire |
| 4. Starter Contactor Cable | 9. Cap-Fuse | 15. Battery Solenoid |
| 5. Washer | 10. Battery Box | 16. Master Switch Wire |
| | 11. Fasteners | |

Figure 17-2. Battery Installation (Sheet 1 of 3)



24-VOLT INSTALLATION



THRU 1973 MODELS

- | | | |
|----------------|-------------------------------|--------------------|
| 1. Battery Box | 6. Bolt | 12. Cable - Ground |
| 2. Drain Hose | 7. Contactor Assembly | 13. Bolt |
| 3. Screw | 8. Cover - Terminal | 14. Diode Assembly |
| 4. Shield | 9. Cable - Negative Terminal | 15. Cable Assembly |
| 5. Nut | 10. Cable - Positive Terminal | 16. Grommet |
| | 11. Battery | |

Figure 17-2. Battery Installation (Sheet 2 of 3)

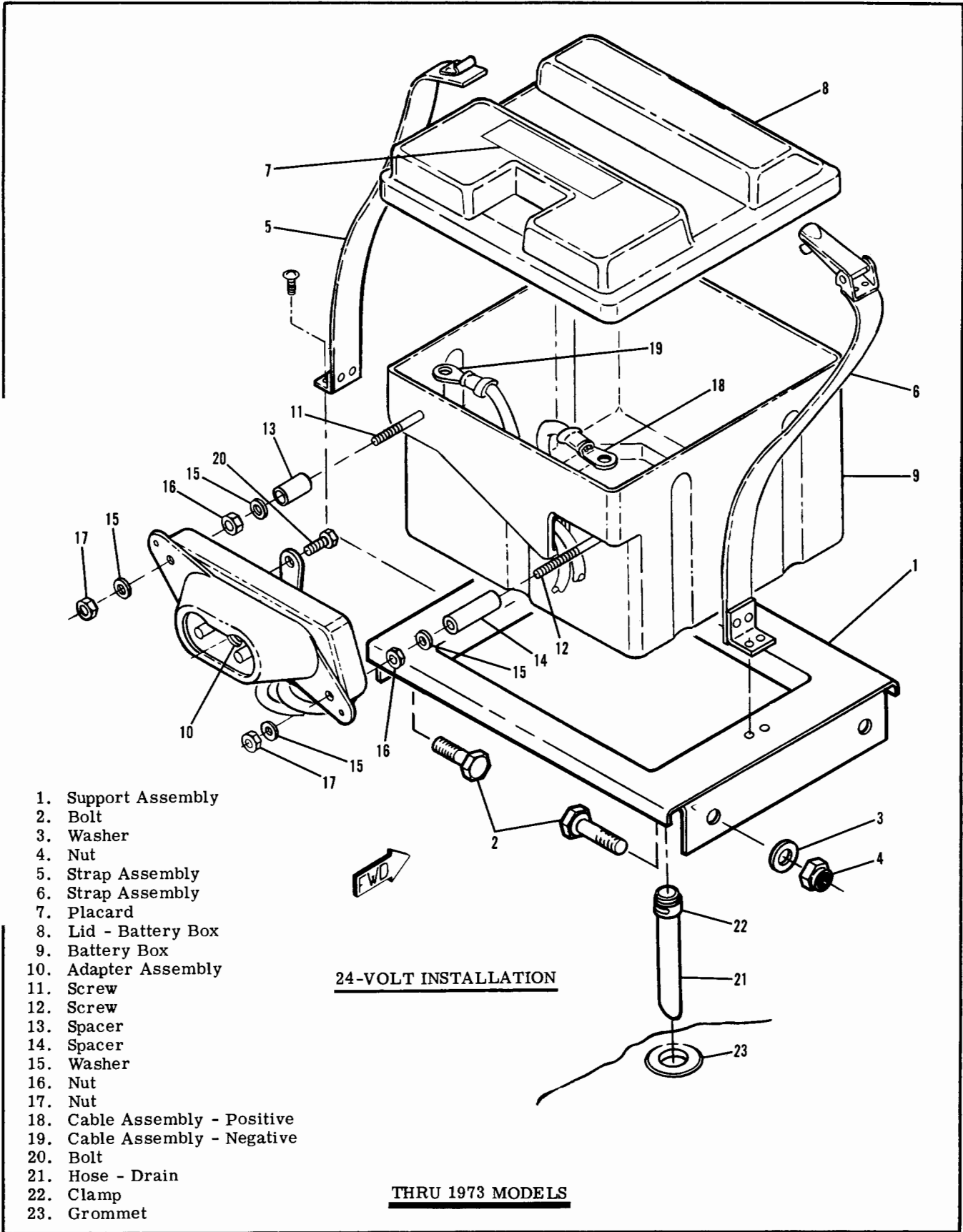
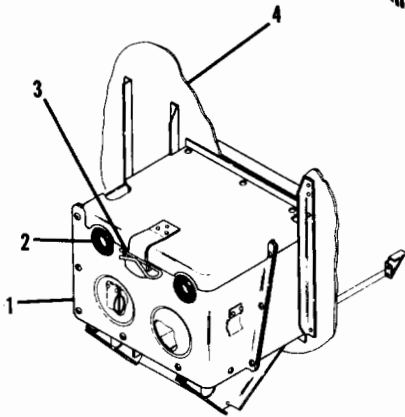
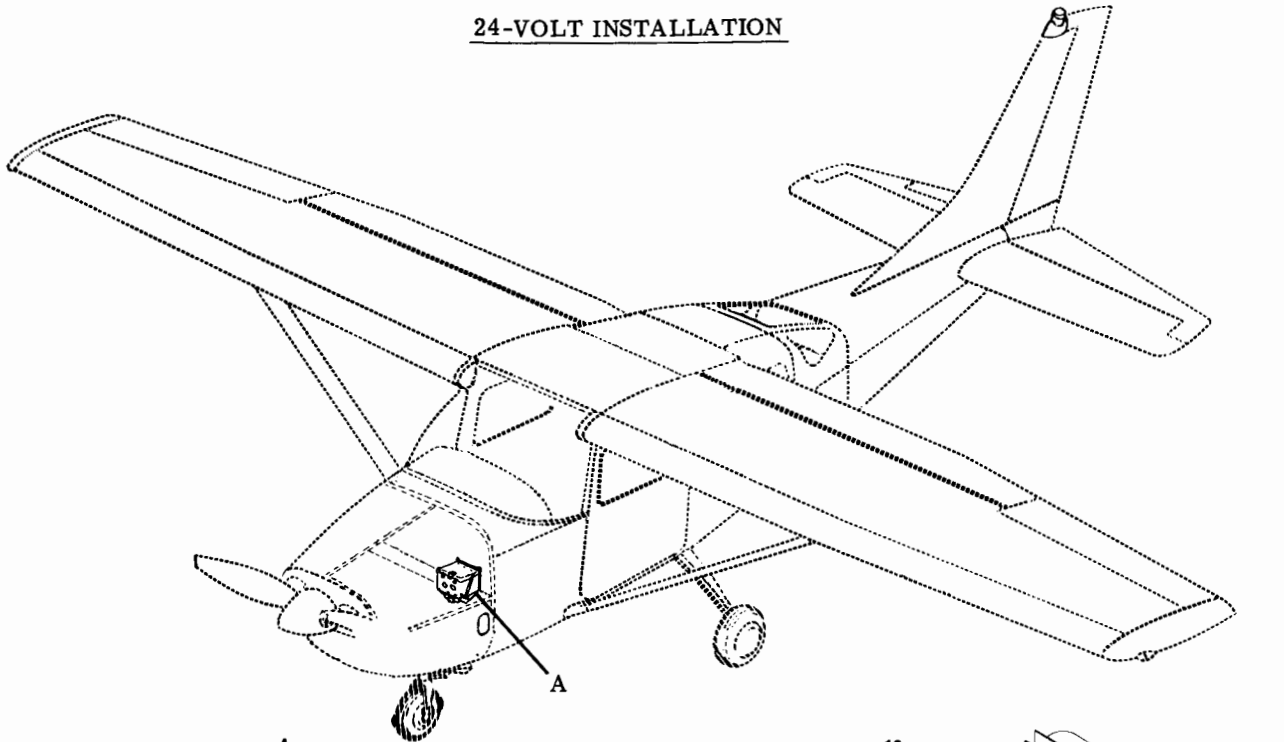
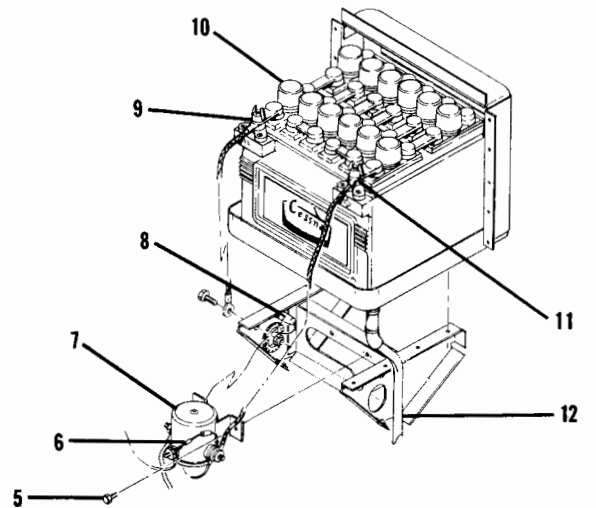


Figure 17-2. Battery Installation (Sheet 3 of 3)

24-VOLT INSTALLATION



Detail A



Detail A
(Cover Removed)

BEGINNING WITH 1974 MODELS

- 1. Battery Box
- 2. Grommet
- 3. Clip
- 4. Firewall

- 5. Bolt
- 6. Diode
- 7. Contactor
- 8. Fuse

- 9. Cable Assembly-Negative
- 10. Battery
- 11. Cable Assembly-Positive
- 12. Hose Drain

Figure 17-2. Battery Installation (Sheet 4 of 4)

17-19. **CLEANING THE BATTERY.** For maximum efficiency, the battery and connections should be kept clean at all times.

- a. Remove the battery in accordance with preceding paragraph.
- b. Tighten battery cell filler caps to prevent the cleaning solution from entering the cells.
- c. Wipe battery cable ends, battery terminals and entire surface of the battery with a clean cloth moistened with a solution of bicarbonate of soda (baking soda) and water.
- d. Rinse with clear water, wipe off excess water and allow battery to dry.
- e. Brighten up cable ends and battery terminals with emery cloth or a wire brush.
- f. Install the battery according to the preceding paragraph.
- g. Coat the battery terminals and the cable ends with petroleum jelly.

17-20. **ADDING ELECTROLYTE OR WATER TO THE BATTERY.** A battery being charged and discharged with use will decompose the water from the electrolyte by electrolysis. When the water is decomposed, hydrogen and oxygen gases are formed which escape into the atmosphere through the battery vent system. The acid in the solution chemically combines with the plates of the battery during discharge or is suspended in the electrolyte solution during charge. Unless the electrolyte has been spilled from a battery, acid should not be added to the solution. The water will decompose into gases and should be replaced regularly. Add distilled water as necessary to maintain the electrolyte level even with the horizontal baffle plate inside the battery. When "dry charged" batteries are put into service, fill as directed with electrolyte. However, as the electrolyte level falls below normal with use add only distilled water to maintain the proper level. The battery electrolyte contains approximately 25% sulphuric acid by volume. Any change in this volume will hamper the proper operation of the battery.

CAUTION

Do not add any type of "battery rejuvenator" to the electrolyte. When acid has been spilled from a battery, the acid balance may be adjusted by following instructions published by the Association of American Battery Manufacturers.

17-21. **TESTING THE BATTERY.** The specific gravity check method of testing the battery is preferred when the condition of the battery is in a questionable state-of-charge. However, when the aircraft has been operated for a period of time with an alternator output voltage which is known to be correct, the question of battery capability may be answered more correctly with a load type tester. If testing the battery is deemed necessary, the specific gravity should be checked first and compared with the following chart.

BATTERY HYDROMETER READINGS

1.280 Specific Gravity	100% Charged
1.250 Specific Gravity	75% Charged
1.220 Specific Gravity	50% Charged
1.190 Specific Gravity	25% Charged
1.160 Specific Gravity	Practically Dead

NOTE

All readings shown are for an electrolyte temperature of 80° Fahrenheit. For higher temperatures the readings will be slightly lower. For cooler temperatures the readings will be slightly higher. Some hydrometers have a built-in temperature compensation chart and a thermometer. If this type tester is used, disregard this chart.

If a specific gravity reading indicates that the battery is not fully charged, the battery should be charged on 12-volt systems at 14-volts, or on 24-volt systems at 28-volts for approximately 30 minutes, or until battery voltage rises to 14-volts on 12-volt systems or 28-volts on 24-volt systems. After charging, a load tester will give more meaningful results. A special gravity check can be used after charging but the check cannot spot cells which short under load, broken connectors between plates of a cell, etc.

17-22. **CHARGING THE BATTERY.** When the battery is to be charged, the level of electrolyte should be checked and adjusted by adding distilled water to cover the tops of the internal battery plates. The battery cables and connections should be clean.

WARNING

When a battery is charging, hydrogen and oxygen gases are generated. Accumulation of these gases can create a hazardous explosive condition. Always keep sparks and open flame away from the battery. Allow unrestricted ventilation of the battery area during charging.

The main points of consideration during a battery charge are excessive battery temperature and violent gassing. Under a reasonable rate of charge, the battery temperature should not rise over 125° F nor should gassing be so violent that acid is blown from the vents.

17-23. **BATTERY BOX.**

17-24. **DESCRIPTION.** On 12-volt aircraft, the battery is enclosed in a metal battery box which is painted with acid proof paint and is riveted to the forward side of the firewall. On 24-volt aircraft, thru 1973 models, the battery is enclosed in a acid resistant plastic box which is mounted in the tunnel

below the engine. Beginning with 1974 models the 24-volt aircraft, the battery box is mounted on the left hand firewall and constructed of metal covered with acid proof paint. On all three systems, the battery box completely encloses the battery preventing any spillage of electrolyte or accumulation of battery gases inside the aircraft. All three battery boxes are vented by a tube which attaches to the bottom of the battery box and extends downward through the bottom of the fuselage.

17-25. REMOVAL AND INSTALLATION OF 12 VOLT BATTERY BOX. (Refer to figure 17-2.) The battery box is riveted to the firewall. The rivets must be drilled out to remove the box. When a battery box is installed and riveted into place, all rivets and scratches inside the box should be painted with acid-proof lacquer, Part No. CES1054-381, available from the Cessna Service Parts Center.

17-26. REMOVAL AND INSTALLATION OF 24 VOLT BATTERY BOX. (Refer to figure 17-2.)

- a. Use paragraph 17-18 as a guide for removal and replacement of the battery box.

NOTE

If rivets are removed from battery box, new rivets should be painted with acid-proof lacquer, Part No. CES1054-381, available from the Cessna Service Parts Center.

17-27. MAINTENANCE OF BATTERY BOX. The battery box should be inspected and cleaned periodically. The box and cover should be cleaned with a strong solution of bicarbonate of soda (baking soda) and water. Hard deposits may be removed from a metal box with a wire brush or from a plastic box with a plastic scraper. When all corrosive deposits have been removed from the box, flush it thoroughly with clean water.

WARNING

Do not allow acid deposits to come in contact with skin or clothing. Serious acid burns may result unless the affected area is washed immediately with soap and water. Clothing will be ruined upon contact with battery acid.

Inspect the cleaned box and cover for physical damage and for areas lacking proper acid proofing. A badly damaged or corroded box should be replaced. If the box or lid require acid proofing, paint the area with acid-proof black lacquer, Part No. CES1054-381, available from the Cessna Service Parts Center.

17-28. BATTERY CONTACTOR.

17-29. DESCRIPTION. The battery contactor on 12-volt systems is bolted to the firewall below the battery box. Thru 1973 models on the 24 volt system the battery contactor is bolted to the tunnel wall below the engine, beginning with 1974 models on the 24 volt system the battery contactor is bolted to the battery box support bracket on the firewall. The contactor is a solenoid plunger type, which is actuated by turning the master switch on. Beginning with U20601912 a vented battery contactor is installed. When the master switch is off, the battery is disconnected from the electrical system. A silicon diode is used to eliminate spiking of the transistorized radio equipment. The cathode (+) terminal of the diode connects to the battery terminal of the battery contactor. The anode (-) terminal of the diode connects to the same terminal on the contactor as the master switch wire. This places the diode directly across the contactor solenoid coil so the inductive spikes originating in the coil are clipped when the master switch is opened. Refer to figure 17-2 for pictorial installation of the battery contactor and diode.

17-30. REMOVAL AND INSTALLATION. (Refer to figure 17-2.)

- a. On 12-volt aircraft and 24-volt aircraft beginning with 1974 models, open battery box and disconnect negative battery terminal. Pull cable clear of aircraft.
- b. On 24-volt aircraft thru 1973 models, remove the quick disconnect cable assembly from the battery box by loosening the knob on the cable assembly.
- c. Refer to figure 17-2 as a guide for removal and installation.
- d. For installation of battery contactor, reverse this procedure.
 - a. On 12-volt aircraft, open battery box and disconnect negative battery terminal. Pull cable clear of aircraft.
 - b. On 24-volt aircraft, remove the quick disconnect cable assembly from the battery box by loosening the knob on the cable assembly.
 - c. Refer to figure 17-2 and use as a guide for removal.
 - d. For replacement of battery contactor, reverse this procedure.

17-31. BATTERY CONTACTOR CLOSING CIRCUIT.

17-32. DESCRIPTION. This circuit consists of a fuse, a resistor and a diode mounted on the ground service receptacle bracket. This serves to shunt a small charge around the battery contactor so that ground power may be used to close the contactor when the battery is too dead to energize the contactor by itself. Refer to figure 17-3.

17-33. GROUND SERVICE RECEPTACLE.

17-34. DESCRIPTION. A ground service receptacle is installed to permit the use of external power for cold weather starting or when performing lengthy electrical maintenance. A reverse polarity protection system is utilized whereby ground power must pass through an external power contactor to be connected to the bus. A silicon junction diode is connected in series with the coil on the external power contactor so that if the ground power source is inadvertently connected with a reversed polarity, the external power contactor will not close. This feature protects the diodes in the alternator, and other semiconductor devices used in the aircraft, from possible reverse polarity damage.

NOTE

Maintenance of the electronic installations cannot be performed when using external power. Application of external power opens the relay supplying voltage to the electronics bus. For lengthy ground testing of electronics systems, connect a well regulated and filtered power supply directly to the battery side of the battery contactor. Adjust the supply for 14-volts on 12-volt systems or 28-volt on 24-volt systems and close the master switch.

NOTE

When using ground power to start the aircraft, close the master switch before removing the ground power plug. This will ensure closure of the battery contactor and excitation of the alternator field in the event that the battery is completely dead.

CAUTION

Failure to observe polarity when connecting an external power source directly to the battery or directly to the battery side of the battery contactor, will damage the diodes in the alternator and other semiconductor devices in the aircraft.

WARNING

External power receptacle must be functionally checked after wiring, or after replacement of components of the external power or split bus systems. Incorrect wiring or malfunctioned components can cause immediate engagement of starter when ground service plug is inserted.

17-35. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
STARTER ENGAGES WHEN GROUND POWER IS CONNECTED.	Shorted or reversed diode in split bus-bar system.	Check wiring to, and condition of diode mounted on the split bus relay bracket adjacent to the magneto switch. Correct wiring. Replace diode board assembly.
GROUND POWER WILL NOT CRANK ENGINE.	Ground service connector wired incorrectly.	1. Check for voltage at all three terminals of external power contactor with ground power connected and master switch off. If voltage is present on input and coil terminals but not on the output terminal, proceed to step 4. If voltage is present on the input terminal but not on the coil terminal, proceed to step 2. If voltage is present on all three terminals, check wiring between contactor and bus.
		2. Check for voltage at small terminal of ground service receptacle. If voltage is not present, check ground service plug wiring. If voltage is present, proceed to step 3.

17-35. TROUBLE SHOOTING. (Cont).

TROUBLE	PROBABLE CAUSE	REMEDY
GROUND POWER WILL NOT CRANK ENGINE. (Cont).	Open or mis-wired diode on ground service diode board assembly.	3. Check polarity and continuity of diode on diode board at rear of ground service receptacle. If diode is open or improperly wired, replace diode board assembly.
	Faulty external power contactor.	4. Check resistance from small (coil) terminal of external power contactor to ground (master switch off and ground power unplugged). Normal indication is 16-24 ohms. on 12-volt system or 50-70 ohms on the 24-volt systems. If resistance indicates an open coil, replace contactor. If resistance is normal, proceed to step 5.
	Faulty contacts in external power contactor.	5. With master switch off and ground power applied, check for voltage drop between two large terminals of external power (turn on taxi light for a load). Normal indication is zero volts. If voltage is intermittently present or present all the time, replace contactor.

17-36. REMOVAL AND INSTALLATION. (Refer to figure 17-3.)

- a. On 12-volt systems, open the battery box and disconnect the ground cable from the negative terminal of the battery and pull the cable free of the box.
- b. On 24-volt systems, remove the quick-disconnect cable assembly from the battery box assembly by loosening the knob on the cable assembly.
- c. Remove the nuts, washers, ground strap, bus bar and diode board from the studs of the receptacle and remove battery cable.
- d. Remove the screws and nuts holding the receptacle; ground strap will then be free from the bracket.
- e. To install a ground service receptacle, reverse this procedure.

17-37. ALTERNATOR POWER SYSTEM.

17-38. DESCRIPTION. The alternator system consists of an engine driven alternator, a voltage regulator and a circuit breaker located on the instrument panel. The system is controlled by the left hand portion of the split rocker, master switch labeled ALT. Beginning with 1972 models an over-voltage sensor switch and red warning light labeled HIGH VOLTAGE are incorporated to protect the system, (refer to paragraph 17-57). The aircraft battery supplies the source of power for excitation of the alternator.

17-39. ALTERNATOR.

17-40. DESCRIPTION. The 60-ampere alternator used on the aircraft are three-phase, delta connected with integral silicon diode rectifiers. The alternator is rated at 14-volts or 28-volts at 60-amperes continuous output. The moving center part of the alternator (rotor) consists of an axial winding with radial interlocking poles which surround the winding.

With excitation applied to the winding through slip rings the pole pieces assume magnetic polarity. The rotor is mounted in bearings and rotates inside the stator which contains the windings in which the ac current is generated. The stator windings are three-phase, delta connected and are attached to two diode plates, each of which contains three silicon diodes. The diode plates are connected to accomplish full-wave, rectification of the ac. The resulting dc output is applied to the aircraft bus and sensed by the voltage regulator. The regulator controls the excitation applied to the alternator field thus controlling the output voltage of the alternator.

17-41. ALTERNATOR REVERSE VOLTAGE DAMAGE. The alternator is very susceptible to reverse polarity damage due to the very low resistance of the output windings and the low resistance of the silicon diodes in the output. If a high current source, such as a battery or heavy duty ground power cart is attached to the aircraft with the polarity inadvertently reversed, the current through the alternator will flow almost without limit and the alternator will be immediately damaged.

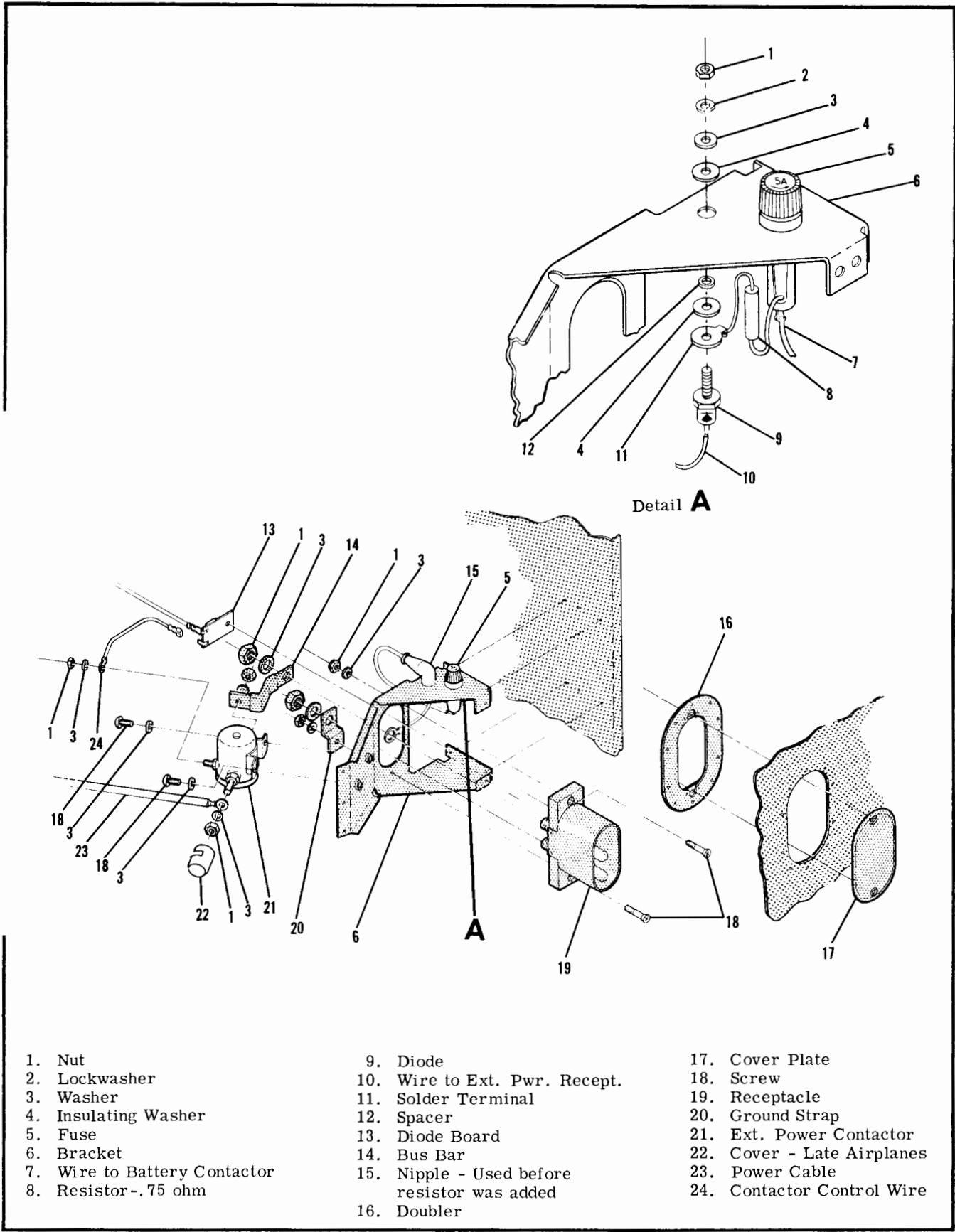


Figure 17-3. Ground Service Receptacle Installation

17-42. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
<p>AMMETER INDICATES HEAVY DISCHARGE WITH ENGINE NOT RUNNING OR ALTERNATOR CIRCUIT BREAKER OPENS WHEN MASTER SWITCH IS TURNED ON.</p>	<p>Shorted field in alternator.</p>	<p>1. Remove plug from regulator with master switch on and observe if heavy drain persists. If heavy drain is reduced, proceed to step 2. If heavy drain is not reduced, proceed to step 3.</p> <p>2. Check resistance from terminal "F" on alternator to the alternator case. Normal indication on 12-volt systems is 6-7 ohms of 11-12 ohms on 24-volt systems. If resistance is too low, repair or replace alternator.</p>
	<p>Shorted radio noise filter or shorted wire.</p>	<p>3. Remove cable from output terminal of alternator. Check resistance from end of cable to ground (MASTER SWITCH MUST BE OFF). If resistance does not indicate a direct short, proceed to step 6. If resistance indicates a direct short, proceed to step 4.</p> <p>4. Remove cable connections from radio noise filter. Check resistance from the filter input terminal to ground. Normal indication is infinite resistance. If reading indicates a direct short, replace filter. If no short is evident, proceed to step 5.</p> <p>5. Check resistance from ground to the free ends of the wires which were connected to the radio noise filter (or alternator if no noise filter is installed). Normal indication does not show a direct short. If a short exists in wires, repair or replace wiring.</p>
	<p>Shorted diodes in alternator.</p>	<p>6. Check resistance from output terminal of alternator to alternator case. Reverse leads and check again. Resistance reading may show continuity in one direction but should show an infinite reading in the other direction. If an infinite reading is not obtained in at least one direction, repair or replace alternator.</p>

17-42. TROUBLE SHOOTING (Cont).

TROUBLE	PROBABLE CAUSE	REMEDY
<p>ALTERNATOR SYSTEM WILL NOT KEEP BATTERY CHARGED.</p>	<p>Regulator faulty or improperly adjusted.</p>	<p>1. Start engine and adjust for 1500 RPM. Ammeter should indicate a heavy charge rate with all electrical equipment turned off. Rate should taper off in 1-3 minutes. On 12-volt aircraft a voltage check at the bus should indicate a reading consistent with the voltage vs temperature chart on page 17-19. If charge rate tapers off very quickly and voltage is normal, check battery for malfunction. If ammeter shows a low charge rate or any discharge rate, and voltage is low, proceed to step 2.</p> <p>2. Stop engine, remove cowl, and remove cover from voltage regulator. Turn master switch ON/OFF several times and observe field relay in regulator. Relay should open and close with master switch and small arc should be seen as contacts open. If relay is inoperative, proceed to step 3. If relay operates, proceed to step 4.</p> <p>3. Check voltage at "S" terminal of regulator with master switch closed. Meter should indicate bus voltage. If voltage is present, replace regulator. If voltage is not present, check wiring between regulator and bus.</p> <p>4. Remove plug from regulator and start engine. Momentarily jumper the "A+" and "F" terminals together on the plug. Aircraft's ammeter should show heavy rate of charge. If heavy charge rate is observed, replace regulator. If heavy charge rate is not observed, proceed to step 5.</p>
	<p>Faulty wiring between alternator and regulator, or faulty alternator.</p>	<p>5. Check resistance from "F" terminal of regulator to "F" terminal of alternator. Normal indication is a very low resistance. If reading indicates no, or poor continuity, repair or replace wiring from regulator to alternator.</p>

17-42. TROUBLE SHOOTING. (Cont).

TROUBLE	PROBABLE CAUSE	REMEDY
ALTERNATOR SYSTEM WILL NOT KEEP BATTERY CHARGED. (Cont).	Faulty wiring between alternator and regulator, or faulty alternator. (Cont).	<p>6. Check resistance from "F" terminal of alternator to alternator case. Normal indication on 12-volt systems is 6-7 ohms or 11-12 ohms on 24-volt systems. If resistance is high or low, repair or replace alternator.</p> <p>7. Check resistance from case of alternator to airframe ground. Normal indication is very low resistance. If reading indicates no, or poor continuity, repair or replace alternator ground wiring.</p>
ALTERNATOR OVERCHARGES BATTERY - BATTERY USES EXCESSIVE WATER.	Regulator faulty or improperly adjusted.	Check bus voltage with engine running. Normal indication agrees with voltage vs temperature chart on page 17-13. Observe aircraft's ammeter, ammeter should indicate near zero after a few minutes of engine operation. Replace regulator.
OVER-VOLTAGE WARNING LIGHT STAYS ON. (24-VOLT).	<p>Faulty regulator.</p> <p>Over-voltage relay out of adjustment.</p> <p>Faulty over-voltage relay.</p> <p>Faulty field wiring.</p>	<p>Reset over-voltage relay by turning master switch (ALT side) off and on. Check regulator by replacement. Replace regulator.</p> <p>Warning light comes on without over-voltage. Adjust over-volt relay assembly, thru 1973 models.</p> <p>Repair or replace. Substitute relay.</p> <p>Test wiring - look for field wire shorted to primary voltage. Repair.</p>
OVER-VOLTAGE WARNING LIGHT ON. (12 VOLT)	Regulator faulty or improperly adjusted. Faulty sensor switch.	1. With engine running turn off and on battery portion of the master switch. If the light stays on shut down engine then turn on the "BAT" and "ALT" portions of the master switch. Check for voltage at the "S" terminal of the voltage regulator. If voltage is present adjust or replace regulator. If voltage is not present check master switch and wiring for short or open condition. If wiring and switch are normal replace sensor.

17-43. REMOVAL AND INSTALLATION. (Refer to figure 17-4.)

- a. Make sure that the master switch remains in the off position or disconnect the negative lead from the battery.
- b. Disconnect the wiring from the alternator.
- c. Remove the safety wire from the upper adjusting bolt and remove the bolt from the alternator.
- d. Remove the nut and washer from the lower mounting bolt.
- e. Remove the alternator drive belt and lower mounting bolt to remove the alternator.
- f. To replace alternator, reverse this procedure.
- g. Adjust belt tension to obtain 3/8" deflection at the center of the belt when applying 12 pounds pressure to the belt. After belt is adjusted and bolt is safety wired, tighten the bottom bolt to 100-140 lb.in. torque to remove any play between alternator mounting foot and the U-shaped support assembly.

CAUTION

When new belt is installed, belt tension should be checked within 10 to 25 hours of operation.

NOTE

When tightening the alternator belt, apply pry bar pressure only to the end of the alternator nearest to the belt pulley.

17-44. ALTERNATOR FIELD CIRCUIT PROTECTION. On models prior to 1970, a 2-amp automatic resetting circuit breaker located on the back of the instrument panel is provided to protect the alternator field circuit. On 1970 models and on, a manually-

resettable circuit breaker located on the switch panel is provided to protect the alternator field circuit.

17-45. ALTERNATOR VOLTAGE REGULATOR. 12 VOLT AIRCRAFT ONLY.

17-46. DESCRIPTION. The alternator voltage regulator contains two relays. The field relay is actuated by the aircraft master switch and connects the regulator to the battery. The voltage limiter relay is a two-stage, voltage sensitive device, which is used to control the current applied to the field winding of the alternator. When the upper set of contacts on the voltage regulator relay are closed, full bus voltage is applied to the field. This condition will exist when the battery is being heavily charged or when a very heavy load is applied to the system. When the upper contacts open, as the voltage begins to rise toward normal bus voltage, the voltage to the alternator field is reduced through a resistor network in the base of the regulator, thus reducing the output from the alternator. As the voltage continues to rise, assuming a very light load on the system, the lower contacts will close and ground the alternator field and shut the alternator completely off. Under lightly loaded conditions the voltage relay will vibrate between the intermediate charge rate and the lower (completely off) contacts. Under a moderate load, relay will vibrate between intermediate charge and upper (full output) contacts. The voltage relay is temperature compensated so that the battery is supplied with the proper charging voltage for all operating temperatures. With the battery fully charged (ship's ammeter indicating at or near zero) and a moderate load applied to the system (a taxi light turned on), the voltage at the bus bar should be within the range shown according to the air tem-

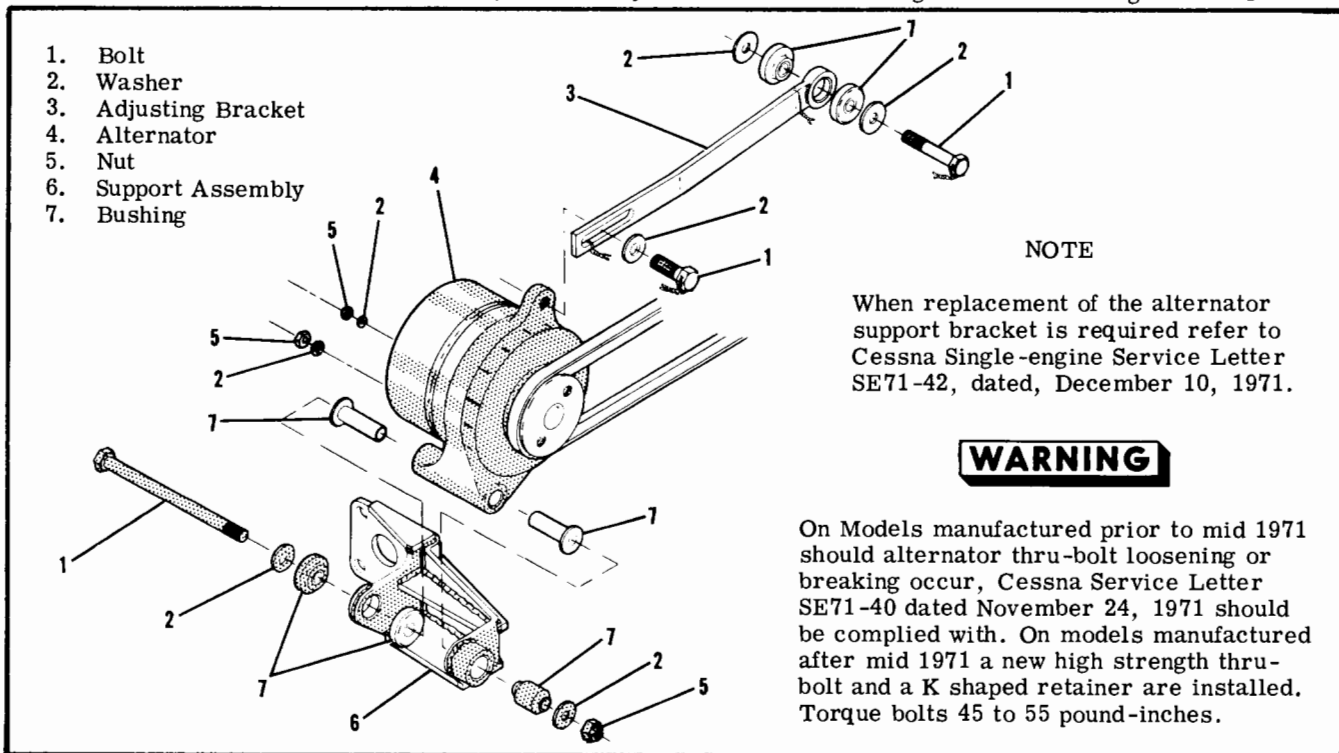


Figure 17-4. Alternator Installation

perature on the temperature and bus voltage chart.

Beginning with U20602200 a solid state voltage regulator is installed. The Voltage Limiter relay in this regulator is replaced by a circuit board. The regulator is a remove and replace item and not repairable. The regulator may be adjusted by removing the cover and adjusting the potentiometer either up or down.

12-VOLT SYSTEM	
TEMPERATURE	BUS VOLTAGE
60 - 75°F	13.8 - 14.1
75 - 90°F	13.7 - 14.0
91 - 100°F	13.6 - 13.9

The voltage regulator is adjustable but adjustments on the aircraft is not recommended. A bench adjustment procedure is outlined in the Cessna Alternator Charging Systems Service/Parts Manual.

17-47. TRANSISTORIZED VOLTAGE REGULATOR. (24-VOLT AIRCRAFT ONLY.)

17-48. DESCRIPTION. The transistorized voltage regulator controls the alternator output in a similar manner to a mechanical voltage regulator: by regulating the alternator field current. The regulation is accomplished electronically with the use of transistors and diodes rather than by a vibrating armature relay. The voltage sensing component is a zener diode which has the characteristic of suddenly changing its resistance when a specified voltage is reached.

When the engine is started, battery current is supplied to the field through a "bias" diode, and power transistor. The bias diode aids high temperature stability of the power transistor. A second diode, connected from the field terminal to common ground, absorbs undesirable field voltage peaks more efficiently than the resistor used in electro-mechanical regulators. As the alternator begins to supply current, battery voltage will increase. When battery voltage reaches approximately 28 volts, the zener diode suddenly reduced its resistance and turns on the driver transistor. When the driver transistor turns on, the power transistor is caused to turn off. Battery voltage is reduced slightly because the alternator output was reduced when the power transistor turned off the field current. Zener diode voltage is reduced at the same time as battery voltage, causing the zener diode to increase its resistance and turn off the driver transistor. The power transistor is caused to turn on again, resulting in a complete cycle of events. The transistors alternate in the on-off action. When the driver transistor turns on the power transistor turns off.

The temperature compensating resistor is made of a special material that changes its resistance with temperature in such a manner that during cold weather the battery charging voltage is increased. This resistor performs the same function as the bimetal hinge on the voltage limiter armature of a mechanical regulator.

Transistor regulator calibration can be changed by screwdriver adjustment of potentiometer. Adjusting the potentiometer performs the same function as adjusting the voltage limiter armature spring tension on a mechanical regulator.

A capacitor, in series with two resistors, causes the driver transistor and the power transistor to switch on and off faster, for proper flip-flop action.

The remaining resistors in the unit provide proper operating voltages for the zener diode and the two transistors.

17-49. TRANSISTORIZED REGULATOR ADJUSTMENTS - 24 VOLT AIRCRAFT ONLY. Regulator voltage limiter adjustments.

The only adjustment on the transistorized alternator regulator is the voltage limiter adjustment. The voltage setting can be tailored to meet the requirements of a given aircraft in order to maintain proper battery specific gravity. Never shift the voltage setting by more than 0.3 volt from the previous setting. Always allow an adequate time interval between each new voltage setting in order to obtain an accurate reading of battery specific gravity.

NOTE

Clockwise adjustment decreases voltage and counterclockwise adjustment increases voltage. Refer to the Cessna Alternator Charging Systems Manual for bench testing.

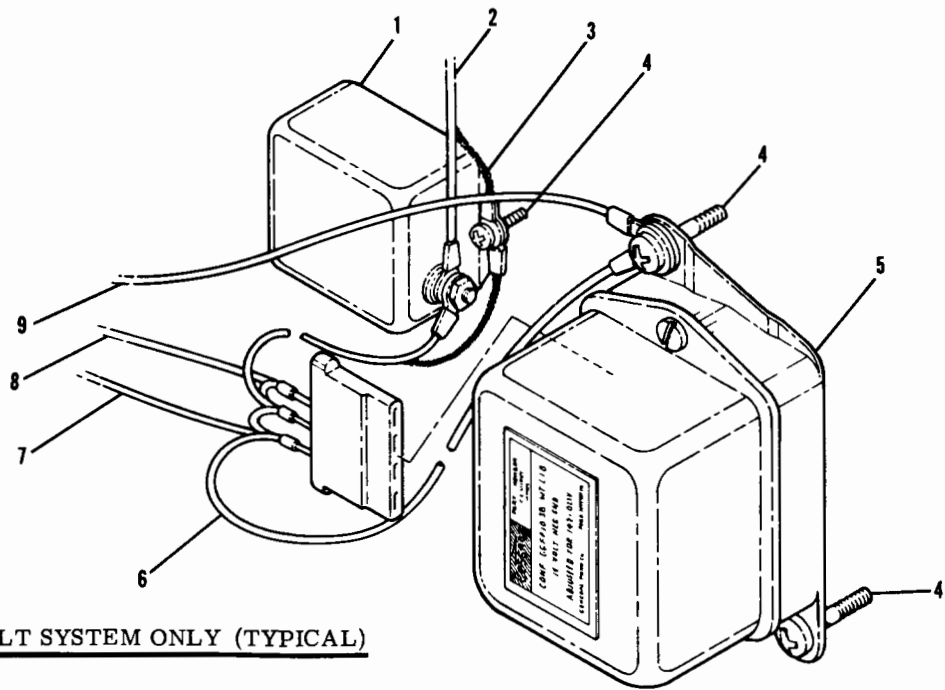
17-50. TROUBLE SHOOTING THE VOLTAGE REGULATOR. For trouble shooting the voltage regulator, refer to paragraph 17-42.

17-51. REMOVAL AND INSTALLATION - 12-VOLT AIRCRAFT ONLY (Refer to Figure 17-5.)

- Make sure that the master switch is off or disconnect the negative lead from the battery.
- Remove the connector plug from the regulator.
- Remove two screws holding the regulator on the firewall.
- To replace the regulator, reverse this procedure. Be sure that the connections for grounding the alternator, wiring shields and the base of the regulator are clean and bright before assembly. Otherwise, poor voltage regulation and/or excessive radio noise may result.

17-52. REMOVAL AND INSTALLATION OF TRANSISTORIZED VOLTAGE REGULATOR - 24-VOLT AIRCRAFT ONLY.

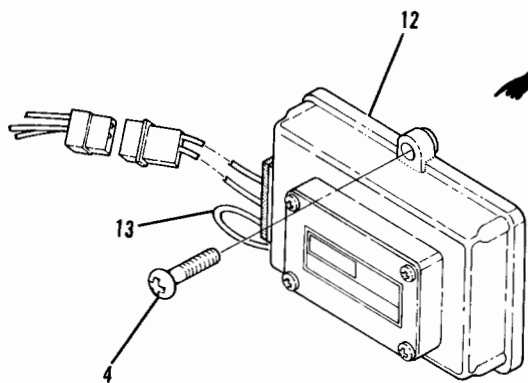
- Ensure that the master switch is off.
- Remove the quick-disconnect cable assembly from the battery box assembly by loosening the knob on the cable assembly.
- Remove the upper cowling to gain access to the regulator mounted on the forward left side of the firewall.
- Disconnect wiring from regulator and label wires.
- Remove the three mounting bolts and nuts.
- To replace the regulator, reverse this procedure.



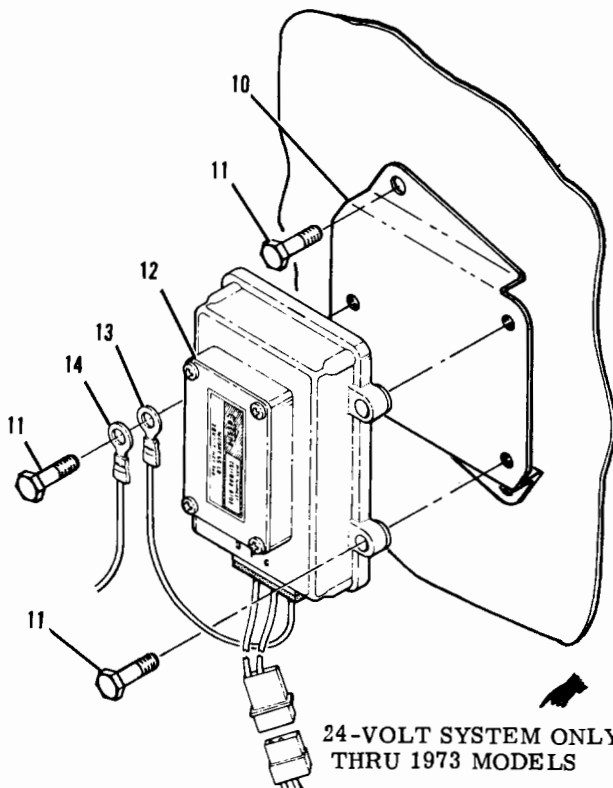
12-VOLT SYSTEM ONLY (TYPICAL)

NOTE

Beginning with 1974 Models a solid state voltage regulator is installed on the 12 volt system.



**24-VOLT SYSTEM ONLY
BEGINNING WITH 1974
MODELS.**



**24-VOLT SYSTEM ONLY
THRU 1973 MODELS**

- 1. Filter - Radio Noise
- 2. Wire to Master Switch
- 3. Shield - Ground
- 4. Screw
- 5. Voltage Regulator

- 6. Wire Shields to Ground
- 7. Wire to Alternator "F"
- 8. Wire to Alternator "A+"
- 9. Wire to Alternator Ground

- 10. Support Assembly - Regulator
- 11. Bolt
- 12. Alternator Regulator
- 13. Regulator Ground Wire
- 14. Alternator Ground Wire

Figure 17-5. Voltage Regulator Installation

17-53. OVER-VOLTAGE WARNING CIRCUIT - 24-VOLT AIRCRAFT ONLY. (Refer to Figure 17-6.)

17-54. DESCRIPTION. Thru 1973 models the over-voltage warning system consists of a relay assembly, condenser and red indicator light. The relay is voltage sensitive, opening the alternator field circuits and turning on a red warning light if excessive voltage is present. Simultaneously with lamp illumination, the alternator will automatically shut down. To turn the over-volt light out, the ALT side of the master switch must be turned OFF and then back ON to reset the system. Monitor the output of the alternator on the ammeter and shut off enough electronic equipment to bring the reading below full scale. Beginning with 1974 models the system operation remains the same except the relay and capacitor are replaced by a new type relay. This relay is a remove and replace item and not adjustable.

17-55. ADJUSTMENT OF OVER-VOLTAGE RELAY ASSEMBLY. (THRU 1973 MODELS, 24 VOLT). Connect a well filtered D. C. supply to terminals E (negative) and B (positive) of the relay. Connect a 28 volt light bulb between terminals B and F of the relay. Increase the voltage of the supply until the lamp lights. The lamp should come on when the power supply voltage reaches 31.5 volts. The relay may be adjusted with a screwdriver until proper pull-in voltage is obtained.

17-56. REMOVAL AND INSTALLATION OF OVER-VOLTAGE RELAY ASSEMBLY.

- a. Turn Master Switch (BAT side) to OFF position.
- b. Label wires for identification and use figure 17-6 as a guide for removal and replacement.

17-57. OVER-VOLTAGE SENSOR AND WARNING LIGHT. (12 VOLT AIRCRAFT ONLY, BEGINNING WITH 1972 MODELS.)

17-58. DESCRIPTION. The over-voltage system consists of a over-voltage sensor switch and a red warning light labeled, "HIGH VOLTAGE", on the instrument panel. When an over-voltage tripoff occurs the over-voltage sensor turns off the alternator system and the red warning light comes on. The ammeter will show a discharge. Turn off both sections of the Master Switch to recycle the over-voltage sensor. If the over-voltage condition was transient, the normal alternator charging will resume and no further action is necessary. If the over-voltage tripout recurs, then a generating system malfunction has occurred such that the electrical accessories must be operated from the aircraft battery only. Conservation of electrical energy must be practiced until the flight can be terminated. The over-voltage red warning light filament may be tested at any time by turning off the "Alternator" portion of the Master Switch and leaving the "Battery" portion turned on. This test does not induce an over-voltage condition on the electrical system.

NOTE

Should nuisance trip-outs occur on aircraft prior to U20601751, Single-engine Service letter SE72-15, Dated April 21, 1972 should be complied with.

17-58A. RIGGING THROTTLE OPERATED MICRO-SWITCH. Refer to Section 13.

17-58B. AUXILIARY ELECTRIC FUEL PUMP FLOW RATE ADJUSTMENT. Refer to Section 13.

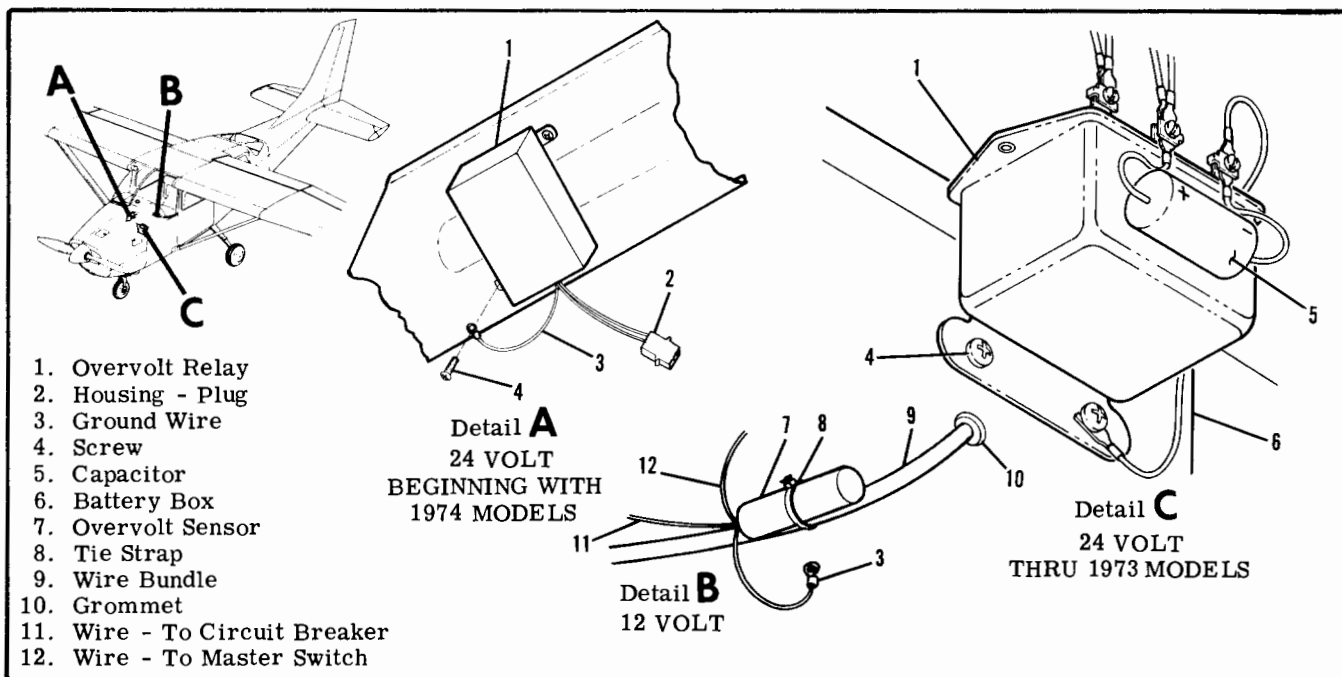


Figure 17-6. Overvolt Relay Installation

17-59. AIRCRAFT LIGHTING SYSTEM.

17-60. DESCRIPTION. The aircraft lighting system consists of landing and taxi lights, navigation lights, anti-collision strobe lights, flashing beacon light, interior and instrument panel flood lights, electro-luminescent panel lighting, instrument post lighting, pedestal lights, courtesy lights, control wheel map

light, compass and radio dial lights.

On the 1969 model, snap-in type rocker switches are introduced. These switches have a design feature which permits them to snap into the panel from the panel side and can subsequently be removed for easy maintenance. These switches also feature spade type slip-on terminals.

17-61. TROUBLE SHOOTING.

TROUBLE	PROBABLE CAUSE	REMEDY
LANDING AND TAXI LIGHTS OUT.	Short circuit in wiring.	1. Inspect circuit breaker. If circuit breaker is open, proceed to step 2. If circuit breaker is OK, proceed to step 3.
	Defective wiring.	2. Test each circuit separately until short is located. Repair or replace wiring.
	Defective switch.	3. Check voltage at lights with master and landing and taxi light switches ON. Should read battery voltage. Replace switch.
LANDING OR TAXI LIGHT OUT.	Lamp burned out.	1. Test lamp with ohmmeter or new lamp. Replace lamp.
	Open circuit in wiring.	2. Test wiring for continuity. Repair or replace wiring.
FLASHING BEACON DOES NOT LIGHT.	Short circuit in wiring.	1. Inspect circuit breaker. If circuit breaker is open, proceed to step 2. If circuit breaker is OK, proceed to step 3.
	Defective wiring.	2. Test circuit until short is located. Repair or replace wiring.
	Lamp burned out.	3. Test lamp with ohmmeter or a new lamp. Replace lamp. If lamp is good, proceed to step 4.
	Open circuit in wiring.	4. Test circuit from lamp to flasher for continuity. If no continuity is present, repair or replace wiring. If continuity is present, proceed to step 5.
	Defective switch.	5. Check voltage at flasher with master and beacon switch on. Should read battery voltage. Replace switch. If voltage is present, proceed to step 6.
	Defective flasher.	6. Install new flasher.
FLASHING BEACON CONSTANTLY LIT.	Defective flasher.	1. Install new flasher.

17-61. TROUBLE SHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ALL NAV LIGHTS OUT.	Short circuit in wiring.	1. Inspect circuit breaker. If circuit breaker is open, proceed to step 2. If circuit breaker is OK, proceed to step 3.
	Defective wiring.	2. Isolate and test each nav light circuit until short is located. Repair or replace wiring.
	Defective switch.	3. Check voltage at nav light with master and nav light switches on. Should read battery voltage. Replace switch.
ONE NAV LIGHT OUT.	Lamp burned out.	1. Inspect lamp. Replace lamp.
	Open circuit in wiring.	2. Test wiring for continuity. Repair or replace wiring.
ONE ANTI-COLLISION STROBE LIGHT WILL NOT LIGHT. THRU 1972 MODELS.	Flash tube burned out.	Test with new flash tube. Replace flash tube.
	Faulty wiring.	Test for continuity. Repair or replace.
	Faulty trigger head.	Test with new trigger head. Replace trigger head.
BOTH ANTI-COLLISION STROBE LIGHTS WILL NOT LIGHT. THRU 1972 MODELS.	Circuit breaker open.	Inspect. Reset.
	Faulty power supply.	Listen for whine in power supply to determine if power is operating.
	Faulty switch.	Test for continuity. Repair or replace.
	Faulty wiring.	Test for continuity. Repair or replace.
WARNING		
The anti-collision system is a high voltage device. Do not remove or touch tube assembly while in operation. Wait at least 5 minutes after turning off power before starting work.		
BOTH ANTI-COLLISION STROBE LIGHTS WILL NOT LIGHT. BEGINNING WITH 1973 MODELS.	Open circuit breaker.	1. Check, if open reset. If circuit breaker continues to open proceed to step 2.

TROUBLE	PROBABLE CAUSE	REMEDY
<p>BOTH ANTI-COLLISION STROBE LIGHTS WILL NOT LIGHT. BEGINNING WITH 1973 MODELS. Cont.</p>	<p>Open circuit breaker. Cont.</p>	<p>2. Disconnect red wire between aircraft power supply (battery/external power) and strobe power supplies, one at a time. If circuit breaker opens on one strobe power supply, replace strobe power supply. If circuit breaker opens on both strobe power supplies proceed to step 3. If circuit breaker does not open proceed to step 4.</p>
		<p>3. Check aircraft wiring. Repair or replace as necessary.</p>
		<p>4. Inspect strobe power supply ground wire for contact with wing structure.</p>
<p>CAUTION</p> <p>Extreme care should be taken when exchanging flash tube. The tube is fragile and can easily be cracked in a place where it will not be obvious visually. Make sure the tube is seated properly on the base of the nav light assembly and is centered in the dome.</p> <p>NOTE</p> <p>When checking defective power supply and flash tube, units from opposite wing may be used. Be sure power leads are protected properly when unit is removed to prevent short circuit.</p>		
<p>ONE ANTI-COLLISION STROBE LIGHT WILL NOT LIGHT. BEGINNING WITH 1973 MODELS.</p>	<p>Defective Strobe Power Supply, or flash tube.</p>	<p>1. Connect voltmeter to red lead between aircraft power supply (battery/external power) and strobe power supply, connecting negative lead to wing structure. Check for 12 volts. If OK proceed to step 2. If not, check aircraft power supply (battery/external power).</p>
		<p>2. Replace flash tube with known good flash tube. If system still does not work, replace strobe power supply.</p>

17-61. TROUBLE SHOOTING (Cont).

TROUBLE	PROBABLE CAUSE	REMEDY
DOME LIGHT TROUBLE.	Short circuit in wiring.	1. Inspect circuit breaker. If circuit breaker is open, proceed to step 2. If circuit breaker is OK, proceed to step 3.
	Defective wiring.	2. Test circuit until short is located. Repair or replace wiring.
		3. Test for open circuit. Repair or replace wiring. If no short or open circuit is found, proceed to step 4.
	Lamp burned out.	4. Test lamp with ohmmeter or new lamp. Replace lamp.
	Defective switch.	5. Check for voltage at dome light with master and dome light switch on. Should read battery voltage. Replace switch.
ELECTROLUMINESCENT PANELS WILL NOT LIGHT.	Short circuit in wiring.	1. Inspect circuit breaker. If circuit breaker is open, proceed to step 2. If circuit breaker is OK, proceed to step 3.
	Defective wiring.	2. Test circuit until short is located. Repair or replace wiring. 3. Test for open circuit. Repair or replace wiring. If no open or short circuit is found, proceed to step 4.
	Defective resistor.	4. Check resistor for continuity. (Located in line between rheostat and invert-a-pak.) Replace resistor.

SHOP NOTES:

17-61. TROUBLE SHOOTING (Cont).

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTROLUMINESCENT PANELS WILL NOT LIGHT. (Cont).	Defective rheostat.	5. Check input voltage at invertapak with master switch on. Voltmeter should give a smoothly varied reading over the entire control range of the rheostat. If no voltage is present or voltage has a sudden drop before rheostat has been turned full counterclockwise, replace rheostat.
	Defective invertapak.	6. Check output voltage at invertapak with ac voltmeter. Should read about 125 volts ac with rheostat set for full bright. Replace invertapak.
INSTRUMENT LIGHTS WILL NOT LIGHT (THRU 1969 MODELS ONLY).	Short circuit in wiring.	1. Inspect circuit breaker. If circuit breaker is open, proceed to step 2. If circuit breaker is OK, proceed to step 3.
	Defective wiring.	2. Test circuit until short is located. Repair or replace wiring 3. Test for open circuit. Repair or replace wiring. If no short or open circuit is found, proceed to step 4.
	Defective rheostat.	4. Check voltage at instrument light with master switch on. Should read battery voltage with rheostat turned full clockwise and voltage should decrease as rheostat is turned counterclockwise. If no voltage is present or voltage has a sudden drop before rheostat has been turned full counterclockwise, replace rheostat.
	Lamp burned out.	5. Test lamp with ohmmeter or new lamp. Replace lamp.
INSTRUMENT LIGHTS WILL NOT LIGHT (1970 MODELS & ON).	Short circuit wiring.	1. Inspect circuit breaker. If circuit breaker is open, proceed to step 2. If circuit breaker is OK, proceed to step 3.
	Defective wiring.	2. Test circuit until short is located. Repair or replace wiring. 3. Test for open circuit. Repair or replace wiring. If no short or open circuit is found, proceed to step 4.
	Faulty section in dimming potentiometer.	4. Lights will work when control is placed in brighter position. Replace potentiometer.

17-61. TROUBLE SHOOTING (CONT.)

TROUBLE	PROBABLE CAUSE	REMEDY
INSTRUMENT LIGHTS WILL NOT LIGHT (1970 MODELS & ON). (Cont).	Faulty light dimming transistor.	5. Test both transistors with new transistor. Replace faulty transistor.
	Faulty selector switch.	6. Inspect. Replace switch.
INSTRUMENT LIGHTS WILL NOT DIM (1970 MODELS & ON).	Open resistor or wiring in minimum intensity end of potentiometer.	1. Test for continuity. Replace resistor or repair wiring.
	Shorted transistor.	2. Test transistor by substitution. Replace defective transistor.
CONTROL WHEEL MAP LIGHT WILL NOT LIGHT THRU 1969 MODELS ONLY.	Nav light switch turned off.	1. Nav light switch has to be ON before map light will light.
	Short circuit in wiring.	2. Check lamp fuse on terminal board located on back of stationary panel with ohmmeter. If fuse is open, proceed to step 3. If fuse is OK, proceed to step 4.
	Defective wiring.	3. Test circuit until short is located. Repair or replace wiring. 4. Test for open circuit. Repair or replace wiring. If a short or open circuit is not found, proceed to step 5.
	Defective map light assembly.	5. Check voltage at map light assembly with master and nav switches on. If battery voltage is present, replace map light assembly.
<p>CAUTION</p> <p>Failure to observe polarity shown on wiring diagram 11.11.0 will result in immediate failure of the transistor on the map light circuit board assembly.</p>		
CONTROL WHEEL MAP LIGHT WILL NOT LIGHT 1970 MODELS & ON.	Nav light switch turned off.	1. Nav light switch has to be ON before map light will light.
	Short circuit in wiring.	2. Check lamp fuse on terminal board located on back of stationary panel with ohmmeter. If fuse is open, proceed to step 3. If fuse is OK, proceed to step 4.

17-61. TROUBLE SHOOTING (Cont).

TROUBLE	PROBABLE CAUSE	REMEDY
CONTROL WHEEL MAP LIGHT WILL NOT LIGHT 1970 MODELS AND ON. (Cont).	Defective wiring.	3. Test circuit until short is located. Repair or replace wiring. 4. Test for open circuit. Repair or replace wiring. If a short or open circuit is not found, proceed to step 5.
	Defective map light assembly.	5. Check voltage at map light assembly with master and nav switches on. If battery voltage is present, replace map light assembly.

17-62. LANDING AND TAXI LIGHTS.

17-63. DESCRIPTION. Thru 1971 Models the landing and taxi lights are mounted in the leading edge of the left wing. A clear plastic cover provides weather protection for the lamps and is shaped to maintain the leading edge curvature of the wing. The landing lamp is mounted on the inboard side and is adjusted to throw its beam further forward than the taxi lamp. Both lamps are controlled by an interlocking split rocker switch. Beginning with 1972 Models the landing and taxi lights are mounted in the lower nose cowl. Beginning with 1974 models the interlocking split rocker switch is replaced by two separate rocker switches interconnected by a jumper wire and a diode assembly.

17-64. REMOVAL AND INSTALLATION. (THRU 1971 MODELS). (Refer to Figure 17-7.)

- a. Remove the 18 screws securing the landing light window assembly (1) and the assembly will then be free for removal.
- b. Remove the four attaching screws (6) from the bracket assembly and remove the bracket.

NOTE

Do not reposition the landing and taxi light adjustment screws (2). If readjustment is required refer to figure 17-7.

- c. Remove the two screws securing the wiring to the lamp contacts and remove the lamp.
- d. Install new lamp and reassemble.

17-65. REMOVAL AND INSTALLATION. (BEGINNING WITH 1972 MODELS.) (Refer to Figure 17-7.)

- a. Remove screws securing support assembly (2) to cowl and pull assembly forward from cowl.
- b. Remove screws securing the wiring to lamp contacts.
- c. Remove the tinnerman screws from the bracket (5) and remove bracket and lamp.
- d. Install new lamp and reassemble.

17-66. NAVIGATION LIGHTS.

17-67. DESCRIPTION. The navigation lights are located on each wing tip and the stinger. Operation of the lights is controlled by a single switch. A plastic light detector on each wing tip allows the pilot to determine if the lamps are working properly during flight.

17-68. REMOVAL AND INSTALLATION. Refer to Figure 17-8 for removal and installation.

17-69. ANTI-COLLISION STROBE LIGHTS.

17-70. DESCRIPTION. A white strobe light is installed on each wing tip. These lights are vibration resistant and operate on the principle of a capacitor discharge into a xenon tube, producing an extremely high intensity flash. Thru 1972 Models energy is supplied to the strobe lights from a power supply. The power supply is mounted inside the left wing, on the rib at wing station 118.00 just forward of the wing rear spar. Beginning with 1973 Models energy is supplied from individual power supplies mounted on the wing tip rib.

17-70A. OPERATIONAL REQUIREMENTS.

WARNING

The capacitors in the strobe light power supplies must be reformed if not used for a period of six (6) months. The following procedure must be used.

Connect the power supply, red wire to plug, black to ground to 6 volt DC source. Do Not connect strobe tube. Turn on 6 volt supply. Note current draw after one minute. If less than 1 ampere, continue operation for 24 hours. Turn off DC power source. Then connect to the proper voltage, 12/24 volt. Connect tube to output of strobe power supply and allow to operate, flashing, for 15 minutes. Remove strobe tube. Operating power supply at 12/24 volts, note

the current drain after one minute. If less than 0.5 amperes, operate for 6 hours. If current draw is greater than 0.5 amperes, reject the unit.

17-71. REMOVAL AND INSTALLATION. Refer to Figure 17-8 as a guide for removal and installation.

WARNING

The anti-collision system is a high voltage device. Do not remove or touch the tube

assembly while in operation. Wait at least five minutes after turning off power before starting work.

17-72. FLASHING BEACON LIGHT.

17-73. DESCRIPTION. The flashing beacon light is attached to the (ABS constructed) vertical fin tip. The assembly consists of a red dome cover and a iodine vapor lamp electrically switched by a solid-

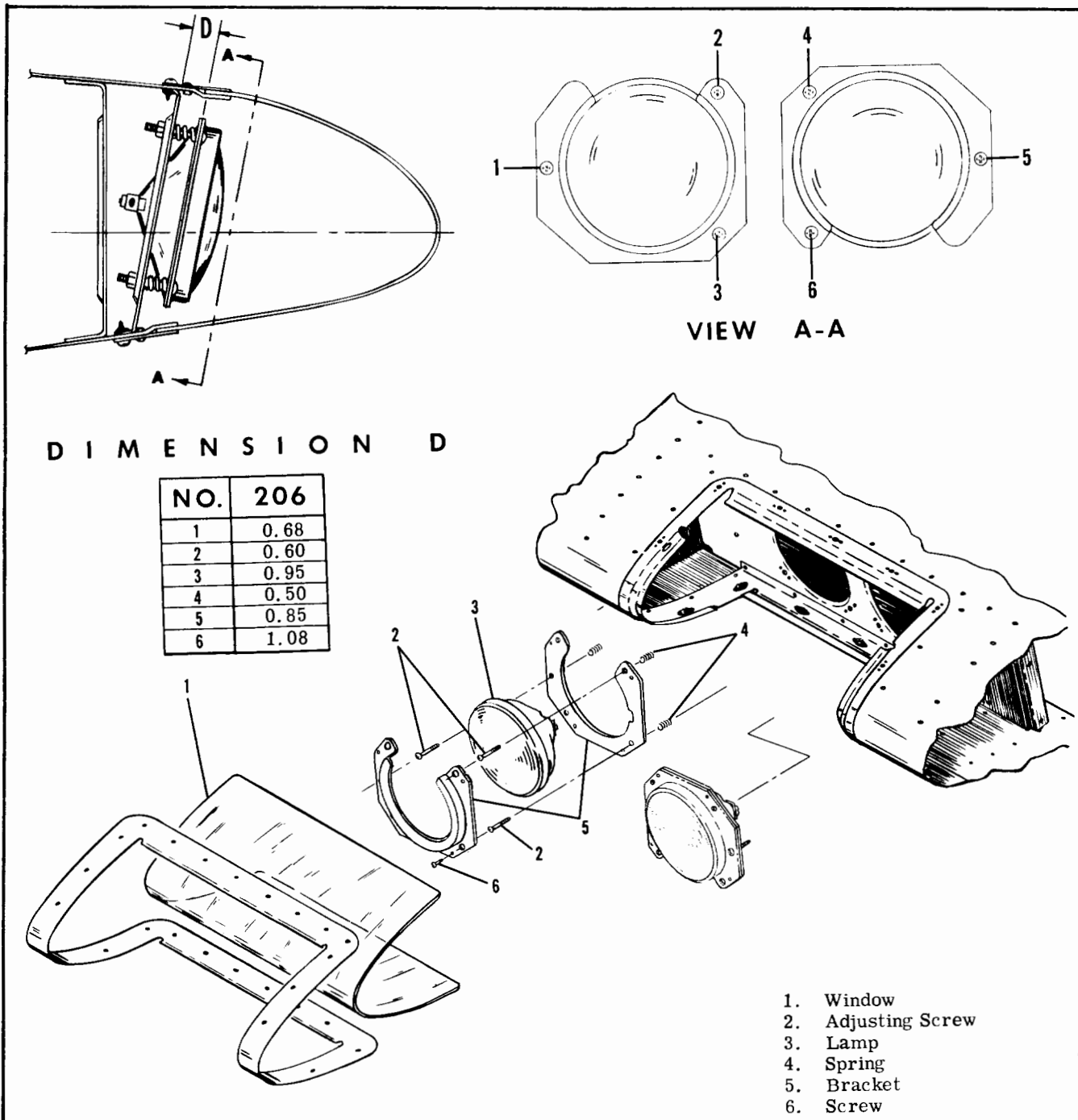


Figure 17-7. Landing and Taxi Light Installation (Sheet 1 of 2)

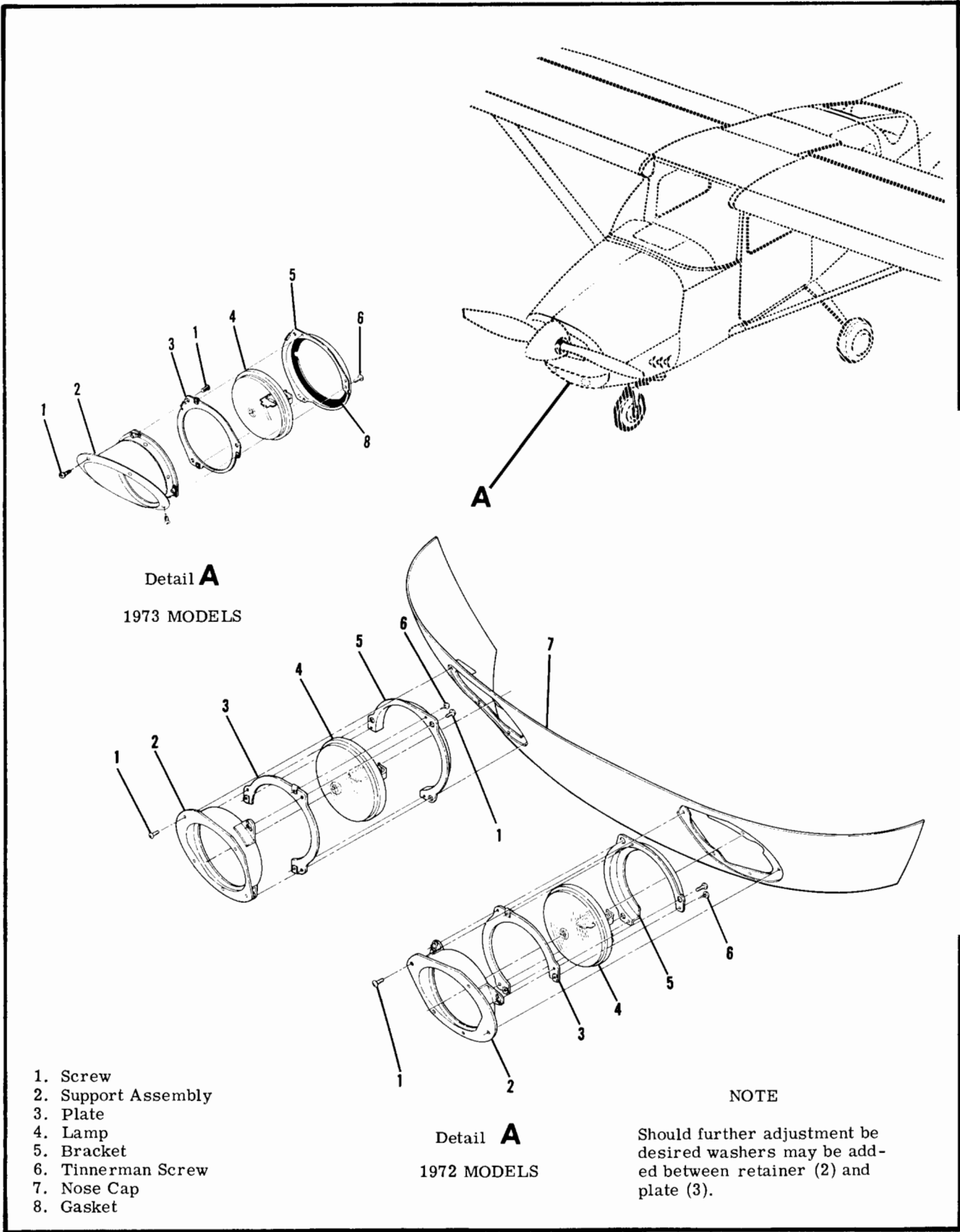


Figure 17-7. Landing and Taxi Light Installation (Sheet 2 of 2)

state flasher assembly. Thru U20601966 a 100 watt lamp is installed. Beginning with U20601967 a 125 watt lamp is installed. The flasher assembly is located in the vertical fin tip. A 1.5 ohm resistor on 12 volt and 6 ohm resistor on the 24 volt, is installed on the forward upper side of the stabilizer to prevent pulsing of the aircraft lighting when the beacon is operating. The switching frequency of the flasher assembly operates the beacon at approximately 45 flashes per minute.

17-74. REMOVAL AND INSTALLATION. Refer to Figure 17-9 for removal and installation.

17-75. INSTRUMENT LIGHTING.

17-76. DESCRIPTION. The instrument panel lighting is fabricated in two separate sections. The lower two-thirds of the instrument panel is illuminated by two lights mounted in the overhead light console. The lighting for the upper one-third of the instrument panel is provided by (four small lights thru 1972 Models and five small lights beginning with the 1973 Models) located in the instrument panel glare shield. The intensity of the instrument panel lighting is con-

trolled by a dimming rheostat located on the left side of the instrument panel. A remotely located two-circuit, transistorized dimmer is installed as standard equipment to control the instrument panel lighting on 1970 and on models. Panel lighting dimming controls are increased from two to three. This is accomplished by concentric knob arrangement on one of the existing control knobs. Transistor light dimming is used on two of three circuits, thereby allowing greater dimming load variation and better linearity of control. One circuit controls the engine instruments and radio lights while the other circuit controls the instrument flood lights and post lights.

17-77. REMOVAL AND INSTALLATION. Refer to Figure 17-10 and 17-12 for removal and installation.

17-78. REMOVAL AND INSTALLATION OF TRANSISTORIZED LIGHT DIMMING. Refer to Figure 17-11 for removal and installation.

17-79. ELECTROLUMINESCENT PANEL LIGHTING.

17-80. DESCRIPTION. The electroluminescent lighting consists of two "EL" panels; the switch panel

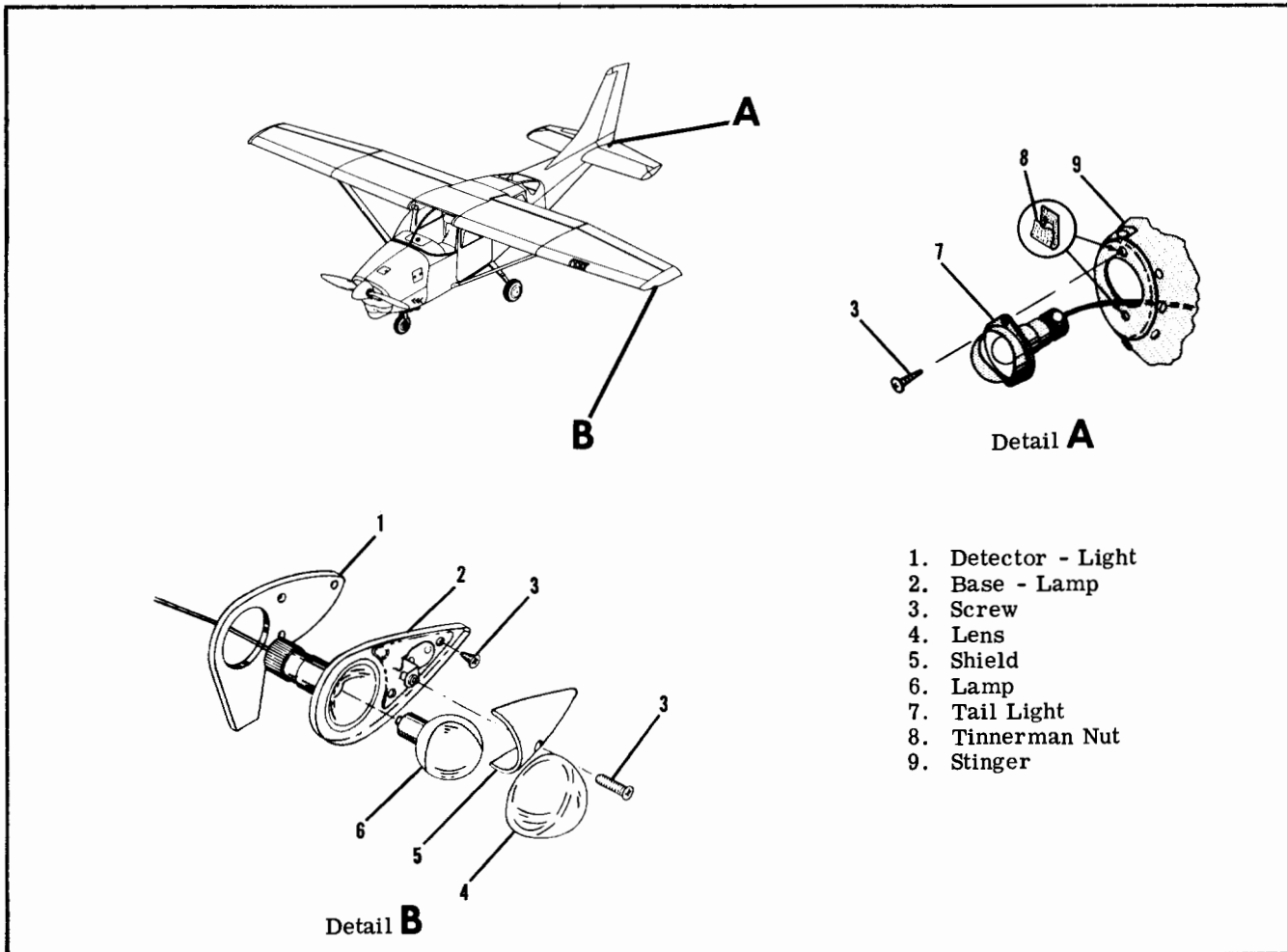


Figure 17-8. Navigation and Anti-Collision Strobe Lights Installation (Sheet 1 of 2)

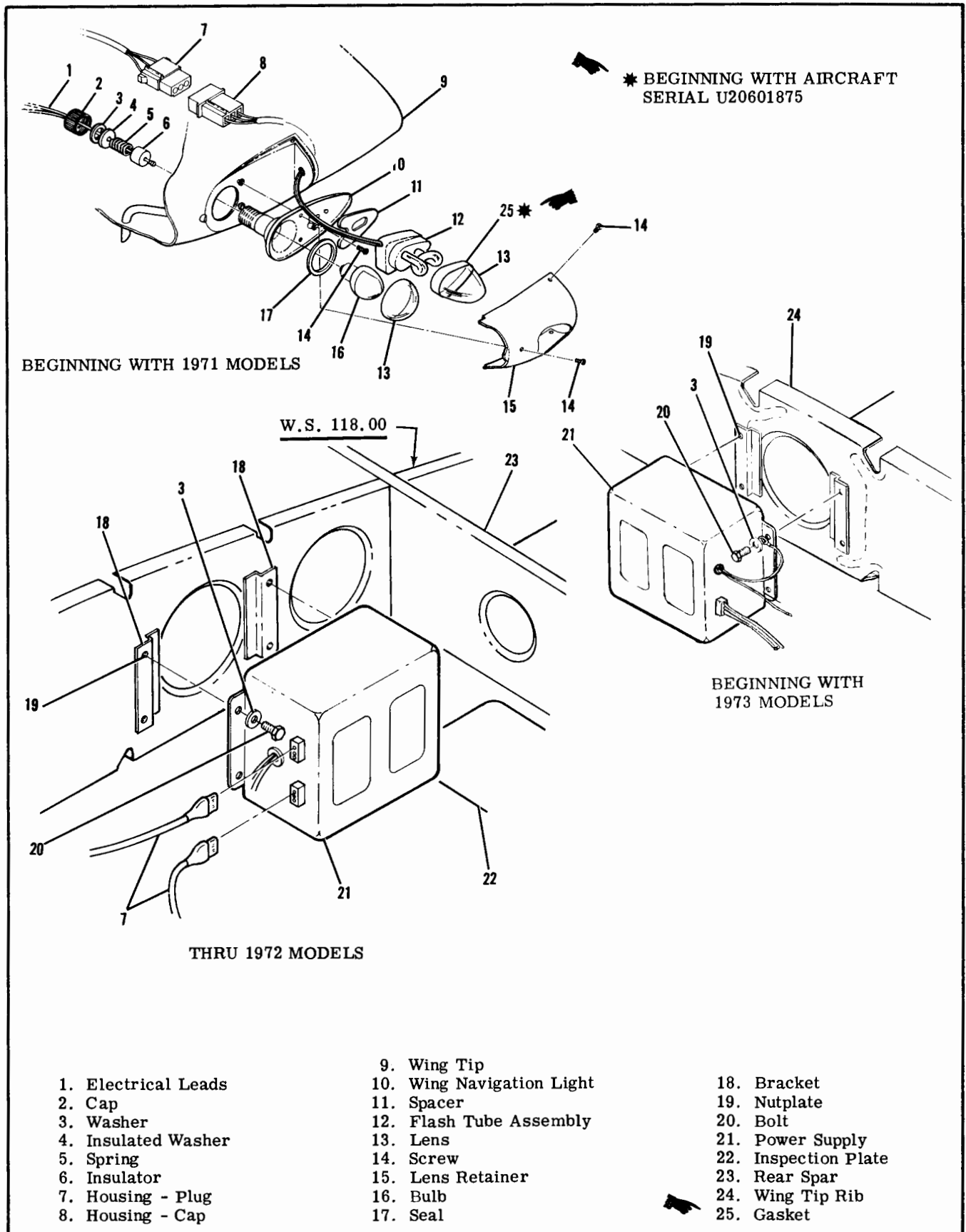
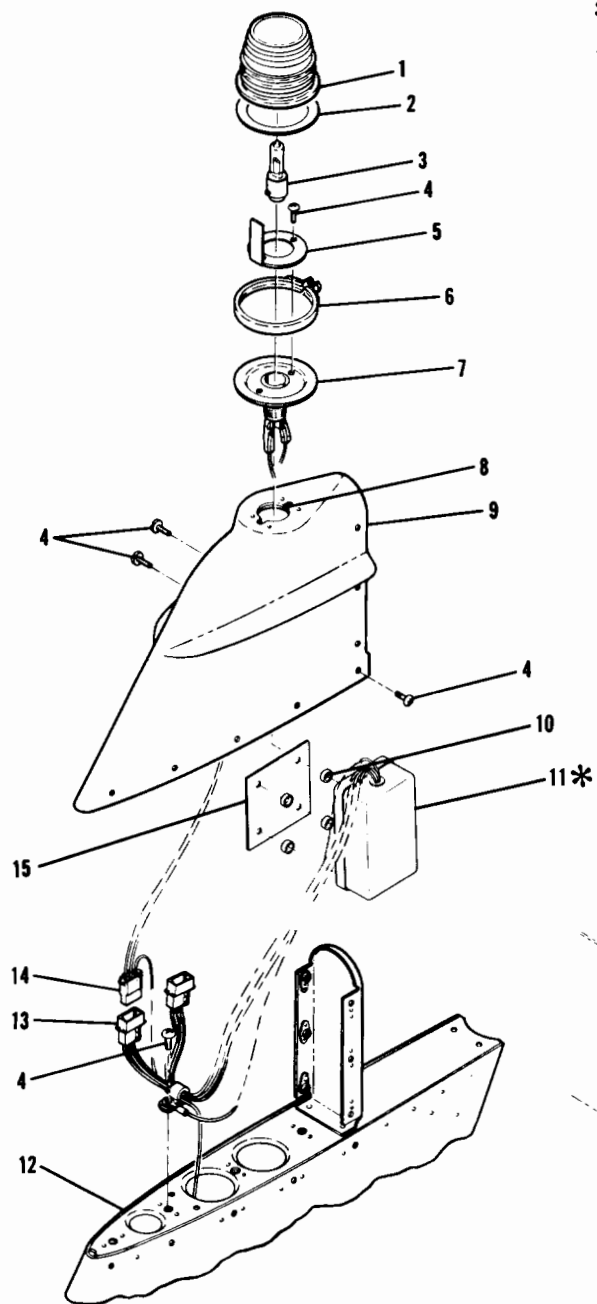


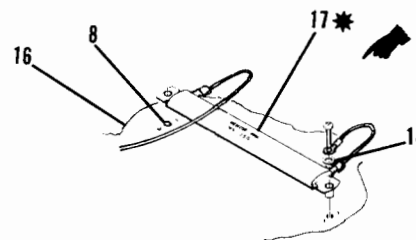
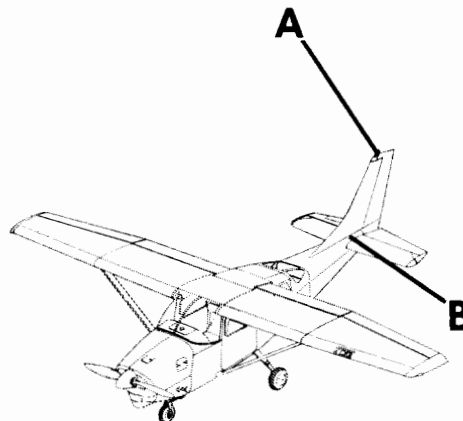
Figure 17-8. Navigation and Anti-Collision Strobe Lights Installation (Sheet 2 of 2)

* THRU 1972 MODELS

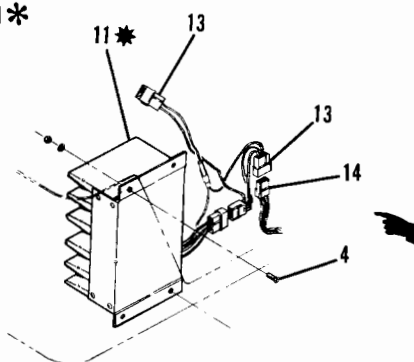
* BEGINNING WITH 1973 MODELS



Detail A



Detail B



CAUTION

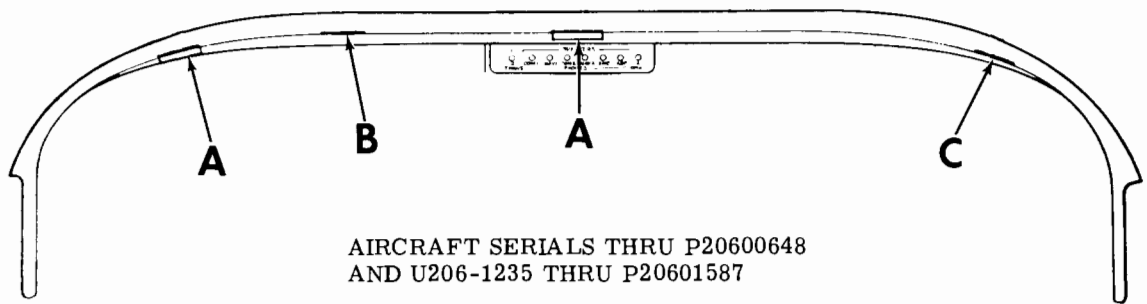
When inserting lamp into socket always use a handkerchief or a tissue to prevent getting fingerprints on the lamp.

NOTE

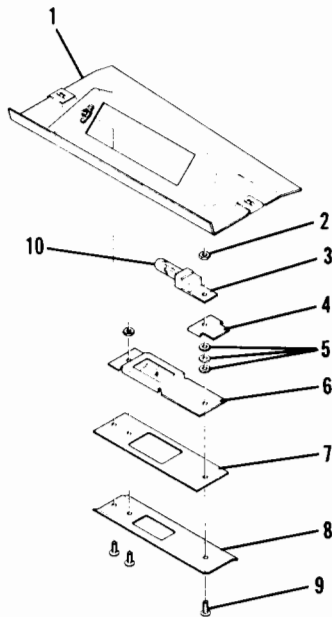
Fingerprints on lamp may shorten the life of the lamp.

- | | | |
|-------------------|-----------------------|-----------------------------|
| 1. Dome | 7. Socket Assembly | 13. Housing - Cap |
| 2. Gasket | 8. Nutplate | 14. Housing - Plug |
| 3. Lamp | 9. Tip Assembly - Fin | 15. Plate |
| 4. Screw | 10. Spacer | 16. Stabilizer Skin - Upper |
| 5. Baffle | 11. Flasher Assembly | 17. Resistor |
| 6. Clamp Assembly | 12. Fin Assembly | 18. Washer |

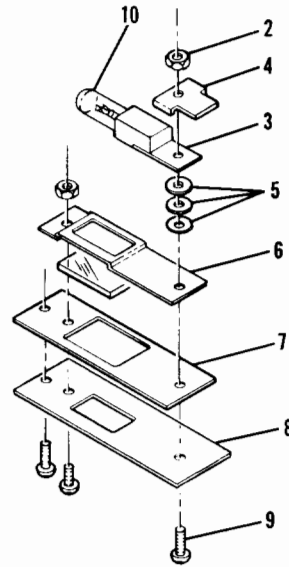
Figure 17-9. Flashing Beacon Light Installation



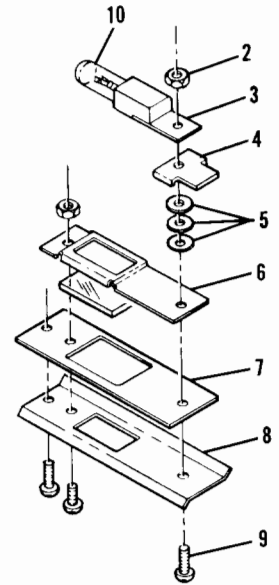
AIRCRAFT SERIALS THRU P20600648
AND U206-1235 THRU P20601587



DETAIL A
TYPICAL
INSTALLATION



DETAIL B



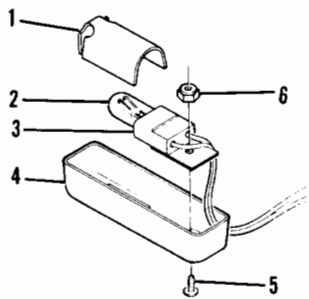
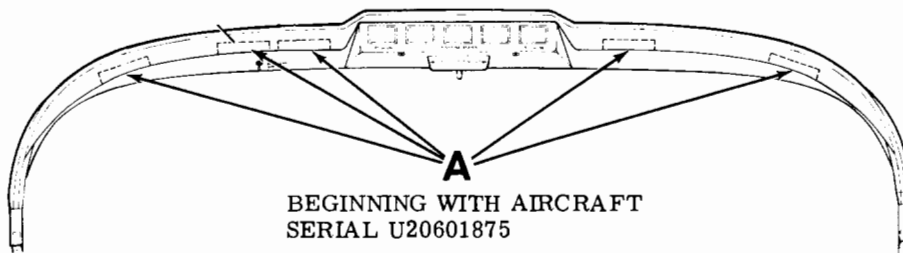
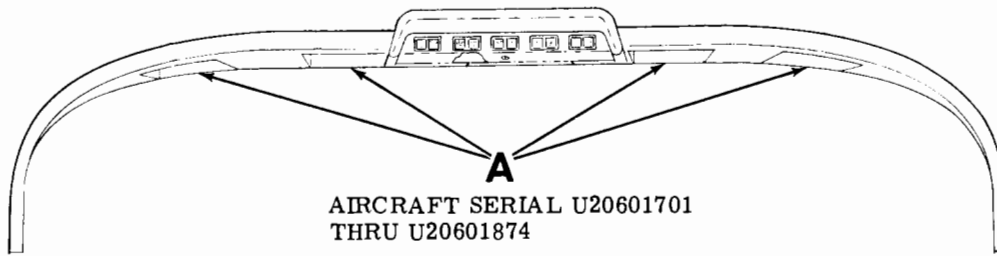
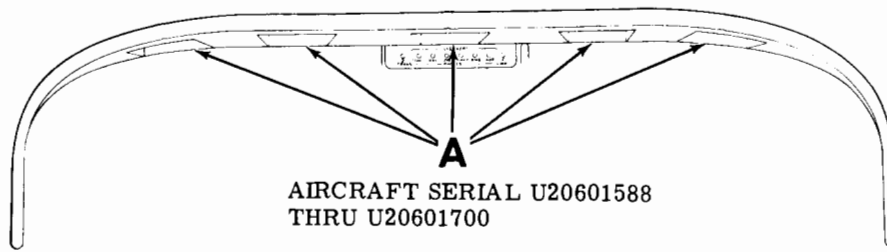
DETAIL C

- 1. Light Fitting Assembly
- 2. Nut
- 3. Light Assembly

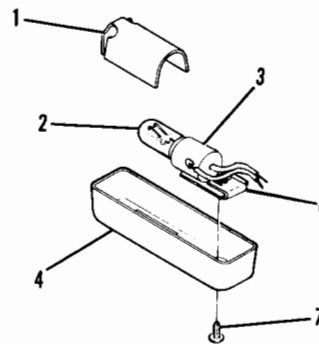
- 4. Retainer
- 5. Washer
- 6. Bracket
- 7. Gasket

- 8. Cover
- 9. Screw
- 10. Bulb

Figure 17-10. Instrument Panel Glare Shield Light Installation (Sheet 1 of 2)



12 VOLT
Detail **A**



24 VOLT
Detail **A**

- | | |
|----------------|--------------------|
| 1. Reflector | 5. Screw |
| 2. Lamp | 6. Nut |
| 3. Lamp Socket | 7. Tinnerman Screw |
| 4. Housing | 8. Tinnerman Nut |

Figure 17-10. Instrument Panel Glare Shield Light Installation (Sheet 2 of 2)

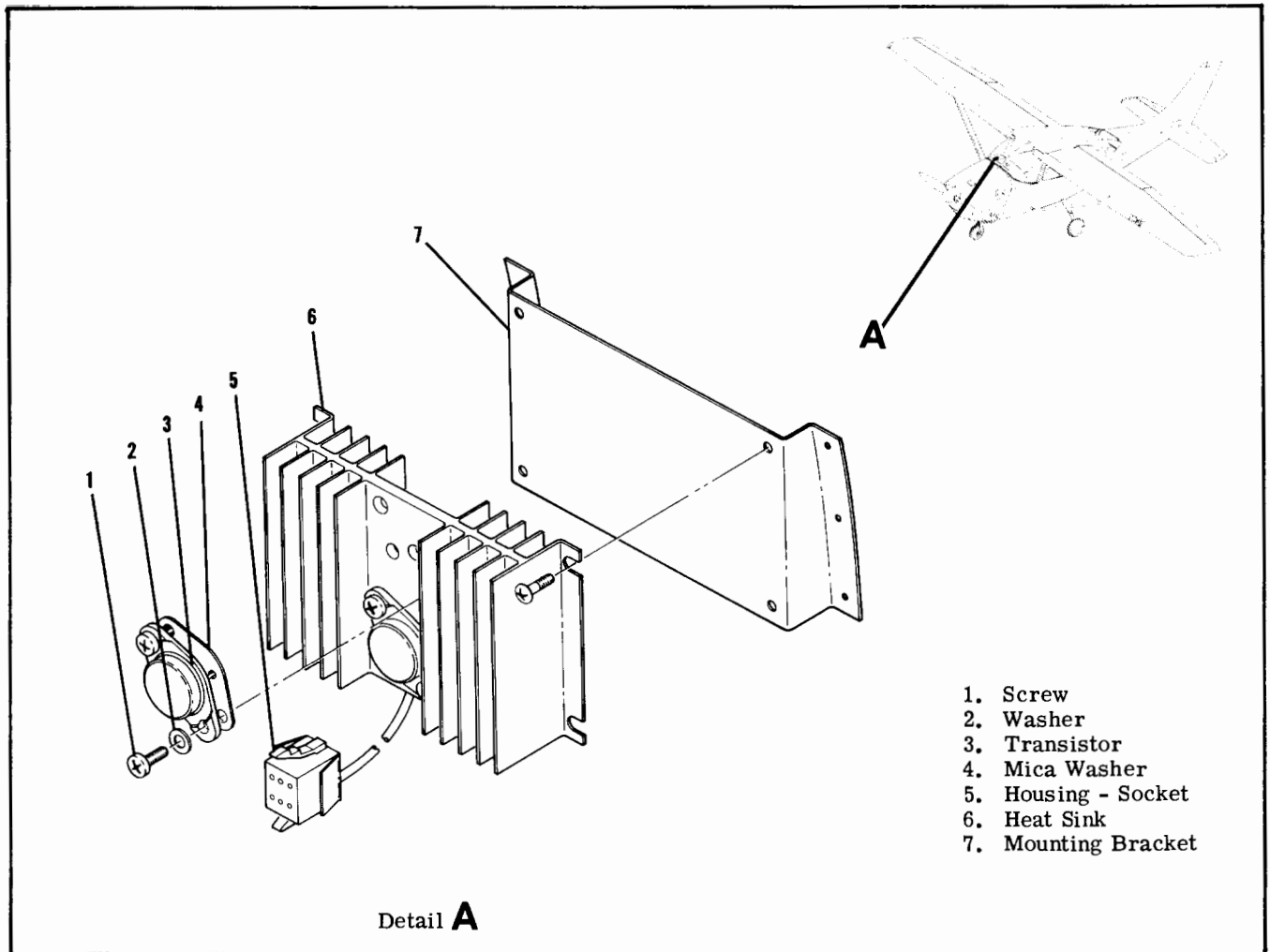


Figure 17-11. Transistorized Light Dimming Installation

and the comfort control panel. The ac voltage required to drive the "EL" panels is supplied by a small inverta-pak (power supply) located behind the instrument panel. The intensity of the "EL" panel lighting is controlled by a rheostat located on the instrument panel. Beginning with aircraft serials P20600635 and U20601493 a resistor is installed ahead of the dimming EL rheostat as a load for the AC output of the E inverter. Due to heat dissipation, the resistor must be kept away from the wire bundle. Refer to figure 17-1 and 17-13.

17-81. PEDESTAL LIGHTS .

17-82. DESCRIPTION. The pedestal lights consist of two post type lights mounted on the pedestal to illuminate the rudder and elevator trim controls.

The pedestal lights are controlled by the instrument light rheostat.

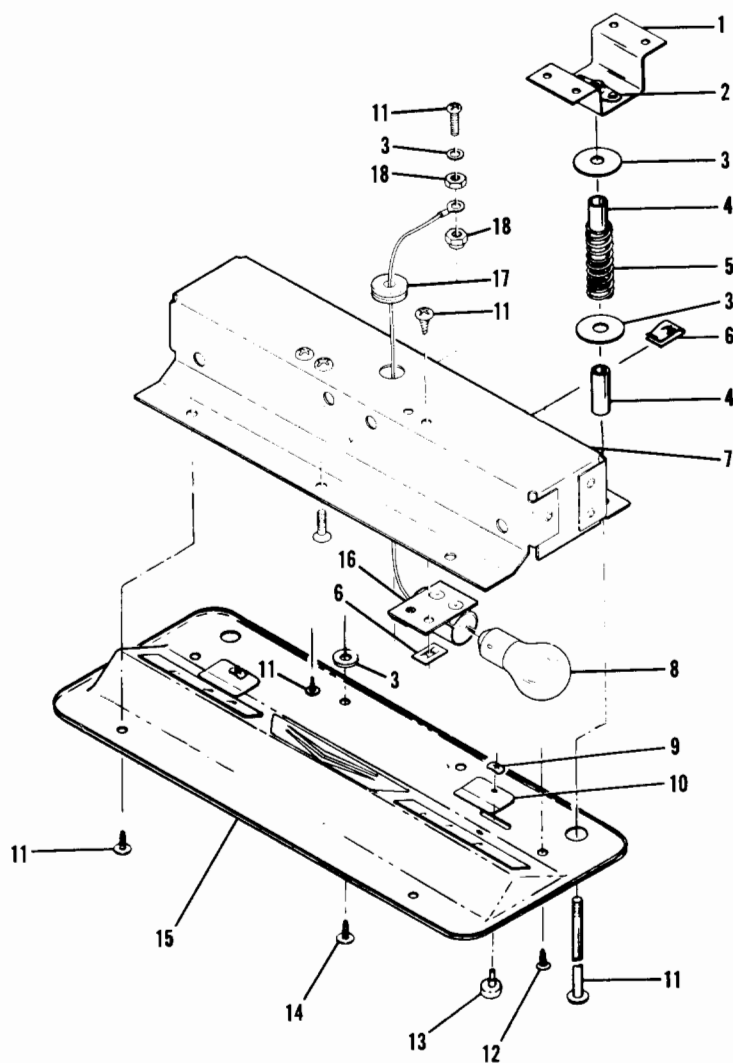
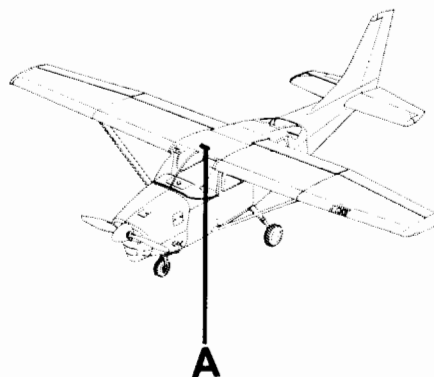
17-83. REMOVAL AND INSTALLATION. For removal and replacement of the pedestal lamp, slide the cap and lens assembly from the base. Slide the lamp from the socket and replace.

17-84. INSTRUMENT POST LIGHTING.

17-85. DESCRIPTION. Individual post lighting may be installed as optional equipment to provide for non-glare instrument lighting. The post light consists of a cap and a clear lamp assembly with a tinted lens. The intensity of the instrument post lights is controlled by the radio light dimming rheostat located on the switch panel.

NOTE

Adjust the overhead map light so that the forward edge of the lighted area is 3.0 (±1.0) inches aft of the control wheel (when full forward).



Detail **A**

- | | | |
|------------------------|------------------------|-----------------------|
| 1. Panel Light Bracket | 7. Panel Light Housing | 12. Screw |
| 2. Nutplate | 8. Lamp | 13. Slide Knob |
| 3. Washer | 9. Clip | 14. Panel Light Cover |
| 4. Spacer | 10. Slide Cover | 15. Lamp Socket |
| 5. Spring | 11. Adjustment Screw | 16. Grommet |
| 6. Tinnerman Nut | | 17. Nut |

Figure 17-12. Overhead Console Installation

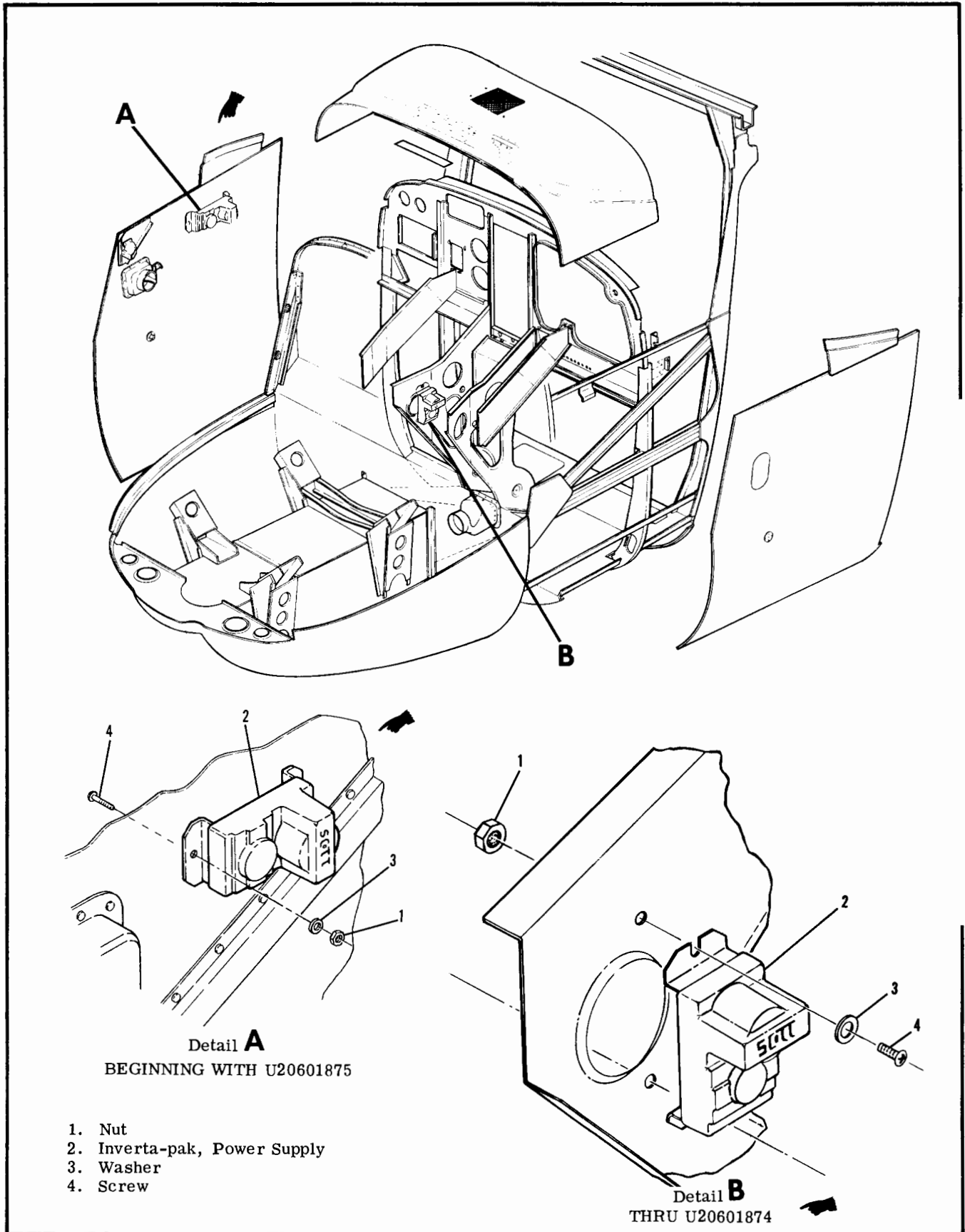


Figure 17-13. Electroluminescent Panel Inverta-pak Power Supply

17-86. REMOVAL AND INSTALLATION. For removal and replacement of the instrument post lamps, slide the cap and the lens assembly from the base. Slide the lamp from the socket and replace.

17-87. COURTESY LIGHTS.

17-88. DESCRIPTION. The lights consist of one light located on the underside of each wing to provide ground lighting around the cabin area. The courtesy lights have clear lens and are controlled by a single slide switch labeled, "Utility Lights," located on the left rear door post. The switch also operates the dome lights thru 1972 Models.

17-89. REMOVAL AND INSTALLATION. Refer to Figure 17-14 for removal and installation.

17-90. INTERIOR LIGHTING. Thru 1972 Models the cabin interior is illuminated by two dome lights, one dome light on each side of the aft cabin. The dome lights are controlled by a single slide switch labeled "Utility Lights," located on the left door post. The switch also operates the courtesy lights. Beginning with 1973 Models a single dome light is installed overhead center aft of the rear spar. The light is controlled by a rocker switch on the assembly.

17-91. REMOVAL AND INSTALLATION. Thru 1972 models for removal and replacement of dome lamps, pry light assembly out of retainer then pry socket out of light assembly. Twist the bayonet type lamp from the socket and replace. Beginning with 1973 models the lens snap out for access to the lamp.

17-92. CONTROL WHEEL MAP LIGHT.

17-93. DESCRIPTION. As optional equipment, a white, dimmable map light may be installed on the underside of the pilot's control wheel. On 1969 models, a solid-state dimming circuit along with a miniature dimming control was used. On 1970 thru 1971 models, a new type of optional map light has been installed on the underside of the pilot's control wheel. The new map light assembly consists of a rectangle shaped housing containing two small lamps and a small rheostat. On both type of installations, the dimming control extends just below the edge of the control wheel map light housing for convenient thumb or finger operation. For dimming the control should be rotated clockwise. Beginning with 1972 models the control wheel map light is internally mounted in the control wheel. Thru 1974 models a rheostat switch located on the right hand forward side of the wheel controls the light, Beginning with 1975 models the rheostat switch is located on the lower right hand side of the control wheel.

17-94. REMOVAL AND INSTALLATION (THRU U 206-1444) (Refer to Figure 17-15.)

- a. Rotate the control wheel 90° to the left to gain access to the underside of the control wheel.
- b. Remove four screws at the corner of the etched circuit board assembly.

c. Detach wires from the terminal strip along the edge of the circuit board. Note the connection for reference when replacing the board.

d. To install the control wheel map light, reverse the procedure.

NOTE

It is recommended that the board be replaced as an assembly if the lamps should become defective. If personnel familiar with etched circuit board repair work are available, emergency repairs of the map light assembly may be made by soldering leads to #330 lamps and then soldering the lamps to the board in place of those provided. The lamps should be secured in place with a spot of epoxy cement after soldering.

17-95. REMOVAL AND INSTALLATION (AIRCRAFT U20601445 THRU U20601700) (Refer to Figure 17-15.)

- a. Rotate the control wheel 90° to the left to gain access to the underside of the control wheel.
- b. Remove two screws and nuts holding map light assembly to control wheel.
- c. Detach two wires from the terminal strip above the map light. Note the connection and mark for reference when replacing the wires.
- d. To install the control wheel map light reverse this procedure.
- e. For replacement of defective lamps, remove two screws holding map light cover in place and unplug rheostat to remove cover.
- f. Unsnap lamp sockets and replace lamps.
- g. To reassemble, reverse this procedure.

17-96. REMOVAL AND INSTALLATION. (AIRCRAFT SERIAL U20601701 THRU U20601757).

- a. Disconnect electrical cable connector of aft side of control wheel.
- b. Remove screws securing control wheel back plate to control wheel tube adapter.
- c. Remove screws securing plate to control wheel.
- d. Disconnect socket from map light lamp and reflector unit.
- e. Remove lamp and reflector unit.

NOTE

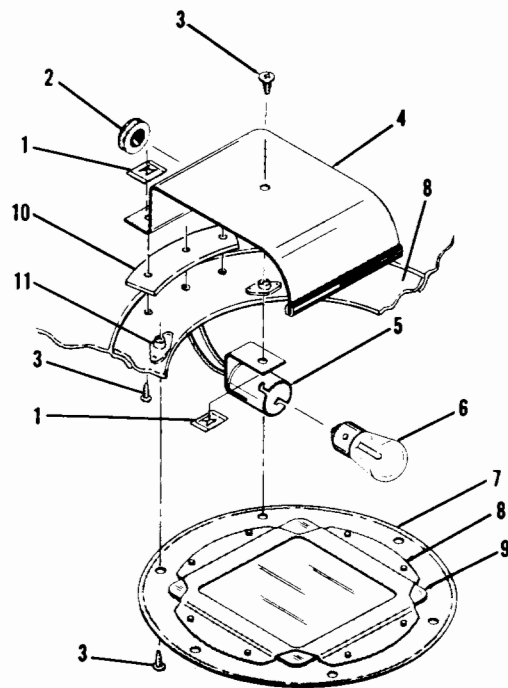
Lamp and reflector unit are bonded to control wheel.

CAUTION

Care must be taken in removing excess bonding material, (do not hammer on control wheel) as control wheel could be damaged.

f. Using Conley Weld C1 and C2 or Hysol 5095 and 3673, bond new lamp and reflector unit.

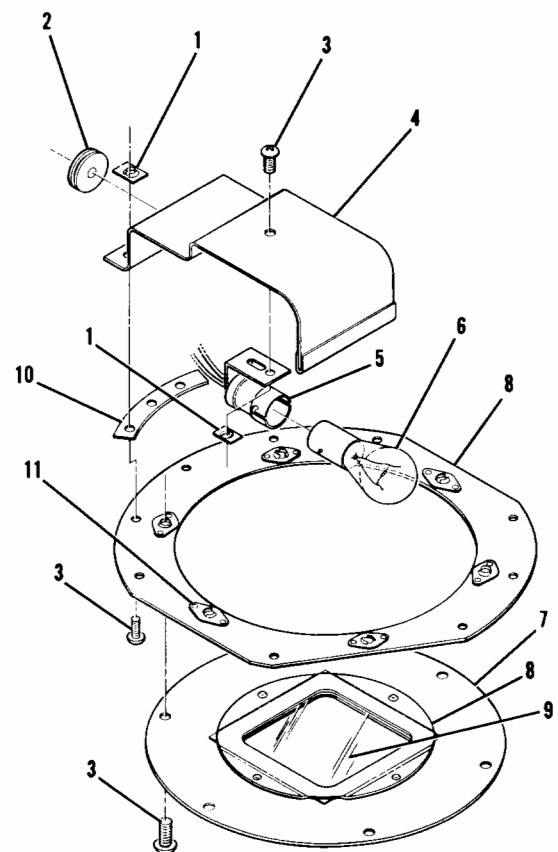
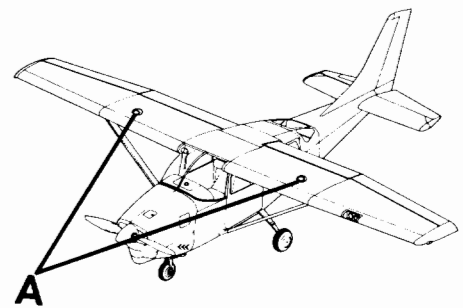
g. To reassemble, reverse this procedure.



THRU 1969 MODELS ONLY

Detail A

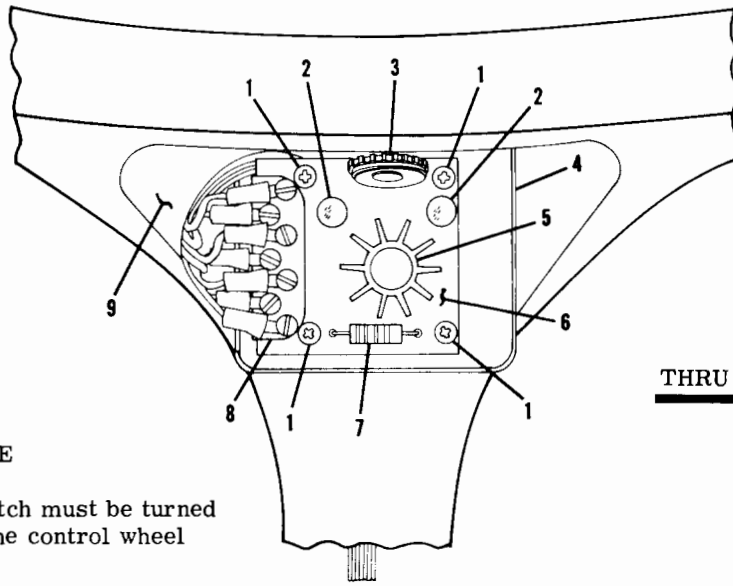
- 1. Tinnerman Nut
- 2. Grommet
- 3. Screw
- 4. Reflector
- 5. Socket
- 6. Bulb
- 7. Inspection Plate
- 8. Doubler
- 9. Lens
- 10. Spacer
- 11. Nutplate



1970 MODELS & ON

Detail A

Figure 17-14. Courtesy Light Installation



THRU 1969 MODELS ONLY

NOTE

The "NAV LIGHTS" switch must be turned on in order to operate the control wheel map light.

- | | | |
|--------------------|----------------------|-------------------|
| 1. Screw | 4. Map Light Housing | 7. Resistor |
| 2. Lamp | 5. Transistor | 8. Terminal Board |
| 3. Dimming Control | 6. Circuit Board | 9. Control Wheel |

Figure 17-15. Control Wheel Map Light Installation (Sheet 1 of 4)

17-97. REMOVAL AND INSTALLATION. (BEGINNING WITH AIRCRAFT SERIAL U20601758 AND ALL SERVICE PARTS BEGINNING WITH U20601701). To remove, push upward on the lamp and turn. The lamp and reflector is replaced as a unit.

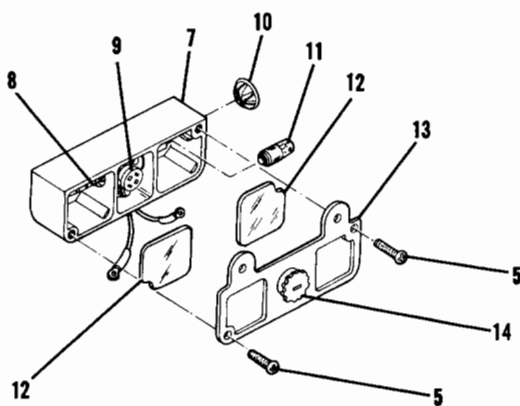
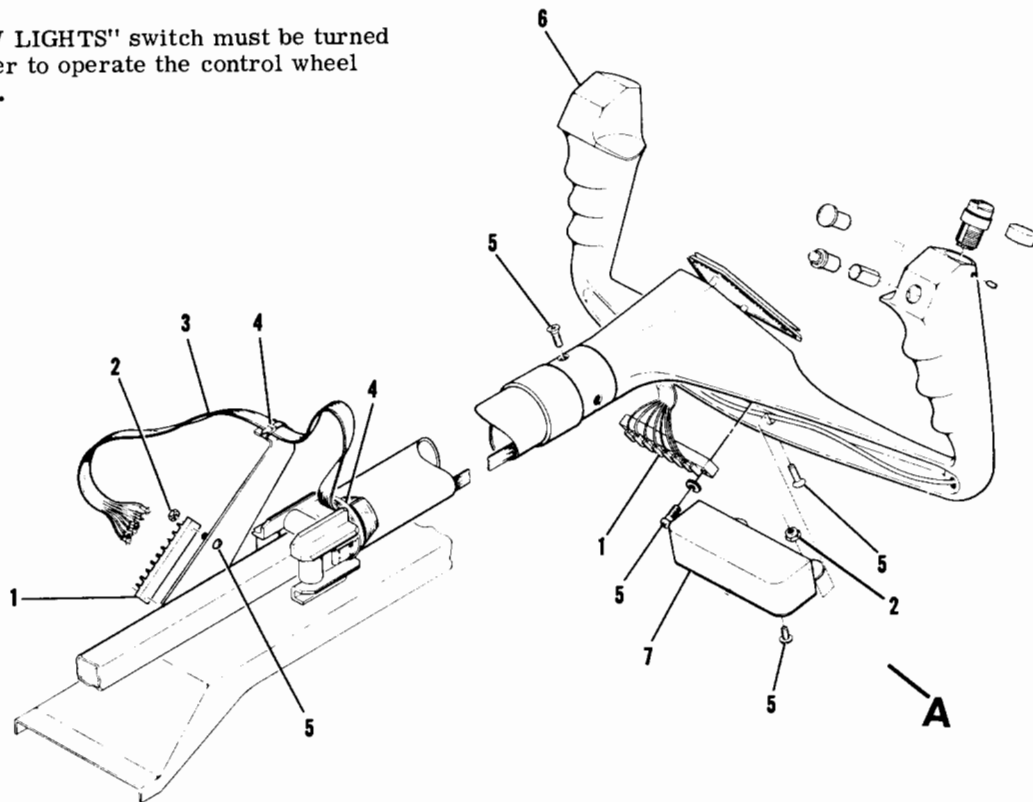
17-98. COMPASS AND RADIO DIAL LIGHTS.

17-99. DESCRIPTION. The compass and radio dial lights are contained within the individual units. The

SHOP NOTES:

NOTE

The "NAV LIGHTS" switch must be turned on in order to operate the control wheel map light.



Detail **A**

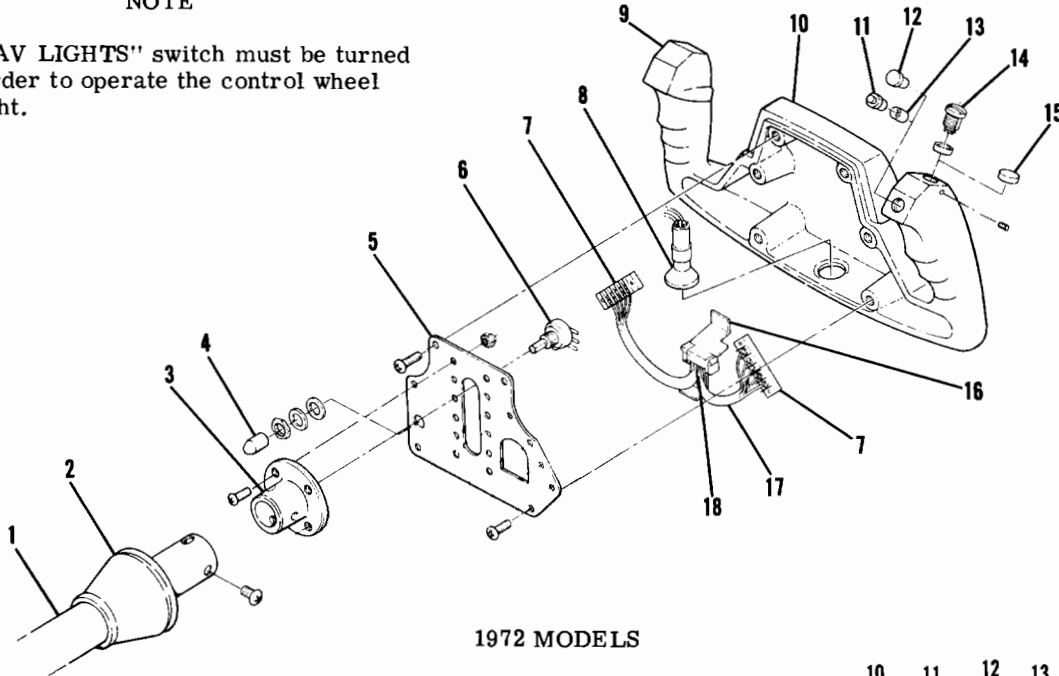
- 1. Terminal Block
- 2. Nut
- 3. Spectastrip Cable
- 4. Sta-Strap
- 5. Screw
- 6. Control Wheel
- 7. Housing
- 8. Socket (Lamp)
- 9. Socket (Rheostat)
- 10. Plug Button
- 11. Lamp
- 12. Lens
- 13. Cover
- 14. Rheostat

1970 AND 1971 MODELS

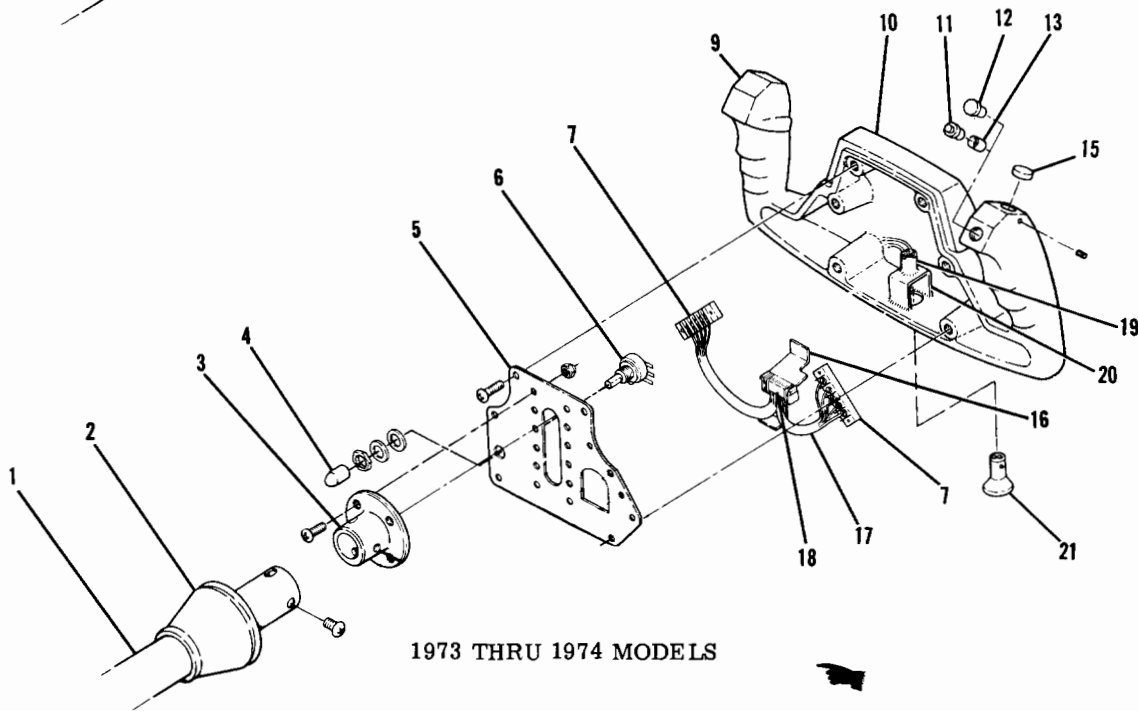
Figure 17-15. Control Wheel Map Light Installation (Sheet 2 of 4)

NOTE

The "NAV LIGHTS" switch must be turned on in order to operate the control wheel map light.



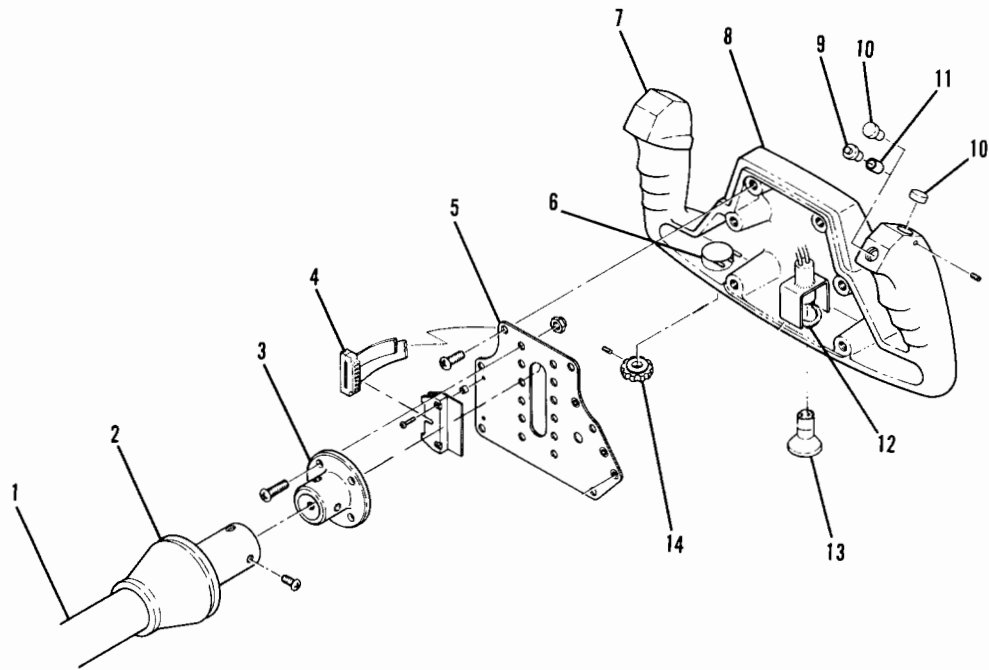
1972 MODELS



1973 THRU 1974 MODELS

- | | | |
|-----------------------|--------------------------|---------------|
| 1. Tube | 8. Map Light Assembly | 15. Plug |
| 2. Cover | 9. Control Wheel | 16. Bracket |
| 3. Adapter | 10. Pad | 17. Cable |
| 4. Rubber Cover | 11. Mike Switch | 18. Connector |
| 5. Plate | 12. Plug | 19. Socket |
| 6. Map Light Rheostat | 13. Insulator | 20. Bracket |
| 7. Terminal Block | 14. Electric Trim Switch | 21. Lamp |

Figure 17-15. Control Wheel Map Light Installation (Sheet 3 of 4)



BEGINNING WITH 1975 MODELS

- | | |
|--------------------------|------------------------|
| 1. Control Tube Assembly | 8. Pad |
| 2. Cover | 9. Mike Switch |
| 3. Adapter | 10. Plug |
| 4. Connector | 11. Insulator |
| 5. Plate | 12. Map Light Assembly |
| 6. Map Light Rheostat | 13. Lamp |
| 7. Control Wheel | 14. Knob (Map Light) |

Figure 17-15. Control Wheel Map Light Installation (Sheet 4 of 4)

light intensity is controlled by the radio dial light dimming rheostat mounted on the lower left side of the instrument panel.

17-100. ELECTRIC CLOCK.

17-101. DESCRIPTION. The electric clock is connected to the battery through a 1-ampere fuse mounted adjacent to the battery box. The clock has a sweep second hand and is an electro-mechanical type which rewinds approximately every one and one-half minutes.

17-102. STALL WARNING SYSTEM.

17-103. DESCRIPTION. The stall warning circuit is comprised of a warning horn and an actuating switch. The switch is installed in the leading edge of the left wing and is actuated by airflow over the surface of the wing. The switch will close as a stall condition is approached, actuating the warning horn which is mounted on the glove box. The stall warning unit should actuate the stall warning horn approximately five to ten miles per hour above the aircraft stall speed. Install the lip of the warning unit approximately one-sixteenth of an inch below the centerline of the wing skin cutout. Test fly the aircraft to determine if the unit actuates the

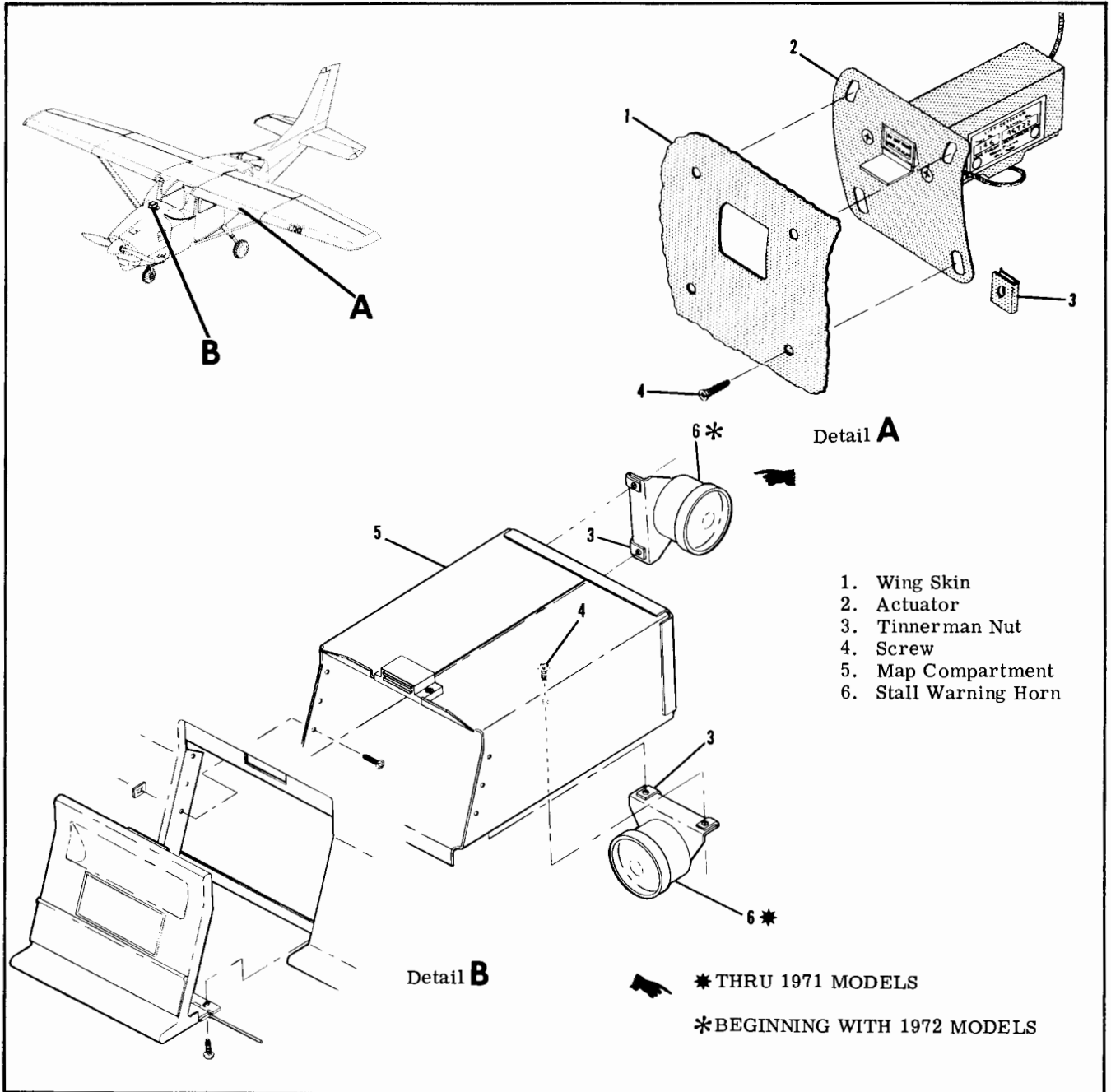


Figure 17-16. Stall Warning, Actuator and Horn Installation

warning horn at the desired speed. If the unit actuates the warning horn at a speed in excess of ten miles per hour above stall speed, loosen the mounting screws and move the unit down. If the unit actuates the horn five miles per hour below stall speed, loosen the mounting screws and move the unit up.

17-104. PITOT AND STALL WARNING HEATERS.

17-105. DESCRIPTION. Electrical heater units are incorporated in some pitot tubes and stall warning switch units. The heaters offset the possibility of

ice formations on the pitot tube and stall warning actuator switch. The heaters are integrally mounted in the pitot tube and the stall warning actuator switch. Both heaters are operated by the pitot heat switch.

17-106. REMOVAL AND INSTALLATION OF PITOT HEATER. Refer to Figure 17-17 for removal and installation.

17-107. CIGAR LIGHTER.

17-108. DESCRIPTION. A special circuit breaker is

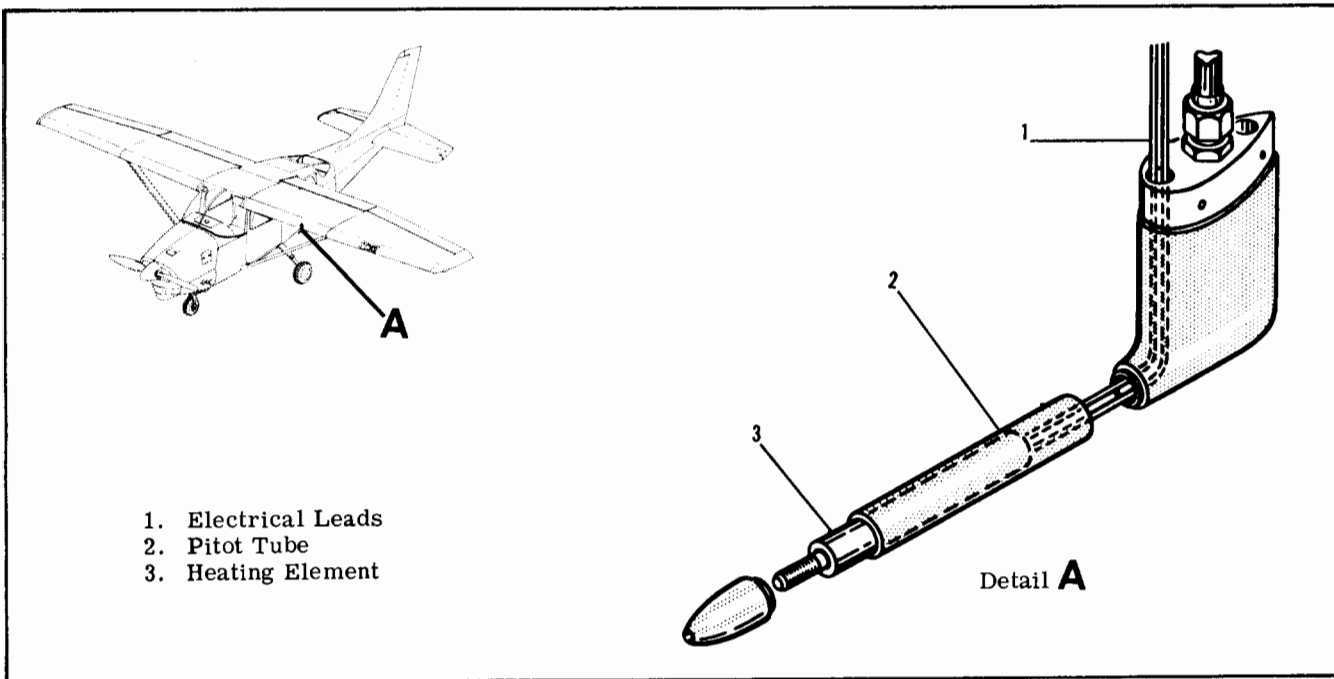


Figure 17-17. Pitot Heater Installation

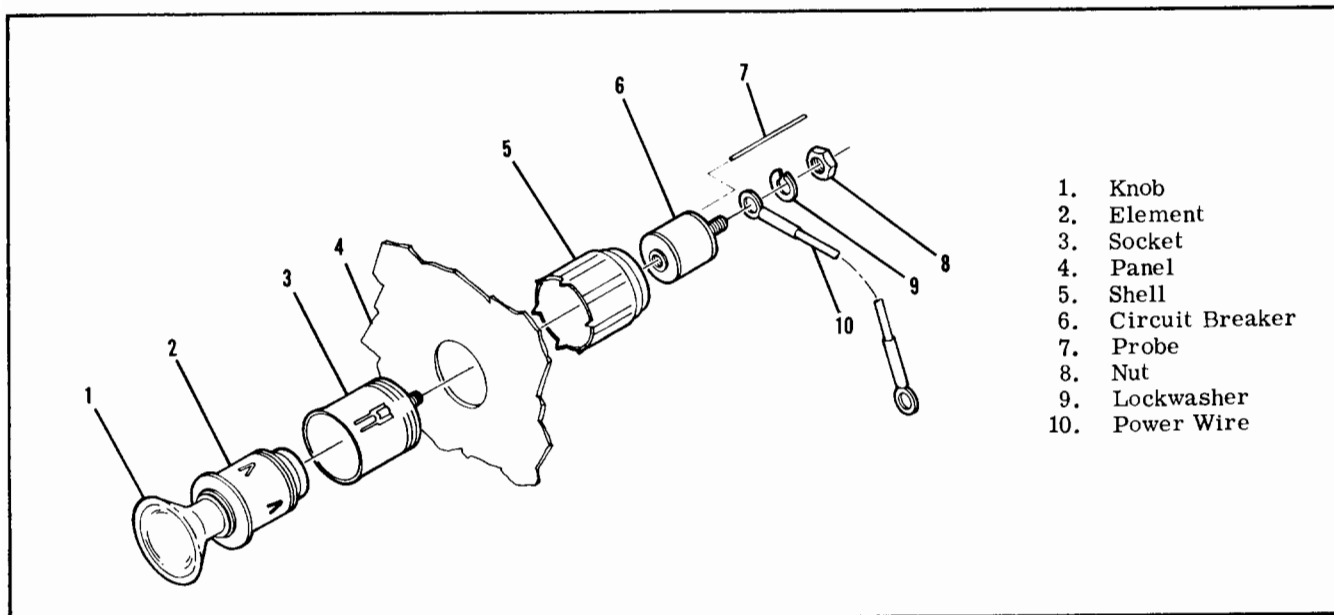


Figure 17-18. Cigar Lighter Installation

contained in a small cylinder screwed directly on the back of the cigar lighter socket. The circuit breaker is a bi-metallic type and is resettable. To reset a breaker, make sure that the master switch is off, then insert a small diameter pin (end of a paper clip works) into the hole in the phenolic back plate of the breaker and apply pressure. A small click will be heard when the breaker resets.

17-109. REMOVAL AND INSTALLATION (Refer to Figure 17-18.)

- a. Ensure that the master switch is "OFF."
- b. Remove cigar lighter element.
- c. Disconnect wire on back of lighter.
- d. Remove shell that screws on socket back of panel.
- e. The socket will then be free for removal.
- f. To install a cigar lighter, reverse this procedure.

17-110. SKYDIVING KIT.

17-111. DESCRIPTION. The kit consists of a spoiler, sky diver steering switch, and a steering signal light console. The spoiler is installed on the door hinges of the removed front cargo door to mini-

mize the strong air flow buffeting within the cabin when cargo doors are removed. The rocker-type steering switch is mounted inside the cabin on the upper sill of the cargo door opening and is used by the sky diver to signal the pilot of his desired flight path over the drop zone. A steering signal light console, with red and green lights controlled by operation of the steering switch, is mounted on top of the instrument panel. Illumination of the red light indicates to the pilot that the diver desires that the aircraft be steered left; conversely, a green light shows that the pilot is to steer right. Removal of the cargo doors necessitates the installation of a depressor plate over the wing flap circuit interrupt switch to permit flap operation with doors removed. (Under normal operations with the cargo door installed the switch prevents flap operation whenever the front cargo door is open to prevent accidental damage to the door or wing flap if the flaps are lowered.)

17-112. REMOVAL AND INSTALLATION. For removal and installation of skydiving kit, refer to Figure 17-19. Refer to wing flap wiring diagrams in the Wiring Section of this manual for wiring associated with the flap circuit interrupt switch.

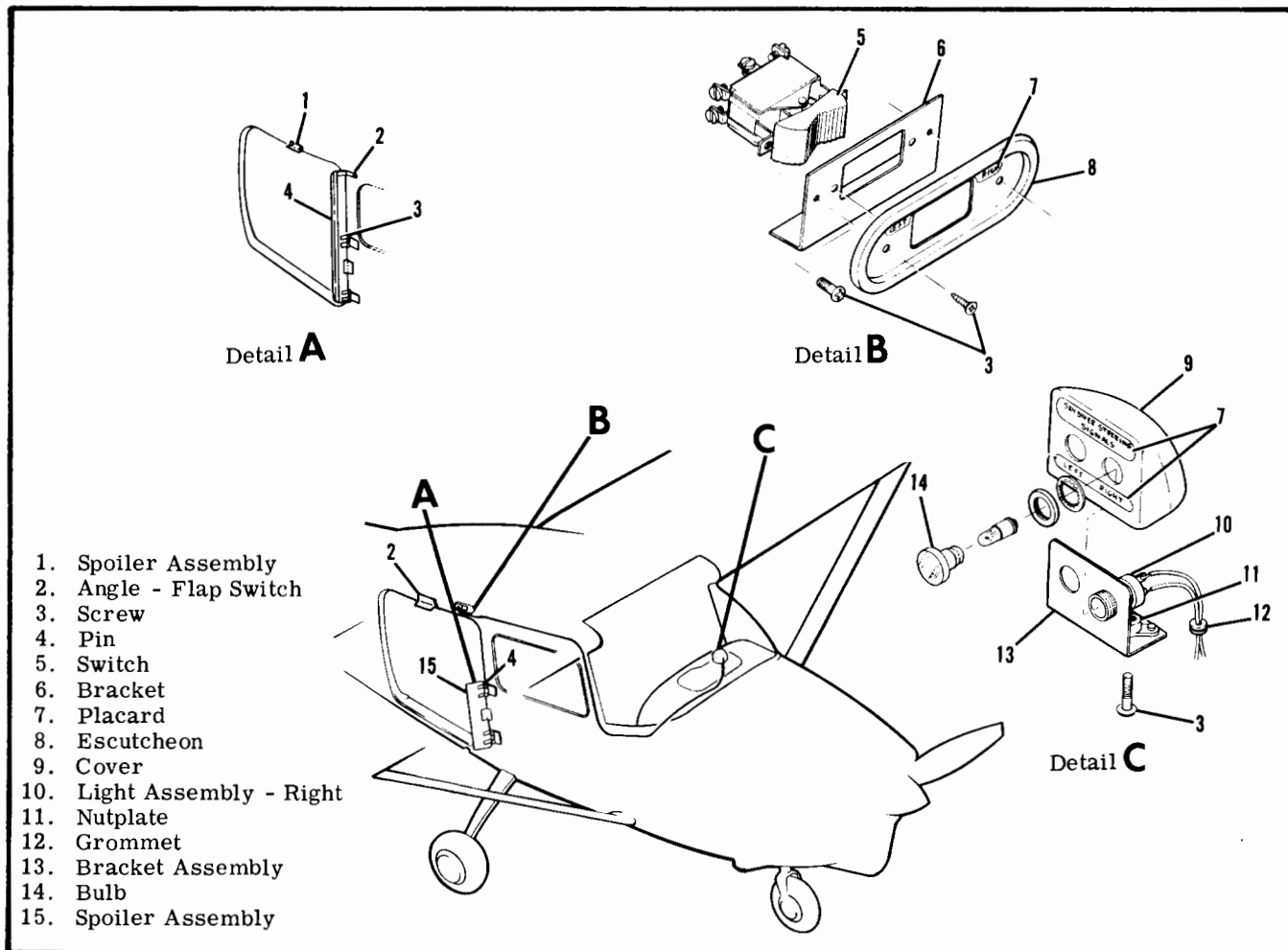


Figure 17-19. Sky Diving Components Equipment Installation

17-113. EMERGENCY LOCATOR TRANSMITTER.

17-114. DESCRIPTION. The ELT is a self-contained, solid state unit, having its own power supply, with an externally mounted antenna. The C589510-0209 transmitter is designed to transmit simultaneously on dual emergency frequencies of 121.5 and 243.0 Megahertz. The C589510-0211 transmitter used for Canadian registry, operates on 121.5 only. The unit is mounted in the tailcone, aft of the baggage curtain on the right hand side. The transmitters are designed to provide a broadcast tone that is audio modulated in a swept manner over the range of 1600 to 300 Hz in a distinct, easily recognizable distress signal for reception by search and rescue personnel and others monitoring the emergency frequencies. Power is supplied to the transmitter by a battery-pack which has the service life of the batteries placarded on the batteries and also on the outside end of the transmitter. ELT's thru early 1974 models, were equipped with a battery-pack containing six magnesium "D" size dry cell batteries wired in series. (See figure 17-20) Mid 1974 thru early 1975, ELT's are equipped with a battery-pack containing four "in-line" lithium "D" batteries wired in series. Early 1975 and on ELT's are equipped with a battery-pack containing four lithium "D" size batteries which are stacked in two's (See figure 17-22). The ELT exhibits line of sight transmission characteristics which correspond approximately to 100 miles at a search altitude of 10,000 feet. When battery inspection and replacement schedules are adhered to, the transmitter will broadcast an emergency signal at rated power (75 MW-minimum), for a continuous period of time as listed in the following table.

TRANSMITTER LIFE
TO 75 MILLIWATTS OUTPUT

Temperature	6 Cell Magnesium Battery Pack	4 Cell Lithium Battery Pack
+130°F	89 hrs	115 hrs
+ 70°F	95 hrs	115 hrs
- 4°F	49 hrs	95 hrs
- 40°F	23 hrs	70 hrs

Battery-packs have a normal shelf life of five to ten (5-10) years and must be replaced at 1/2 of normal shelf life in accordance with TSO-C91. Cessna specifies 3 years replacement of magnesium (6-cell) battery-packs and 5 years replacement of lithium (4-cell) battery packs.

17-115. OPERATION. A three position switch on the forward end of the unit controls operation. Placing the switch in the ON position will energize the unit to start transmitting emergency signals. In the OFF position, the unit is inoperative. Placing the switch in the ARM position will set the unit to start transmitting emergency signals only after the unit has received a 5g (tolerances are +2g and -0g) impact force, for a duration of 11-16 milliseconds.

CAUTION

Do not leave the emergency locator transmitter in the ON position longer than 5 seconds or you may activate downed aircraft procedures by C. A. P., D. O. T. or F. A. A. personnel.

WARNING

Magnesium (6-cell) battery-packs (excluding 4 cell lithium battery-packs) after prolonged continuous use (1 hour) in a sealed environment give off explosive gas. If your ELT has operated for this time period or longer, as a precautionary measure, loosen the ELT cover screws, lift the cover to break air tight seal and let stand for 15 minutes before tightening screws. Keep sparks, flames and lighted cigarettes away from battery-pack.

NOTE

After relatively short periods of inactivation, the magnesium (6-cell) battery-pack develops a coating over its anode which drastically reduces self discharge and thereby gives the cell an extremely long storage life. This coating will exhibit a high resistance to the flow of electric current when the battery is first switched on. After a short while (less than 15 seconds), the battery current will completely dissolve this coating and enable the battery to operate normally. If this coating is present when your ELT is activated, there may be a few seconds delay before the transmitter reaches full power.

17-116. CHECKOUT INTERVAL:

100 HOURS.

- a. Turn aircraft master switch ON.
- b. Turn aircraft transceiver ON and set frequency on receiver to 121.5 MHz.
- c. Remove the ELT's antenna cable from the ELT unit.
- d. Place the ELT's function selector switch in the ON position for 5 seconds or less. Immediately replace the ELT function selector switch in the ARM position after testing ELT.
- e. Test should be conducted only within the time period made up of the first five minutes after any hour.

CAUTION

Tests with the antenna connected should be approved and confirmed by the nearest control tower.

NOTE

Without its antenna connected, the ELT will produce sufficient signal to reach your receiver, yet it will not disturb other communications or damage output circuitry.

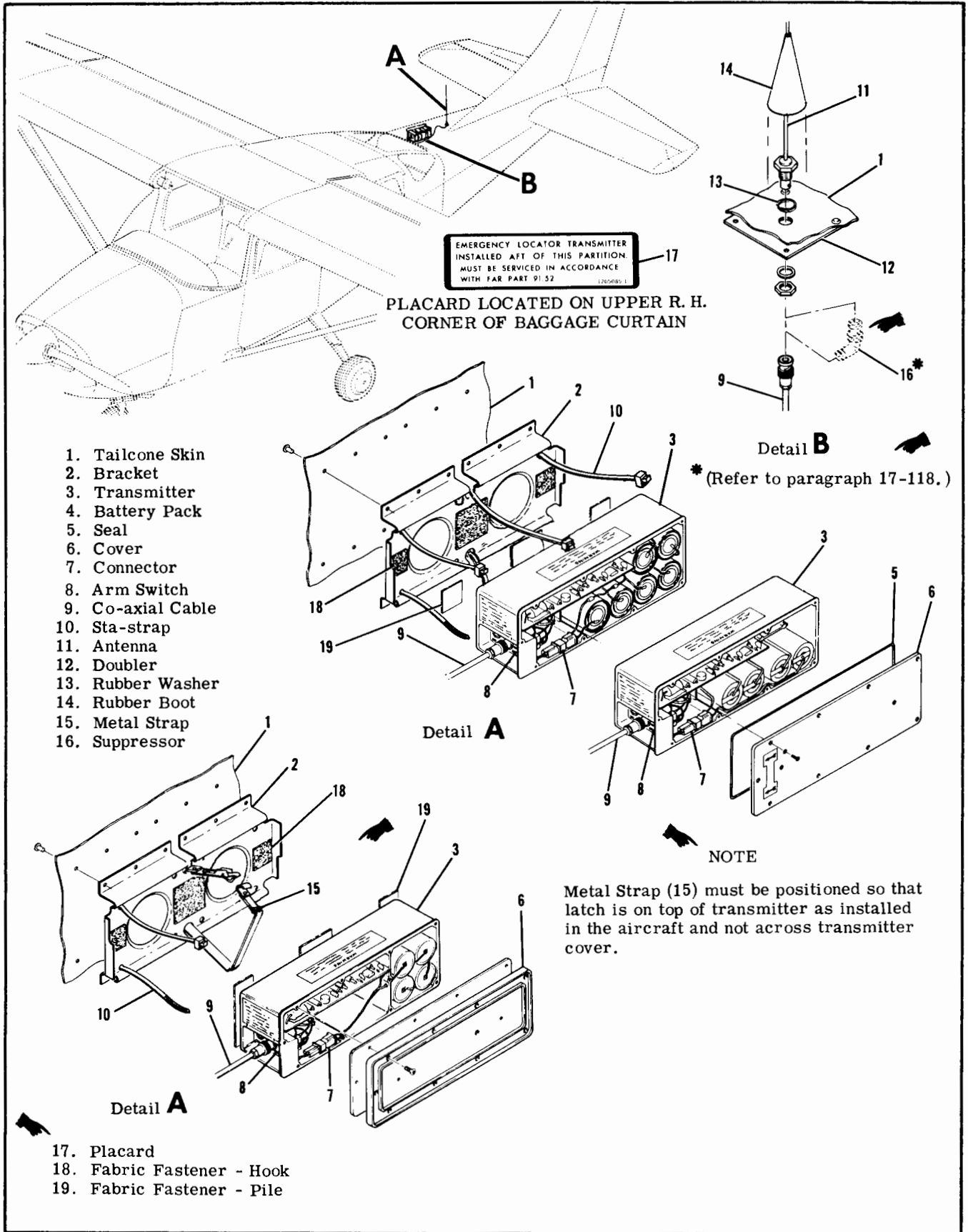


Figure 17-20. Emergency Locator Transmitter Installation

NOTE

After accumulated test or operation time equals 1 hour, battery-pack replacement is required.

f. Check calendar date for replacement of battery-pack. This date is supplied on a sticker attached to the outside of the ELT case and to each battery.

17-117. REMOVAL AND INSTALLATION OF TRANSMITTER. (Refer to figure 17-20.)

- a. Remove the baggage curtain to gain access to the transmitter and antenna.
- b. Disconnect co-axial cable from end of transmitter.
- c. Depending upon the particular installation, either cut four sta-straps and remove transmitter or cut sta-strap securing antenna cable and unlatch metal strap to remove transmitter.

NOTE

Transmitter is also attached to the mounting bracket by velcro strips; pull transmitter to free from mounting bracket and velcro.

NOTE

To replace velcro strips, clean surface thoroughly with clean cloth saturated in one of the following solvents: Trichloric thylene, Aliphatic Napthas, Methyl Ethyl Ketone or Enmar 6094 Lacquer Thinner. Cloth should be folded each time the surface is wiped to present a clean area and avoid redepositing of grease. Wipe surface immediately with clean dry cloth, do not allow solvent to dry on surface. Apply Velcro #40 adhesive to each surface in a thin even coat and allow to dry until quite tacky, but no longer transfers to the finger when touched (usually between 5 and 30 minutes). Porous surfaces may require two coats. Place the two surfaces in contact and press firmly together to insure intimate contact. Allow 24 hours for complete cure.

e. To reinstall transmitter, reverse preceding steps.

NOTE

An installation tool is required to properly secure sta-straps on units installed with sta-straps. This tool may be purchased locally or ordered from the Pandiut Corporation, Tinley Park, Ill., part number GS-2B (Conforms to MS90387-1).

CAUTION

Ensure that the direction of flight arrows (placarded on the transmitter) are pointing towards the nose of the aircraft.

17-118. REMOVAL AND INSTALLATION OF ANTENNA. (Refer to figure 17-20.)

- a. Disconnect co-axial cable from base of antenna.
- b. Remove the nut and lockwasher attaching the antenna base of the fuselage and the antenna will be free for removal.
- c. To reinstall the antenna, reverse the preceding steps.

NOTE

Upon reinstallation of antenna, cement rubber boot (14) using RTV102, General Electric Co. or equivalent, to antenna whip only; do not apply adhesive to fuselage skin or damage to paint may result.

CAUTION

In-service 6 cell magnesium battery-pack powered ELT's require the installation of a static electricity suppressor in the antenna cable to prevent the possibility of damage to the case of the ELT. Refer to Cessna Avionics Service Letter AV74-16 and figure 17-20.

17-119. REMOVAL AND INSTALLATION OF MAGNESIUM SIX (6) CELL BATTERY-PACK. (Refer to figure 17-21.)

NOTE

On aircraft incorporating Cessna ELT's manufactured by Leigh (Shark 7 series), when replacing battery-pack refer to Cessna Avionics Service Letter AV75-5, dated July 3, 1975.

NOTE

Since replacement 6 cell magnesium battery-packs are no longer available, when in-service units require replacement, use the 4 cell lithium battery-pack. Refer to paragraph 17-120.

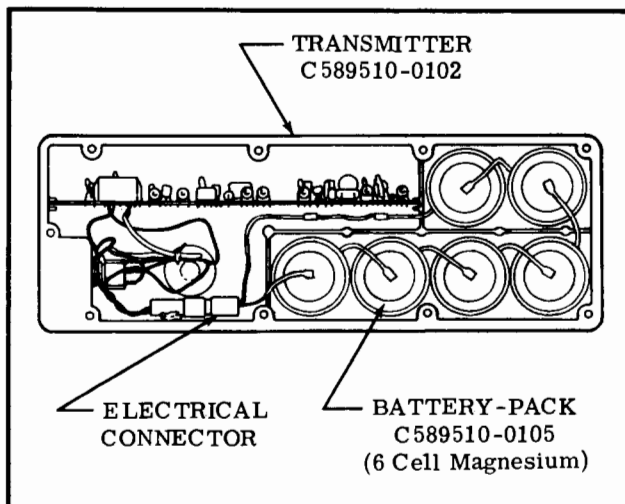


Figure 17-21. Magnesium 6 Cell Battery-Pack Installation

17-120. REMOVAL AND INSTALLATION OF LITHIUM FOUR (4) CELL BATTERY-PACK. (Refer to figure 17-22.)

NOTE

On aircraft incorporating Cessna ELT's manufactured by Leigh (Shark 7 series), when replacing battery-pack refer to Cessna Avionics Service Letter AV75-5, dated July 3, 1975.

NOTE

Transmitters equipped with the 4 cell battery-pack can only be replaced with another 4 cell battery-pack.

- a. After the transmitter has been removed from aircraft in accordance with para. 17-117, place the transmitter switch in the OFF position.
- b. Remove the nine screws attaching the cover to the case and then remove the cover to gain access to the battery-pack.

NOTE

Retain the rubber "O" ring gasket, rubber washers and screws for reinstallation.

- c. Disconnect the battery-pack electrical connector and remove battery-pack.
- d. Place new battery-pack in the transmitter with four batteries as shown in the case in figure 17-22.
- e. Connect the electrical connector as shown in figure 17-22.

NOTE

Before installing the new 4 cell battery-pack, check to ensure that its voltage is 11.2 volts or greater.

CAUTION

If it is desirable to replace adhesive material on the 4 cell battery-pack, use only 3M Jet Melt Adhesive #3738. Do not use other adhesive materials since other materials may corrode the printed circuit board assembly.

- f. Replace the transmitter cover by positioning the rubber "O" ring gasket, if installed, on the cover and pressing the cover and case together. Attach cover with nine screws and rubber washers.
- g. Remove the old battery-pack placard from the end of transmitter and replace with new battery-pack placard supplied with the new battery-pack.

SHOP NOTES:

CAUTION

Be sure to enter the new battery-pack expiration date in the aircraft records. It is also recommended this date be placed in your ELT Owner's Manual for quick reference.

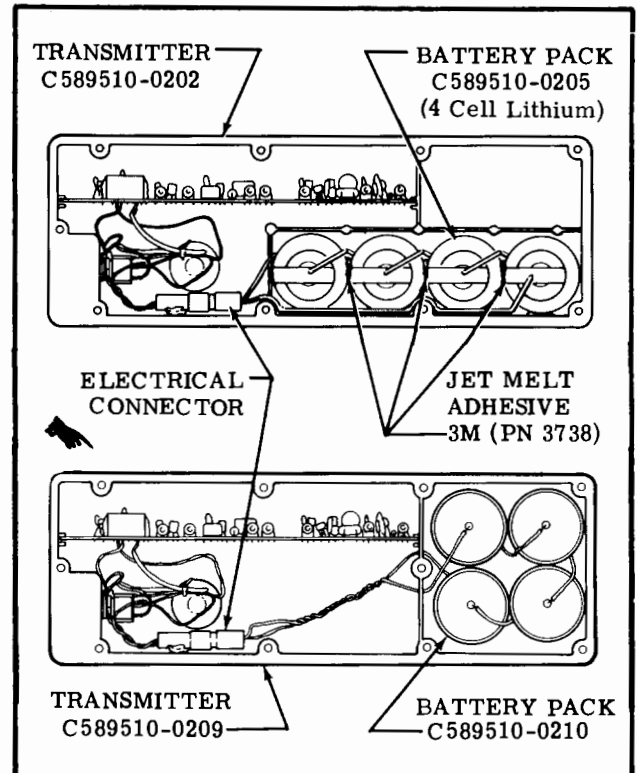


Figure 17-22. Lithium 4 Cell Battery Pack Installations

17-121. TROUBLE SHOOTING. Should your Emergency Locating Transmitter fail the 100 Hours performance checks, it is possible to a limited degree to isolate the fault to a particular area of the equipment. In performing the following trouble shooting procedures to test peak effective radiated power, you will be able to determine if battery replacement is necessary or if your unit should be returned to your dealer for repair.

TROUBLE	PROBABLE CAUSE	REMEDY
*POWER LOW	Low battery voltage.	1. Set toggle switch to off. 2. Remove plastic plug from the remote jack and by means of a Switchcraft #750 jackplug, connect a Simpson 260 model voltmeter and measure voltage. If the battery-pack voltage on the 6-cell magnesium battery pack transmitter is 10.8 volts or less, and on the 4-cell lithium battery pack transmitters is 11.2 volts or less, the battery pack is below specification.
	Faulty transmitter.	3. If the battery-pack voltage meets the specifications in step 2, the battery-pack is O. K. If the battery is O. K. , check the transmitter as follows: <ol style="list-style-type: none"> a. Remove the voltmeter. b. By means of a switchcraft 750 jackplug and 3 inch maximum long leads, connect a Simpson Model 1223 ammeter to the jack. c. Set the toggle switch to ON and observe the ammeter current drain. If the current-drain is in the 85-100 ma range, the transmitter or the co-axial cable is faulty.
	Faulty co-axial antenna cable.	4. Check co-axial antenna cable for high resistance joints. If this is found to be the case, the cable should be replaced.

*This test should be carried out with the co-axial cable provided with your unit.

SHOP NOTES:

ELECTRICAL LOAD ANALYSIS CHART

24 VOLT ALL MODELS

STANDARD EQUIPMENT (RUNNING LOAD)	AMPS REQD					
	1971	1972	1973	1974	1975	1976
Battery Contactor	0.6	.41	.41	.41	.41	.41
Clock	†	†	†	†	†	†
Cylinder Head Temperature Indicator	0.2	.039	.039	0.039	0.039	0.039
Fuel Quantity Indicators	0.4	.12	.12	0.12	0.12	0.12
Flashing Beacon	7.0	6.0	6.0	4.0	4.0	4.0
Instrument Lights						
a. Electroluminescent Panel . . . . .	.03	.03	.03	0.02	0.02	0.02
b. Cluster	0.2	0.2	0.2	0.16	0.16	0.16
c. Console*	1.0	1.0	1.0	1.14	1.14	1.14
d. Compass . . . . .	.04	.04	.04	0.04	0.04	0.04
Position Lights	2.0	2.0	2.0	2.0	2.0	2.0
Turn Coordinator	0.4	.28	.28	0.3	0.3	0.3
OPTIONAL EQUIPMENT (RUNNING LOAD)						
Heated-Pitot	5.8	5.8	5.8	5.8	5.8	5.8
Strobe Lights	4.0	4.0	4.0	4.0	4.0	4.0
Carburetor Air Temp	0.03	0.03	0.03	0.03	0.03	0.03
Cessna 200A Navomatic (Type AF-295A)	—	—	—	1.5	—	—
Cessna 200A Navomatic (Type AF-295B)	—	—	—	—	1.5	1.5
Cessna 300 ADF (Type R-521B)	1.6	—	—	—	—	—
Cessna 300 ADF (Type R-546A)	—	1.0	1.0	1.0	1.0	1.0
Cessna 300 ADF (Type R-546E)	—	1.0	1.0	1.0	1.0	1.0
Cessna 300 Marker Beacon (Type R-502B) . . . . .	.02	.02	.02	0.02	0.02	0.02
Cessna 300 Nav/Com (90 Channel-Type RT-517R)	4.5	—	—	—	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-540A)	4.5	—	—	—	—	—
Cessna 300 Nav/Com (100 Channel-Type RT-508A)	—	1.9	1.9	—	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-308C)	—	—	—	1.5	1.5	1.5
Cessna 300 Nav/Com (360 Channel-Type RT-528A)	—	1.9	1.9	—	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-528E)	—	—	1.9	1.9	1.9	1.9
Cessna 300 Nav/Com (360 Channel-Type RT-328A)	—	—	1.9	—	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-328C)	—	—	—	1.5	—	—
Cessna 300 Nav/Com (720 Channel-Type RT-328D)	—	—	—	—	1.5	1.5
Cessna 300 Transceiver (Type RT-524A)	2.1	2.1	2.1	2.1	2.1	2.1
Cessna 300 HF Transceiver (Type PT-10A)	1.0	1.0	1.0	1.0	—	—
Cessna 300 Transponder (Type KT-75R)	0.7	0.7	—	—	—	—
Cessna 300 Transponder (Type KT-76 & KT-78)	—	1.3	1.3	—	—	—
Cessna 300 Transponder (Type RT-359A)	—	—	—	1.0	1.0	1.0
Cessna 300 Navomatic (Type AF-512C)	1.8	—	—	—	—	—
Cessna 300 Navomatic (Type AF-512D)	—	1.8	—	—	—	—
Cessna 300 Navomatic (Type AF-394A)	—	—	1.75	1.8	—	—
Cessna 300A Navomatic (Type AF-395A)	—	—	—	—	2.0	2.0
Cessna 300 DME (Type KN-60B)	3.0	—	—	—	—	—
Cessna 300 DME (Type KN-60C)	—	3.0	3.0	2.4	—	—
Cessna 400 ADF (Type R-324A)	1.8	—	—	—	—	—
Cessna 400 ADF (Type R-346A)	—	1.0	1.0	1.0	—	—
Cessna 400 ADF (Type R-446A)	—	—	—	—	—	1.0
Cessna 400 Glideslope (Type R-543B)	0.4	0.4	0.4	0.4	0.4	0.4
Cessna 400 Glideslope (Type R-443A)	—	—	0.4	—	—	—
Cessna 400 Glideslope (Type R-443B)	—	—	—	0.32	0.32	0.32
Cessna 400 Nav/Com (Type RT-522A)	3.0	3.0	3.0	3.0	3.0	3.0
Cessna 400 Nav/Com (Type RT-422A)	—	—	2.5	1.7	—	—
Cessna 400 Transceiver (Type RT-532A)	2.2	2.2	—	—	—	—
Cessna 400 Transceiver (Type RT-432A)	—	—	1.7	1.4	—	—
Cessna 400 Transponder (Type RT-506A)	1.5	1.5	1.5	—	—	—
Cessna 400 Transponder (Type RT-459A)	—	—	—	1.0	1.0	1.0
Cessna 400 Nav-O-Matic (Type AF-520C)	1.2	1.2	—	—	—	—
Cessna 400 Nav-O-Matic (Type AF-420A)	—	—	1.2	1.2	1.2	1.2

ELECTRICAL LOAD ANALYSIS CHART (CONT.)

24 VOLT ALL MODELS

OPTIONAL EQUIPMENT (RUNNING LOAD) (CONT.)	AMPS REQD					
	1971	1972	1973	1974	1975	1976
Cessna 400 Area Nav (Type RN-478A)	—	—	—	—	—	0.5
Cessna 400 DME (Type R-476A)	—	—	—	—	—	2.5
Bendix MKR BCN RCVR (Type GM-247A)	—	—	—	—	—	.100
King KN-65 DME	—	—	—	1.4	1.4	1.4
Sunair SSB Transceiver (Type ASB-125)	2.5	2.5	2.5	2.5	2.5	2.5
Narco Mark 12B Nav/Com with VOA-40 or VOA-50	4.6	—	—	—	—	—
Narco UGR-2 Glideslope Receiver . . . . .	.23	—	—	—	—	—
King KN-60C DME	—	—	—	—	2.4	2.4
Pantronics PT-10A HF Transceiver	—	—	—	—	1.5	1.5
ITEMS NOT CONSIDERED AS PART OF RUNNING LOAD.						
Auxiliary Fuel Pump	3.0	3.0	3.0	3.0	3.0	3.0
Cigarette Lighter	7.0	7.0	7.0	7.0	7.0	7.0
Flap Motor	8.5	8.5	8.5	8.5	8.5	8.5
Landing Lights (Each)	3.57	3.57	3.57	3.57	3.57	3.57
Oil Dilution System	1.0	1.0	1.0	1.0	1.0	1.0
Stall Warning Horn . . . . .	.25	.25	.25	.28	.28	.28
Wing Courtesy Lights and Cabin Lights	1.2	1.2	1.2	1.65	1.65	1.65
Sky Diving Lights . . . . .	.04	.04	.04	.04	.04	.04
<p>*Console lights not used with post lights. Only one or the other may be used at one time. †Negligible</p>						

12 VOLT ALL MODELS

STANDARD EQUIPMENT (RUNNING LOAD)	AMPS REQD						
	1969	1970	1971	1972	1973	1974	1975
Battery Contactor	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Clock	†	†	†	†	†	†	†
Cylinder Head Temperature Indicator	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fuel Quantity Indicators	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Flashing Beacon	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Instrument Lights							
a. Electroluminescent Panel	0.5	0.5	0.5	0.5	0.5	0.4	0.4
b. Cluster	0.3	0.3	0.3	0.3	0.3	0.32	0.32
c. Console*	2.0	2.0	2.0	2.0	2.0	2.08	2.08
d. Compass	0.1	0.1	0.1	0.1	0.1	0.8	0.8
Position Lights	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Turn Coordinator	0.8	0.8	0.8	0.8	0.8	0.8	0.8
OPTIONAL EQUIPMENT (RUNNING LOAD)							
Heated-Pitot, Stall Warning Heater	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Strobe Lights	—	—	4.0	4.0	4.0	2.0	2.0
Carburetor Air Temp	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Cessna 200A Navomatic Autopilot (Type AF-295A)	—	—	—	—	—	2.0	—
Cessna 200A Navomatic Autopilot (Type AF-295B)	—	—	—	—	—	—	2.0
Cessna 300 ADF (Type R-521B)	1.6	1.6	1.6	—	—	—	—

ELECTRICAL LOAD ANALYSIS CHART (CONT.)

12 VOLT ALL MODELS

OPTIONAL EQUIPMENT (RUNNING LOAD) (CONT.)	AMPS REQD						
	1969	1970	1971	1972	1973	1974	1975
Cessna 300 ADF (Type R-546A)	—	—	—	1.0	1.0	1.0	1.0
Cessna 300 ADF (Type R-546E)	—	—	—	1.0	1.0	1.0	1.0
Cessna 300 Marker Beacon (Type R-502B) . . . . .	.02	.02	.02	.02	.02	0.02	0.02
Cessna 300 Nav/Com (90 Channel-Type RT-517R)	4.5	4.5	4.5	—	—	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-540A)	4.5	4.5	4.5	—	—	—	—
Cessna 300 Nav/Com (100 Channel-Type RT-508A)	—	—	—	1.9	1.9	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-308C)	—	—	—	—	—	1.5	1.5
Cessna 300 Nav/Com (360 Channel-Type RT-528A)	—	—	—	1.9	1.9	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-528E)	—	—	—	—	1.9	1.9	1.9
Cessna 300 Nav/Com (360 Channel-Type RT-328A)	—	—	—	—	1.9	—	—
Cessna 300 Nav/Com (360 Channel-Type RT-328C)	—	—	—	—	—	1.5	—
Cessna 300 Nav/Com (720 Channel-Type RT-328D)	—	—	—	—	—	—	1.5
Cessna 300 Transceiver (Type RT-524A)	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Cessna 300 HF Transceiver (Type PT-10A)	—	—	1.5	1.5	1.5	1.5	—
Cessna 300 Transponder (Type KT-75R)	1.5	1.5	1.5	1.5	—	—	—
Cessna 300 Transponder (Type KT-76 & KT-78)	—	—	—	1.3	1.3	—	—
Cessna 300 Transponder (Type RT-359A)	—	—	—	—	—	1.0	1.0
Cessna 300 Navomatic (Type AF-512C)	3.5	3.5	3.5	—	—	—	—
Cessna 300 Navomatic (Type AF-512D)	—	—	—	3.5	—	—	—
Cessna 300 Navomatic (Type AF-394A)	—	—	—	—	2.0	2.0	—
Cessna 300A Navomatic (Type AF-395A)	—	—	—	—	—	—	2.0
Cessna 300 DME (Type KN-60B)	3.0	3.0	3.0	—	—	—	—
Cessna 300 DME (Type KN-60C)	—	—	—	3.0	3.0	3.0	—
Cessna 400 ADF (Type R-324A)	2.0	2.0	2.0	—	—	—	—
Cessna 400 ADF (Type R-346A)	—	—	—	1.0	1.0	1.0	—
Cessna 400 ADF (Type R-446A)	—	—	—	—	—	—	—
Cessna 400 Glideslope (Type R-543B)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cessna 400 Glideslope (Type R-443A)	—	—	—	—	0.4	—	—
Cessna 400 Glideslope (Type R-443B)	—	—	—	—	—	0.4	0.4
Cessna 400 Nav/Com (Type RT-522A)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Cessna 400 Nav/Com (Type RT-422A)	—	—	—	—	2.5	2.5	—
Cessna 400 Transceiver (Type RT-532A)	1.5	1.5	1.5	1.5	—	—	—
Cessna 400 Transceiver (Type RT-432A)	—	—	—	—	1.4	1.4	—
Cessna 400 Transponder (Type RT-506A)	3.0	3.0	3.0	3.0	3.0	—	—
Cessna 400 Transponder (Type RT-459A)	—	—	—	—	—	1.0	1.0
Cessna 400 Nav-O-Matic (Type AF-520C)	—	—	2.4	2.4	—	—	—
Cessna 400 Nav-O-Matic (Type AF-420A)	—	—	—	—	1.2	1.2	1.2
Sunair SSB Transceiver (Type ASB-125)	—	5.0	5.0	5.0	5.0	5.0	5.0
Flashing Beacon	7.0	7.0	7.0	7.0	7.0	7.0	—
King KN-60C DME	—	—	—	—	—	—	3.0
King KN-65 DME	—	—	—	—	—	2.8	2.8
Pantronics PT-10A HF Transceiver	—	—	—	—	—	—	1.5
Narco Mark 12A Nav/Com	4.6	—	—	—	—	—	—
Narco Mark 12B Nav/Com with VOA-40 or VOA-50	4.6	4.6	4.6	—	—	—	—
Narco UGR-2 Glideslope Receiver . . . . .	.23	.23	.23	—	—	—	—
ITEMS NOT CONSIDERED AS PART OF RUNNING LOAD							
Auxiliary Fuel Pump	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Cigarette Lighter	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Flap Motor	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Landing Lights	15.6	15.6	15.6	15.6	15.6	15.6	15.6
Oil Dilution System	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Stall Warning Horn	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Wing Courtesy Lights and Cabin Lights	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Sky Diving Lights	0.1	0.1	0.1	0.1	0.1	0.1	0.1
*Console lights not used with post lights. Only one or the other may be used at one time							
†Negligible							

SECTION 18

STRUCTURAL REPAIR

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18-1. REPAIR CRITERIA.

18-2. Although this section outlines repair permissible on structure of the aircraft, the decision of whether to repair or replace a major unit of structure will be influenced by such factors as time and labor available, and by a comparison of labor costs with the price of replacement assemblies. Past experience indicates that replacement, in many cases, is less costly than major repair. Certainly, when the aircraft must be restored to its airworthy condition in a limited length of time, replacement is preferable.

18-3. Restoration of a damaged aircraft to its original design strength, shape and alignment involves careful evaluation of the damage, followed by exacting workmanship in performing the repairs. This section suggest the extent of structural repair practical on the aircraft and supplements Federal Aviation Regulations, Part 43. Consult the factory when in doubt about a repair not specifically mentioned here.

18-4. EQUIPMENT AND TOOLS.

18-5. Equipment and tools for repair of structure may be fabricated locally for all but major repair jobs. For major repair of wings and fuselage, special jigs, available from the factory are recommended. These jigs are precision equipment designed to ensure accurate alignment of these airframe components.

18-6. CONTROL BALANCING requires the use of a fixture to determine the static balance moment of the control surface assembly. Plans for, and the use of, such a fixture are shown in figure 18-9.

18-7. SUPPORT STANDS shown in figure 18-1 are used to hold a fuselage or wing when it is removed. The stands may be manufactured locally of any suitable wood.

18-8. FUSELAGE REPAIR JIG. The fuselage jig, which may be obtained from the factory, is a sturdy,

versatile fixture used to hold an entire fuselage and to locate the firewall, wing and landing gear attachment points. The jig is ideal for assembling new parts in repair of a badly damaged fuselage.

18-9. WING JIG. The wing jig, which may also be obtained from the factory, serves as a holding fixture during extensive repair of a damaged wing. The jig locates the root rib, leading edge, and tip rib of the wing.

18-10. WING AND STABILIZER ANGLE-OF-INCIDENCE. Angle-of-incidence and wing twist are listed in the following chart. Stabilizers do not have twist. Wings have a constant angle from the wing root to the strut fitting station. All twist in the panel is between this station and the tip rib. The amount of twist between these points is the difference between the angle-of-incidence at the root and the angle-of-incidence at the tip. See figure 18-2.

WING

Angle-of-incidence, Root	+47'
Angle-of-incidence, Tip	-2°50'
Twist (Washout)	3°37'

STABILIZER

Angle-of-incidence	-3°±15'
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18-11. REPAIR MATERIALS.

18-12. Thickness of material on which a repair is to be made can easily be determined by measuring with a micrometer. In general, material used in Cessna aircraft covered in this manual is made from 2024 aluminum alloy, heat treated to a -T3, -T4, or -T42 condition. If the type of material cannot be readily determined, 2024-T3 may be used in making repairs, since the strength of -T3 is greater than -T4 or -T42 (-T4 and -T42 may be used interchangeably, but they may not be substituted for -T3). When necessary to form a part with a smaller bend radius than the standard cold bending radius for 2024-T4, use 2024-0 and heat treat to 2024-T42 after forming. The repair material used in making a repair must equal the gage of the material being repaired unless otherwise noted. It is often practical to cut repair pieces from service parts listed in the Parts Catalogs.

A few components (empennage tips, for example) are fabricated from thermo-formed plastic or glass fiber constructed materials.

18-13. WING.

18-14. The wing assemblies are of the semi-cantilever type employing semi-monocoque type of structure. Basically, the internal structure consists of built-up front and rear spar assemblies, formed sheet metal nose, intermediate, and trailing edge ribs. Stressed skin, riveted to the rib and spar structures, completes the wing structure.

18-15. ACCESS openings (hand holes with removable cover plates) are located in the underside of the wing between the wing root and tip section. These open-

ings afford access to the aileron bellcranks, flap bellcranks, electrical wiring, strut attaching fittings, aileron control cable pulley and control cable disconnect points.

18-16. WING SKIN.

18-17. NEGLIGIBLE DAMAGE. Any smooth dents in the wing skin that are free from cracks, abrasions and sharp corners, which are not stress wrinkles and do not interfere with any internal structure or mechanism, may be considered as negligible damage. In areas of low stress intensity, cracks, deep scratches or deep, sharp dents, which after trimming or stop drilling can be enclosed by a two-inch circle, can be considered negligible if the damaged area is at least one diameter of the enclosing circle away from all existing rivet lines and material edges. Stop drilling is considered a temporary repair and a permanent repair should be made as soon as practicable.

18-18. REPAIRABLE DAMAGE. Figure 18-3 outlines typical repairs to be employed in patching skin. Before installing a patch, trim the damaged area to form a rectangular pattern, leaving at least a one-half inch radius at each corner, and deburr. The sides of the hole should lie span-wise or chord-wise. A circular patch may also be used. If the patch is in an area where flush rivets are used, make a flush patch type of repair; if in an area where flush rivets are not used, make an overlapping type of repair. Where optimum appearance and airflow are desired, the flush patch may be used. Careful workmanship will eliminate gaps at butt-joints; however, an epoxy type filler may be used at such joints.

18-19. DAMAGE NECESSITATING REPLACEMENT OF PARTS. If a skin is badly damaged, repair should be made by replacing an entire skin panel, from one structural member to the next. Repair seams should be made to lie along existing structural members and each seam should be made exactly the same in regard to rivet size, spacing, and pattern as the manufactured seams at the edges of the original sheet. If the manufactured seams are different, the stronger should be copied. If the repair ends at a structural member where no seam is used, enough repair panel should be used to allow an extra row of staggered rivets, with sufficient edge margin, to be installed.

18-20. WING STRINGERS.

18-21. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17.

18-22. REPAIRABLE DAMAGE. Figure 18-4 outlines a typical wing stringer repair. Two such repairs may be used to splice a new section of stringer material in position, without the filler material.

18-23. DAMAGE NECESSITATING REPLACEMENT OF PARTS. If a stringer is so badly damaged that more than one section must be spliced into it, replace the entire stringer.

18-24. WING RIBS.

18-25. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17.

18-26. REPAIRABLE DAMAGE. Figure 18-5 outlines typical wing rib repairs.

18-27. DAMAGE NECESSITATING REPLACEMENT OF PARTS. Leading edge and trailing edge ribs that are extensively damaged should be replaced. However, due to the necessity of unfastening so much skin in order to replace ribs, they should be repaired if practicable. Center ribs, between the front and rear spars should always be repaired if practicable.

18-28. WING SPARS.

18-29. NEGLIGIBLE DAMAGE. Due to the stresses which wing spars encounter, very little damage can be considered negligible. All cracks, stress wrinkles, deep scratches, and sharp dents must be repaired. Smooth dents, light scratches, and abrasions may be considered negligible.

18-30. REPAIRABLE DAMAGE. Figure 18-6 outlines typical spar repairs. It is often practical to cut repair pieces from spare parts listed in Parts Catalogs. Service Kits are available for certain types of spar repairs.

18-31. DAMAGE NECESSITATING REPLACEMENT OF PARTS. Damage so extensive that repair is not feasible requires replacement of a complete wing spar. Also refer to paragraph 18-2.

18-32. WING LEADING EDGE.

18-33. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17.

18-34. REPAIRABLE DAMAGE. A typical leading edge skin repair is shown in figure 18-8. An epoxy type filler may be used to fill gaps at butt joints. To facilitate repair, extra access holes may be installed in the locations noted in figure 18-7. If the damage would require a repair which could not be made between adjacent ribs, refer to the following paragraph.

18-35. DAMAGE NECESSITATING REPLACEMENT OF PARTS. For extensive damage, complete leading edge skin panels should be replaced. To facilitate replacement, extra access holes may be installed in the locations noted in figure 18-7.

18-35A. BONDED LEADING EDGE REPAIR.

18-35B. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17.

18-35C. REPAIRABLE DAMAGE. (Refer to figure 18-12.) Cut out damaged area, as shown, to the edge of undamaged ribs. Using a corresponding section from a new leading edge skin, overlap ribs and secure to wing using rivet pattern as shown in the figure.

18-36. AILERONS.

18-37. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17.

18-38. REPAIRABLE DAMAGE. The repair shown in figure 18-8 may be used to repair damage to aileron leading edge skins. Figure 18-3 may be used as a guide to repair damage to flat surface between corrugations, when damaged area includes corrugations refer to figure 18-11. It is recommended that material used for repair be cut from spare parts of the same gauge and corrugation spacing. Refer to figure 18-10 for balancing. If damage would require a repair which could not be made between adjacent ribs, refer to paragraph 18-39.

18-39. DAMAGE NECESSITATING REPLACEMENT OF PARTS. If the damage would require a repair which could not be made between adjacent ribs, complete skin panels should be replaced. Ribs and spars may be repaired, but replacement is generally preferable. Where extensive damage has occurred, replacement of the aileron assembly is recommended. After repair and/or repainting, balance in accordance with figure 18-9.

18-40. WING FLAPS.

18-41. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17.

18-42. REPAIRABLE DAMAGE. Flap repairs should be similar to aileron repairs discussed in paragraph 18-38. A flap leading edge repair is shown in figure 18-8.

18-43. DAMAGE NECESSITATING REPLACEMENT OF PARTS. Flap repairs which require replacement of parts should be similar to aileron repairs discussed in paragraph 18-39.

18-44. ELEVATORS AND RUDDERS.

18-45. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17. The exception of negligible damage on the elevator surfaces is the front spar, where a crack appearing in the web at the hinge fittings or in the tip rib which supports the overhanging balance weight is not considered negligible. Cracks in the overhanging tip rib, in the area at the front spar intersection with the web of the rib, also cannot be considered negligible.

18-46. REPAIRABLE DAMAGE. Skin patches illustrated in figure 18-3 may be used to repair skin damage to the rudder, and between corrugations on the elevator. For skin damage on the elevator which includes corrugations, refer to figure 18-11. Following repair the elevator/rudder must be balanced. Refer to figure 18-10 for balancing. If damage would require a repair which could not be made between adjacent ribs, refer to paragraph 18-47.

18-47. DAMAGE NECESSITATING REPLACEMENT OF PARTS. If the damaged area would require a repair which could not be made between adjacent ribs,

complete skin panels should be replaced. Ribs and spars may be repaired, but replacement is generally preferable. Where extensive damage has occurred, replacement of the entire assembly is recommended. After repair and/or repainting, balance in accordance with figure 18-9.

18-48. FIN AND STABILIZER.

18-49. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17.

18-50. REPAIRABLE DAMAGE. Skin patches shown in figure 18-3 may be used to repair skin damage. Access to the dorsal area of the fin may be gained by removing the horizontal closing rib at the bottom of the fin. Access to the internal fin structure is best gained by removing skin attaching rivets on one side of the rear spar and ribs, and springing back the skin. Access to the stabilizer structure may be gained by removing skin attaching rivets on one side of the rear spar and ribs, and springing back the skin. If the damaged area would require a repair which could not be made between adjacent ribs, or a repair would be located in an area with compound curves, see the following paragraph.

18-51. DAMAGE NECESSITATING REPLACEMENT OF PARTS. If the damaged area would require a repair which could not be made between adjacent ribs or the repair would be located in an area with compound curves, complete skin panels should be replaced. Ribs and spars may be repaired, but replacement is generally preferable. Where damage is extensive, replacement of the entire assembly is recommended.

18-52. FUSELAGE.

18-53. The fuselage is of semi-monocoque construction consisting of formed bulkheads, longitudinal stringers, reinforcing channels and skin platings.

18-54. NEGLIGIBLE DAMAGE. Refer to paragraph 18-17. Mild corrosion appearing upon alclad surfaces does not necessarily indicate incipient failure of the base metal. However, corrosion of all types should be carefully considered, and approved remedial action taken. Small cans appear in the skin structure of all metal airplanes. It is strongly recommended, however, that wrinkles which appear to have originated from other sources, or which do not follow the general appearance of the remainder of the skin panels, be thoroughly investigated. Except in the landing gear bulkhead area, wrinkles occurring over stringers which disappear when the rivet pattern is removed may be considered negligible. However, the stringer rivet holes may not align perfectly with the skin holes because of a permanent "set" in the stringer. If this is apparent, replacement of the stringer will usually restore the original strength characteristics of the area.

NOTE

Wrinkles occurring in the skin of the main landing gear bulkhead areas should not be

considered negligible. The skin panel should be opened sufficiently to permit a thorough examination of the lower portion of the landing gear bulkhead and its tie-in structure.

Wrinkles occurring on open areas which disappear when the rivets at the edge of the sheet are removed, or a wrinkle which is hand removable, may often be repaired by the addition of a 1/2 x 1/2 x .060 inch 2024-T4 extruded angle, riveted over the wrinkle and extended to within 1/16 to 1/8 inch of the nearest structural members. Rivet pattern should be identical to the existing manufactured seam at the edge of the sheet.

18-55. REPAIRABLE DAMAGE. Fuselage skin repairs may be accomplished in the same manner as wing skin repairs outlined in paragraph 18-18. Stringers, formed skin flanges, bulkhead channels, and similar parts may be repaired as shown in figure 18-4.

18-56. DAMAGE NECESSITATING REPLACEMENT OF PARTS. Fuselage skin major repairs may be accomplished in the same manner as wing skin repairs outlined in paragraph 18-19. Damaged fittings should be replaced. Seat rails serve as structural parts of the fuselage and should be replaced if damaged.

18-57. BULKHEADS.

18-58. LANDING GEAR BULKHEADS. Since these bulkheads are highly stressed members irregularly formed to provide clearance for control lines, actuators, fuel lines, etc., patch type repairs will be for the most part, impractical. Minor damage consisting of small nicks or scratches may be repaired by dressing out the damaged area, or by replacement of rivets. Any other such damage should be repaired by replacing the landing gear support assembly as an aligned unit.

18-59. REPAIR AFTER HARD LANDING. Duckled skin or floorboards and loose or sheared rivets in the area of the main gear support will give evidence of damage to the structure from an extremely hard landing. When such evidence is present, the entire support structure should be carefully examined and all support forgings should be checked for cracks, using a dye penetrant and proper magnification. Bulkheads in the area of possible damage should be checked for alignment and a straightedge should be used to determine deformation of the bulkhead webs. Damaged support structure, buckled floorboards and skins, and damaged or questionable forgings should be replaced. Landing gear components should be replaced and rigged properly.

18-60. REPLACEMENT OF HI-SHEAR RIVETS. Hi-shear rivet replacement with close tolerance bolts or other commercial fasteners of equivalent strength properties is permissible. Holes must not be elongated, and the Hi shear substitute must be a smooth push fit. Field replacement of main landing gear forgings on bulkheads may be accomplished by using:

a. NAS464P* Bolt, MS21042-* Nut and AN960-* washer in place of Hi-Shear Rivets for forgings with machined flat surface around attachment holes.

b. NAS464P* Bolt, ESNA 2935* Mating Base Ring, ESNA LH 2935* Nut for forgings (with draft angle of up to a maximum of 8°) without machined flat surface around attachment holes.

*Dash numbers to be determined according to the size of the holes and the grip lengths required. The bolts grip length should be chosen so that no threads remain in the bearing area.

18-61. NOSE GEAR WHEEL WELL AND FIREWALL. The nose gear wheel well is made of stainless steel, as is the firewall bulkhead. Refer to paragraph 18-17 for negligible damage, and paragraph 18-18 for repairable damage. Stainless steel patches should be used in nose wheel well and firewall repairs. Any repairs in these areas will require resealing with 700P, or equivalent compound.

18-62. BAFFLES.

18-63. CONSIDERATIONS. Baffles ordinarily should be replaced if damaged or cracked. However, small plate reinforcements riveted to the baffle will often prove satisfactory both to the strength and cylinder cooling requirements of the unit.

18-64. ENGINE COWLING.

18-65. REPAIR OF COWLING SKINS. If extensively damaged, complete sections of cowling should be replaced. Standard flush-type skin patches, however, may be used if repair parts are formed to fit. Small cracks may be stop-drilled and dents straightened, if they are reinforced on the inner side with a doubler

of the same material. Bonded cowling may be repaired by the same methods used for riveted structure. Rivets are a satisfactory substitute for bonded

seams on these assemblies. The strength of the bonded seams in cowling may be replaced by a single 3/32, 2117-AD rivet per running inch of bond seam. The standard repair procedures outlined in AC43.13-1 are also applicable to cowling.

18-66. REPAIR OF REINFORCEMENT ANGLES. Cowl reinforcement angles, if damaged, should be replaced. Due to their small size they are easier to replace than to repair.

18-67. REPAIR OF ABS COMPONENTS.

18-68. Rezolin Kit Number 404 may be obtained from the Cessna Service Parts Center for repair of ABS components.

18-69. REPAIR OF GLASS FIBER CONSTRUCTED COMPONENTS.

18-70. Glass fiber constructed components on the aircraft may be repaired as stipulated in instructions furnished in SK182-12. Observe the resin manufacturer's recommendations concerning mixing and application of the resin. Epoxy resins are preferable for making repairs, since epoxy compounds are usually more stable and predictable than polyester and, in addition, give better adhesion.

18-71. BONDED DOORS.

18-72. REPAIRABLE DAMAGE. Bonded doors may be repaired by the same methods used for riveted structure. Rivets are a satisfactory substitute for bonded seams on these assemblies. The strength of the bonded seams in doors may be replaced by a single 3/32, 2117-AD rivet per running inch of bond seam. The standard repair procedures outlined in AC43.13-1 are also applicable to bonded doors.

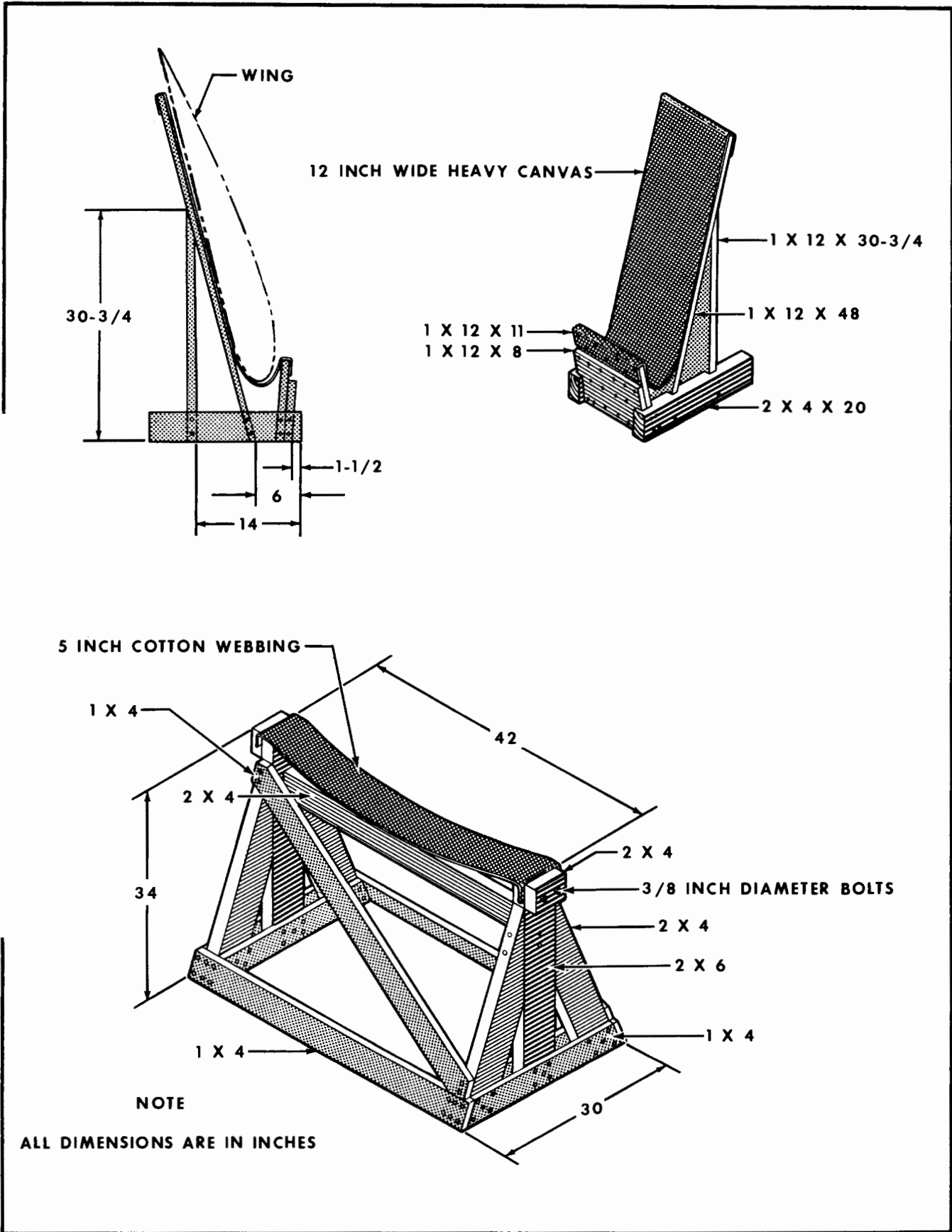
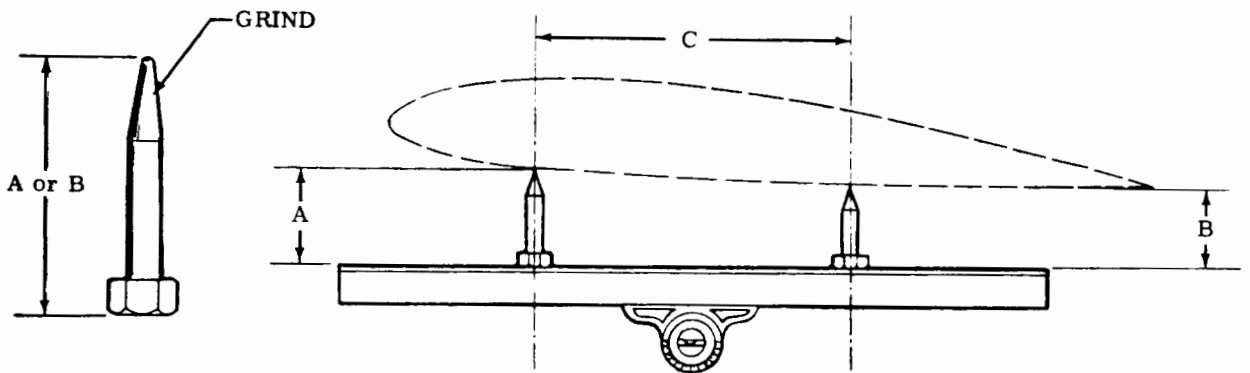


Figure 18-1. Wing and Fuselage Support Stands



MODEL	A	B	C	WING STATION
THRU U20601700	2.00	1.00	29.50	39.00
	2.00	1.00	29.50	100.00
	.79	1.00	20.00	207.00
BEGINNING WITH U20601701	2.00	1.00	29.50	39.00
	2.00	1.00	29.50	100.00
	.66	1.00	20.00	207.00

ALL WING TWIST OCCURS BETWEEN STA. 100.00 AND STA. 207.00.
(Refer to paragraph 18-10 for angle of incidence).

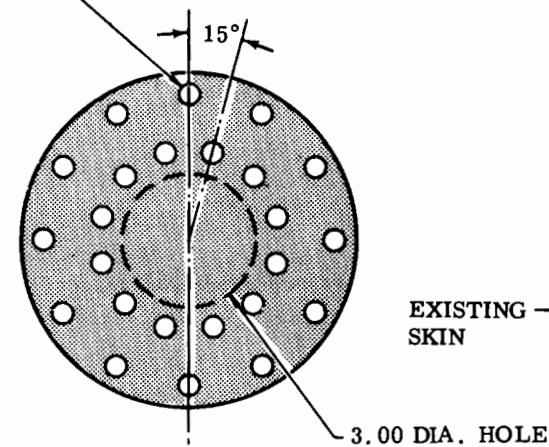
MEASURING WING TWIST

If damage has occurred to a wing, it is advisable to check the twist. The following method can be used with a minimum of equipment, which includes a straightedge (32" minimum length of angle, or equivalent), three modified bolts for a specific wing, and a protractor head with level.

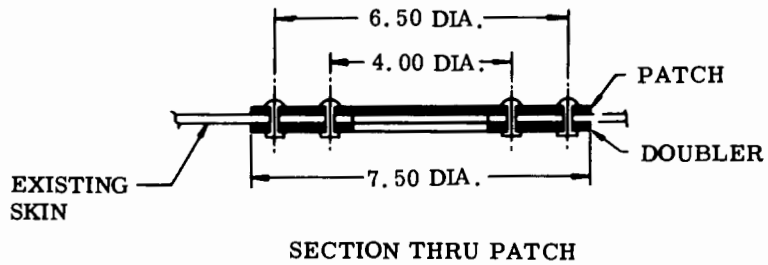
1. Check chart for applicable dimension for bolt length (A or B).
2. Grind bolt to a rounded point as illustrated, checking length periodically.
3. Tape two bolts to straightedge according to dimension C.
4. Locate inboard wing station to be checked and make a pencil mark approximately one-half inch aft of the lateral row of rivets in the wing leading edge spar flange.
5. Holding straightedge parallel to wing station (staying as clear as possible from "cans"), place longer bolt on pencil mark and set protractor head against lower edge of straightedge.
6. Set bubble in level to center and lock protractor to hold this reading.
7. Omitting step 6, repeat procedure for each wing station, using dimensions specified in chart. Check to see that protractor bubble is still centered.
8. Proper twist is present in wing if protractor readings are the same (parallel). Forward or aft bolt may be lowered from wing .10 inch maximum to attain parallelism.

Figure 18-2. Checking Wing Twist

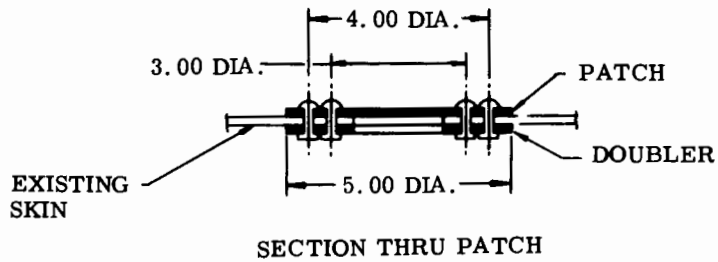
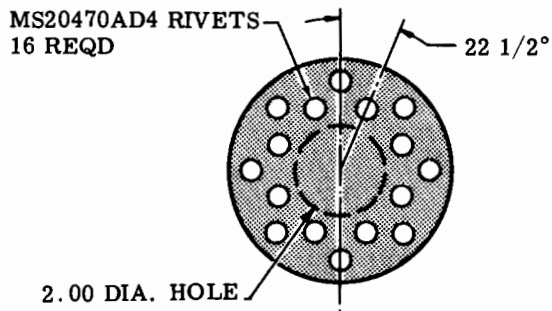
MS20470AD4 RIVETS
24 REQD



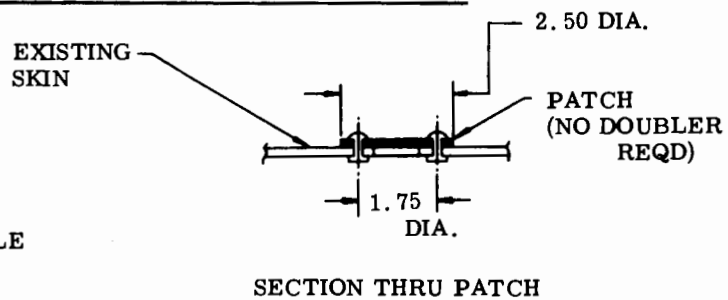
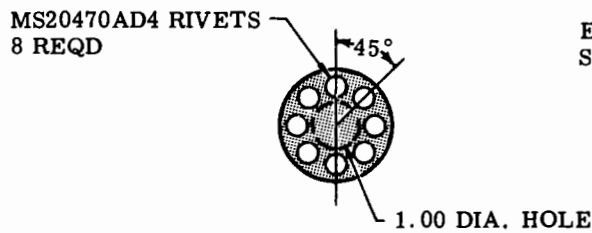
PATCHES AND DOUBLERS —
2024-T3 ALCLAD



PATCH REPAIR FOR 3 INCH DIAMETER HOLE



PATCH REPAIR FOR 2 INCH DIAMETER HOLE

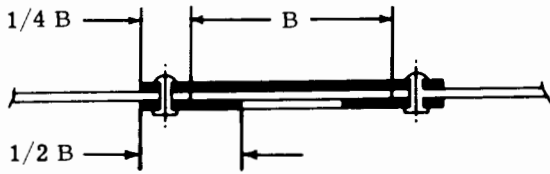


PATCH REPAIR FOR 1 INCH DIAMETER HOLE

- ORIGINAL PARTS
- REPAIR PARTS
- REPAIR PARTS IN CROSS SECTION

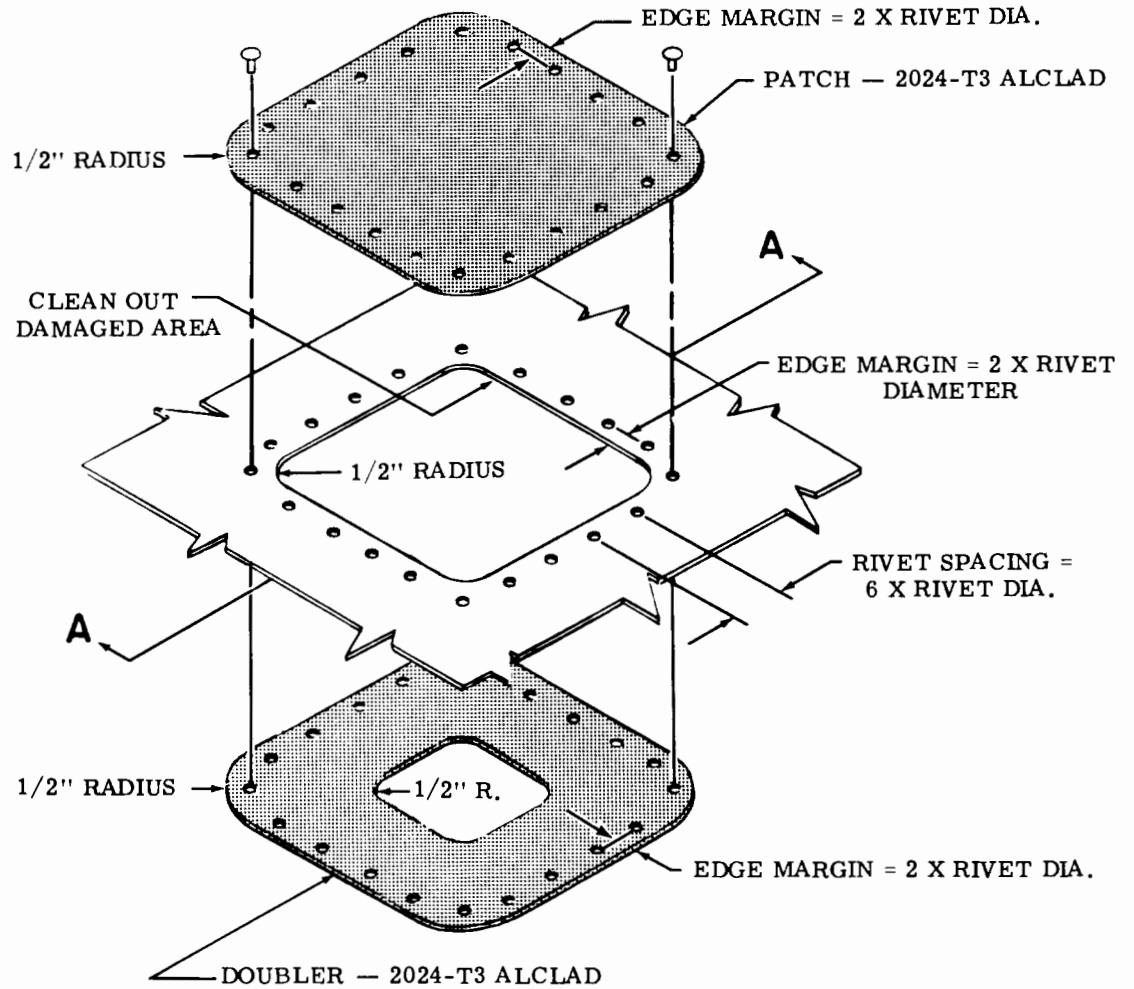
OVERLAPPING
CIRCULAR PATCH




Figure 18-3. Skin Repair (Sheet 1 of 6)



SECTION THRU ASSEMBLED PATCH

A-A

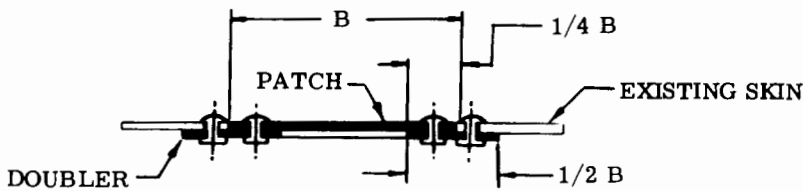


-  ORIGINAL PARTS
-  REPAIR PARTS
-  REPAIR PARTS IN CROSS SECTION

OVERLAPPING REC-TANGULAR PATCH

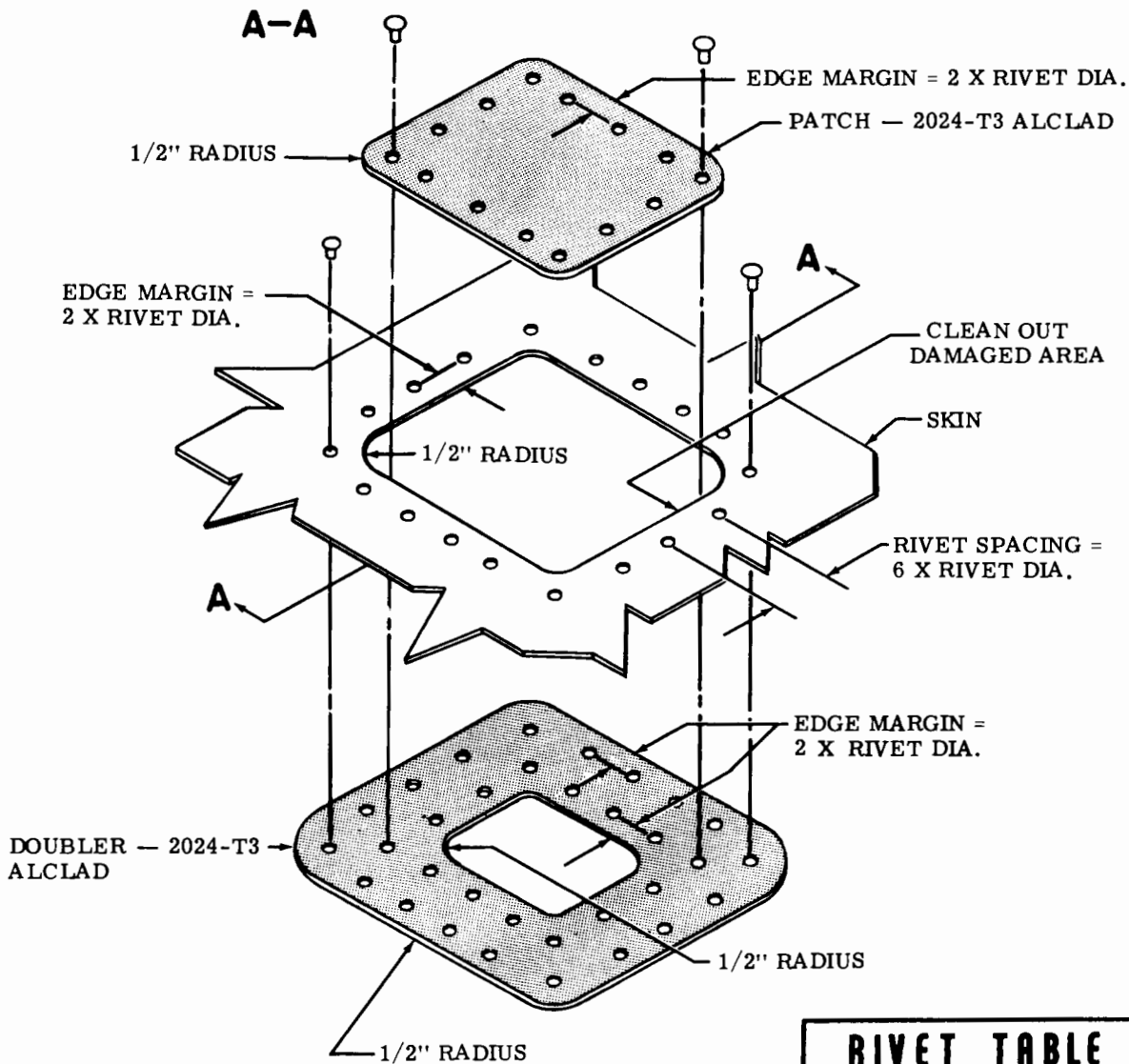
RIVET TABLE	
SKIN GAGE	RIVET DIA.
.020	1/8
.025	1/8
.032	1/8
.040	1/8
.051	5/32

Figure 18-3. Skin Repair (Sheet 2 of 6)



NOTE

For optimum appearance and airflow, use flush rivets, dimpled skin and patch, and counter-sunk doubler.



- ORIGINAL PARTS
- REPAIR PARTS
- REPAIR PARTS IN CROSS SECTION

FLUSH RECTANGULAR PATCH
(CIRCULAR FLUSH PATCH IS
SIMILAR)

RIVET TABLE	
SKIN GAGE	RIVET DIA.
.020	1/8
.025	1/8
.032	1/8
.040	1/8
.051	5/32

Figure 18-3. Skin Repair (Sheet 3 of 6)

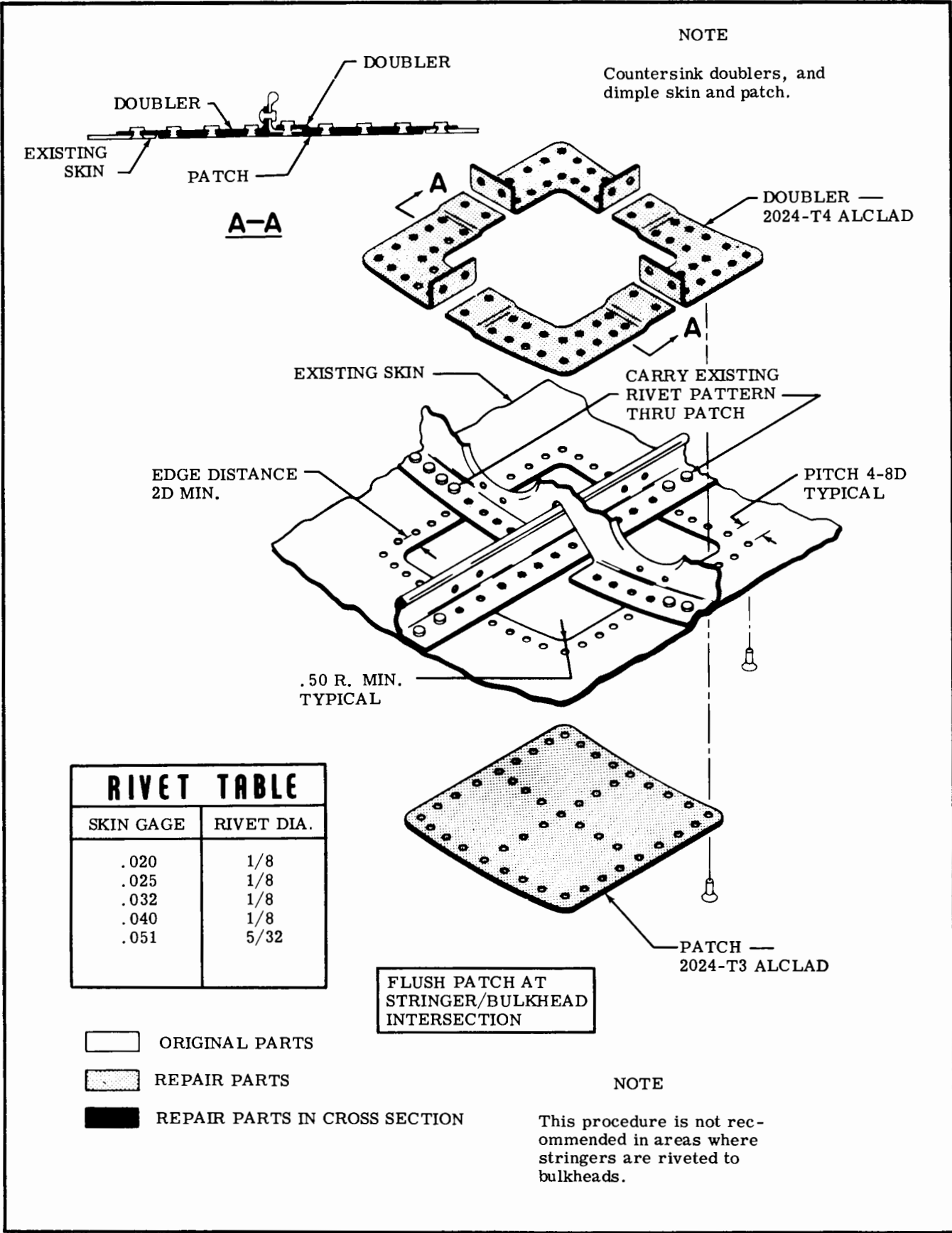


Figure 18-3. Skin Repair (Sheet 4 of 6)

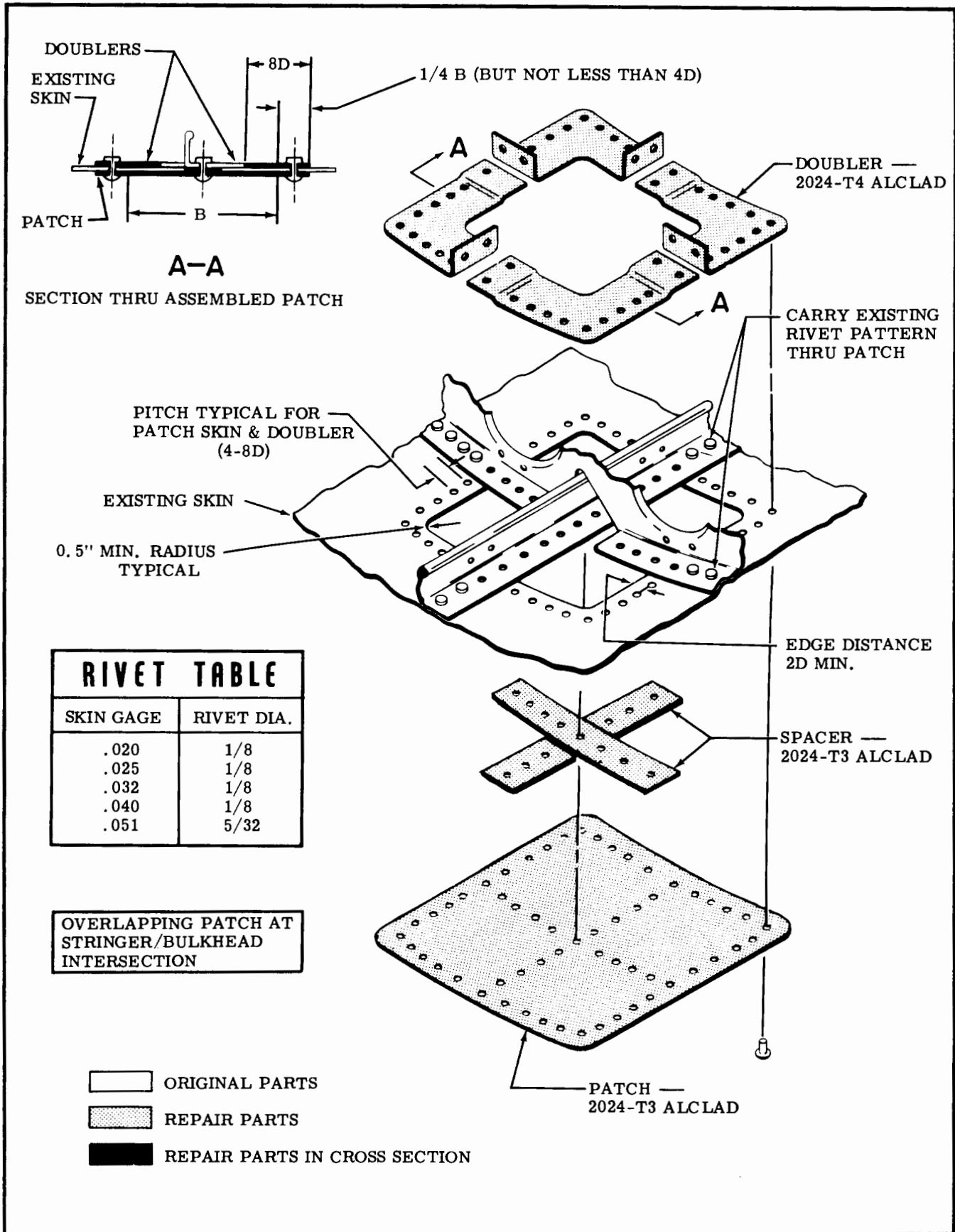


Figure 18-3. Skin Repair (Sheet 5 of 6)

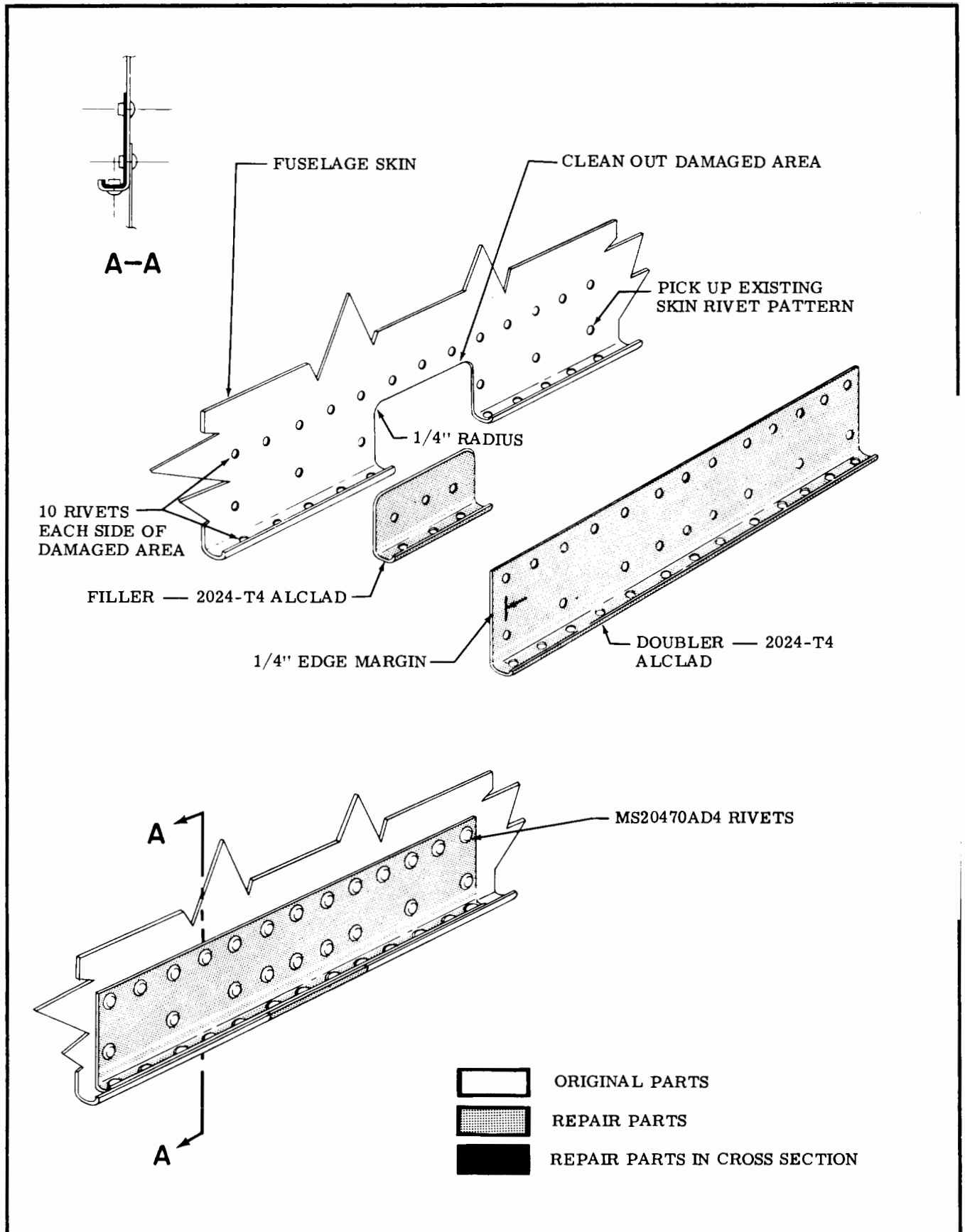
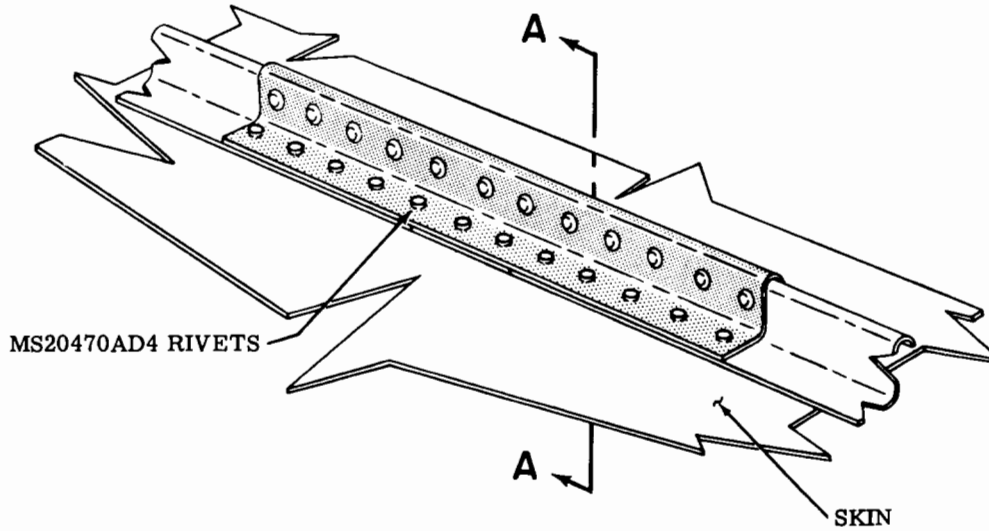
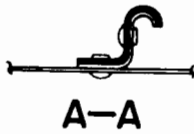
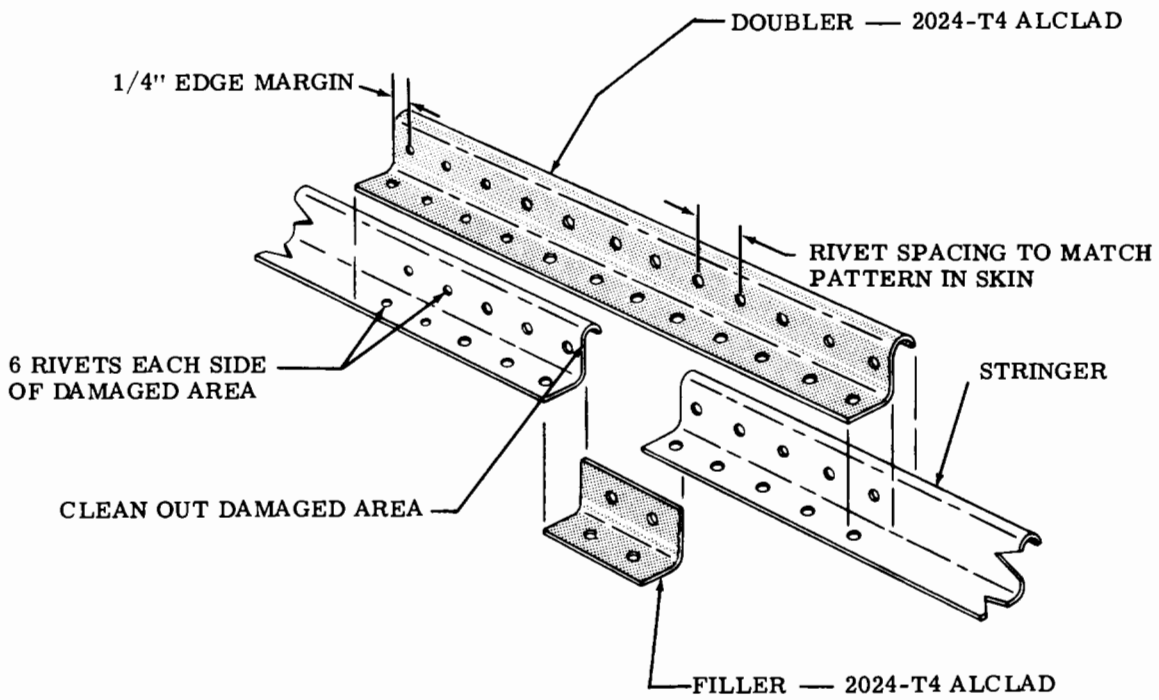


Figure 18-3. Skin Repair (Sheet 6 of 6)






-  ORIGINAL PARTS
-  REPAIR PARTS
-  REPAIR PARTS IN CROSS SECTION

Figure 18-4. Stringer and Channel Repair (Sheet 1 of 4)

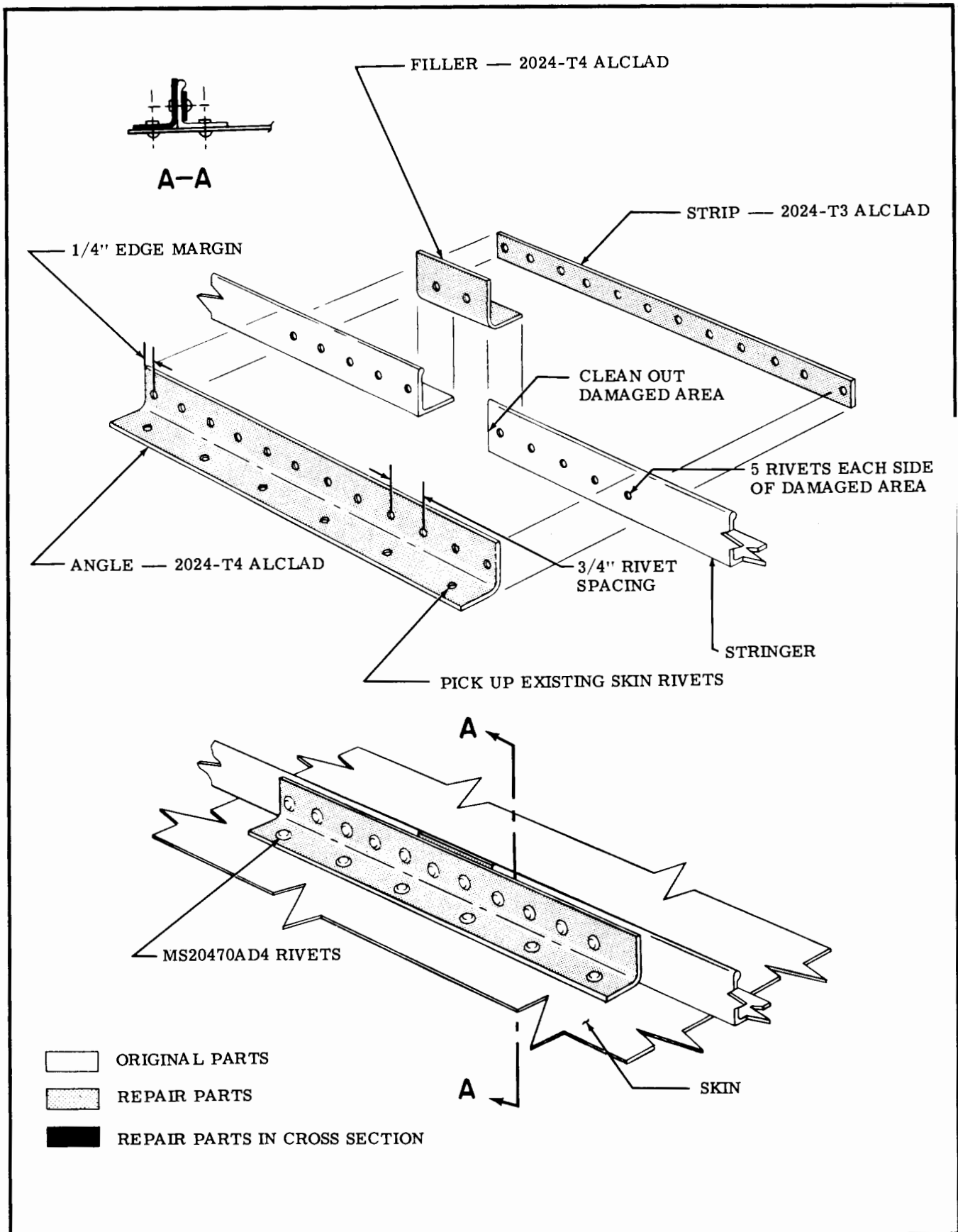


Figure 18-4. Stringer and Channel Repair (Sheet 2 of 4)

- ORIGINAL PARTS
- ▨ REPAIR PARTS
- REPAIR PARTS IN CROSS SECTION

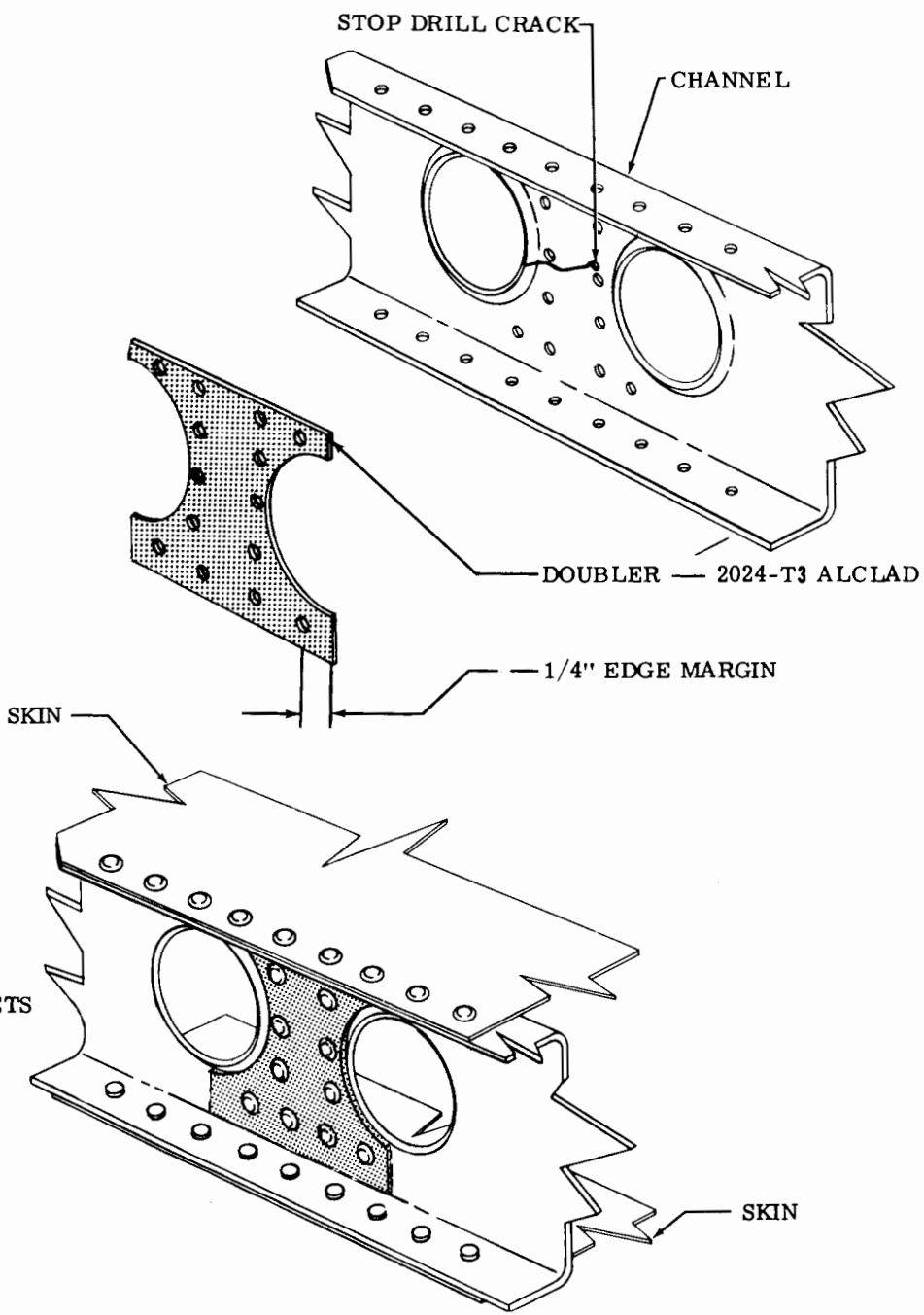


Figure 18-4. Stringer and Channel Repair (Sheet 3 of 4)

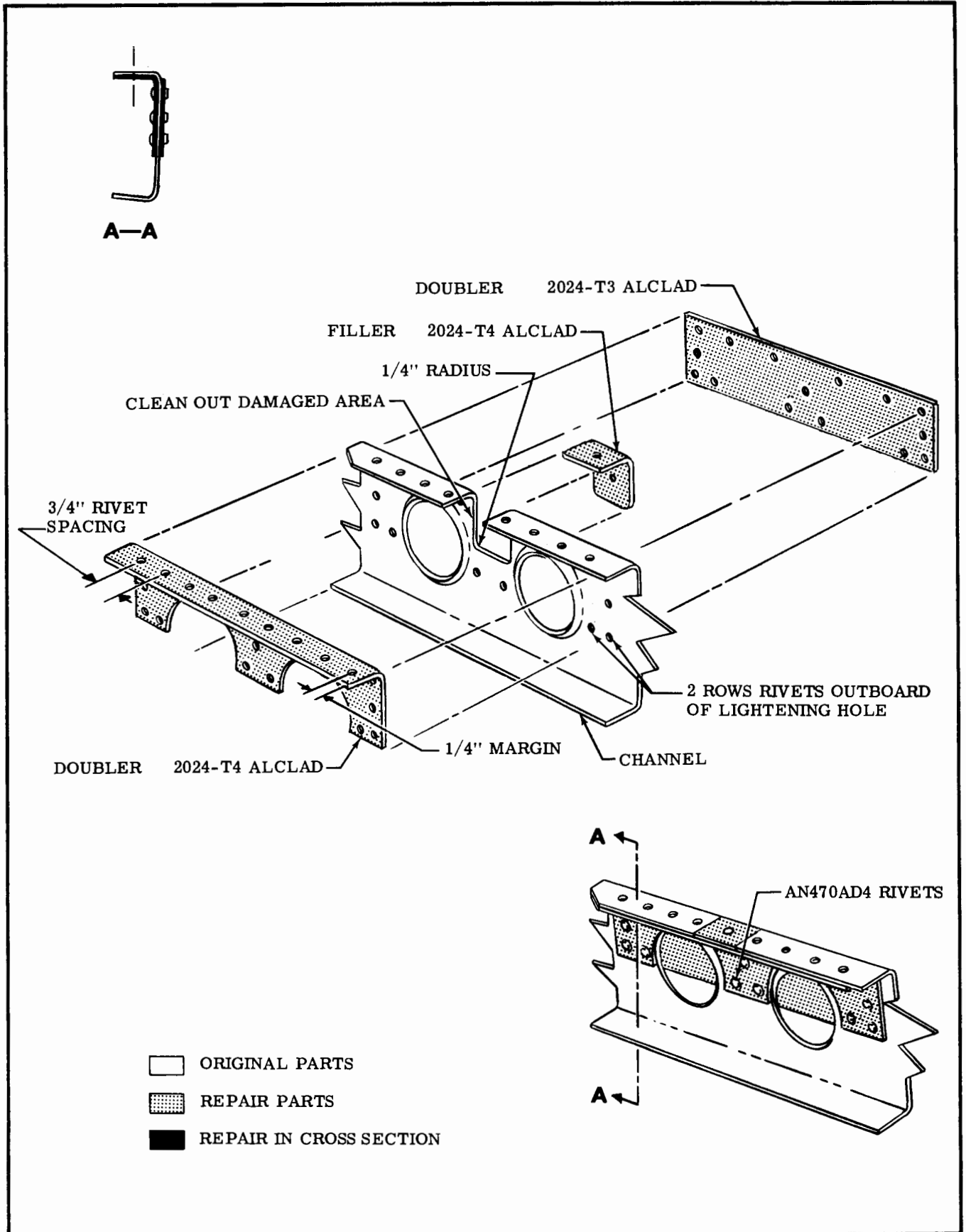


Figure 18-4. Stringer and Channel Repair (Sheet 4 of 4)

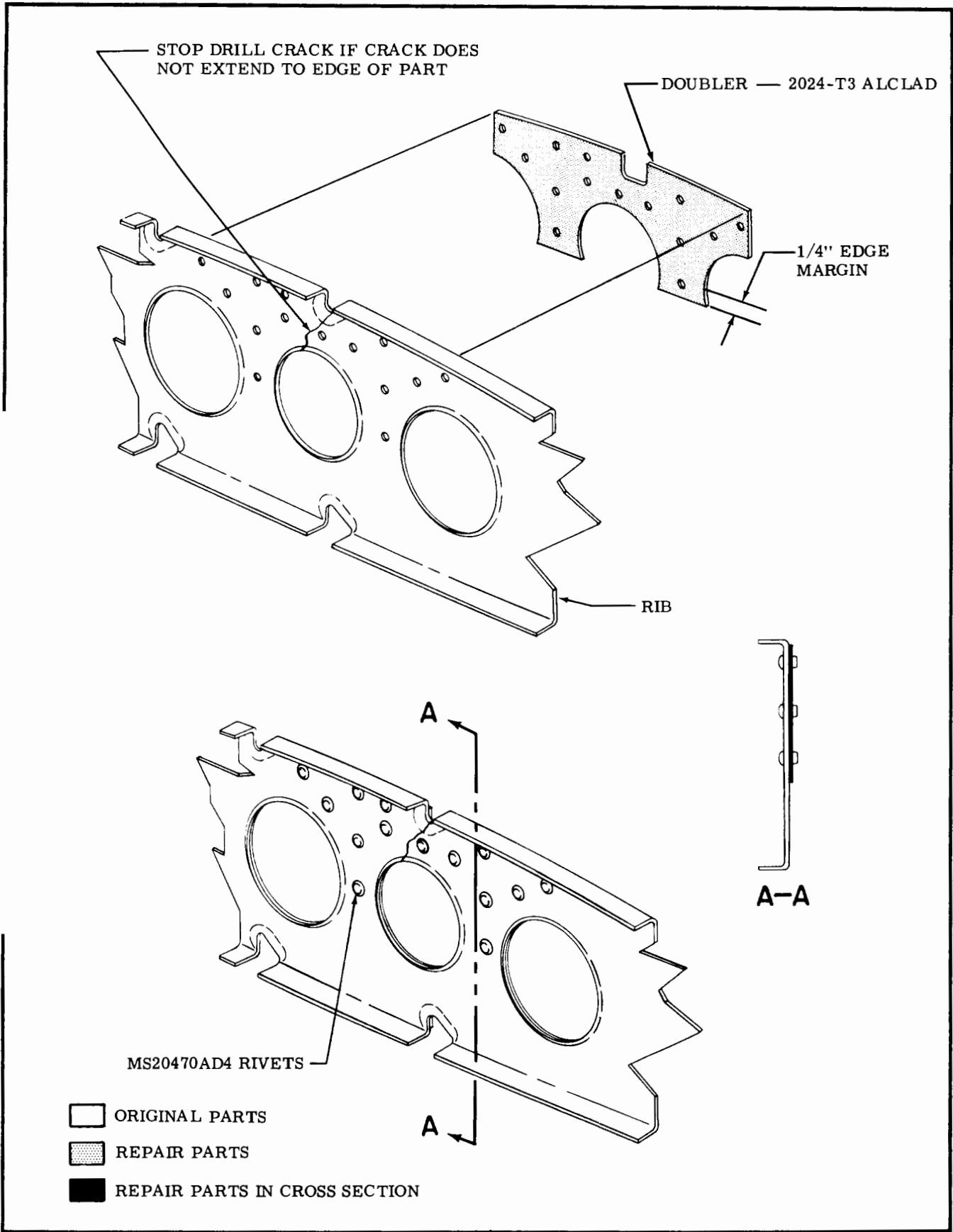


Figure 18-5. Rib Repair (Sheet 1 of 2)

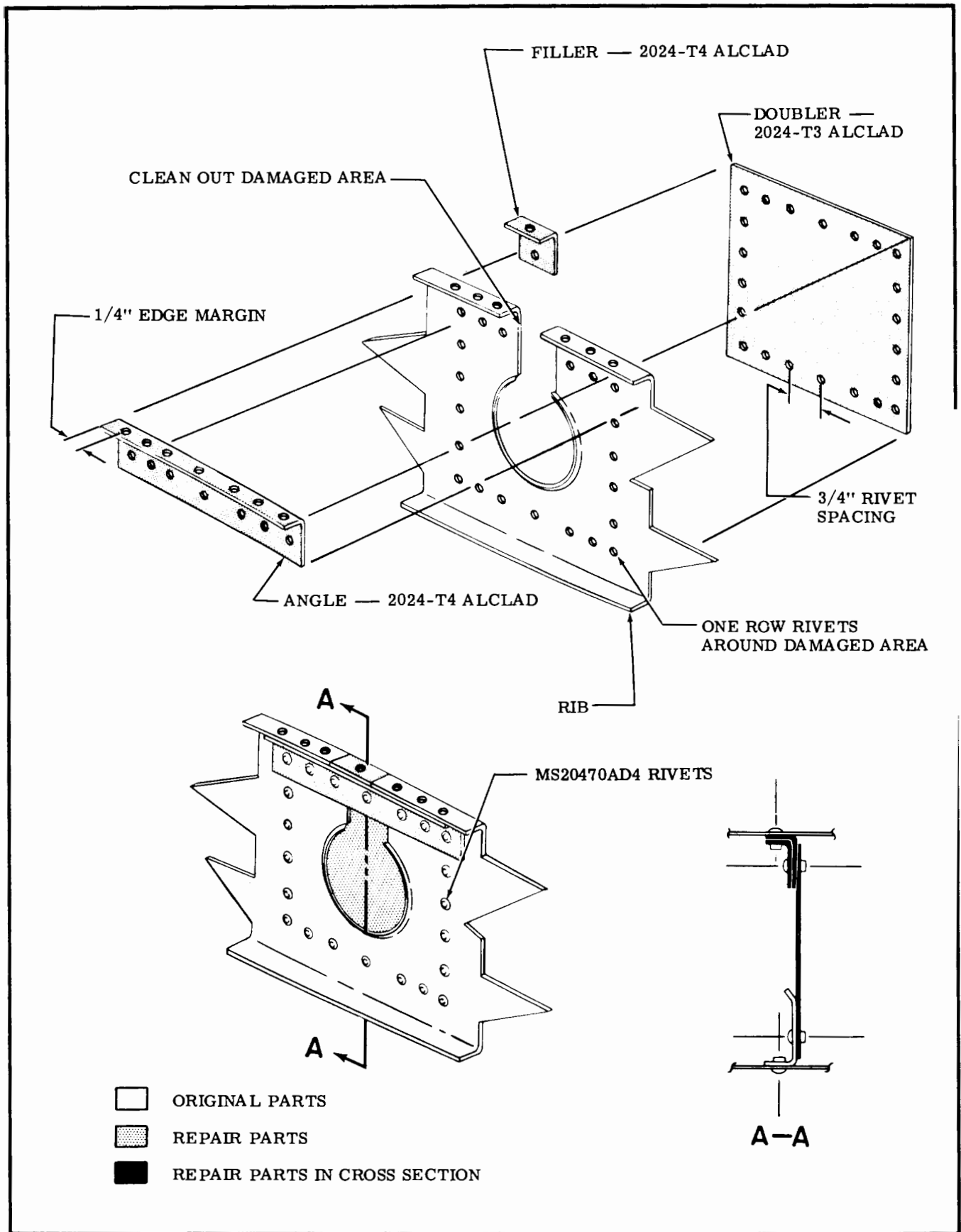


Figure 18-5. Rib Repair (Sheet 2 of 2)

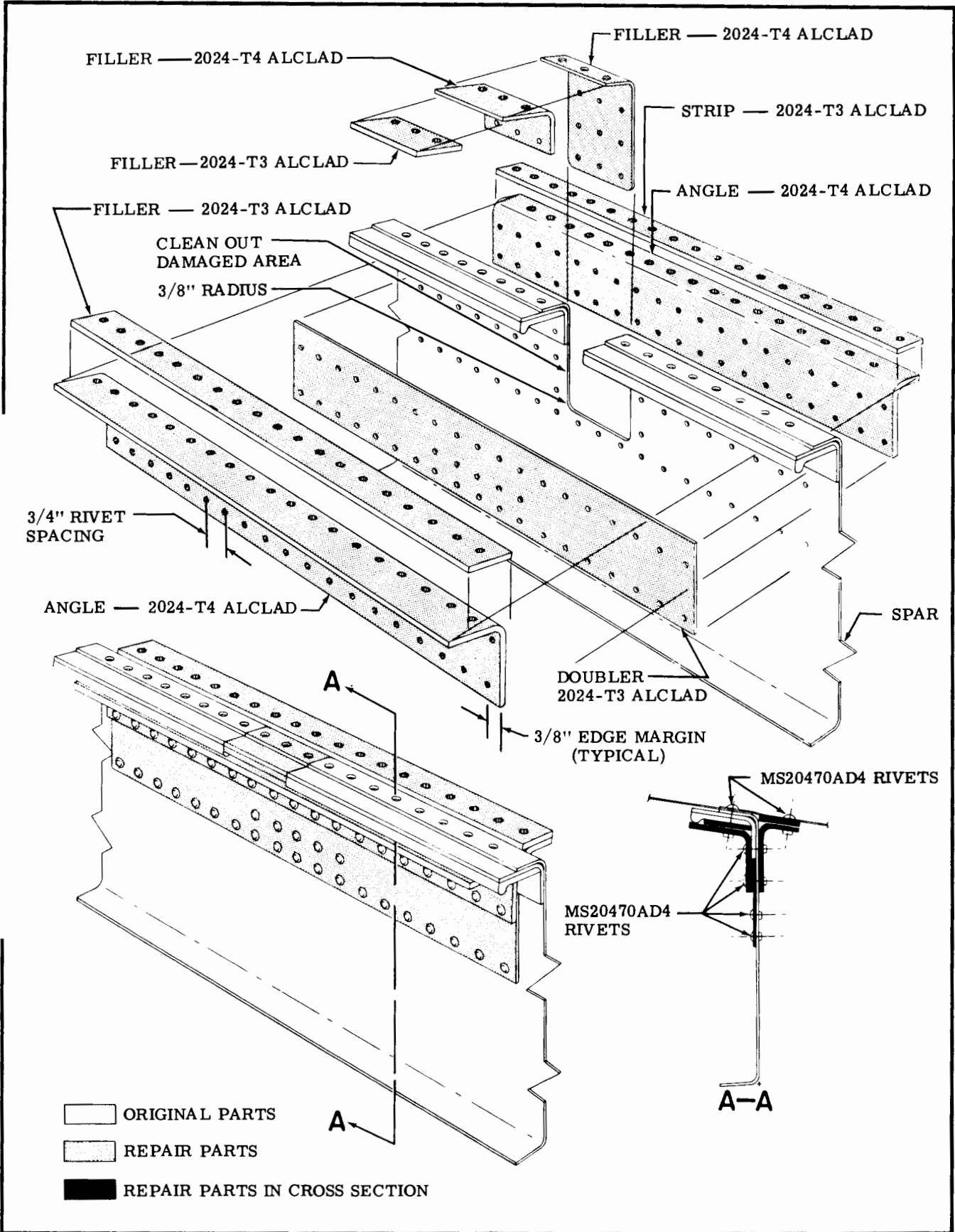


Figure 18-6. Wing Spar Repair (Sheet 1 of 4)

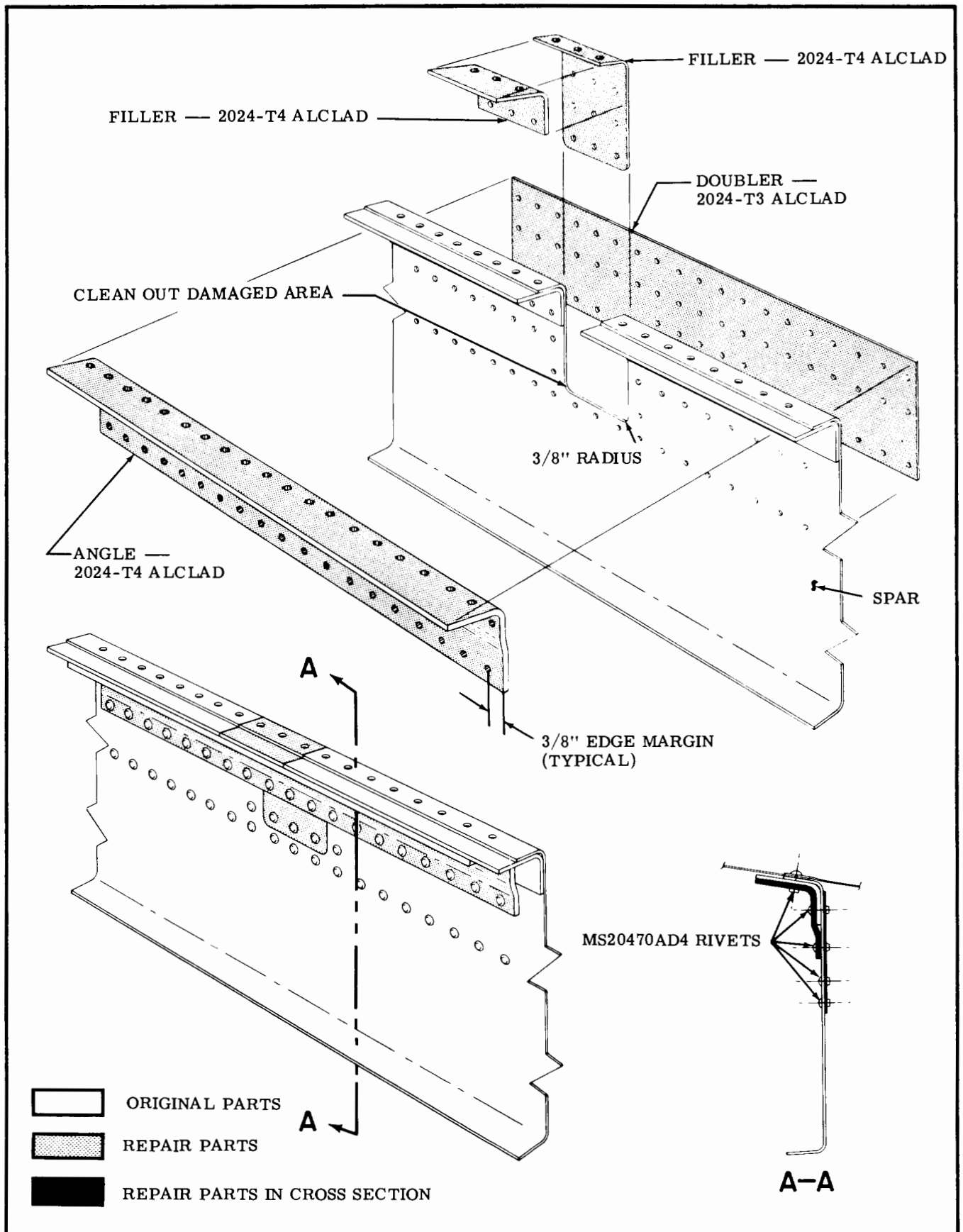


Figure 18-6. Wing Spar Repair (Sheet 2 of 4)

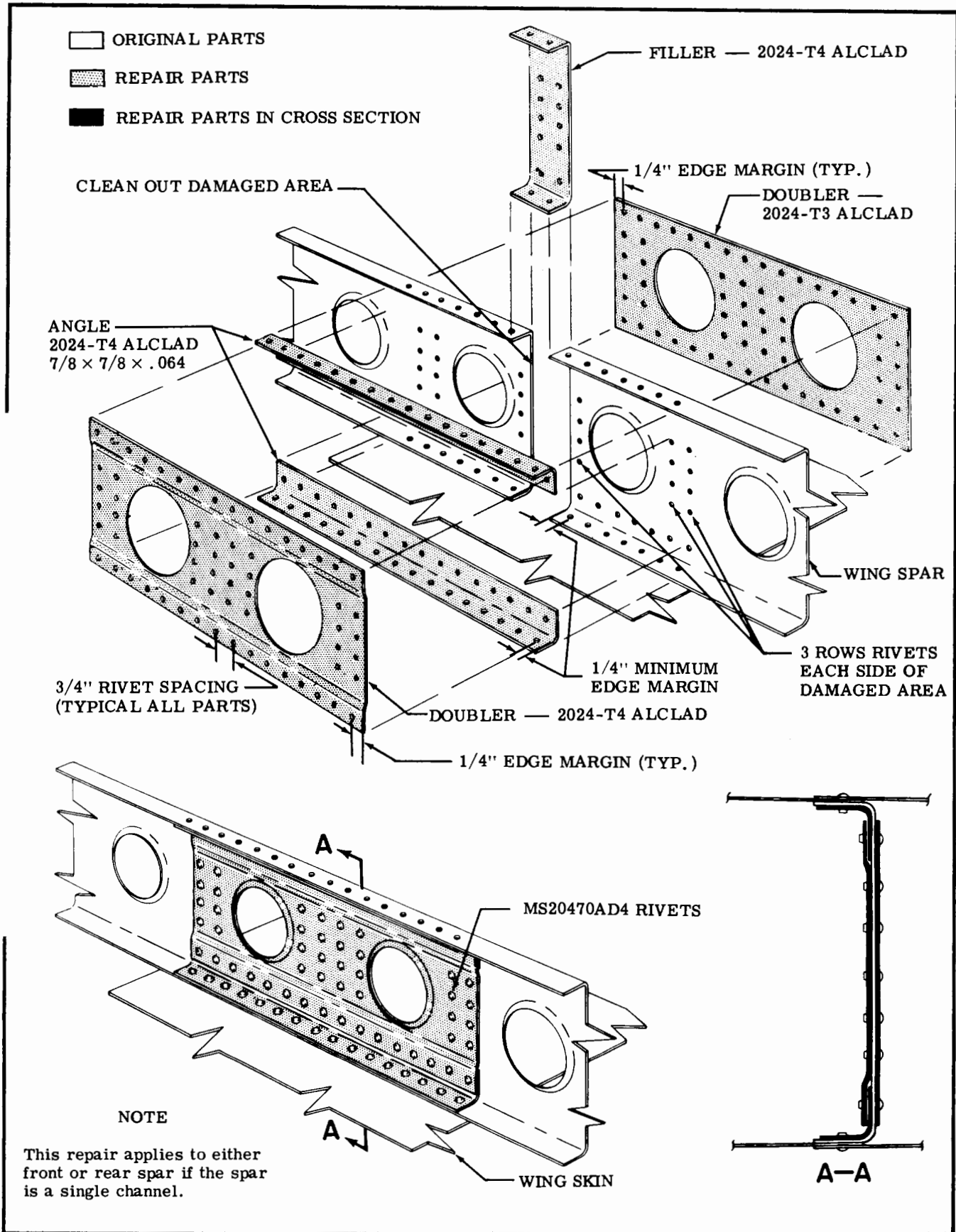


Figure 18-6. Wing Spar Repair (Sheet 3 of 4)

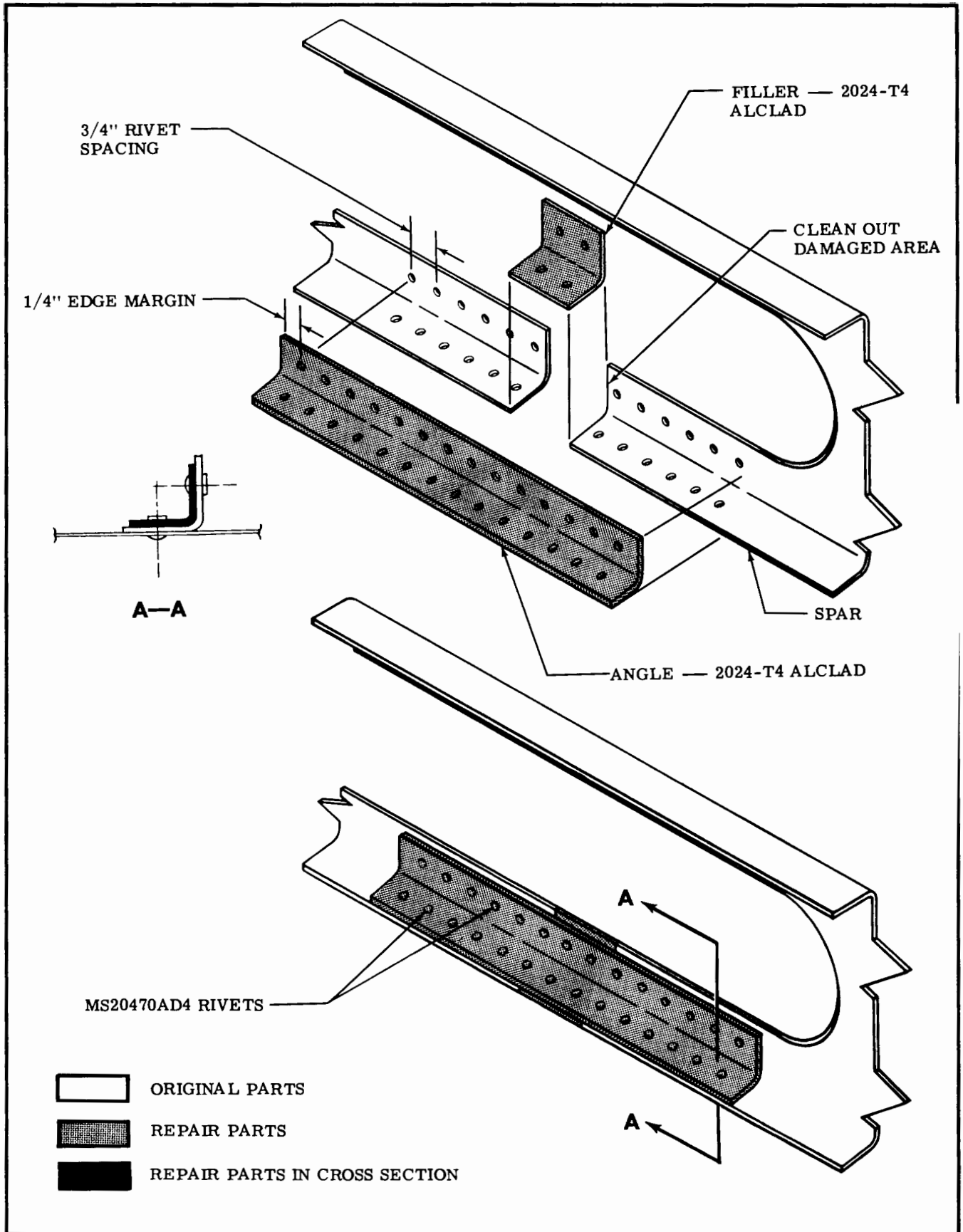
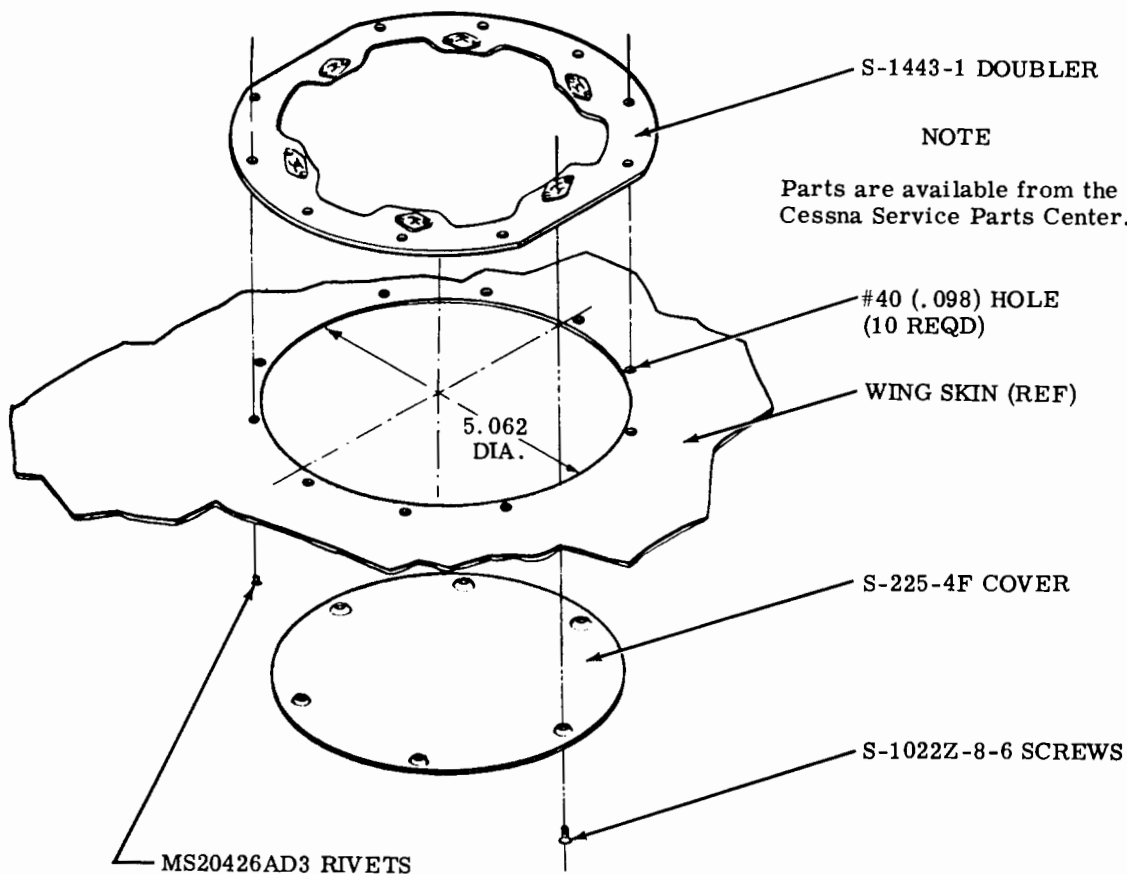


Figure 18-6. Wing Spar Repair (Sheet 4 of 4)



PRECAUTIONS:

1. Add the minimum number of access holes necessary.
2. Any circular or rectangular access hole which is used with approved optional equipment installations may be added in lieu of the access hole illustrated.
3. Use landing light installations instead of adding access holes where possible. Do not add access holes at outboard end of wing; remove wing tip instead.
4. Do not add an access hole in the same bay where one is already located.
5. Locate new access holes near the center of a bay (spanwise).
6. Locate new access holes forward of the front spar as close to the front spar as practicable.
7. Locate new access holes aft of the front spar between the first and second stringers aft of the spar. When installing the doubler, rotate it so the two straight edges are closest to the stringers.
8. Alternate bays, with new access holes staggered forward and aft of the front spar, are preferable.
9. A maximum of five new access holes in each wing is permissible; if more are required, contact the Cessna Service Department.
10. When a complete leading edge skin is being replaced, the wing should be supported in such a manner that wing alignment is maintained.

- a. Establish exact location for inspection cover and inscribe centerlines.
- b. Determine position of doubler on wing skin and center over centerlines. Mark the ten rivet hole locations and drill to size shown.
- c. Cut out access hole using dimension shown.
- d. Flex doubler and insert through access hole, and rivet in place.
- e. Position cover and secure using screws as shown.

Figure 18-7. Access Hole Installation

NOTES:

1. Dimple leading edge skin and filler material; countersink the doubler.
2. Use MS20426AD4 rivets to install doubler.
3. Use MS20426AD4 rivets to install filler, except where bucking is impossible. Use CR162-4 Cherry (blind) rivets where regular rivets cannot be bucked.
4. Contour must be maintained; after repair has been completed, use epoxy filler as necessary and sand smooth before painting.
5. Vertical size is limited by ability to install doubler clear of front spar.
6. Lateral size is limited to seven inches across trimmed out area.
7. Number of repairs is limited to one in each bay.

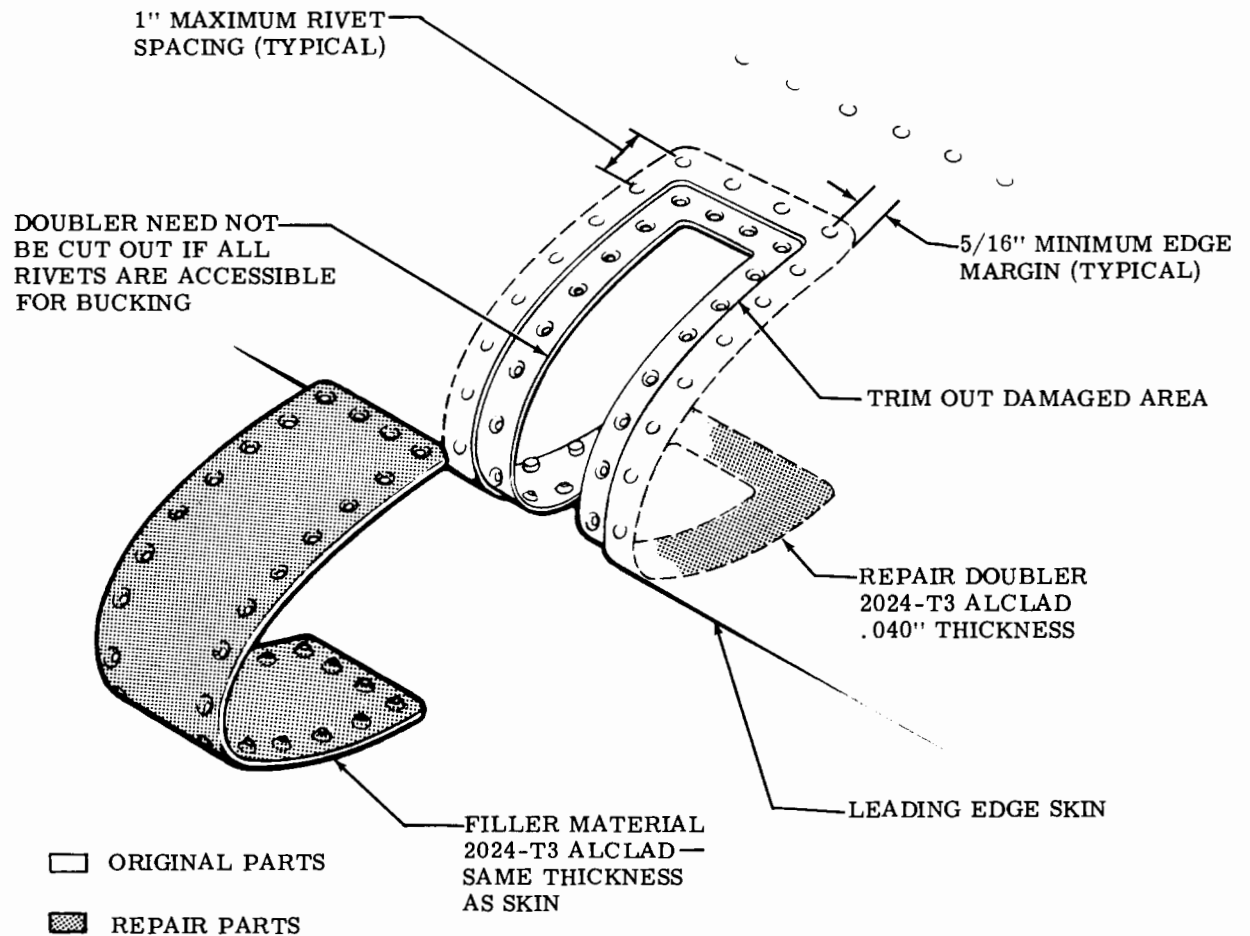


Figure 18-8. Leading Edge Repair Applicable to Aileron, Flap, and Wing

GENERAL NOTES

1. Balance control surfaces in a draft-free area.
2. Place hinge bolts through control surface hinges, and position on knife edge balancing mandrels.
3. Make sure all control surfaces are in their final flight configuration: painted (if applicable), trim tabs installed, all foreign matter removed from inside of control surface, elevator trim tab push-pull rod installed, and all tips installed.
4. Place balancing mandrels on a table or other suitable flat surface.
5. Adjust trailing edge support to fit control surface being balanced while center of balancing beam is directly over hinge line. Remove balancing beam and balance the beam itself by adding washers or nuts as required at end opposite the trailing edge support.
6. When positioning balancing beam on control surface, avoid rivets to provide a smooth surface for the beam, and keep the beam 90° to the hinge line of the control surface.
7. Paint is a considerable weight factor. In order to keep balance weight to a minimum, it is recommended that existing paint be removed before adding paint to a control surface. Increase in balance weight will also be limited by the amount of space available and clearance with adjacent parts. Good workmanship and standard repair practices should not result in unreasonable balance weight.
8. The approximate amount of weight needed may be determined by taping loose weight at the balance weight area.
9. Lighten balance weight by drilling off part of weight.
10. Make balance weight heavier by fusing bar stock solder to weight after removal from control surface. The ailerons should have balance weight increased by ordering additional weight and gang channel, listed in applicable Parts Catalogs, and installing next to existing inboard weight the minimum length necessary for correct balance, except that a length which contains at least two attaching screws must be used. If necessary, lighten new weight and/or existing weights for correct balance.

BALANCING BEAM

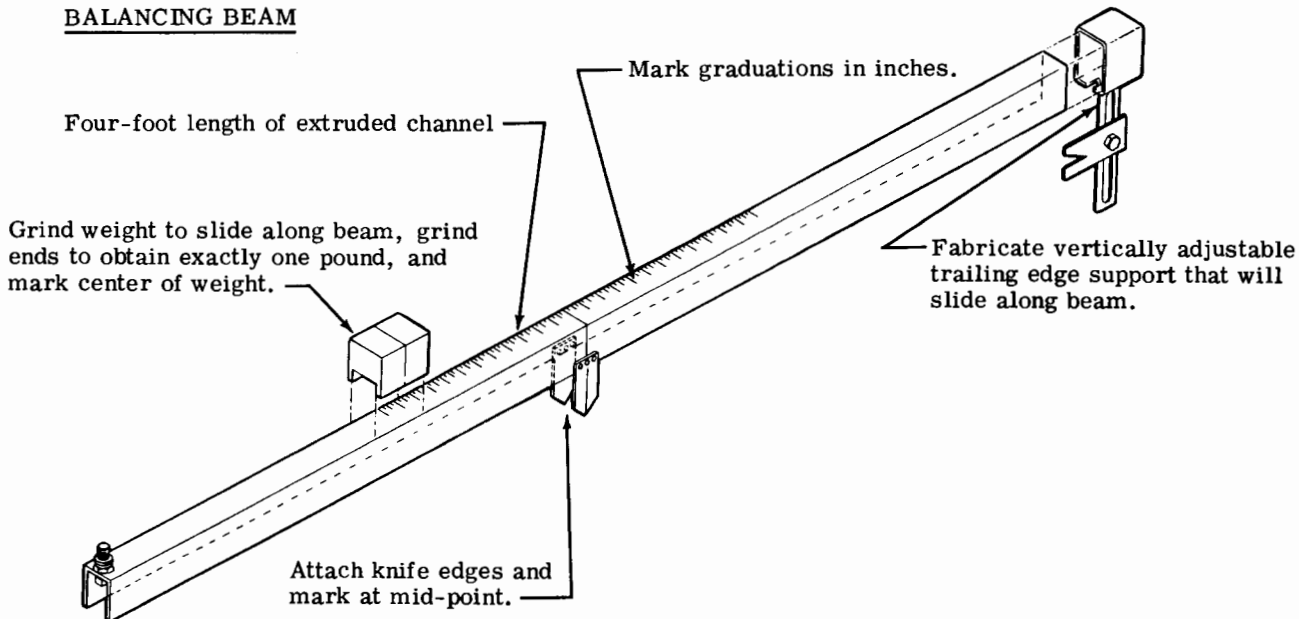
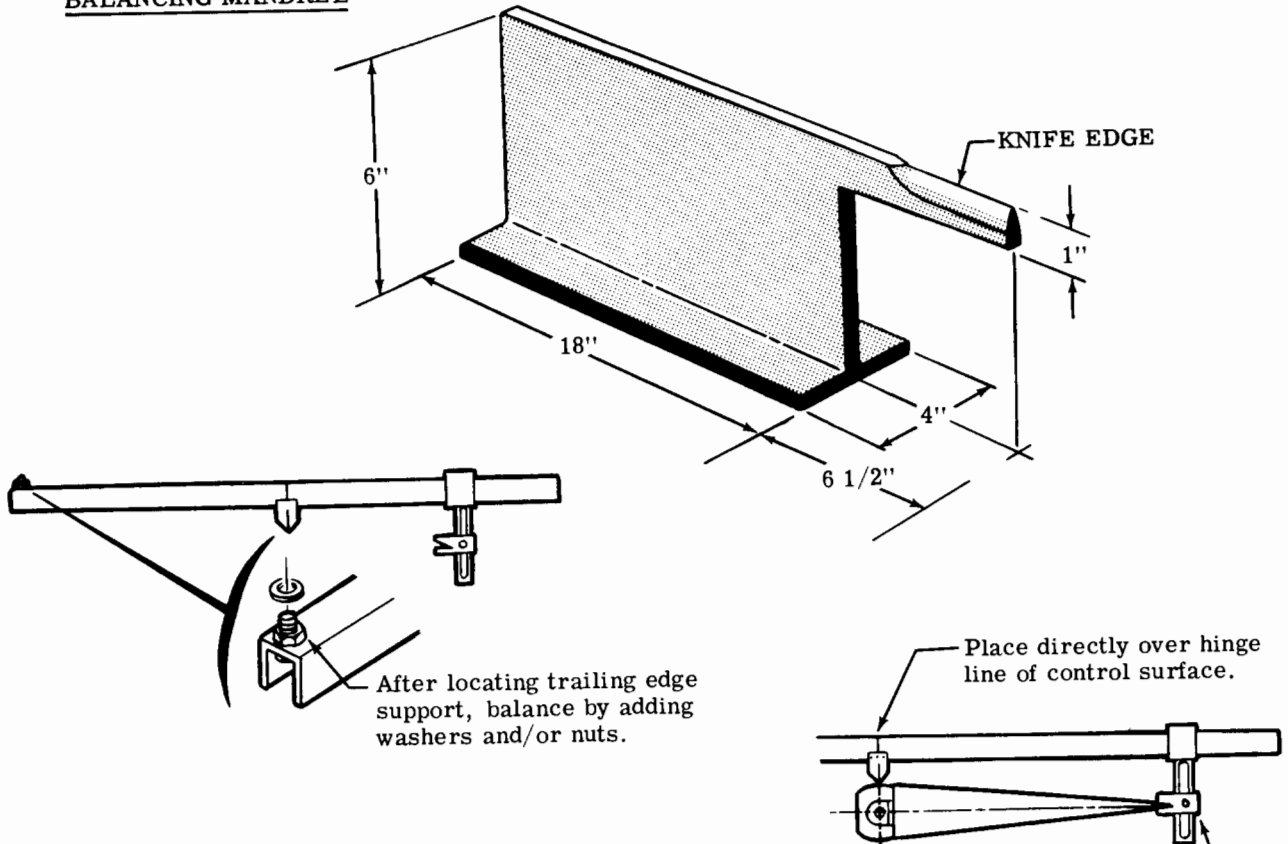


Figure 18-9. Control Surface Balancing (Sheet 1 of 3)

BALANCING MANDREL



RUDDERS AND ELEVATORS

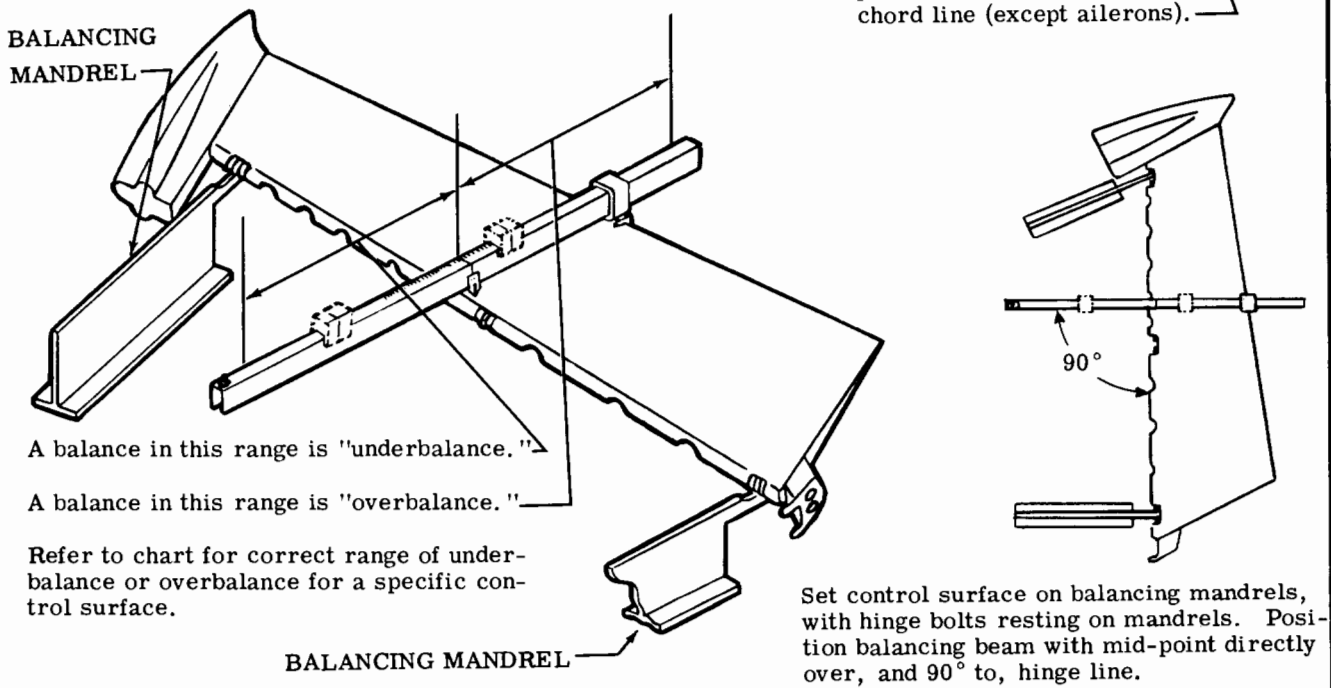
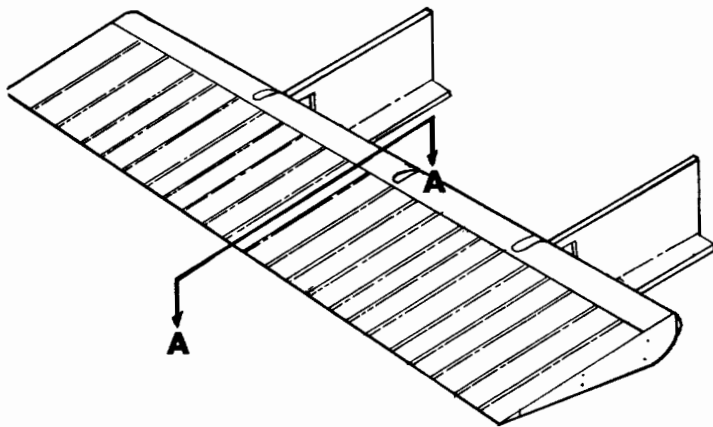
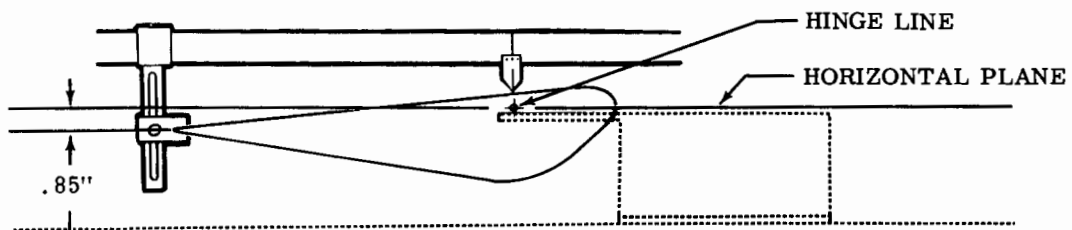


Figure 18-9. Control Surface Balancing (Sheet 2 of 3)

AILERONS



DETAIL A-A



Balance aileron inverted, with trailing edge at point opposite cut-out for push-pull rod .85" below hinge line horizontal plane.

Figure 18-9. Control Surface Balancing (Sheet 3 of 3)

CONTROL SURFACE BALANCE REQUIREMENTS

NOTE

Unpainted values are not limits which must be met. They are given as guides, in order that the unbalance of the control surface in the final aircraft configuration may be predicted. If the control surface in the unpainted condition falls within the unpainted limit, the mechanic may feel confident that the control surface will be acceptable after painting. However, if the surface in the unpainted condition exceeds the unpainted limit, the balance must be checked again after final painting to assure that the control surface falls within the painted unbalance limit. Refer to GENERAL NOTES on sheet 1 of figure 18-9 for specific conditions.

DEFINITIONS:

UNDERBALANCE is defined as the condition that exists when the control surface is trailing edge heavy, and is symbolized by a plus (+).

OVERBALANCE is defined as the condition that exists when the control surface is leading edge heavy, and is symbolized by a minus (-).

NOTE

The following applies to the landplane/floatplane except as noted.

NOTE

The "Balance Limits" columns list the moment tolerances within which the control surface must balance. These tolerances must never be exceeded in the final flight configuration.

CONTROL: AILERON

PAINTED (Inch-Pounds)	UNPAINTED (Inch-Pounds)
BALANCE LIMITS	BALANCE LIMITS
0.0 to +3.0	0.0 to +2.3

CONTROL: RUDDER

PAINTED (Inch-Pounds)	UNPAINTED (Inch-Pounds)
BALANCE LIMITS	BALANCE LIMITS
Landplane -1.87 to +1.50	Landplane -2.85 to 0.0
Floatplane 0.0 to +7.25	Floatplane 0.0 to +6.0

CONTROL: RIGHT ELEVATOR

PAINTED (Inch-Pounds)	UNPAINTED (Inch-Pounds)
BALANCE LIMITS	BALANCE LIMITS
0.0 to +12.1	0.0 to +8.5
	BEGINNING WITH 20602928 0.0 to +5.5

CONTROL: LEFT ELEVATOR

PAINTED (Inch-Pounds)	UNPAINTED (Inch-Pounds)
BALANCE LIMITS	BALANCE LIMITS
0.0 to +12.1	0.0 to +8.5
	BEGINNING WITH U20602928 0.0 to +5.0

Figure 18-10. Control Surface Balance Limits

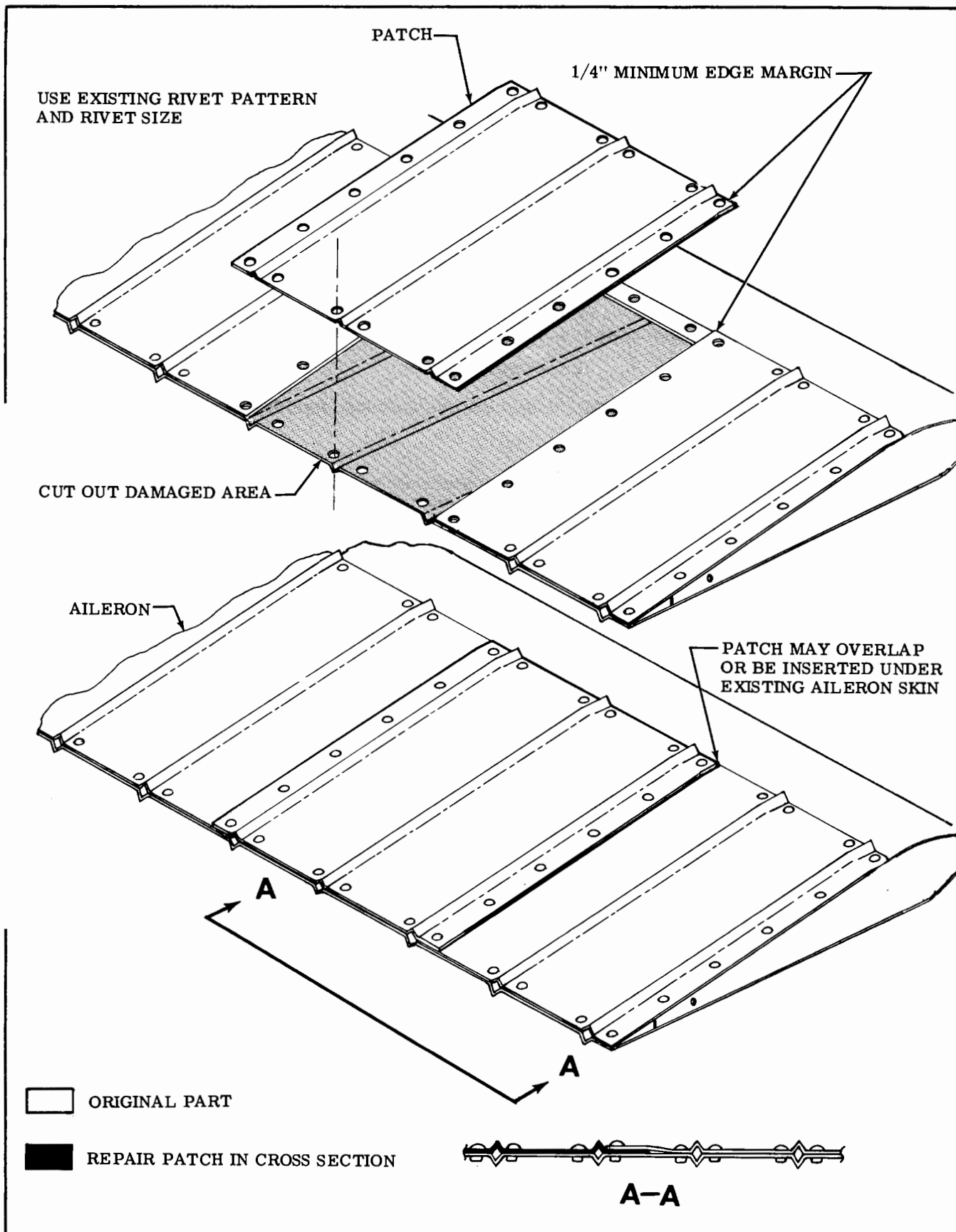


Figure 18-11. Corrugated Skin Repair

NOTES

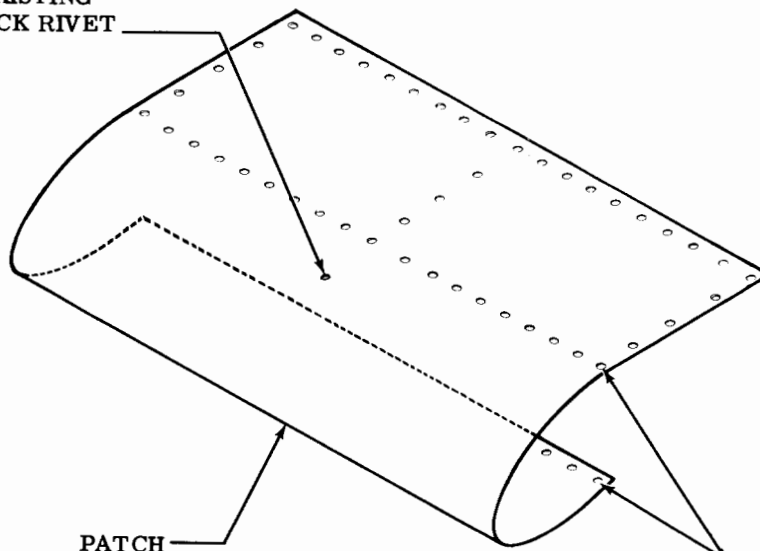
Use rivet pattern at wing station 23.53 for repair from wing station 23.53 to wing station 85.62. Use rivet pattern at wing station 100.00 for lap splice patterns from wing station 100.00 to 190.00. Refer to figure 1-2 for wing stations.

Use rivet spacing similar to the pattern at wing station 100.00 with the number of BB4 dimpled rivets at leading edge ribs between lap splices as shown:

STATION	*NO. OF BB4 RIVETS	*NO. OF CR2248-4 DIMPLED RIVETS
118	18	22
136	15	18
154	11	13
172	10	12
190	10	12

*NO. OF CR2249-4 RIVETS
 27
 23
 17
 15
 15

EXISTING TACK RIVET



EXISTING RIVET PATTERN

TYPICAL LEADING EDGE SECTION

* NOTE

The Bulbed Cherrylock rivets listed may be substituted for BB4 dimpled rivets in inaccessible areas, provided the number of rivets installed is increased proportionately. Blind rivets should not be installed in the wing spar.

Figure 18-12. Bonded Leading Edge Repair

SECTION 19

EXTERIOR PAINTING

NOTE

This section contains standard factory materials listing and area of application. For paint number and color, refer to Aircraft Trim Plate and Parts Catalog. In all cases determine the type of paint on the aircraft as some types of paint are not compatible. Materials may be obtained from the Cessna Service Parts Center.

MATERIAL	NO/TYPE	AREA OF APPLICATION
PAINT	ACRYLIC LACQUER	Used on exterior airframe.
PAINT	EPOXY PAINT	Used on the nose gear fairing on the P206 thru 1970 models and the U206 on 1969 models.
PRIMER	ER-7 WITH ER-4 ACTIVATOR	Used with acrylic lacquer.
PRIMER	P60G2 WITH R7K46 ACTIVATOR	Used with acrylic lacquer.
THINNER	T-8402A	Used to thin acrylic lacquer and for burndown.
THINNER	T-3871	Used with epoxy (Du Pont).
THINNER	T-6487	Used with epoxy (Enmar).
SOLVENT	#2 SOLVENT	Used to clean aircraft exterior prior to priming.

NOTE

Do not paint Pitot Tube, Gas Caps or Antenna Covers which were not painted at the factory.

NOTE

When stripping aircraft of paint, use caution to avoid stripper coming in contact with ABS parts.

19-1. INTERIOR PARTS (Finish Coat of Lacquer)

a. Painting of Spare Parts.

1. Insure a clean surface by wiping with Naphtha to remove surface contamination.

CAUTION

Do not use strong solvents such as Xylol, Toluol or Lacquer Thinner since prolonged exposure can soften or embrittle ABS.

2. After the part is thoroughly dry it is ready for the lacquer topcoat. Paint must be thinned with lacquer thinner and applied as a wet coat to insure adhesion.

b. Touch Up of Previously Painted Parts.

1. Light sanding is acceptable to remove scratches and repair the surface but care must be exercised to maintain the surface texture or grain.

2. Insure a clean surface by wiping with Naphtha to remove surface contamination.

CAUTION

Do not use strong solvents such as Xylol, Toluol or Lacquer Thinner since prolonged exposure can soften or embrittle ABS.

3. After the part is thoroughly dry it is ready for the lacquer topcoat. Paint must be thinned with lacquer thinner and applied as a wet coat to insure adhesion.

NOTE

Lacquer paints can be successfully spotted in.

19-2. EXTERIOR PARTS (Acrylic Topcoat)

a. Painting of Spare Parts.

1. Lightly scuff sand to remove scratches and improve adhesion.

2. Insure a clean surface by wiping with Naphtha to remove surface contamination.

CAUTION

Do not use strong solvents such as Xylol, Toluol or Lacquer Thinner since prolonged exposure can soften or embrittle ABS.

3. After the part is thoroughly dry it is ready for the topcoat. Paint must be thinned with appropriate acrylic thinner and applied as a wet coat to insure

adhesion.

b. Touch Up of Previously Painted Parts.

1. Lightly scuff sand to remove scratches and improve adhesion.

2. Insure a clean surface by wiping with Naphtha to remove surface contamination.

CAUTION

Do not use strong solvents such as Xylol, Toluol or Lacquer Thinner since prolonged exposure can soften or embrittle ABS.

3. Apply a compatible primer - surfacer and sealer.

4. After the part is thoroughly dry it is ready for the topcoat. Paint must be thinned and applied as a wet coat to insure adhesion.

NOTE

Acrylic topcoats can be successfully spotted in.

19-3. EXTERIOR PARTS (Epoxy or Polyurethane Topcoat)

a. Painting of Spare Parts and Touch Up of Painted Parts.

1. Lightly scuff sand to remove scratches and improve adhesion.

2. Insure a clean surface by wiping with Naphtha to remove surface contamination.

CAUTION

Do not use strong solvents such as Xylol, Toluol or Lacquer Thinner since prolonged exposure can soften or embrittle ABS.

3. Apply a primer compatible with Epoxy or Polyurethane topcoat.

4. After the part is thoroughly dry it is ready for the topcoat.

NOTE

Epoxy or Polyurethane topcoats cannot be successfully spotted in - finish should be applied in areas with natural breaks such as skin laps or stripe lines.

When painting interior and exterior polycarbonate parts, or where the part material is questionable, a "barrier primer" should be applied prior to the Enamel, Lacquer, Epoxy or Polyurethane topcoat.

SECTION 20
WIRING DIAGRAMS
12 - VOLT

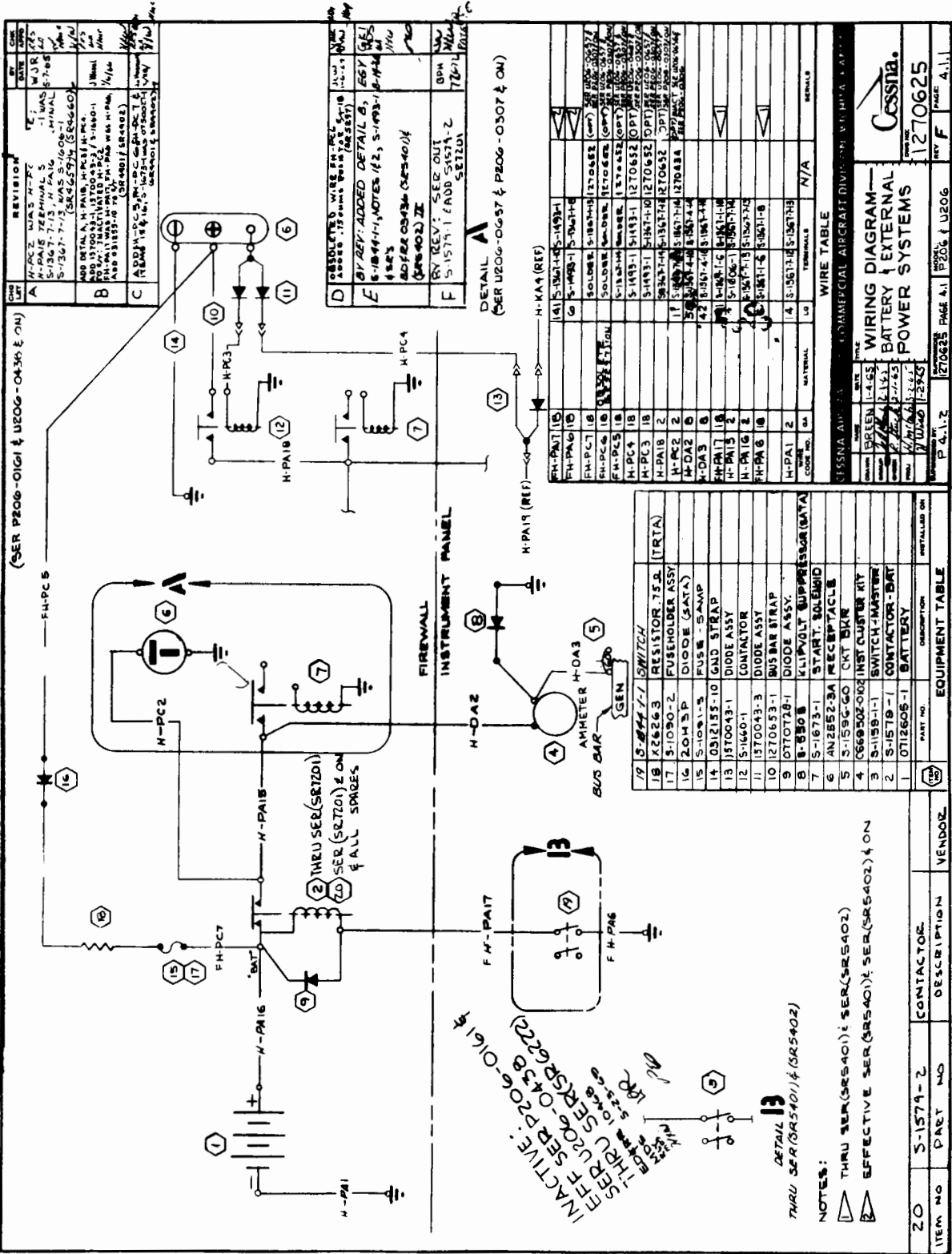
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Ignition System	20-76	Dome and Courtesy 20-88	
ENGINE CONTROL			
Starter System	20-77	Dome and Courtesy 20-89	
FUEL AND OIL			
Fuel Pump System	20-78	Navigation Lights 20-90	
Fuel Pump System	20-79	Navigation Lights 20-91	
Oil Dilution System	20-80	Flashing Beacon Light (Floatplane) 20-92	
ENGINE INSTRUMENTS			
Cylinder Head Temperature	20-81	Flashing Beacon Light (Floatplane) 20-93	
Fuel Quantity Indicator	20-82	Control Wheel Map Light 20-94	
Hourmeter	20-83	Control Wheel Map Light 20-94A	
FLIGHT INSTRUMENTS			
Turn Coordinator	20-84	Skydiving Signal Light 20-95	
Turn and Bank	20-85	Landing Lights 20-96	
MISCELLANEOUS INSTRUMENTS			
		Landing and Taxi Lights 20-97	
		Landing and Taxi Lights 20-98	
		Flashing Beacon Light 20-99	
		Electroluminescent Panel 20-100	
		Electroluminescent Panel 20-101	
		Instrument Lights 20-102	
		Instrument Lights 20-103	

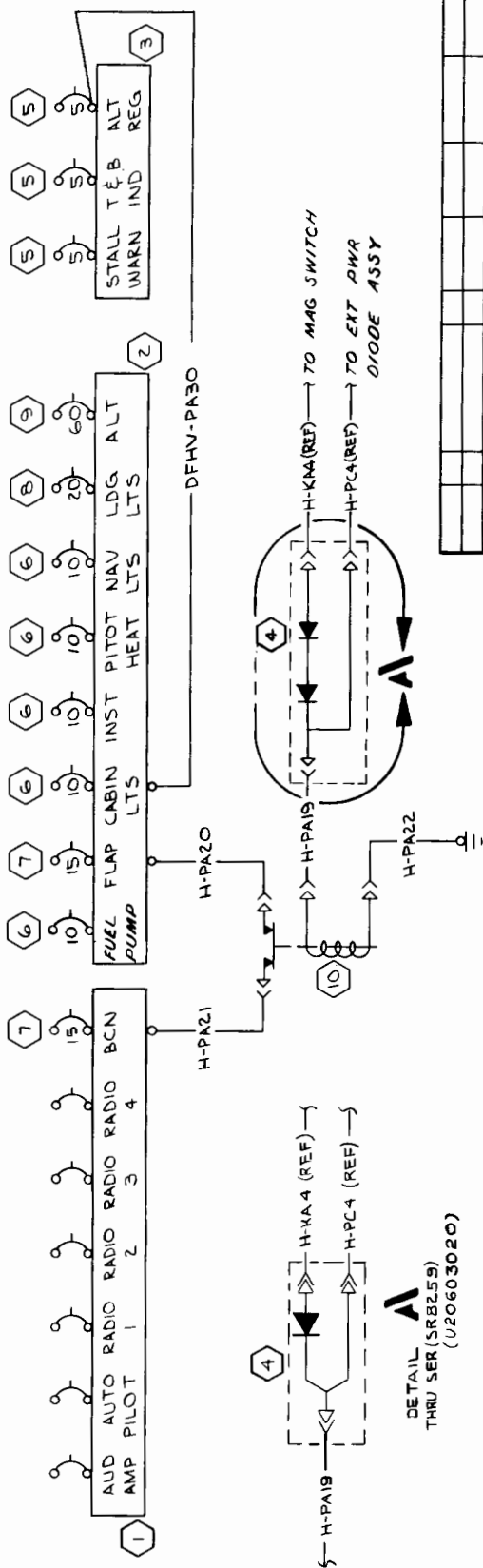
Instrument Lights 20-104
 Post Lighting 20-105
 Post Lighting 20-106
 Post Lighting 20-107
 Wing Tip Strobe Light 20-108
 Wing Tip Strobe Light 20-109
 HEATING, VENTILATION AND DE-ICE
 Cigar Lighter 20-110

Heated Pitot Tube and Stall Warning 20-111
 Heated Pitot Tube and Stall Warning 20-112
 Wing Flaps 20-113
 Wing Flaps 20-114
 Electric Elevator Trim 20-115
 Wing Flaps 20-116
 Wing Flaps 20-116A
 Electric Elevator Trim 20-117
 Electric Elevator Trim 20-118



(SER P20600604 (ON))
(SER U20601445 (ON))

LET	DESCRIPTION	DATE	APPD
A	BY REV: S-1917-1 WAS S-1068-1 (SR7403) E	RAM 9-17-73	STY DMN WEN WMB
B	BY REV: S-1360-15L WAS S-1360-10L AT BCN LT CKT BKR (SR8260)	BAH 5-13-75	DMN SRW/HH
C	BY REV: ADD DETAIL "A" & SER (SR8259)	RS 6-12-75	SRW/HH RFB PLS



DETAIL A
THRU SER (SR8259)
(U20603020)

WIRE CODE	NO	GA	MATERIAL	LG	TERMINALS	SERIALS
DFHV-PA30	14					S-1367-2-S-1367-2-6
H-PA19	18					S-1493-1 S-1493-1
H-PA21	18					S-1493-1 S-1493-1-8
H-PA20	14					S-1493-2-S-1367-2-6
H-PA20	14					S-1493-2-S-1367-2-6

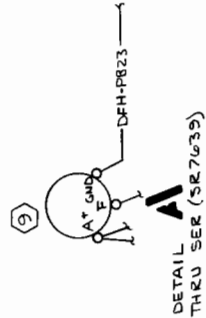
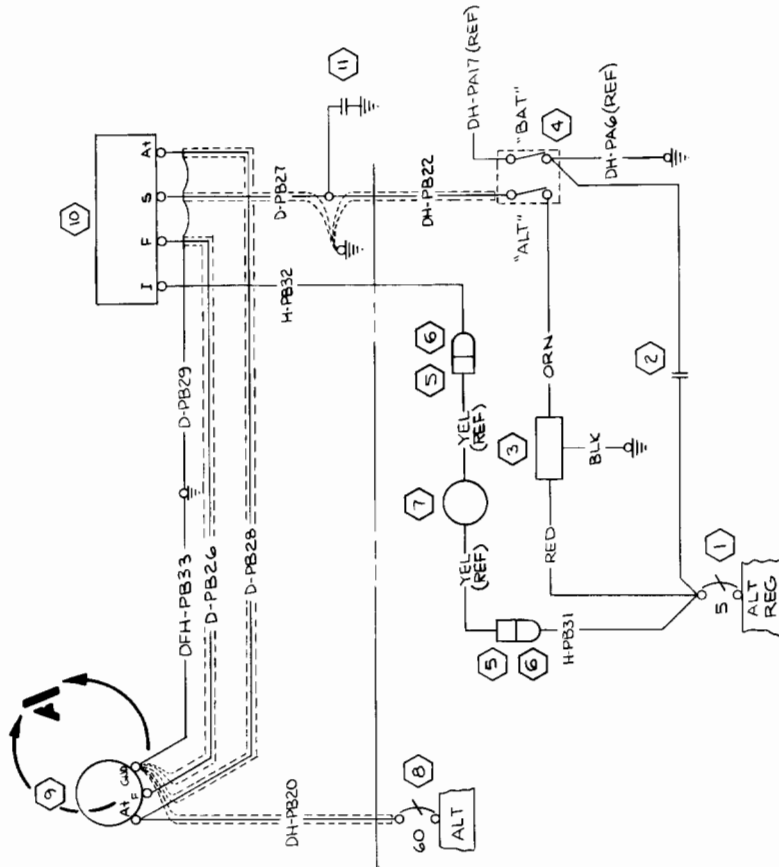
CONTRACT NO.		COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS	
NAME	DATE	DESIGN	TITLE
HEUSHAW	8-7-69		WIRING DIAGRAM -- SPLIT BUS BAR
GROUP	8-6-69	DRAWN	D.L. BURKE 8-1-69
CHECK	8-5-69	STRESS	8-7-69
PROJ	8-2-69	APPD	8-6-69
OTHER			

NO	DESCRIPTION
10	S-1917-1 RELAY-POWER
9	S-1596-60L CIRCUIT BKR
8	S-1360-20L CIRCUIT BKR
7	S-1360-15L CIRCUIT BKR
6	S-1360-10L CIRCUIT BKR
5	S-1360-5L CIRCUIT BKR
4	1570043 DIODE ASSY
3	0713854-3 BUS BAR-PRIMARY 2
2	0713854-2 BUS BAR-PRIMARY 1
1	0713854-1 BUS BAR-ELECTRONIC

EQUIPMENT TABLE	
CES-1000 IS APPLICABLE	SUPERSEDES: P 4.5
VENDOR CODES PER S-1400	
CES-XXXX-CESNA SPEC. NO.	
S-XXX OR CMXXX-CESNA	
STD. NO.	

SCALE: NONE P206 U206 PAGE: 4-7
ED & RR 10422 (SR6005) & (SR6006) Z

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD DETAIL "A" PB33 & SER 1 SER OUT PB23 (SR7639)	RAM	7-31-73	D.P. / W. PA. / J.W. / J.R.
B	BY REV: 5-1943-2 TERM. WMS 5-1367-3-10 TERM. (DH-PB20) ADD WIRE LENGTHS (NOW SHOP PRACTICE)	TON	9-10-73	J.R. / M.L. / J.R.



NOTES:
 1 AMP TERMINAL 42281-2 (0079) ON CONDUCTOR. AMP TERMINAL 2-323931-2 ON SHIELD & GROUNDING WIRE.

DFH-PB33	B	S-1562-8-9	21	S-1943-3	S-1807-4-4	SER (SR7639) 1 ON
D-PB29	18	S-1367-1-12	8	S-1367-1-12	1	
H-PB31	18	S-1635-1	42281-2	S-1635-1		
D-PB25	185	S-1367-1-12	23	S-1367-1-12	1	
D-PB27	185	S-1367-1-12	10	S-1367-1-12	1	
D-PB26	185	S-1367-1-12	23	S-1367-1-12	1	
DH-PB23	10	S-1367-3-10	21	S-1367-3-10	S-1367-3-10	THRU SER (SR7639)
DH-PB22	185	S-1493-1	24	S-1493-1	S-1807-4-4	
DH-PB20	185	S-1534-8-9	56	S-1534-8-9	S-1943-2	
WIRE CODE NO. GA	MATERIAL	LG	TERMINALS	SERIALS		

WIRE TABLE

CONTRACT NO.		Cessna AIRCRAFT CO.		COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS	
DESIGN	WHITE	DATE	1-17-73		
GROUP	W. W. W.	4-27-73			
DRAWN	WHITE	4-23-73			
CHECK	E. YOUNGBERG	4-21-73			
STRESS	C. PAZE	20 Aug 77			
PROJ	2-323931-2	4-18-73			
APPD	J.R.				
OTHER					
TITLE			WIRING DIAGRAM - ALTERNATOR SYSTEM, 60 AMP, 12V		
SIZE			CODE IDENT. DWG NO		
C			71379 1270625		
SCALE: NONE			SR 7403) 15 PAGE: 4, 8, 9		

PART NO.	DESCRIPTION
11	0710038-2 FILTER
10	C611001-0201 VOLTAGE REGULATOR
9	C611501-0102 ALTERNATOR ASSY
8	S-1896-60L CKT BKR
7	S-2135-1 LIGHT ASSY
6	S-1637-1 HOUSING
5	S-1637-2 HOUSING
4	S-1994-1-1 SWITCH
3	C593001-0101 OVERVOLTAGE SENSOR
2	TVA-1315 CAPACITOR
1	S-1360-5L CKT BKR

EQUIPMENT TABLE

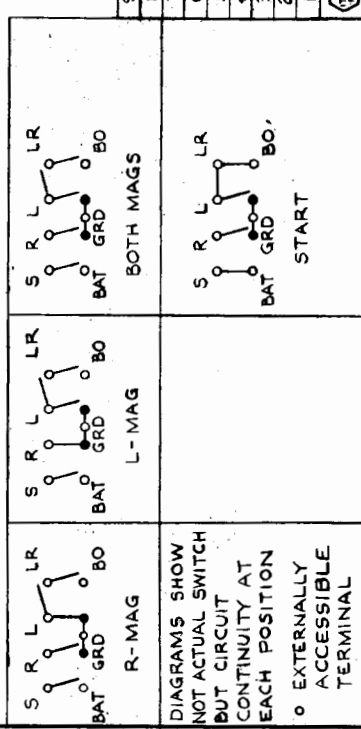
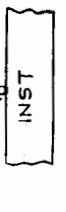
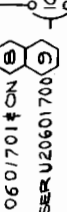
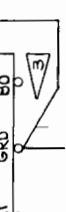
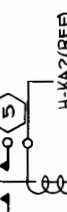
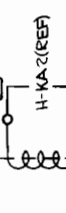
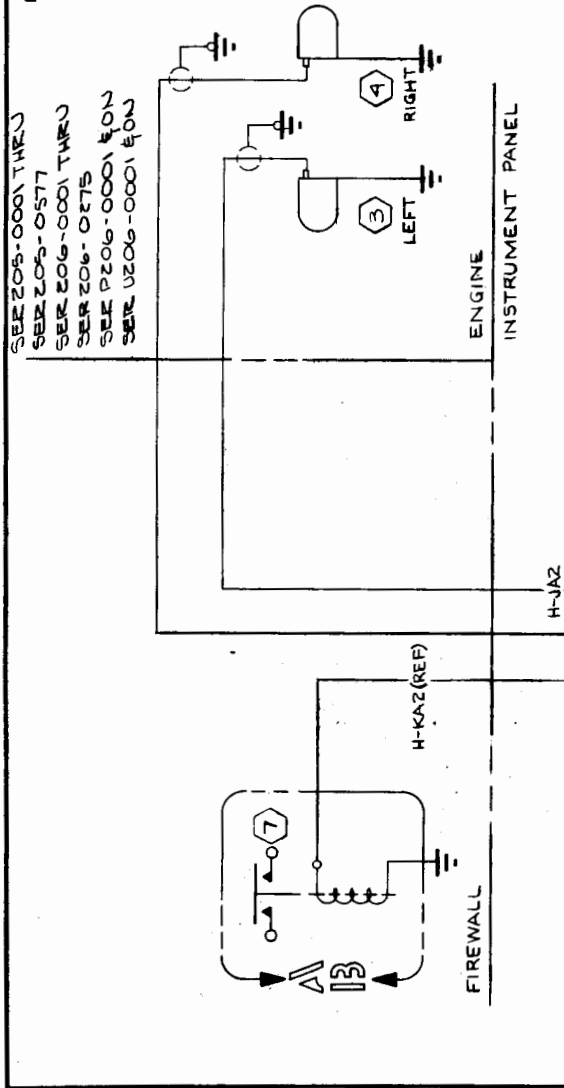
CES-1000 IS APPLICABLE
 SUPERSEDES: P 4, 8, 4, 8, 2.
 CES-XXXX-CESSNA SPEC. NO.
 S-XXX OR CMXXXX-CESSNA
 STD. NO.

SUPERSEDED BY:

CHK LET	CHK APPD	BY DATE	REVISION
A		GLW 4-2-62	REMOVED W/A FROM STD WIRES 0715129-1 WAS S-1229-1 ADD NOTE 2 & 3 FROM SWITCH POSITIONS ADD SHIELD WIRE TO JAI & JAE WIRES ADD NOTE 4 (SR3381-10)
B		GLW 6-17-62	ADD WIRE W/ISS MATERIAL ON JAI & JAE WIRES ADD MODEL 206
C		GLW 6-17-62	1270461-B BUS BAR WAS 1270429-1 S-1360-10 CKT BKR WAS S-1232-10 ON BUS BAR, INST WAS INST LIGHTS (SR-4038-6) (SR-3989-6)
D		WJR 7-1-62	ADDED 206 & U206 TO MODEL BLOCK REMOVED 1270461-1 BUS BAR, H-KA1 & H-KA2 FROM INST. ADDED WIRE LENSING TO W/T
E		GLW 11-1-65	ON WIRES H-JA1 & H-JA2, 1B-5 WIRE WAS 1B-05
F		WDS 5-23-69	BY REV: ADD DETAIL A, B, S-1678-1, S-1991-1 & SER: SER OUT 0750027-1 ED & RR 10468 (SR-6222)
G		RLY 1-17-72	BY REV: C292501-0101 WAS 0715129-1, SER OUT C292501-0101 SER IN C292501-0105; SER OUT S-1360-10, SER IN S-1360-10L (SR1126), (SR6766)

NOTES:

- TERMINATE WITH (7) SHORTING BAR BETWEEN "R" AND UNMARKED TERMINAL ADJACENT TO IT IS NOT USED FOR THIS CIRCUIT.
- TERMINATE SHIELDS ON JAI & JAE WIRES AT THE SWITCH WITH S-1367-2-G TERMINALS & CONNECT TO "GRD" TERMINAL ON SWITCH.
- S-1367-1-0 TERMINAL ON HOT LEAD S-1367-3-10 ON SHIELD.



ITEM NO.	PART NO.	DESCRIPTION	SERIALS
9	S-1360-10	CIRCUIT BREAKER	
8	S-1360-10L	CIRCUIT BKR	
7	S-1991-1	CONTACTOR	
6	S-1675-1	CONTACTOR	
5	0750027-1	START SOLENOID	
4	SLICK #662	RIGHT MAGNETO	
3	SLICK #662	LEFT MAGNETO	
2	C292501-0105	IGNITION SWITCH	
1	C292501-0101	SWITCH	

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-JA3 1B	9	S-1367-1-6S	1367-1-8		
H-JA2 1B-5	63	S-1367-1-6	4		
H-JA1 1B-5	63	S-1367-1-6	4		

WIRE TABLE

Cessna AIRCRAFT CO. COMMERCIAL AIRCRAFT DIVISION, WICHITA, KANSAS

DATE: 12-7-61

WIRING DIAGRAM - IGNITION SYSTEM

DRW: G. WOOD

CHK: J. WOOD

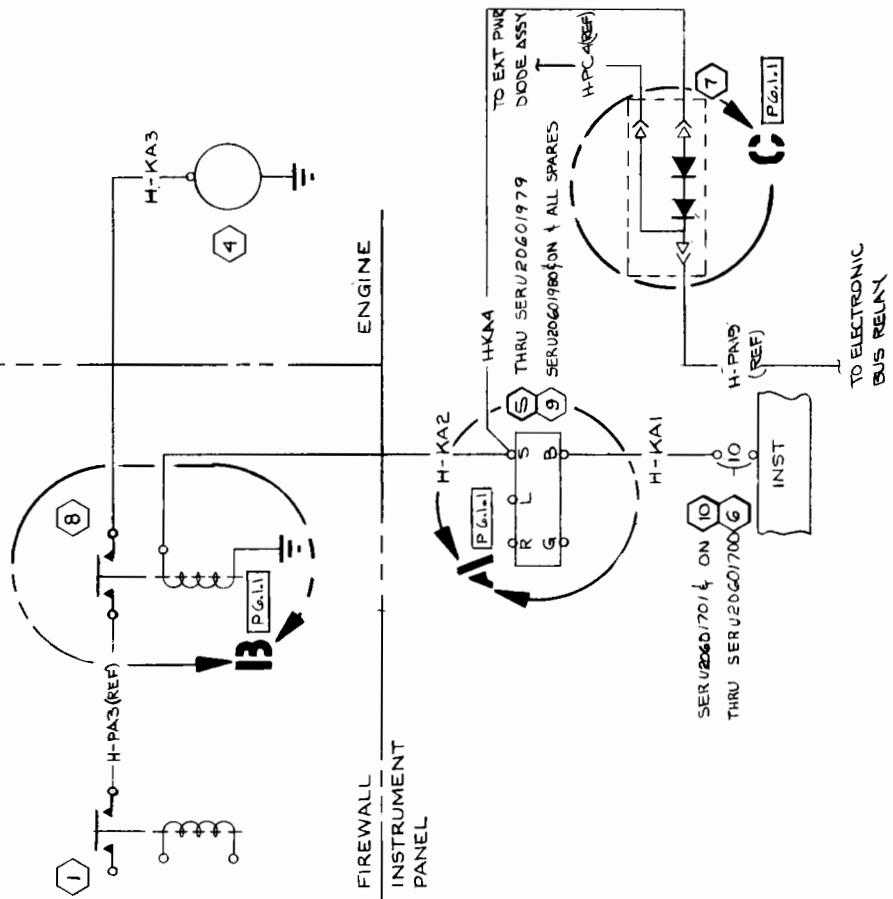
PROJ: 1270625

REV: 6

PAGE: 5-1

SER 205-0001 THRU
SER 205-0577
SER 206-0001 THRU
SER 206-0275
SER P206-0001 ON
SER U206-0001 ON

NOTE: PART OF 125060 ENGINE INSTALLATION.



CHK LET	REVISION	BY	CHK
A	REMOVED N/A FROM STD WIRES 0713129-1 WAS 5-1245-1 (SR33694-0)	GLW	AMPD
B	ADD MODEL 206 5-1360-10 CKT BKR WAS 5-1232-10 1270461-1 BUS BAR WAS 1270429-1 ON BUS BAR, INST WAS INST LIGHTS (SR 4038-6) (SR 3983-6)	GLW	AMPD
C	REMOVED 1270461-1 BUS BAR FROM E/T; ADDED P206 E/U 206 TO B/M REMOVED H-PA3 FROM E/T; ADDED WIRE LENGTHS TO W/T	UJ3R	AMPD
D	BY REV: ADD DETAIL A, 1570043-1 & H-KA4, ED & RRR 10279	FER	AMPD
E	BY REV: ADD DETAIL B, 5-1673-1, 5-1591-1 & SR; SER OUT 0750027-1 ED & RRR 10468 (SR6222)	MDS	AMPD
F	BY REV: C292501-0101 WAS 0713129-1; SER OUT C292501-0101, SER IN C292501-0105; SER OUT 5-1360-10, SER IN 5-1360-10L (SR1126); (SR6766) (REF)	RLY	AMPD
G	BY REV: ADD PG 6.1.1 & DETAIL C" & SER (SR8259)	RS	AMPD

WIRE NO.	GA.	MATERIAL	LG.	TERMINALS	SERIALS
H-KA1 1B					SEE P206-08071 ON SER U206-0001 ON
H-KA2 1B					
H-KA3 2					
H-KA4 1B					

NAME	DATE	TITLE
G WOOD	12-6-61	WIRING DIAGRAM - STARTER SYSTEM
GROUP	REV	CHK
	12-14-62	
	12-5-62	
	2-7-64	

PART NO.	DESCRIPTION	SERIALS
10	5-1360-10L	CIRCUIT BKR
9	C292501-0105	IGNITION SWITCH
8	5-1991-1	CONTACTOR
7	1570043	DODE ASSY
6	5-1360-10	CIRCUIT BREAKER
5	C292501-0101	SWITCH, MAG
4		STARTER
3	0750027-1	START, SOLENOID
2	5-1673-1	CONTACTOR
1	0712003-2	BAT. CONTACTOR

CFSSNA AIRCRAFT CO. COMMERCIAL AIRCRAFT DIVISION WICHITA KANSAS

WIRING DIAGRAM - STARTER SYSTEM

DATE: 12-7-64

REV: 6.1.0

PAGE: 6.1.0

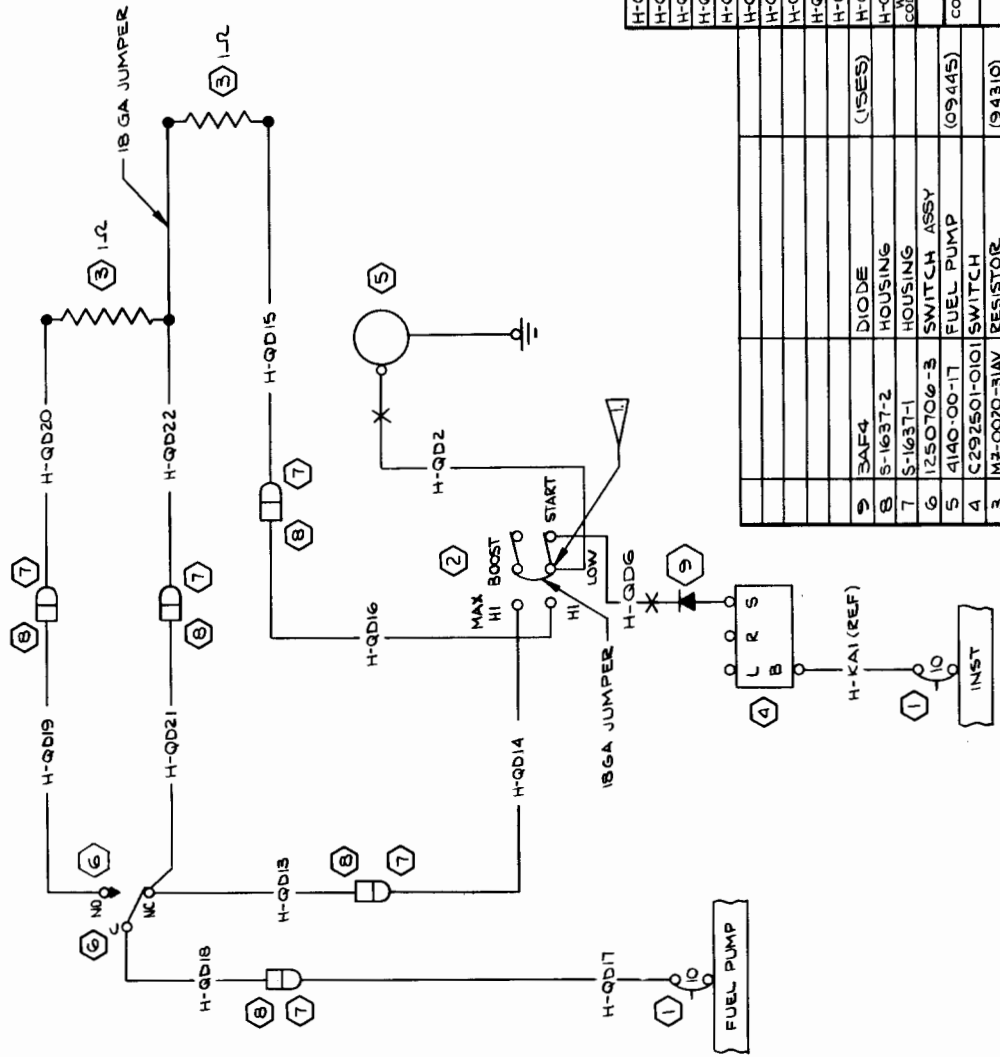
MODEL: 205, P206 & U206

REV: F

1270625

Cessna.

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD NOTE 1 ED4RR10014 (NOW SHOP PRACTICE)	6-9-70	RLY	W/W
B	BY REV: ADD 1250706-3 SER; SER (SR7403) II	1-5-73	DUP	W/W
C	BY REV: DELETE 1250706-5 & SER/1250706-3; INACT DWG. (SR7403) II	4-30-73	GKG	W/W



INACTIVE: 2060219 IX
THRU SER 1250706-5
GKS 4-30-73
W/W

H-QD	WIRE LG	TERMINALS	MATERIAL
H-QD21B	18	S-1493-1	S-1370-1
H-QD6B	18	S-1493-1	S-1370-1
H-QD16B	18	S-1636-1	S-1493-1
H-QD15B	18	SOLDER	S-1635-1
H-QD14B	18	S-1635-1	S-1493-1
H-QD13B	18	S-1367-1	S-1636-1
H-QD22B	18	S-1635-1	SOLDER
H-QD21B	18	S-1367-1	S-1636-1
H-QD20B	18	S-1635-1	SOLDER
H-QD19B	18	S-1367-1	S-1636-1
H-QD18B	18	S-1636-1	S-1367-1
H-QD17B	18	S-1367-1	S-1635-1

CONTRACT NO.		TITLE	
NAME	DATE	DESIGN	DATE
HENSHAW	3-30-70	3-30-70	
W. W. WILSON	3-30-70		
W. W. WILSON	3-30-70		
W. W. WILSON	3-25-70		
W. W. WILSON	3-25-70		

EQUIPMENT TABLE	
PART NO.	DESCRIPTION
09445	SWITCH ASSY
94310	FUEL PUMP
3	RESISTOR
2	SWITCH
1	CIRCUIT BREAKER

EQUIPMENT TABLE	
PART NO.	DESCRIPTION
109445	SWITCH ASSY
94310	FUEL PUMP
3	RESISTOR
2	SWITCH
1	CIRCUIT BREAKER

NOTES:
INSTALL S-2023-1 ADAPTER

COMMERCIAL AIRCRAFT DIV.
5800 E. PAWNEE
WICHITA, KANSAS

CSSNA AIRCRAFT CO.

WIRING DIAGRAM -
FUEL PUMP SYSTEM

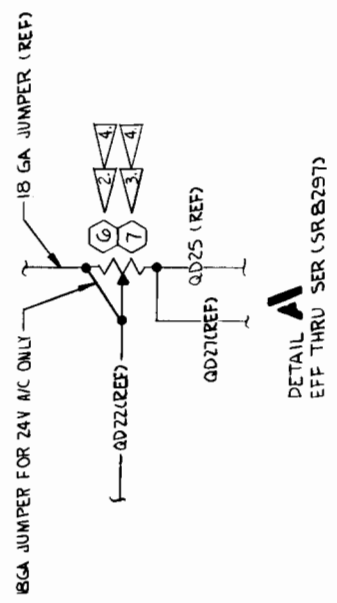
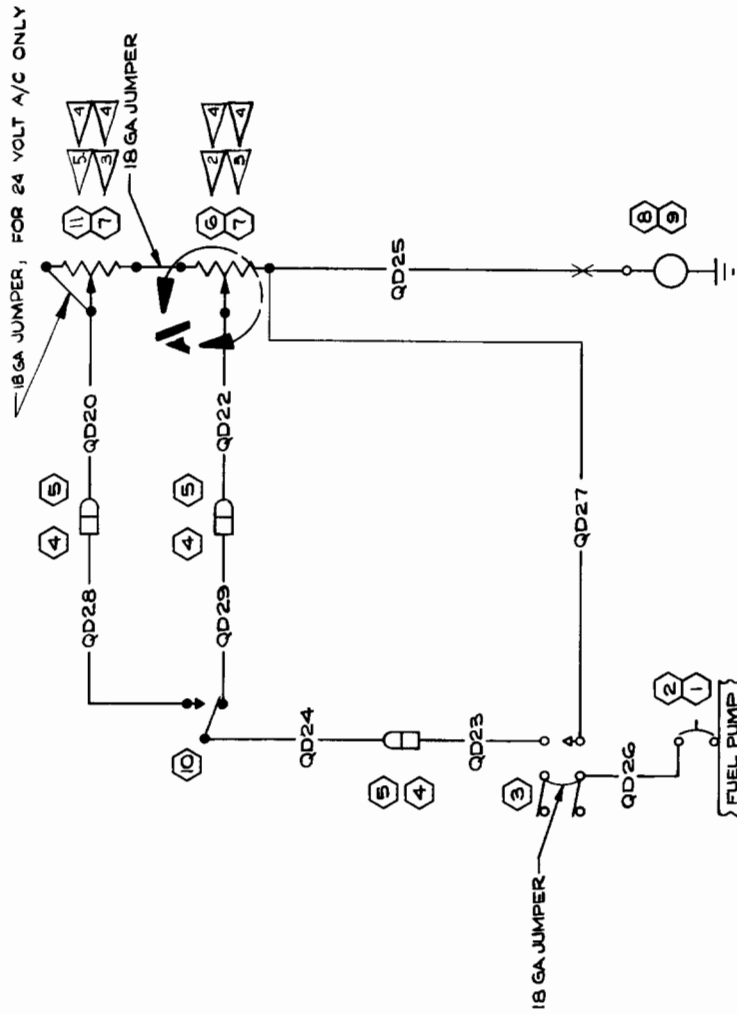
SCALE: NONE 206
PAGE: 1.1.3
ED4RR10935

CES-1000 IS APPLICABLE
VENDOR CODES PER S-1400
CES-XXXX-CSSNA SPEC. NO.
S-XXX OR CMXXXX-CSSNA
STD. NO.

SUPERSEDES:
P 7.1.0

SUPERSEDED BY:
P 7.1.4

LET	REVISION	DESCRIPTION	DATE	APPD
A		BY REV: SOLDER/QD27 WAS SEE QD25; ADD WIRE LENGTHS; REVISED NOTE 1. DELETE NOTE 1; ADD NOTES 2, 3 & 4; ADD JUMPER FOR AMOR20-10 RESISTOR (NOW SHOP PRACTICES SR B082)	DEF 2-8-74 BLA	SRB WLB
B		BY REV: ADD AMOR 20-5 & NOTE 5; REVISE NOTES 2 & 3; ADD DETAIL 'A' AND SER'S (SRB297)	GW 7-30-75	SRB WLB



NOTE:

1. REPLACE YELLOW ROCKER SWITCH IN HIGH BOOST POSITION. ADJUST RESISTOR WITH 3.0 ± .25 VOLTS FOR 24 VOLT SYSTEM AND 2.75 ± .25 VOLTS FOR 28 VOLT SYSTEM. OPEN TO FULL THROTTLE & ADJUST 1ST RESISTOR TO PRODUCE 125 LB/HR INDICATION ON FUEL FLOW METER. ADJUST 2ND RESISTOR WITH THROTTLE CLOSED TO PRODUCE 28 LB/HR INDICATION ON FUEL FLOW METER. RESISTORS ARE IN SERIES WHEN THROTTLE IS CLOSED.
2. ADJUST AMOR20-1.5 TO 1.0 ± .25 OHMS PRIOR TO INSTALLATION
3. ADJUST AMOR20-10 TO 3.5 ± .5 OHMS PRIOR TO INSTALLATION
4. READJUST RESISTOR AS READ AFTER INSTL TO COMPLY WITH FUEL FLOW REQUIREMENTS PER CES 1243
5. ADJUST AMOR20-5 TO 2.0 ± .25 OHMS PRIOR TO INSTALLATION

ITEM NO	DESCRIPTION	EQUIPMENT TABLE
11	AMOR20-5 RESISTOR (12V)	
10	USM5-B SWITCH	
9	4140-00-17 FUEL PUMP (12V)	
8	1426033-3 FUEL PUMP (24V)	
7	AMOR20-10 RESISTOR (24V)	
6	AMOR20-1.5 RESISTOR (12V)	
5	S-1637-1 HOUSING	
4	S-1637-2 HOUSING	
3	S-1846-3-2 SWITCH	
2	S-1860-10L CIRCUIT BKR (12V)	
1	S-1860-5L CIRCUIT BKR (24V)	

CODE NO	GA	MATERIAL	TERMINALS	SERIALS
QD27	18	80 S-1493-1	SOLDER	
QD26	18	13 S-1493-1	S-1867-1-6	
QD25	18	80 SOLDER	S-1870-1	
QD24	18	10 SOLDER	S-1635-1	
QD23	18	78 S-1493-1	S-1636-1	
QD22	18	50 SOLDER	S-1635-1	
QD21	18	10 SOLDER	S-1636-1	
QD20	18	18 SOLDER	S-1635-1	
QD28	18	10 SOLDER	S-1636-1	

CONTRACT NO: _____

DESIGN NAME: _____ DATE: _____

GROUP: *H. N. W.* 43473

DRAWN: *GRUBBS* 4-30-73

CHECK: *R. YOUNGERS* 4-30-73

STRESS: _____

PROJ: *Bergmann* 5-1-73

APPD: *WLB*

OTHER: _____

COMMERCIAL AIRCRAFT DIV.
CROSSIA AIRCRAFT CO.
100 E. PAWNEE
WICHITA, KANSAS

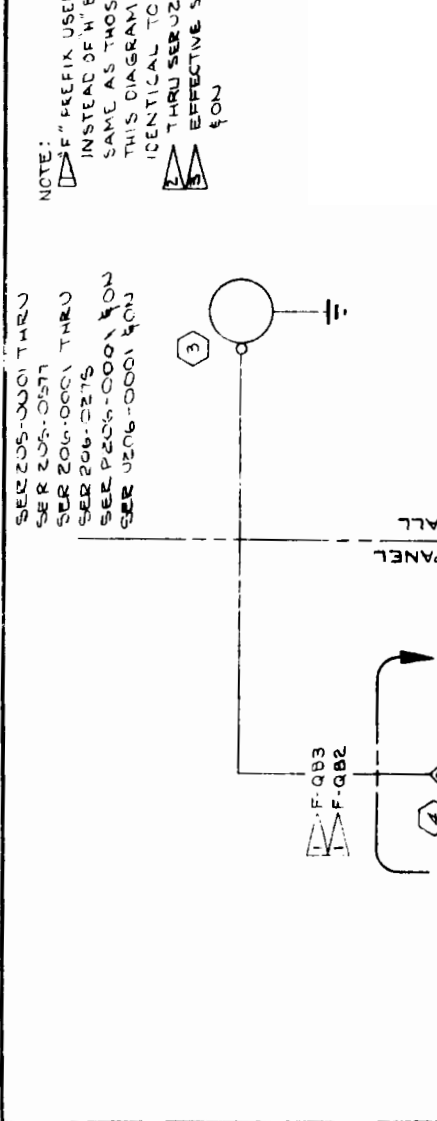
TITLE: **WIRING DIAGRAM - FUEL PUMP SYSTEM (12V & 24V)**

SIZE: **C** CODE IDENT. NO.: **71379** DWG NO: **1270625**

SCALE: **NONE** 206 PAGE: **7.1.4**

REV	DATE	BY	APP'D
A	12-14-51	JDM	
B	1-1-52	JDM	
C	1-1-52	JDM	
D	1-1-52	JDM	
E	1-1-52	JDM	
F	1-1-52	JDM	
G	1-1-52	JDM	

NOTE: "F" PREFIX USED ON THIS DRAWING INSTEAD OF "H" BECAUSE WIRES ARE SAME AS THOSE USED ON MODEL 210. THIS DIAGRAM IS SCHEMATICALLY IDENTICAL TO 270405 PAGE 7.2. THRU SER 206-1234 & SER 206-0519 EFFECTIVE SER 206-1234 & SER 206-0519



REV	DATE	BY	APP'D
A	12-14-51	JDM	
B	1-1-52	JDM	
C	1-1-52	JDM	
D	1-1-52	JDM	
E	1-1-52	JDM	
F	1-1-52	JDM	
G	1-1-52	JDM	

WIRE CODE NO.	GA.	MATERIAL	LG.	TERMINALS	N/A	SERIALS
F-QB3 1B						
F-QB3 1B						
F-QB3 1B						
F-QB1 1B						
H-QB2 1B						
H-QB1 1B						

NAME	DATE	FILE
G WOOD (2-27-51)		
W. L. JONES (2-27-51)		
W. L. JONES (2-27-51)		

DRWG NO.	DATE	FILE
100-1234-1		
100-1234-2		
100-1234-3		

WIRE CODE NO.	GA.	MATERIAL	LG.	TERMINALS	N/A	SERIALS
F-QB3 1B						
F-QB3 1B						
F-QB3 1B						
F-QB1 1B						
H-QB2 1B						
H-QB1 1B						

NAME	DATE	FILE
G WOOD (2-27-51)		
W. L. JONES (2-27-51)		
W. L. JONES (2-27-51)		

DRWG NO.	DATE	FILE
100-1234-1		
100-1234-2		
100-1234-3		

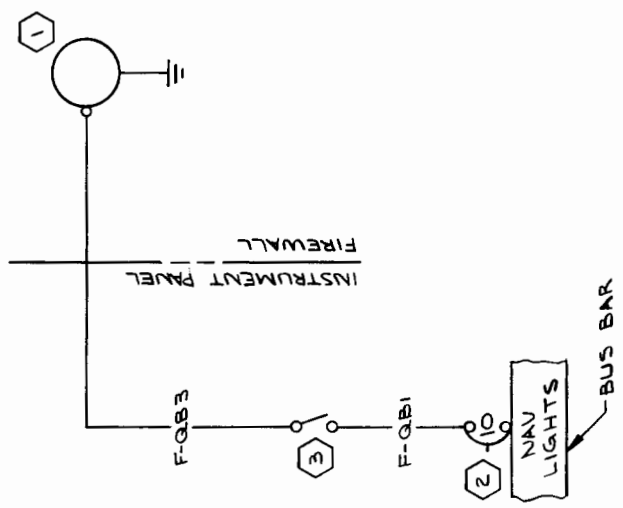
WIRE CODE NO.	GA.	MATERIAL	LG.	TERMINALS	N/A	SERIALS
F-QB3 1B						
F-QB3 1B						
F-QB3 1B						
F-QB1 1B						
H-QB2 1B						
H-QB1 1B						

LET	DESCRIPTION	DATE	APPD

(SER P20600604 FON)
(SER U20601445 FON)

NOTES:

- "F" PREFIX USED ON THIS DRAWING INSTEAD OF "H" BECAUSE WIRES ARE SAME AS THOSE USED ON MODEL 210. THIS DIAGRAM IS SCHEMATICALLY IDENTICAL TO 1270101 PAGE 7.2



WIRE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
F-QB3	18	S-1493-1	5	1347-140	
F-QB1	18	S-1493-1	5	1347-140	

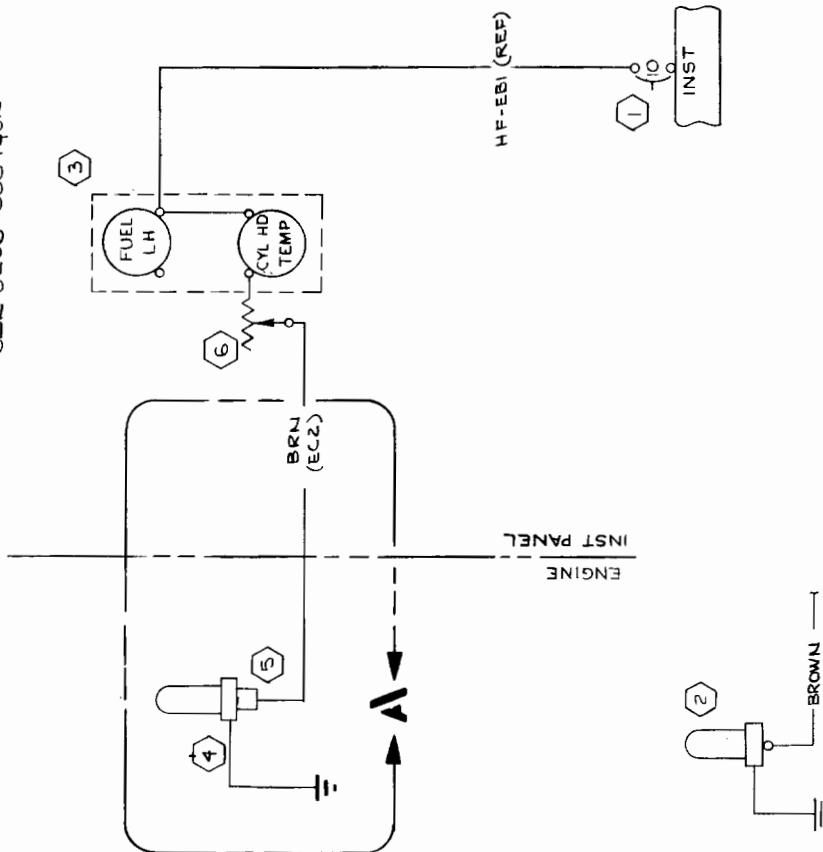
WIRE TABLE

CONTRACT NO:		COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS	
DESIGN	NAME	DATE	TITLE
GROUP	HEADSHAW	8-7-69	WIRING DIAGRAM -
DRAWN	H. W. Judd	8-7-69	OIL DILUTION
CHECK	R. YOUNGERS	8-5-69	SYSTEM (OPT)
STRESS	W. J. Judd	8-7-69	
PROJ	W. J. Judd	8-7-69	
APPD	W. J. Judd	8-7-69	
OTHER			
SIZE	CODE IDENT.	DWG NO	
C	71379	1270625	
SCALE:	NONE	U206 & P206	PAGE: 7.3

3	S-1845-2-2	SWITCH
2	S-1560-10	CIRCUIT BREAKER
1	AN4078-1	OIL DIL VALVE
EQUIPMENT TABLE		
SUPERSEDES: P 7.2		
SUPERSEDED BY:		

CES-1000 IS APPLICABLE
VENDOR CODES PER S-1400
CES-XXXX-CESNA SPEC. NO.
S-XXX OR CMXXXX-CESNA
STD. NO.

SER 205-0001 THRU
 SER 205-0577
 SER 206-0001 THRU
 SER 206-0275
 SER P206-0001 ON
 SER U206-0001 ON



DETAIL
 EFF THRU SER (SR8085)
 (U20602724)

NOTES:

- 1 PART NO. 110691 (PRSO)
 COLOR: BROWN
- 2 TEMP BULB FOR 205, P206 & U206 HNE
 BEEN LOCATED ON NO. 1 CYL. AT
 GIVEN SERIALS, MODEL 205 TEMP
 BULB MOVES TO NO. 6 CYL. MODEL
 P206 & U206 TEMP BULB REMAINS AT
 NO. 1 CYL.
- 3 CRIMP S-1636-5 TERMINAL AROUND WIRE
 INSULATION, BEND .25 OF STRIPPED WIRE
 BACK OVER CRIMP & SOLDER PER CES 1040.
 USE MOLEX HT-1119-C CRIMPING TOOL
 ONLY

CHK LET	REVISION	BY	CHK APPR
A	REMOVED VIA FROM STD WIRES (SR8084-10)	GLW 4-4-62	GLW
B	ADDED 0715602-4 POTENTIOMETER (SR 3981)	GLW 8-27-62	GLW
C	ADD MODEL 206 S-1360-10 CAT BULB WAS S-1232-10 127048-1 BUS BAR WAS 1270429-1 1213505-1 WAS 0715602-4; ADD 1213505-2 ON BUS BAR, INST WAS INST LIGHTS HEBI WIRE WAS 0700603-EBI WIRE ADDED. NOTE 1, MAT WAS PER NIL. (SR 4923) (S-1636-5) (SR8083-6)	GLW 6-18-63	GLW
D	BY REVISION: 1 WAS MATL PER MIL- W-48780 TYPE E 200% GRADE EXTRADED TEFLON DIELECTRIC. REMOVED FROM H-ECI ADD 1 IN FIELD, 'BROWN' WAS HECI. SER (SR4964)	GLW 2-12-64	GLW
E	ADDED WIRE LENGTHS TO WJT; 205E 2206 & U206 TO TITLE BLOCK; AERIVED 127048-1 BUS BAR & 1270429-1 FROM EIT; 069-1502-0001 WAS 1213505-1 & 1213505-2	WJR 7-6-64	WJR
F	BY REV: SER OUT BRN'S: 1372-1; SER IN EC2 & S-1372-2, ADD DETAIL & NOTE 3 (SR8085)	RAM 11-12-74	RAM

BRN (EC2)	18	-18-4	93	S-1360-10	S-1636-5	3	SER (SR8085) & ON
BROWN 18	1	1	1	1	1	1	205-0455 THRU SER (SR8085)
BROWN 18	1	1	1	1	1	1	206-0001 THRU SER (SR8085)
H-ECI 18	1	1	1	1	1	1	INACTIVE 205-0001 & ON

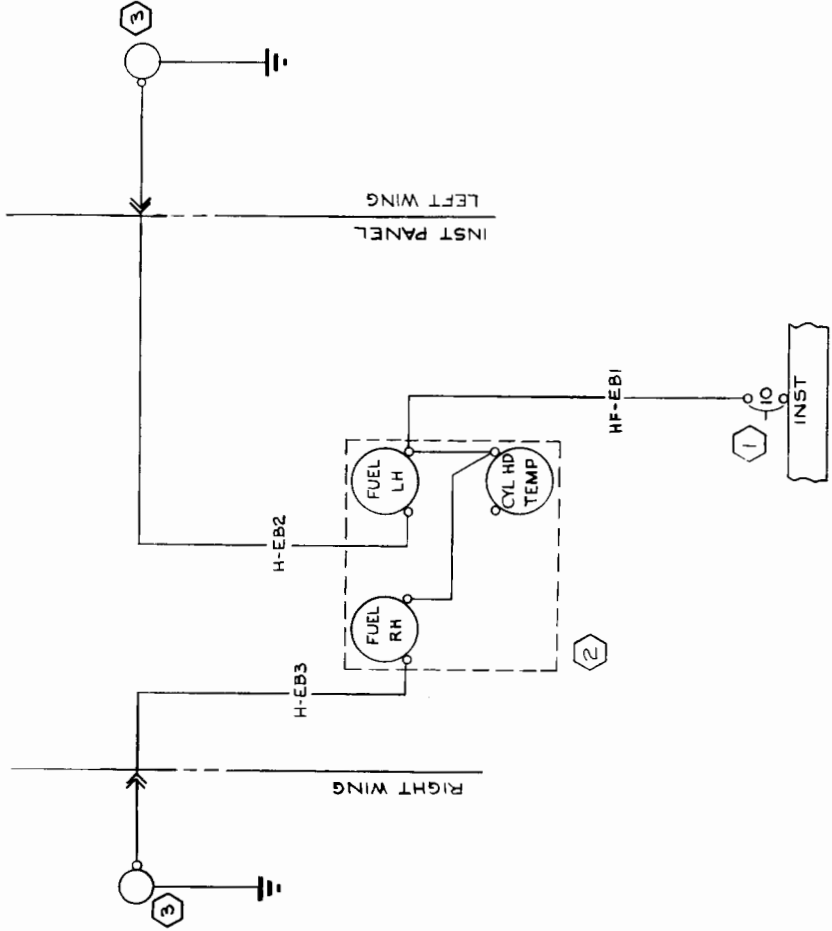
NAME	DATE	TITLE
G WOOD	12-27-62	WIRING DIAGRAM - CYLINDER HEAD TEMPERATURE
GROUP	WJC	127423
CHECK	R. J. ...	127423
PROJ	11/16/64	27-44

SUPERSER	MODEL	REV.	PAGE
205, P206 & U206		E	8.1

NO.	PART NO.	DESCRIPTION	SERIALS
7			
6	0715602-4	POTENTIOMETER	
5	S-1637-4	HOUSING - PLUG	
4	S-1372-2	BULB, CYL HD TEMP	
3	669502-0104	INST CLUSTER KIT	
2	S-1372-1	BULB, CYL HD TEMP	
1	S-1360-10	CIRCUIT BREAKER	

SER 205-0001 THRU
 SER 205-0577
 SER 206-0001 THRU
 SER 206-0275
 SER 206-0001 THRU
 SER 206-0001 THRU

CHK LET	REVISION	BY	CHK APPD
A	BY REVISION: S-341-2 WAS S-1367-1-B ADD SHORT WIRE TO FUEL LEVEL XMTR REMOVED N/A FROM STD WIRES (SER 206)	GLW	RES
B	ADD MODEL 206 ADD H-EB1 WIRE S-1360-10 CXT BKR WAS S-1232-10 1213505-1 WAS 0713602-1; AND 1213505-2 0726110-1 WAS 0726600-1 ON BUS BAR WAS INST LIGHTS DELETE 070603-EB (SER 206-6) (S-1360-10) (SER 206-6)	GLW	RES
C	ADDED WIRE LENGTHS TO WIRE 1 H-EB1 WIRE WAS H-EB1 WIRE ADDED PROG 5 U206 TO BIM; REMOVED 1270421-1 BUS BAR FROM E/F; C66502 -0104 WAS 1213505-1 & 1213505-2	WJR	RES



WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-EB3	18	86 S-1367-HQ	S-341-2		
H-EB2	18	120 S-1367-HQ	S-341-2		
HF-EB1	18	50 S-1367-1-B	S-1367-1-B		

WIRE TABLE	
NAME	DATE
G WOOD	12-26-61
GROUP	1-2-62
CHECK	1-5-62
PROJ	1-7-62

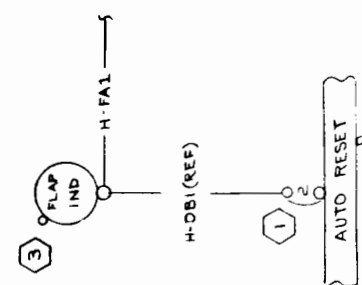
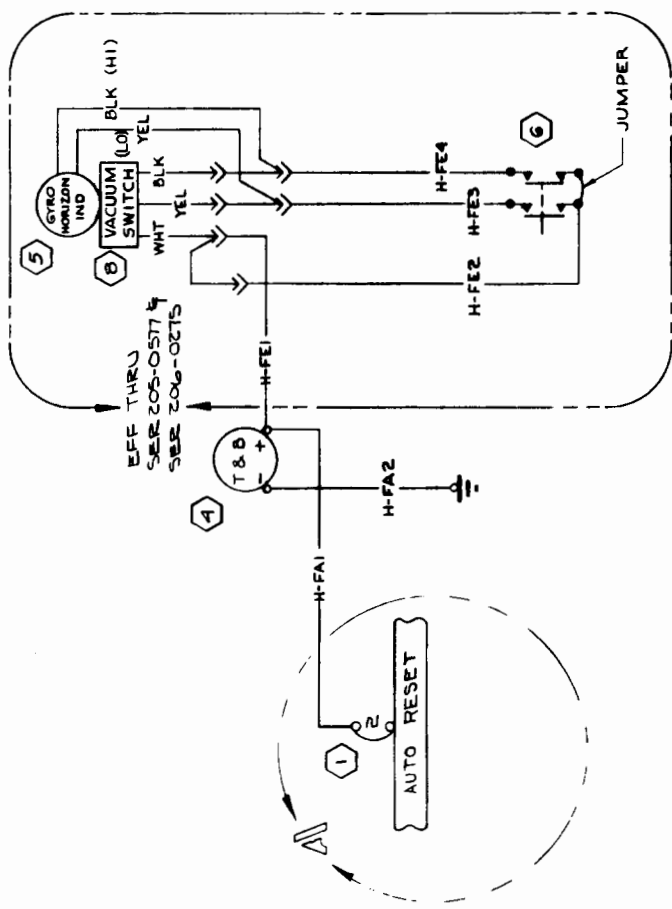
EQUIPMENT TABLE	
ITEM NO.	SERIALS
3	0726110-1 XMTR, FUEL LEVEL
2	6669502-0104 INST CLUSTER KIT
1	S-1360-10 CIRCUIT BREAKER

WIRE TABLE	
NAME	DATE
G WOOD	12-26-61
GROUP	1-2-62
CHECK	1-5-62
PROJ	1-7-62

CESNA AIRCRAFT CO. COMMERCIAL AIRCRAFT DIVISION, WICHITA, KANSAS
 WIRING DIAGRAM —
 FUEL QUANTITY
 INDICATOR
 DWS NO. 1270625
 REV. C
 PAGE 8.2

CHG LET	REVISION	BY	DATE	APPD
A	REMOVED W/A FROM STD WIRES. ADD OPT TO OPT WIRES. (SR355H-10) 4-4-62	GLW	4-4-62	[Signature]
B	ADD MODEL Z06 ADDED: R2704G1-1 BY: WAP, DETAIL A 6-18-63	SLW	6-18-63	KZS
C	(SR 4038-G) (SR 3983-G) ADDED LIMITING SERIALS TO FIELD H-FE4, H-FE2, H-FE3, H-FE1, H-FE5 H-FE6. ADDED P206-0206 TO B/W. REMOVED H-DB1, 12704G1-1, 12704Z9-1 FROM W/T, ADDED W/T LENGTHS TO W/T (SR4505 (SR457))	WJR	7-1-64	[Signature]

SEE Z05-0001 THRU
 SEE Z06-0571
 SEE P206-0001 FOR
 SEE U206-0001 FOR
 SEE Z06-0001 THRU
 SEE Z06-0275



WIRE	WIRE	GA	MATERIAL	LG	TERMINALS	SERIALS
H-FA4	20		SOLDER	0713705	(OPT) INACTIVE THRU SER 206-0001	
H-FE3	20		SOLDER	0713705	(OPT)	
H-FE2	20		SOLDER	0713705	(OPT)	
H-FE1	20		SOLDER	0713705	(OPT)	
H-FA2	18		S-1367H-85	1367H-8		
H-FA1	18		S-1367H-85	1367H-10		

QTY	PART NO	DESCRIPTION	SERIALS
9	S-1365-1	SWITCH, VACUUM	
7	S-1284-1	SWITCH	
6	S-1326N1	IND, GYRO HORIZON	
5	S-1302N1	INDICATOR, T & B	
4	S-1318	INDICATOR, FLAP POS	
3	CA-2	CKT BKR (MTC)	
2			
1			

WIRE TABLE

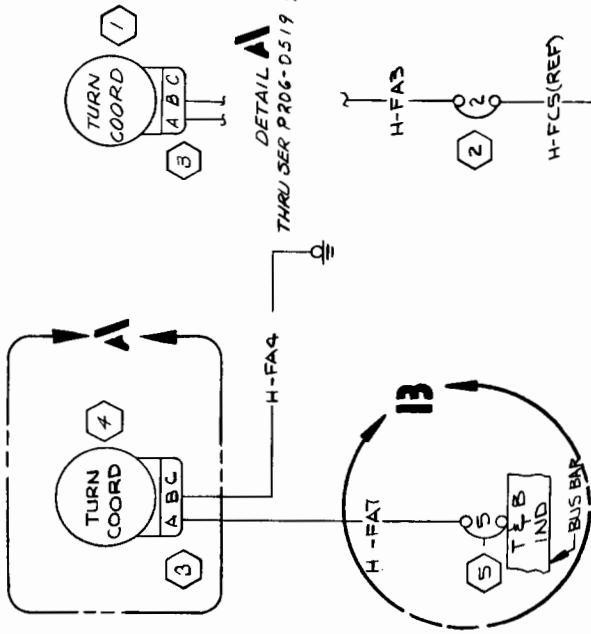
COMMERCIAL AIR

NAME: G. WOODRUFF
 DATE: 12-3-64
 TITLE: WIRING DIAGRAM - TURN & BANK AND GYRO HORIZON INDICATOR

REV: C
 PAGE: 9.1

1270625

(SER P206-0420 (ON)
(SER U206-0915 (ON))



DETAIL A
THRU SER P206-0519 & U206-1234

DETAIL B
THRU SER P206-0603 &
SER U206-1444

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADDED DETAIL A & C661003-0501 ED 6/10/63	(SR 5401) II (SR 5402) III	6-11-63	SKS M.A. H.W.
B	BY REV: SER OUT CA-2; SER IN S-1360-S; ADD DETAIL B ED & RR 10-22-63	(SR 6005) (SR 6006) II	10-22-63	DLB MOS H.W.

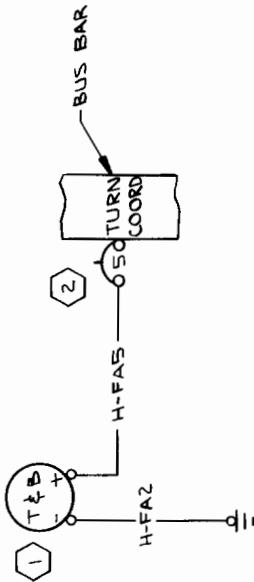
WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-FAT 1B		S-1361-H SOLDER			
H-FAQ 1B		S-1361-H SOLDER			
H-FAS 1B		S-1361-H SOLDER			

CONTRACT NO.		Cessna AIRCRAFT CO.		COMMERCIAL AIRCRAFT DIV. 5800 E. PAVNEE WICHITA, KANSAS	
DESIGN	COOK	DATE	9-13-67	TITLE	
GROUP	H. W. 222	DATE	9-13-67	WIRING DIAGRAM --	
DRAWN	HARRIS	DATE	9-8-67	TURN COORDINATOR	
CHECK	LAURIE	DATE	9-9-67	SIZE	
STRESS	406	DATE	9-11-67	CODE IDENT. DWG NO.	
PROJECT	H. W. 222	DATE	9-14-67	NO.	
APPD	R. E. M. 3334	DATE	9-5-67	C 71379	
SCALE: NONE				P206-12306	
PAGE: 5.4				1270625	

ITEM NO.	PART NO.	DESCRIPTION	EQUIPMENT TABLE
5	S-1360-3	CAT 8KA	
4	C661003-0501	TURN COORDINATOR	
3	M52106A105135	CONNECTOR	
2	CA-2	CIRCUIT BREAKER (80602)	
1	C661003-0201	TURN COORDINATOR	

SUPERSEDED BY:
CES-1000 IS APPLICABLE
VENDOR CODES PER S-1400
CES-XXXX-CESNA SPEC. NO.
S-XXX OR CXXXX-CESNA
STD. NO.

(SER P20600604 & ON)
(SER U20601445 & ON)



LET	DESCRIPTION	DATE	APPD
A	BY REV: S-1413-2 WAS S-1302N1, S-1360-5L WAS S-1360-5 & FAS/S-1367-1-6 WAS S-1367-1-8	7-5-73 RAM	ST RAM MKT

WIRE NO	GA	MATERIAL	LG	TERMINALS	SERIALS
H-FAS	18			S-1367-1-6 S-1367-1-8	
H-FAZ	18		16	S-1367-1-6 S-1367-1-8	

CONTRACT NO: _____

DESIGN: H.E.V.S. 1110 8-7-69

GROUP: H. Wied 8-7-69

DRAWN: D.L. BURKE 8-7-69

CHECK: E. YOUNGERS 8-5-68

STRESS: [Signature] 8-7-69

PROJ: [Signature] 8-7-69

APTD: M. Schumway 8-6-69

OTHER: _____

COMMERCIAL AIRCRAFT DIV.
8800 E. PAWREE
WICHITA, KANSAS

Cessna AIRCRAFT CO.

TITLE: WIRING DIAGRAM -
TURN & BANK INDICATOR

SCALE: NONE

CODE IDENT: C

DWG NO: 71379

SCALE: NONE

FIGURE: P206 & U204

PAGE: 9.5

ED & RR 10422 (SR6005) II (SR6006) II

PART NO.	DESCRIPTION
2	S-1360-5L CIRCUIT BKR INDICATOR
1	S-1413-2 INDICATOR

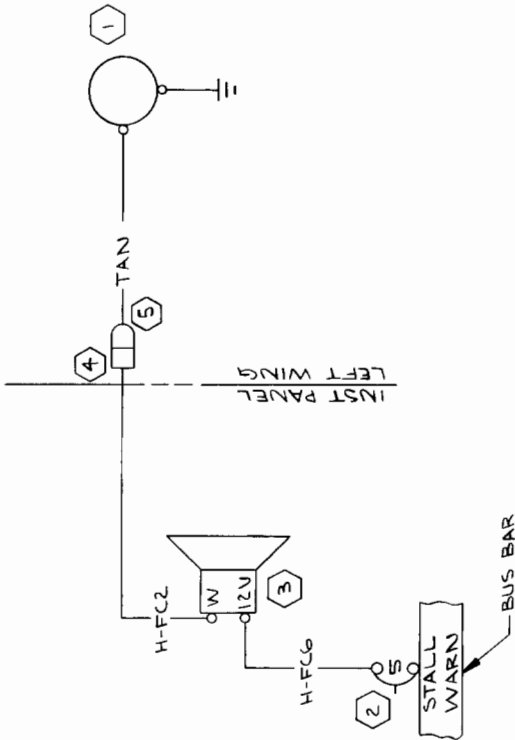
EQUIPMENT TABLE

SUPERSEDES: P 9.1

SUPERSEDED BY: _____

CEC-1000 IS APPLICABLE
VENDOR CODES PER S-1400
CES-XXXX-CESSNA SPEC. NO.
S-XXX OR CXXXX-CESSNA
STD. NO.

(SER P20600604 & ON)
(SER U20601445 & ON)



LET	DESCRIPTION	REVISION	DATE	APPD
A	BY REV: S-1635-1 & S-1636-1 WAS S-341-2 (SR7402) (REF)		DLO 3-1-74	SGM JAS

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
TAN 18	S-1460-1B-10	100S-1367-16	S-1635-1		
H-FC6 18		S-1367-16	S-1367-14		
H-FC2 18		G1	S-1367-16	S-1636-1	

CONTRACT NO.		COMMERCIAL AIRCRAFT DIV.	
Cessna Aircraft Co.		8800 E. PAWNEE WICHITA, KANSAS	
DESIGN	NAME	DATE	TITLE
H-1637-1	Housing-Cap	8-7-69	WIRING DIAGRAM -
GROUP	DRW	CHK	STALL WARNING SYSTEM
DL BURKE	8-7-69	8-7-69	(NON-HEATED)
CHECK	STRESS	APPROV	
RYOUNGERS	8-7-69	8-7-69	
APPROV	APPROV	APPROV	
MD	MD	MD	
8-6-69	8-6-69	8-6-69	

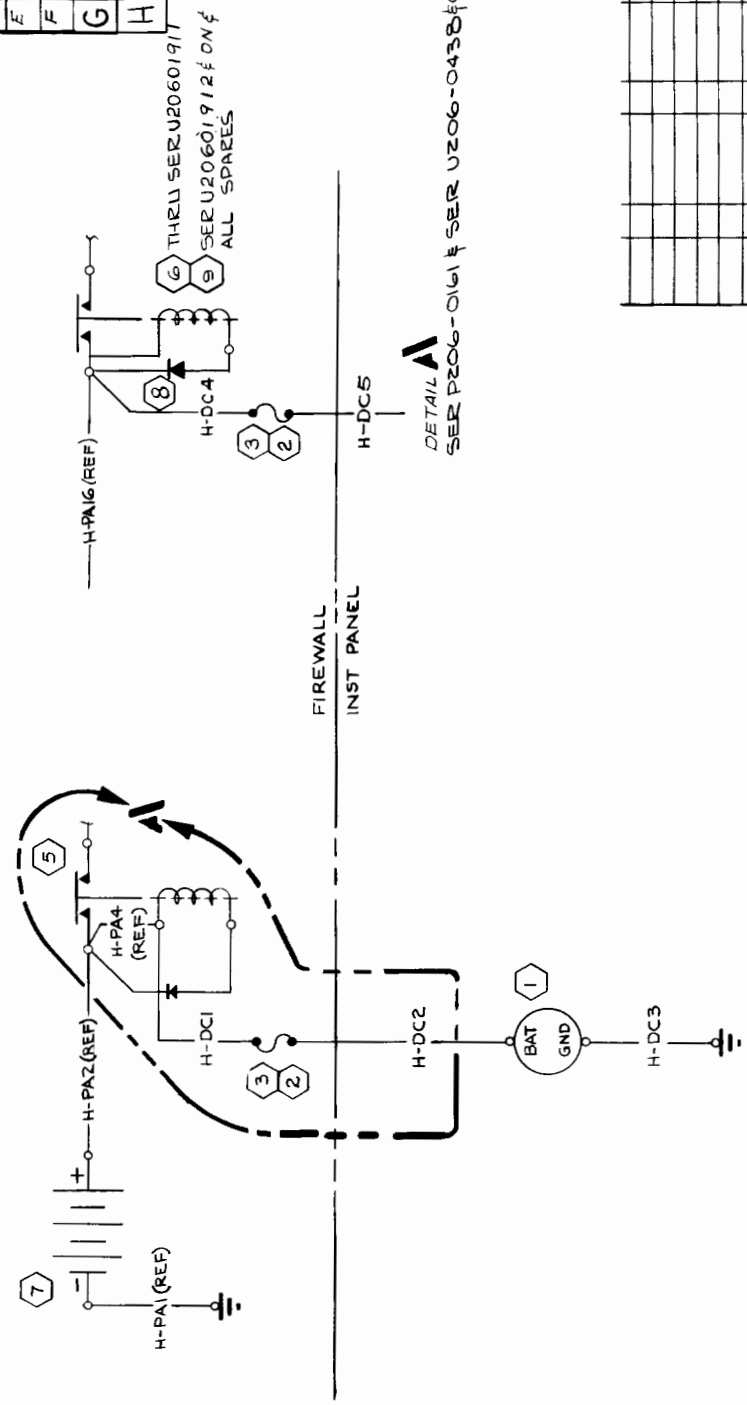
EQUIPMENT TABLE	
PART NO.	DESCRIPTION
S-1637-1	HOUSING-CAP
S-1637-2	HOUSING-PLUG
S-1407-6	HORN,STALL WARN
S-1360-5	CIRCUIT BKR
0511062-4	AMTR,STALL WARN

WIRE TABLE		
SIZE	CODE IDENT.	DWG NO
C	71379	1270625
SCALE: NONE	P206 & U206	PAGE: 9.6

ED & RR 10422 (SR6005) (SR6006) IX

FORM NO. 80-2125

SER 205-0001 THRU
 SER 205-0571
 SER 206-0001 THRU
 SER 206-0275
 SER 206-0001 FOR
 SER U206-0001 FOR



CHG	BY	CHK	DATE	REVISION
A	ELW	ELW	4-1-62	REMOVED NIA FROM STD WIRES (SR3524-10)
B	WJR	WJR	4-1-62	REMOVED OBSOLETE NEVER USED FROM FACE OF DRAWING. S-1011-10862 WAS-2, S-1090-22 (SR-402)
C	ELW	ELW	6-18-62	ADD MODEL 206 (SR3983-6)
D	WJR	WJR	7-16-64	ADDED PROG. U206 TO B/M; ADDED WIRE LENGTHS TO W/T; REMOVED H-PA1, H-PA2 & H-PA3 FROM E/T
E	WJR	WJR	7-16-64	BY REV: ADD DETAIL A H-DC4 ITEM 6. SEB. OUT H-DC1 (SR4459) FROM H-DC2; INACTIVATED H-DC2
F	WJR	WJR	8-7-65	BY REV: S-137N2 WAS S-137N1 PER U206 ED: RR (SR45) 4-8-69 (SR4659) 8-7-65
G	WJR	WJR	8-16-72	BY REV: SER OUT S-1579-1 E. ADD S-1579-2 (SET201)

THRU SER U20601911
 SER U20601912 & ON &
 ALL SPARES

FIREWALL
 INST PANEL

DETAIL A
 SER 206-0161 & SER U206-0438 FOR

ITEM NO.	PART NO.	DESCRIPTION	SERIALS
9	S-1579-2	CONTACTOR	
8	07107084	DIODE ASSY.	
7	0712605-1	BATTERY	
6	S-1579-1	CONTACTOR, BAT.	
5	0712603-2	CONTACTOR, BAT.	
4	S-1579-2	CONTACTOR	
3	S-1091-1	FUSE	
2	S-1090-22	FUSEHOLDER	
1	S-137N2	CLOCK ASSY	

WIRE CODE	GA	MATERIAL	LG	TERMINALS	SERIALS
H-DC5	18	S-1367A-4	SOLDER		SER 206-0161 & SER U206-0438 FOR
H-DC4	18	S-1367A-3	SOLDER		SER 206-0161 & SER U206-0438 FOR
H-DC3	18	S-1367A-65	SOLDER		205-0129 & ON
H-DC2	18	S-1367A-6	SOLDER		205-0129 THRU SER U206-0438 FOR
H-DC1	18	S-1367A-6	SOLDER		205-0129 THRU SER U206-0438 FOR

WIRE TABLE

CESSNA AIRCRAFT CO COMMERCIAL AIRCRAFT DIVISION WICHITA, KANSAS

NAME: G WOOD
 DATE: 12-27-61
 TITLE: WIRING DIAGRAM - CLOCK

DRAWN BY: G WOOD
 CHECKED BY: G WOOD
 PROJ: 1171-1-1
 2-5-62
 2-7-62

SUPERSEDED BY: 205, P206 & U206

MODELS: 205, P206 & U206

REV: H

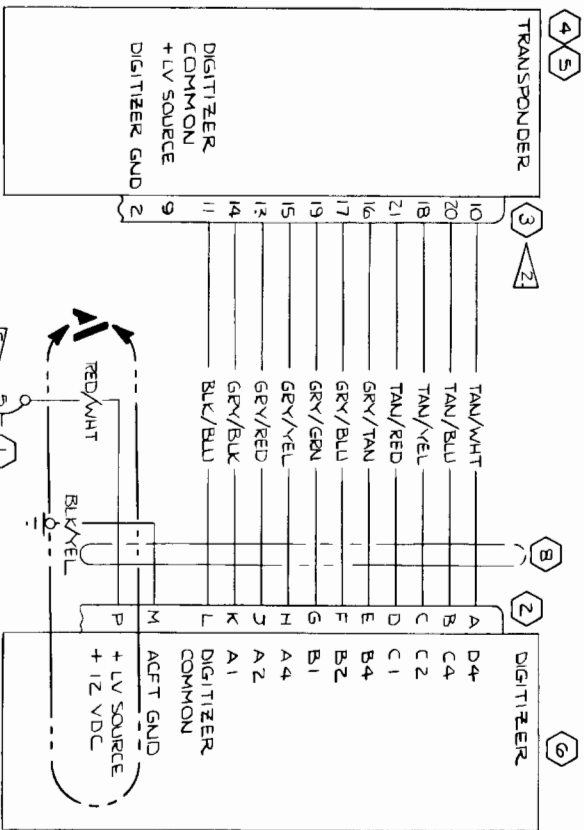
PAGE: 10.1

1270625

Cessna.

FORM NO. 80-2158

REVISION			
LET	DESCRIPTION	DATE	APPD
A	BY REV: ADD NOTE NO. 5; DELETE TURN COORDINATOR FROM BUS BARS; ADD (SR 7922) (SR 7922)	3-5-74	MEM JRM MS



- NOTES:
- FOR 24V WIRING & WIRE TERMINALS REFER TO 1571000 PAGE 9.2
 - TRANSPONDER CONNECTOR HOUSING IS PART OF TRANSPONDER CABLE ASSY
 - FOR WIRING DIAGRAM OF 300 & 400 TRANSPONDER REFER TO 39201473
 - PINS ARE CRIMP TYPE & VENDOR FURNISHED WITH CONNECTOR
 - ATTACH BOTH TRANSPONDER AND ENCODING ALTIMETER TO NO 4 RADIO CIRCUIT BREAKER.

DETAIL (APPLIES TO 24V INSTL.)

QTY	PART NO.	DESCRIPTION
1	5-1360-5L	CIRCUIT BREAKER
2	42816	CONNECTOR
3	5-2189-1	CONNECTOR
4	RT-459A	TRANSPONDER
5	RT-359A	TRANSPONDER
6	EA-401A	ALT DIGITIZER
7	1570312-1	CABLE ASSY
8	1570312-3	CABLE ASSY

WIRE CODE	GA	MATERIAL	LG	TERMINALS	SERIALS
RED/WHT	Z0	-20-2-9	5-1367-1-B	4	
BLK/YEL	Z2	-22-0-4	5-1367-1-B	1	
BLK/BLU	1	-22-0-6	5-2190-1	1	
GRY/BLK	1	-22-8-0		1	
GRY/RED	1	-22-8-2		1	
GRY/BL	1	-22-8-4		1	
GRY/GRN	1	-22-8-5		1	
GRY/BLU	1	-22-8-6		1	
GRY/TAN	1	-22-8-10		1	
TAN/YEL	1	-22-10-4		1	
TAN/RED	1	-22-10-2		1	
TAN/BLU	1	-22-10-6		1	
TAN/WHT	Z2	-22-10-9	5-2190-1	4	

CONTRACT NO: _____

NAME: _____ DATE: _____

DESIGN: _____

GROUP: _____

DRAWN: J. YOUNG DATE: 11-9-73

CHECK: J. YOUNG DATE: 11-9-73

STRESS: _____

PROJ: _____

APPD: _____

OTHER: _____

WIRING DIAGRAM

ENCODING ALTIMETER

(12 & 24 VOLT)

Cessna AIRCRAFT CO. COMMERCIAL AIRCRAFT DIV.
5800 E. PAWNEE WICHITA, KANSAS

SIZE: C

CODE IDENT: 71379

DWG NO: 1270625

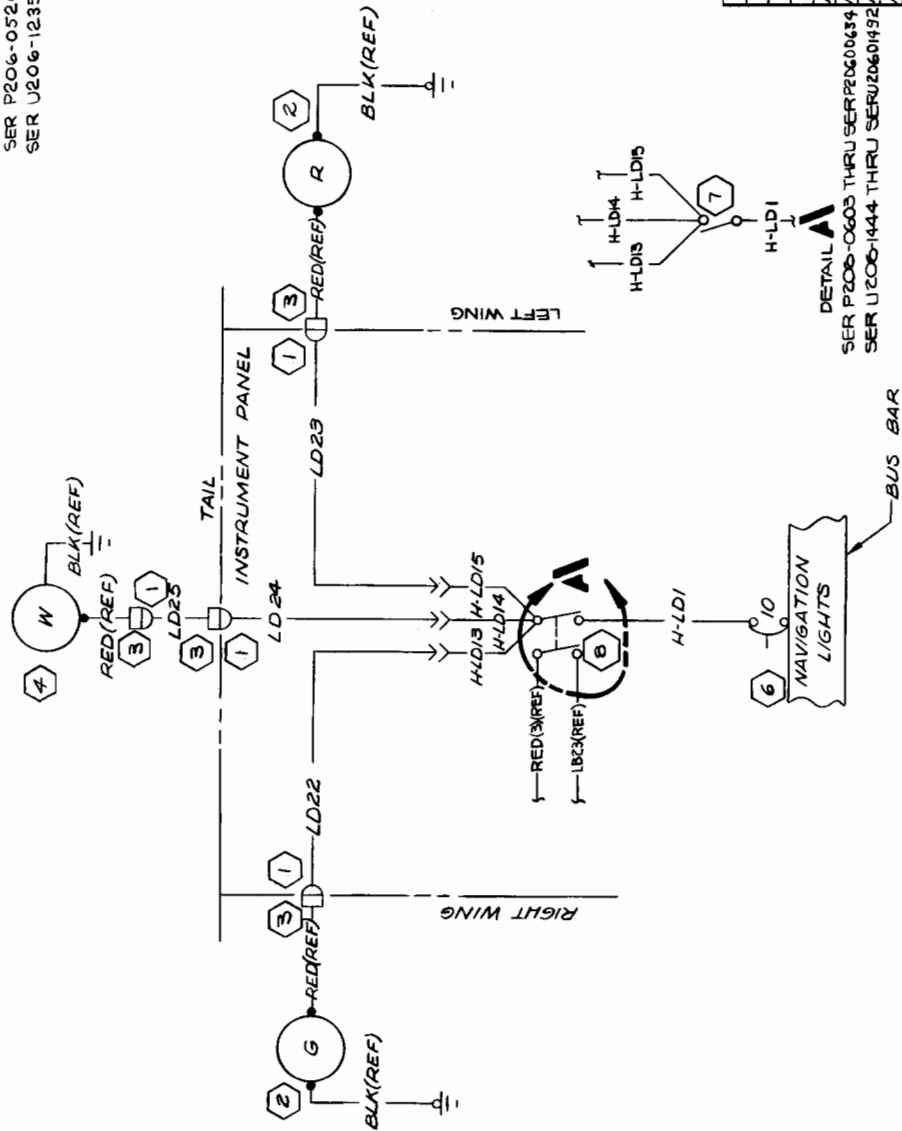
SCALE: NONE

(SR 7922)

PAGE: 9.7

(SR 7922)

SER P206-0520 & ON
SER U206-1235 & ON



LET	REVISION DESCRIPTION	DATE	APPD
A	BY REV: SER OUT S-1845-1-1, SER IN S-1845-1-2, ADD DETAIL A ED & RR 10485 (SR6005)(SR6006)	DLB MOE 8-7-69	ELV MOR JPA KAW
B	BY REV: ADD DETAIL "A" S-1844-1-2 & SER; ADD RED(X)(REF) & LB23(REF) ED RR 10829 (SR6452)	DLP 1-2-70	UMH ELV KAW JPA

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-LD25	18		20	S-1636-15-1635-1	
H-LD24	18		33	S-341-2 5-1635-1	
H-LD23	18		65	S-341-2 5-1635-1	
H-LD22	18		66	S-341-2 5-1635-1	
H-LD15	18		27	S-341-2 5-1493-1	
H-LD14	18		50	S-341-2 5-1493-1	
H-LD13	18		4	S-1677-8 5-1493-1	
H-LD1	18				

CONTRACT NO.	NAME	DATE
	G WOOD	8-25-68
	N. W. L.	8-27-68
	F. YARBROUGH	8-19-68
	M. H. C.	8-17-68
	G. K. IRVIN	8-19-68
	SWANEY	8-20-68

DESIGN	GROUP	DRAWN	CHECK	STRESS	PROJECT	APPD
S-1844-1-2	SWITCH					
S-1845-1-2	CIRCUIT BREAKER					
S-1860-1-1	SWITCH					
062200-0102	TAIL LIGHT ASSY					
S-1637-2	HOUSING					
062200-0201	LIGHT ASSY					
S-1637-1	HOUSING					

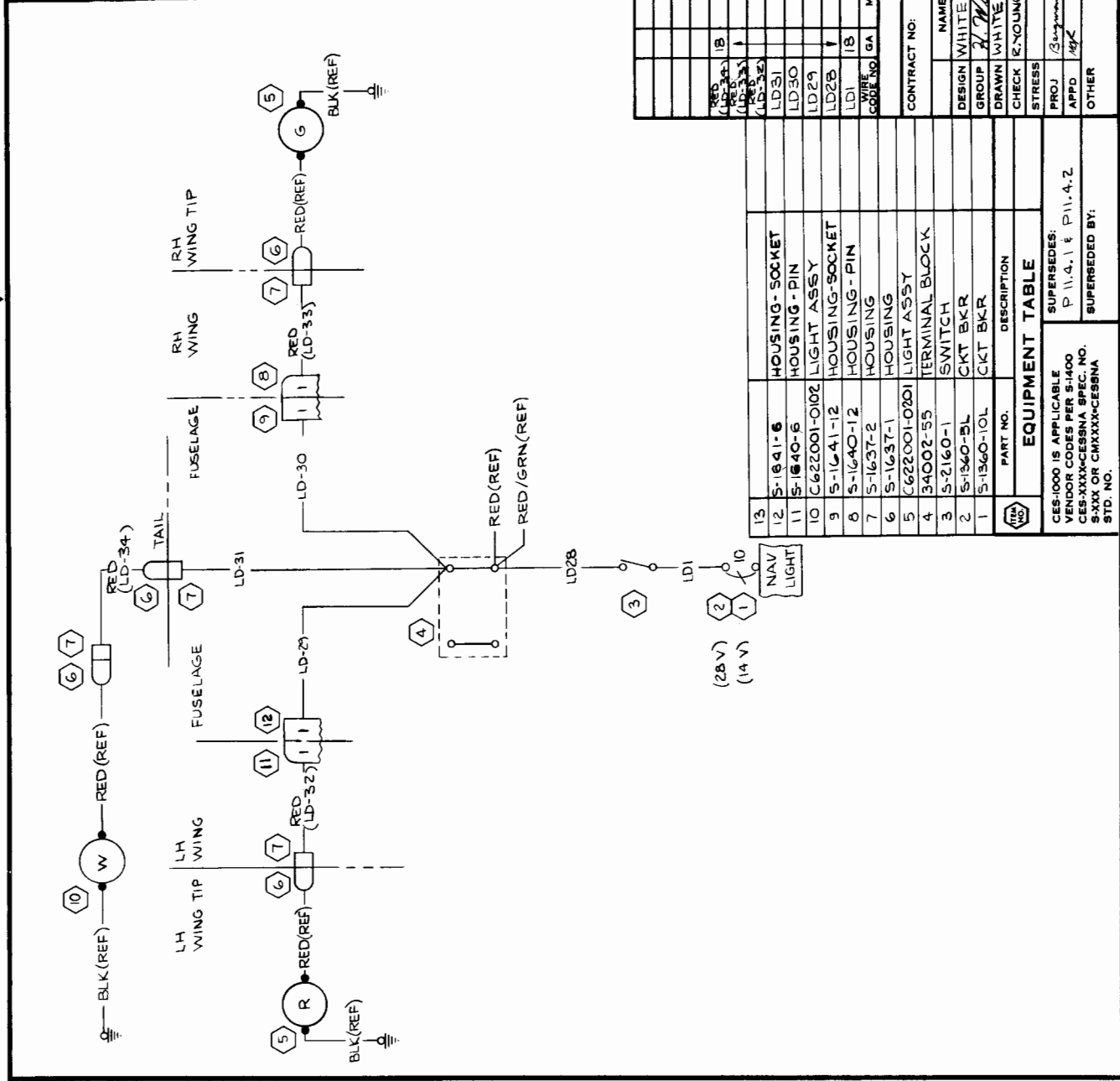
SIZE	CODE IDENT.	DWG NO.
C	71379	1270625

SCALE: NONE U206-206 PAGE: 11.4.1

ED & RR 03436 (SR5401)II & (SR5402)II

FORM NO. 80-118A

LET	REVISION	DESCRIPTION	DATE	APPRO
A	BY REV: ADDED LD-32, LD-33 & LD-33	LD-32, LD-33 (SR7403) II	RAM 8-10-73	<i>[Signature]</i>
B	BY REV: ADD WIRE LENGTHS; S-1640-12 & S-1641-12 WAS S-1640-9 & S-1641-9; S-1640-6 & S-1641-6 WAS S-1640-9 & S-1641-9; MER EC 393 (NOW SHOP PRACTICE)		BLA 12-10-74	<i>[Signature]</i>



REF	WIRE CODE NO.	MATERIAL	LG	TERMINALS	SERIALS
18-2	S-1636-1	S-1635-1			
190	S-1636-1	S-1635-1			
190	S-1636-1	S-1635-1			
352	S-1821-1	S-1636-1			
76		S-1636-1			
27		S-1636-1			
7	S-1821-1	S-1493-1			
6	S-1821-1	S-1493-1			

CONTRACT NO.		DATE	
NAME	WHITE	1-4-73	
DESIGN	WHITE	4-27-73	
GROUP	WHITE	4-27-73	
DRAWN	WHITE	4-27-73	
CHECK	R. YOUNGERS	4-27-73	
STRESS			
PROJ		1-18-73	
APPD			
OTHER			

NO	PART NO.	DESCRIPTION
13	S-1641-6	HOUSING - SOCKET
12	S-1640-6	HOUSING - PIN
11	S-1640-6	LIGHT ASSY
10	C622001-0102	HOUSING-SOCKET
9	S-1641-12	HOUSING-PIN
8	S-1640-12	HOUSING
7	S-1637-2	HOUSING
6	S-1637-1	HOUSING
5	C622001-0201	LIGHT ASSY
4	34002-55	TERMINAL BLOCK
3	S-2160-1	SWITCH
2	S-1340-BL	CKT BKR
1	S-1360-10L	CKT BKR

EQUIPMENT TABLE	
CES-1000 IS APPLICABLE	SUPERSEDES: P 11.4.1 & P 11.4.2
VENDOR CODES PER S-1400	
CES-XXXX-CESNA SPEC. NO.	
9-XXX OR CXXXX-CESNA	
STD. NO.	

COMMERCIAL AIRCRAFT DIV.
 3800 E. PAWNEE
 WICHITA, KANSAS

Cessna AIRCRAFT CO.

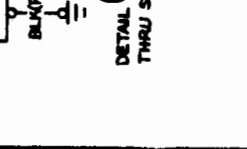
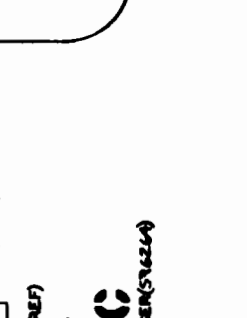
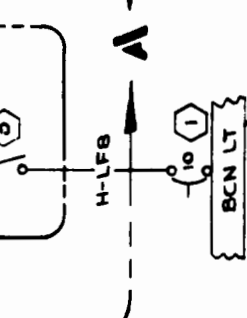
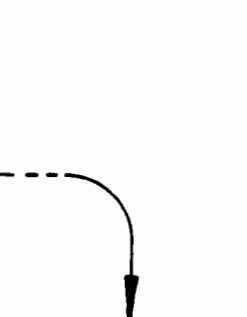
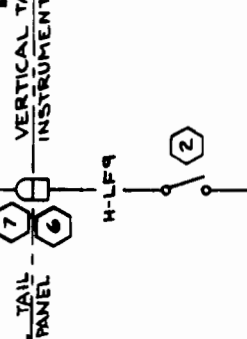
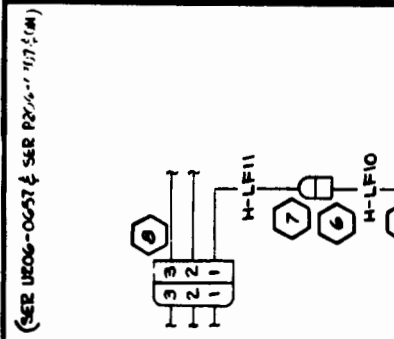
TITLE
**WIRING DIAGRAM --
 NAVIGATION LIGHTS**

SCALE: NONE (SR 7403) II

SIZE
 CODE IDENT. DWG NO
C 71379 -1270625

FORM NO. 80-218B

REV	BY	DATE	REVISION
A	JWH	3-1-50	BY REV: SECURIZE O
B	EGY	5-1-50	BY REV: ADDED DETAIL B, 1/2 EGY (S-1645-1-1); ADDED 6-1637-1-2; S-1638-2 TO EQUIP TABLE; DELETE NOTES 1 & 2; C594501-020; WAS C594501-010; ADD NOTES 3 & 4, S-1493-2 & S-1493-3
C	POP	7-23-50	BY REV: ADD DETAIL C, C594501-020 & DETAIL D; INACTIVATE DMS SER IN C62001-0103 ED&RR 10485 6A1003(SR6005) ED&RR 10542 (S14264)(SR5307)



DETAIL A
 APPLIES TO FLOATPLANE ONLY
 THRU SER U206-0754
 INACTIVE: U206-0657 & SER P206-0307
 EFF SER U206-0657 & SER(SR6006)
 THRU SER(SR6005) & SER(SR6006)
 ED&RR 10485 POP 7-23-50

WIRE NO.	TERMINALS	WIRE NO.	TERMINALS
H-LF9	16	5-1493-2	5-1493-2
H-LF8	16	5-1493-2	5-1493-2
H-LF11	16	5-1493-2	5-1493-2
H-LF10	16	5-1493-2	5-1493-2
H-LF9	16	5-1493-2	5-1493-2
H-LFB	16	5-1493-2	5-1493-2
DFH-LF7	16	5-1493-2	5-1493-2

WIRE NO.	TERMINALS	WIRE NO.	TERMINALS
H-LF9	16	5-1493-2	5-1493-2
H-LF8	16	5-1493-2	5-1493-2
H-LF11	16	5-1493-2	5-1493-2
H-LF10	16	5-1493-2	5-1493-2
H-LF9	16	5-1493-2	5-1493-2
H-LFB	16	5-1493-2	5-1493-2
DFH-LF7	16	5-1493-2	5-1493-2

WIRE NO.	TERMINALS	WIRE NO.	TERMINALS
H-LF9	16	5-1493-2	5-1493-2
H-LF8	16	5-1493-2	5-1493-2
H-LF11	16	5-1493-2	5-1493-2
H-LF10	16	5-1493-2	5-1493-2
H-LF9	16	5-1493-2	5-1493-2
H-LFB	16	5-1493-2	5-1493-2
DFH-LF7	16	5-1493-2	5-1493-2

- NOTES:
- 1. S-1638-2 SOCKET & S-1637-1 HOUSING - PLUG.
 - 2. S-1638-2 PLUG & S-1637-1 HOUSING - CAP.
 - 3. THRU SER(SR6005) & SER(SR6006) EFFECTIVE SER(SR6005) & SER(SR6006) (ON)

WIRE NO.	TERMINALS	WIRE NO.	TERMINALS
H-LF9	16	5-1493-2	5-1493-2
H-LF8	16	5-1493-2	5-1493-2
H-LF11	16	5-1493-2	5-1493-2
H-LF10	16	5-1493-2	5-1493-2
H-LF9	16	5-1493-2	5-1493-2
H-LFB	16	5-1493-2	5-1493-2
DFH-LF7	16	5-1493-2	5-1493-2

WIRE NO.	TERMINALS	WIRE NO.	TERMINALS
H-LF9	16	5-1493-2	5-1493-2
H-LF8	16	5-1493-2	5-1493-2
H-LF11	16	5-1493-2	5-1493-2
H-LF10	16	5-1493-2	5-1493-2
H-LF9	16	5-1493-2	5-1493-2
H-LFB	16	5-1493-2	5-1493-2
DFH-LF7	16	5-1493-2	5-1493-2

WIRE NO.	TERMINALS	WIRE NO.	TERMINALS
H-LF9	16	5-1493-2	5-1493-2
H-LF8	16	5-1493-2	5-1493-2
H-LF11	16	5-1493-2	5-1493-2
H-LF10	16	5-1493-2	5-1493-2
H-LF9	16	5-1493-2	5-1493-2
H-LFB	16	5-1493-2	5-1493-2
DFH-LF7	16	5-1493-2	5-1493-2

WIRING DIAGRAM - FLASHING BEACON LIGHT

1270625

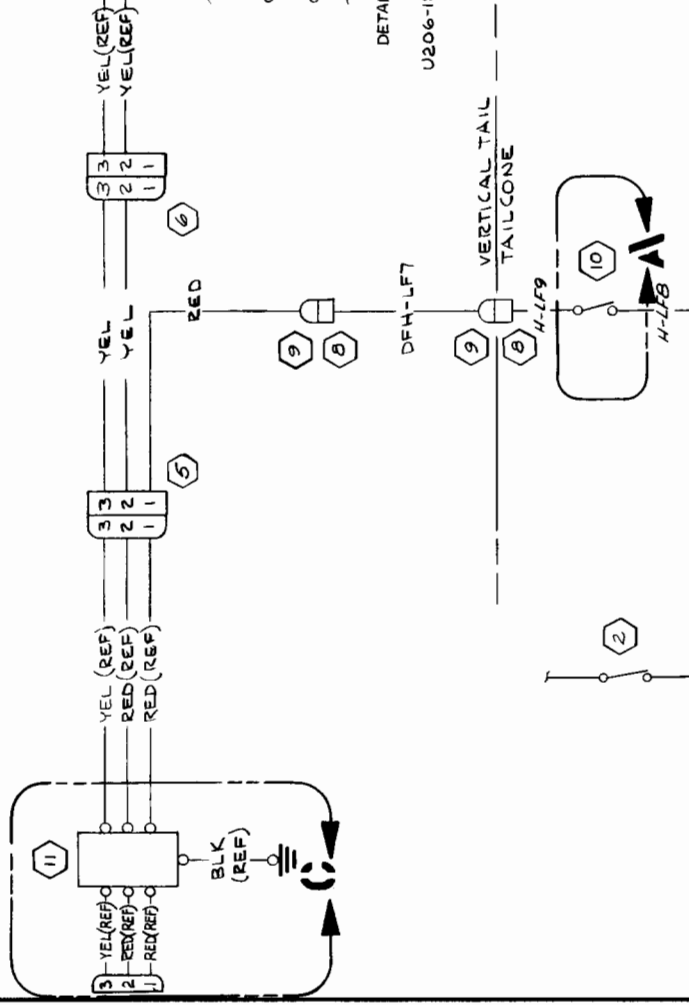
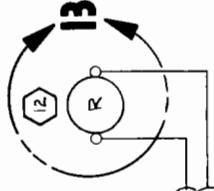
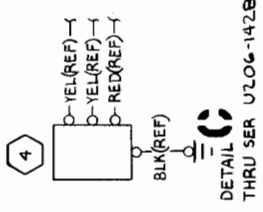
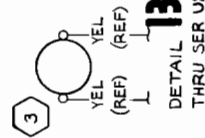
1270625 11.5

1270625 11.5

1270625 11.5

(SER U206-0155 FON)

- NOTES:
1. 8714316-2 / SCHEDULE 1 5-14-74-2 / 40481416-2 PLUG
 2. 8714316-2 / SCHEDULE 1 5-14-74-2 / 40481416-2 CAP.
 3. THRU SER U206-1234
 4. EFFECTIVE SER U206-1235 FON



DETAIL
SER U206-0155 THRU
SER U206-1234

DETAIL
U206-1234 THRU U206-1444

CHG LET	REVISION	BY	CHK
DATE		DATE	APRD
A	BY REV: ADDED DETAIL A 1B 45-1-1; DELETE NOTES TO EQUIP TABLE; 5-1638-2 WAS 5-1638-1, C594501-0201 WAS C594501-0101; YEL 1B GA WAS YEL 16 GA; ADD NOTES 1F 4, 5-1491-2, SR'S ED 1F 4, 5-1491-2 (SR 6005)(SR 6006)IX	EGY	GLK
B	BY REV: ADD DETAIL B, DETAIL C 5-1845-1-2, C594501-0203 621001-0103 ED 1F 4, 5-1491-2 (SR 6264) ED 1F 4, 5-1491-2 (SR 6005)(SR 6006)IX; (SR 5307)	PGP	PGS
C	BY REV: RED (REF) WAS YEL (REF) / PIN 2 ON C594501-0203 ED 1F 4, 5-1491-2 (SR 6005)(SR 6006)IX;	ELY	ELY

A

WIRE CODE NO.	G.A.	MATERIAL	LG	TERMINALS	SERIALS
H-LF 9	16				
H-LF 9	16				
YEL 1B	18-4				
YEL 1B	18-4				
RED 16	16-2				
H-LF 9	16				
H-LF 9	16				
DFH-LF 7	16				

WIRE TABLE

NAME	DATE	TITLE
UNHARRIS	3-1-67	WIRING DIAGRAM - FLASHING BEACON LIGHT (FLOATPLANE)
GROUP	11-22-67	
CHECK	11-25-67	
PROJ	11-25-67	

CESSNA AIRCRAFT CO., COMMERCIAL AIRCRAFT DIVISION, WICHITA, KANSAS

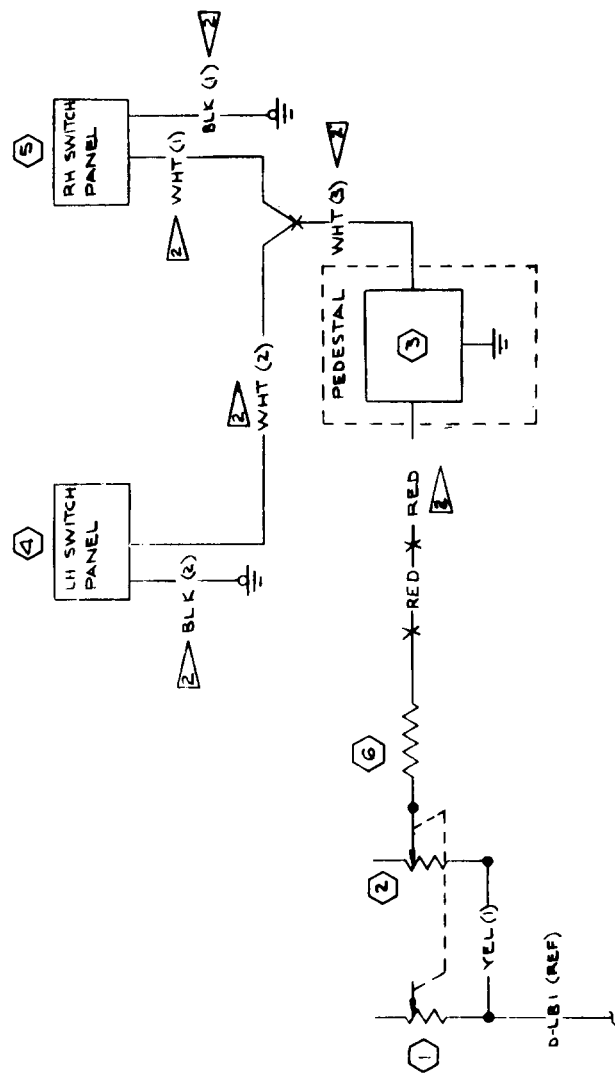
DRW NO: 1270625

REV: C PAGE: 11.5.2

PART NO.	DESCRIPTION	INSTALLED ON
12	C621001-0103 LIGHT ASSY	
11	C594501-0203 FLASHER ASSY	
10	5-1845-1-2 SWITCH	
9	5-1637-2 HOUSING - PLUG	
8	5-1637-1 HOUSING - CAP	
7	3-1845-1-1 SWITCH	
6	5-1638-1 HOUSING PLUG	
5	5-1638-2 HOUSING CAP	
4	C594501-0201 FLASHER UNIT	
3	C621001-0101 LIGHT ASSY	
2	5-1158-2-1 SWITCH	
1	5-1360-10 CIRCUIT BREAKER	

EQUIPMENT TABLE

REV	DESCRIPTION	DATE	APPD



NOTES:
 TO BE RETAINED IN TERMINAL WIRE
 MUST BE STRIPPED, DOUBLED & TWISTED
 THESE WIRES ARE VENDOR FURNISHED.

QTY	DESCRIPTION	SIZE	DATE	DATE
2	WHT (2) 22	-22-9	7-15-68	7-15-68
2	WHT (1) 22	-22-9	7-15-68	7-15-68
2	BLK (2) 22	-22-0	7-11-68	7-11-68
2	BLK (1) 22	-22-0	7-11-68	7-11-68
2	WHT (3) 22	-22-9	7-12-68	7-12-68
1	RED 18	-18-4	7-15-68	7-15-68
1	YEL (1) 18	-18-4	7-15-68	7-15-68

QTY	DESCRIPTION	SIZE	DATE	DATE
6	VAL-3	6.0 RESISTOR (94310)	7-15-68	7-15-68
4	213192-1	PANEL	7-15-68	7-15-68
3	C613001-020	INVERTA PAK	7-15-68	7-15-68
2	S-1880-1	RHEOSTAT	7-15-68	7-15-68
1	S-1880-4	RHEOSTAT	7-15-68	7-15-68

QTY	DESCRIPTION	SIZE	DATE	DATE
1	WHT (1) 18	-18-4	7-15-68	7-15-68
1	YEL (1) 18	-18-4	7-15-68	7-15-68

CONTRACT NO.	94310
DESIGN GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

DESIGN	7-15-68
GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

CONTRACT NO.	94310
DESIGN GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

CONTRACT NO.	94310
DESIGN GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

CONTRACT NO.	94310
DESIGN GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

CONTRACT NO.	94310
DESIGN GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

CONTRACT NO.	94310
DESIGN GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

CONTRACT NO.	94310
DESIGN GROUP	7-15-68
DRAWN	7-11-68
CHECK	7-12-68
STRESS	7-15-68
PROJECT	7-15-68
APPD	7-15-68

LET	REVISION	DESCRIPTION	DATE	APPRO
A	BY REV: S-1847-2-1 WAS S-1847-1-1	EDARR 10084 (SR5401) (SR5402) II	JWH 10/17/68	JWH 10/25 11/14 11/14
B	BY REV: ADD HFV-LB87 (REF) WIRE;	DELETE S-1894-1, S-1802-1, 1813/2 LW1; ADD 1270479-2, EDARR'S 10176 & 10162 (SR5401) (SR5402) II	EGY 10/17/68	JWH 10/25 11/14 11/14

NOTES:

- 1 TYPICAL 17 PLACES
- 2 STANDARD EQUIPMENT
- 3 WHEN POST LIGHTS ARE INSTALLED LB3 & LB87 ARE CONNECTED TO CONSOLE SIDE OF S-1847-2-1 INSTEAD OF S-1880-4 RHEOSTAT
- 4 TYPICAL 16 PLACES

QTY	DESCRIPTION	WIRE	TERMINALS	SERIALS
12	VAL-3			
11	S-1880-6			
10	FRL-5-2			
9	1270479-2			
8	S-1847-2-1			
7	6669502-0202			
6	S-1899-1			
5	S-1899-1			
4	S-1899-2			
3	S-1880-4			
2	S-1880-4			
1	S-1360-10			

DESIGN	NAME	DATE
G WOOD	G WOOD	8-28-68
GROUP	YOUNGERS	8-21-68
DRAWN	YOUNGERS	8-18-68
CHECK	G. JARVIN	8-15-68
STRESS	ANNA	8-21-68
PROJECT	SWANEY	8-21-68
APPRO	SWANEY	8-21-68

CONTRACT NO. _____

COMMERCIAL AIRCRAFT DIV.
WICHITA, KANSAS

CESNA AIRCRAFT CO.

TITLE: WIRING DIAGRAM -
POST LIGHTING (OPT)

SCALE: NONE U206 & P106 PAGE 11-10-1

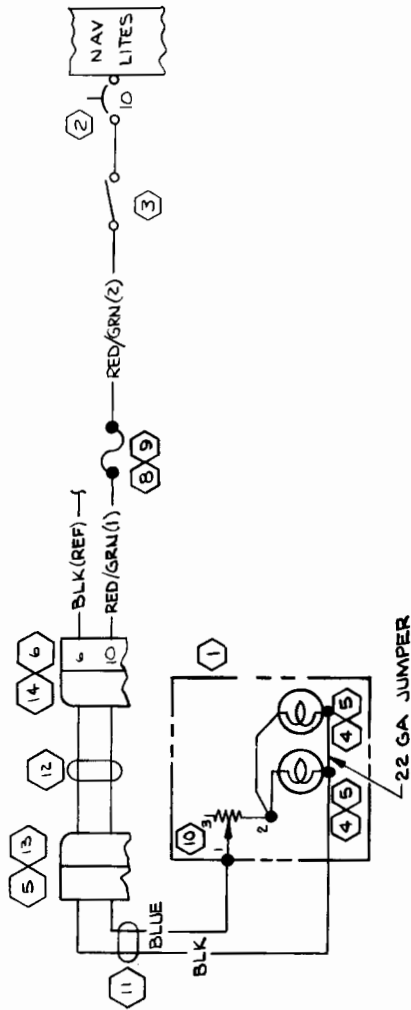
SIZE: C 71379 1270625

CODE IDENT: C 71379

DWG NO. 1270625

EDARR 03436 SER 2606-0520 F01N SEP 11 1968

FORM NO 80 318A



NOTES:
 1- PART OF SF-1030-BX (082-61) CABLE
 2- 60215-4LP TERMINAL (00TT9)

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: SER OUT S-1845-1-2; ADD DETAIL A, S-1360-10L WAS S-1360-10; SER IN RED/GRN(3) SER(SR 7403) A ON	1-4-72	LKW	WLB WLB
B	BY REV: REMOVE DETAIL A, RED/GRN (3), 34002-55 & S-2160-1; INACT. DWG SER 20601701	RAM 9-21-73		WLB WLB

WIRE	GA	MATERIAL	LG	SERIALS
BLK	22	SOLDER		
RED/GRN(3)	22	SOLDER		
RED/GRN(1)	22	SOLDER		
BLUE	22	SOLDER		

CONTRACT NO.	NAME	DATE	TITLE
	WLB	7-2-70	WIRING DIAGRAM - MAP LIGHT, CONTROL WHEEL (12 VOLT)
	WLB	7-2-70	
	WLB	6-30-70	
	WLB	7-1-70	

ITEM NO.	DESCRIPTION	QTY	UNIT
14	120062-1		CTK BOARD
13	120061-1		CTK BOARD
12	120060-1		CABLE ASSY
11	SF-1030-BX	082-61	CABLE
10	K-350	105B2	POT
9	HHJ-A	71400	FUSE HOLDER
8	AGC-1/2	71400	FUSE
7	255 10 70 190	71785	CONNECTOR
6	SR2304-9	00TT9	SOCKET
5	S-1902-1		SOCKET
4	S-1694-1		LAMP
3	S-1845-1-2		SWITCH
2	S-1360-10L		CKT BKR
1	1270686-1		MAPLIGHT ASSY

DESIGN	DATE	GROUP	CHECK	STRESS	PROJ	APPD	OTHER
WLB	7-2-70	WLB	WLB	WLB	WLB	WLB	WLB
WLB	7-2-70	WLB	WLB	WLB	WLB	WLB	WLB
WLB	6-30-70	WLB	WLB	WLB	WLB	WLB	WLB
WLB	7-1-70	WLB	WLB	WLB	WLB	WLB	WLB

WIRE TABLE	CONTRACT NO.	NAME	DATE	TITLE
		WLB	7-2-70	WIRING DIAGRAM - MAP LIGHT, CONTROL WHEEL (12 VOLT)

COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS

WIRING DIAGRAM -
 MAP LIGHT, CONTROL WHEEL
 (12 VOLT)

CODE IDENT. DWG NO
 C 71379 1270625

SCALE: NONE 206 PAGE: 11.11.2

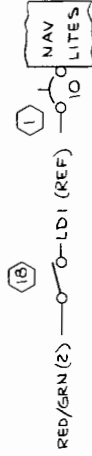
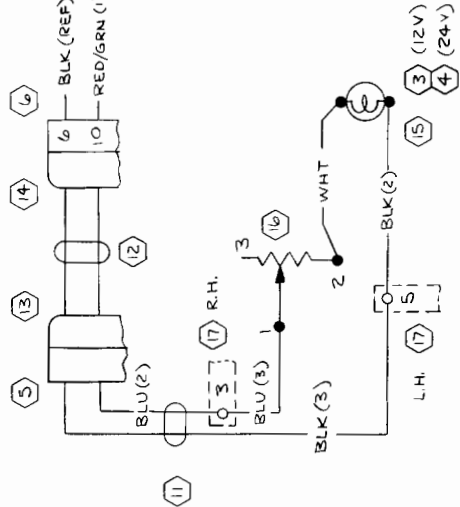
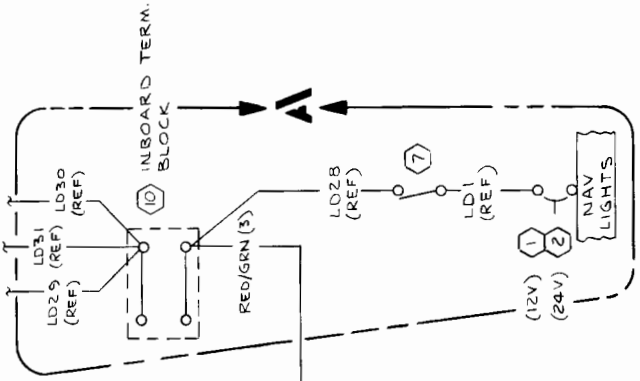
EDPR 10907 (SR6565)

SUPERSEDES: 1270625 PAGE 11.11.1
 SUPERSEDED BY: 11.11.3

FORM NO. 60-215B

REV	DESCRIPTION	DATE	APPD

INACTIVE:
 EFF THRU SER 020602199
 (020602199) (020602199)



DETAIL A
 (EFF THRU SER U20602199)

REV	DESCRIPTION	DATE	APPD

WIRE TABLE

REV	DESCRIPTION	DATE	APPD

CONTRACT NO.	NAME	DATE

DESIGN	GROUP	DATE

STRESS	PROJ	DATE

DESIGN	GROUP	DATE

STRESS	PROJ	DATE

DESIGN	GROUP	DATE

STRESS	PROJ	DATE

- NOTES:
 1. 6021S-4LP (00779) TERMINAL
 2. 329636 (00779) TERMINAL

COMMERCIAL AIRCRAFT DIV.
 CESSNA AIRCRAFT CO.
 WICHITA, KANSAS

WIRING DIAGRAM —
 MAP LIGHT, CONTROL WHEEL

SIZE	CODE IDENT.	DWG NO
C	71379	1270625

SCALE	NONE
U20601701	PAGE: 11.11.3

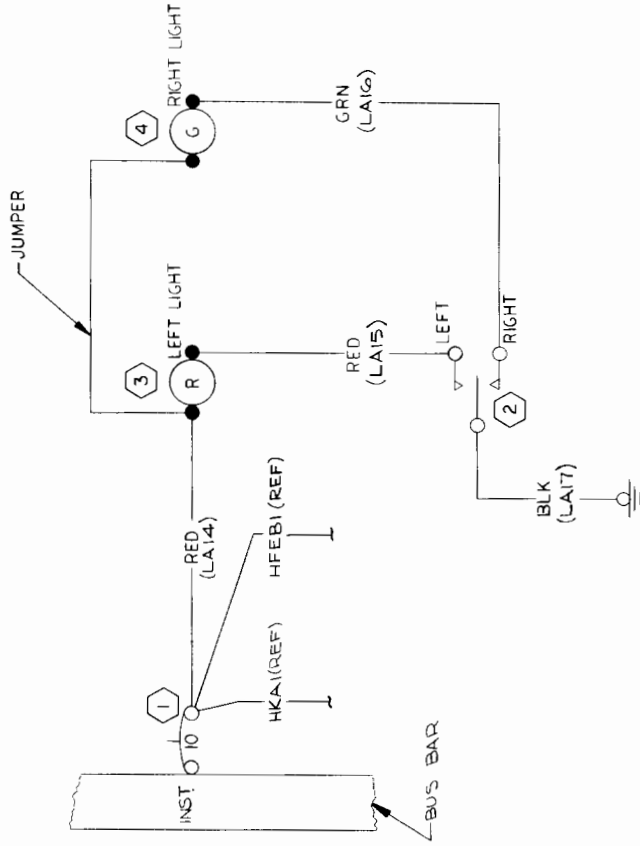
EQUIPMENT TABLE

PART NO.	DESCRIPTION

DESCRIPTION	REVISION

REVISION	DESCRIPTION

REVISIONS		
LTR	DESCRIPTION	DATE
A	BY REV: INST WAS CABIN LTS; ADD (OPT) TO TITLE BLOCK, HFEBI(REF) & HKAI(REF); DELETE HLAI(REF) ED & RR 02372	SEM 6-17-68
B	BY REV: S-1460-18-2 LAMS S-1460-20-2 ED & RR 10290	A.S. 12-6-68
C	BY REV: ADD CES1100 CODE TO WIRES NOW SHOP PRAC	GKG 6-25-73



REF	GA	MATERIAL	LG	TERMINALS	SERIALS
18	5-1460-18-2	5-13671-6	SOLDER		
19	5-1460-18-2	5-13671-4	SOLDER		
20	5-1460-20-5	5-13671-4	SOLDER		
18	5-1460-18-0	5-13671-6	S-13671-8		

CONTRACT NO. _____

COMMERCIAL AIRCRAFT DIV.
WICHITA, KANSAS

Cessna AIRCRAFT CO.

TITLE: **WIRING DIAGRAM - SKYDIVING SIGNAL LIGHT (OPT)**

DESIGN: _____ DATE: 7-8-67

GROUP: N 7146

DRAWN: SWANEY 6-22-67

CHECK: WAKSHAW 6-23-67

STRESS: _____ 7-5-67

PROJECT: 1116

APPR: 1116

SIZE: 11x17

CODE IDENT: DWG NO. **C 71379**

SCALE: NONE

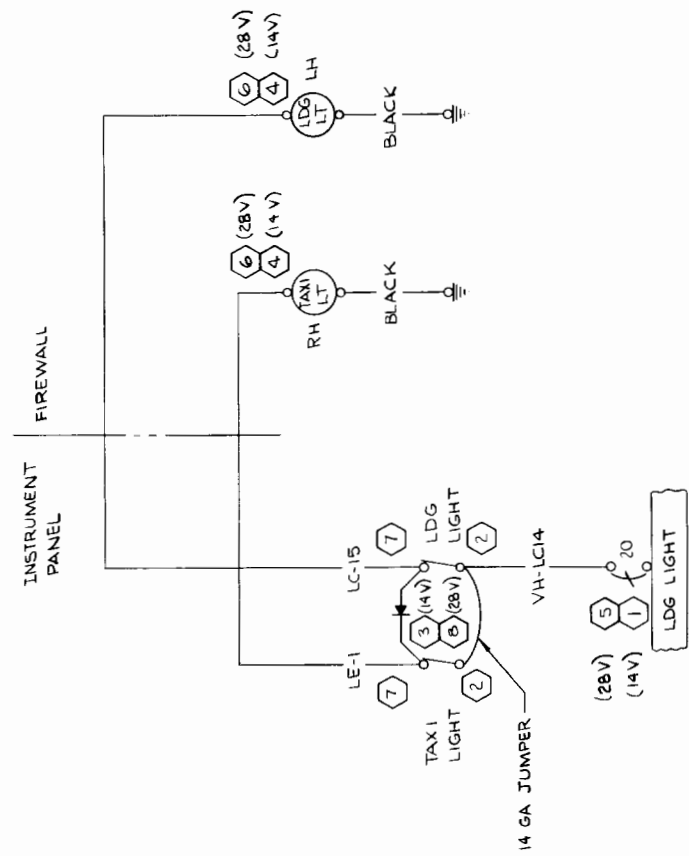
SER: U206-081540N

PAGE: 1112

PART NO.	DESCRIPTION
4 VM304-7	LIGHT ASSY (87034)
3 VM304-6	LIGHT ASSY (87034)
2 S-1238-1-1	SWITCH
1 S-1360-10	CKT BXR

EQUIPMENT TABLE

REVISION		DATE	APPD
LET	DESCRIPTION		



WIRE CODE NO.	MATERIAL	LG	TERMINALS	SERIALS
BLACK 14	- 14-O		S-1367-2-B	
LE-1 14			S-1493-2	S-1367-2-B
LC-15 14			S-1493-2	S-1367-2-B
LC-14 14			S-1367-2-B	S-1493-2

WIRE TABLE

CONTRACT NO.	NAME	DATE	TITLE
	WHITE	1-3-73	COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS
	GROUP	1-17-73	
	DRAWN	1-12-73	
	CHECK	1-15-73	

CESSNA AIRCRAFT CO.
WIRING DIAGRAM -
LANDING LIGHT & TAXI LIGHT

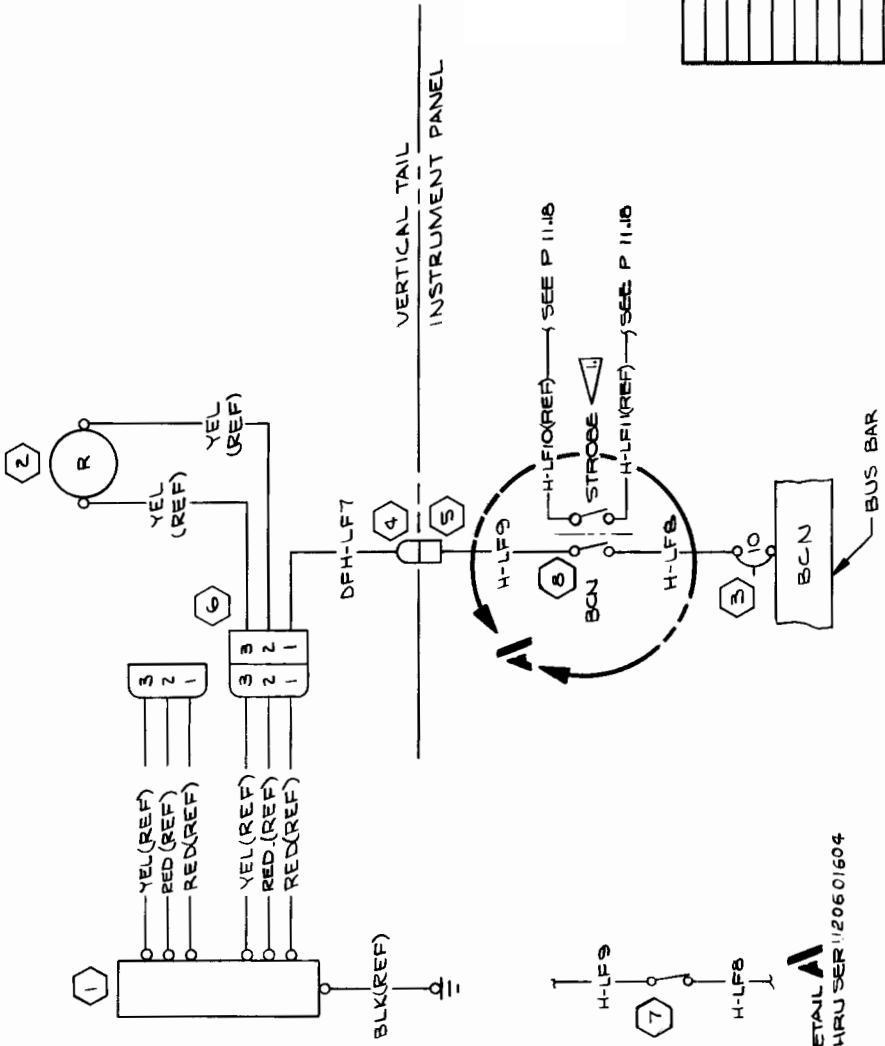
STRESS	PROJ	APPD	OTHER
	3-Younger		

SIZE	CODE IDENT.	DWG NO.
C	71379	1270625

SCALE:	NONE

SER P20600604 4 ON
SER U20601445 5 ON

LET	DESCRIPTION	DATE	APPD
A	BY REV: ADD S-1846-2-3, DETAIL A, SER 4 NOTE 1, EDARR 10827 (SR6355)(SR6356)(SR6355)*	DLP 12/23/68	JULY 68 DLS HZU
B	BY REV: (SR6600) WAS (SR6355)* (SR6600)	ZLY 5-14-70	RD HZU DLS HZU
C	BY REV: RED (REF) WAS YEL (REF) / PIN 2 ON CS94501-0203 EDARR 10048	ZLY 6-8-70	LW HZU P B



DETAIL A
THRU SER 120601604

NOTES:
INSTALL 1270693-2 CLIP ON STROBE SIDE OF S-1846-2-3 SWITCH WHEN STROBE LIGHTS ARE NOT INSTL

ITEM NO.	PART NO.	DESCRIPTION
5	S-1846-2-3	SWITCH
7	S-1845-1-2	SWITCH
6	S-1638-1	HOUSING-PLUG
5	S-1637-2	HOUSING-PLUG
4	S-1637-1	HOUSING-CAP
3	S-1360-10	CIRCUIT BKR
2	CS21001-01	LIGHT ASSY
1	CS94501-003	FLASHER ASSY

EQUIPMENT TABLE	
CES-1000 IS APPLICABLE	SUPERSEDES: P 11.5-1
VENDOR CODES PER S-1400	
CES-XXXX-CESNA SPEC. NO.	
S-XXX OR CMXXXX-CESNA	
STD. NO.	SUPERSEDED BY: P 11.14.2

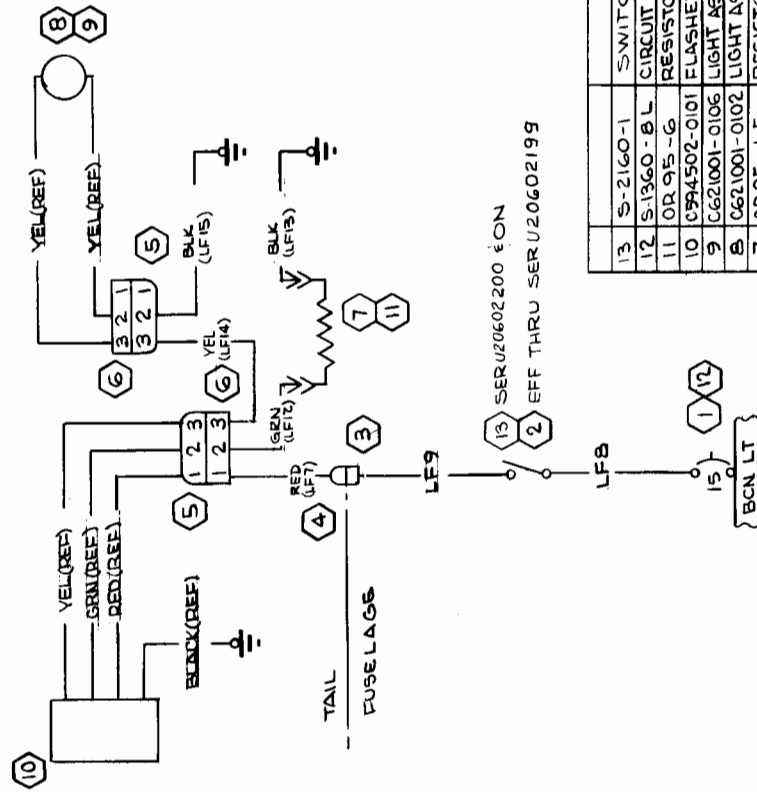
WIRE TABLE

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-LF9	16			S-1493-2 S-1636-2	
H-LF8	16			S-1493-2 S-1636-2	
DFH-LF7	16			S-1636-2 S-1635-2	

CONTRACT NO. _____
 TITLE: **WIRING DIAGRAM -- FLASHING BEACON LIGHT**
 DESIGN: HENSHAW 8-7-69
 GROUP: R. W. WAD 8-7-69
 DRAWN: D.L. BURKE 8-7-69
 CHECK: R. YOUNGERS 8-5-69
 STRESS: H. D. 8-7-69
 PROJ: 1270625
 APPD: [Signature] 8-6-69
 OTHER: _____
 SIZE: C
 CODE IDENT: 71379
 DWG NO: 1270625
 SCALE: NONE
 U206 & P206
 PAGE: 11.14

EDARR 10845 SER P20600604 ON SER U20601445 4 ON

LET	DESCRIPTION	DATE	APPD
A	BY REV: ADD S-2160-1, RED, GRN, YEL BLK & SER; SER OUT S-1845-12, LF7, LF12, LF13, LF14 & LF15; ADD NOTE 1 C621001-0106 WAS C621001-0107 (SR1403) (SR1473)	1-10-73	WJW MAG JKB
B	BY REV: S-1360-15L WAS S-1360-10L (12V); S-1360-8L WAS S-1360-5L (24V) (SR2060)	5-13-75	BH JCM



NOTES:
1. COLORED WIRES BEARING CES1100 CODING IN PARENTHESIS SHALL NOT BE STAMPED. CES1100 CODING ON THESE WIRES IS FOR PARTS LIST USE ONLY.

LG	TERMINALS	MATERIAL	LG	TERMINALS
1	S-1635-2	S-1637-2-8	1	SER U20602209 EON
2	S-1493-2	S-1567-2-8	2	SER U20602209 EON
3	S-1636-2	S-1635-2	3	SER U20602209 EON
4	S-1636-2	S-1493-2	4	SER U20602209 EON
5	S-1636-2	S-1635-2	5	SER U20602209 EON
6	S-1636-2	S-1635-2	6	SER U20602209 EON
7	S-1636-2	S-1635-2	7	SER U20602209 EON
8	S-1636-2	S-1635-2	8	SER U20602209 EON
9	S-1636-2	S-1635-2	9	SER U20602209 EON
10	S-1636-2	S-1635-2	10	SER U20602209 EON
11	S-1636-2	S-1635-2	11	SER U20602209 EON
12	S-1636-2	S-1635-2	12	SER U20602209 EON
13	S-1636-2	S-1635-2	13	SER U20602209 EON

CONTRACT NO.	NAME	DATE	DESIGN	GROUP	DRAWN	CHECK	STRESS	PROJ	APPD	OTHER
	COOK	6-16-72	622-72	622-72	COOK	COOK	WHITE	6-24-72	WJW	

CONTRACT NO.	NAME	DATE	DESIGN	GROUP	DRAWN	CHECK	STRESS	PROJ	APPD	OTHER
	COOK	6-16-72	622-72	622-72	COOK	COOK	WHITE	6-24-72	WJW	

CONTRACT NO.	NAME	DATE	DESIGN	GROUP	DRAWN	CHECK	STRESS	PROJ	APPD	OTHER
	COOK	6-16-72	622-72	622-72	COOK	COOK	WHITE	6-24-72	WJW	

WIRE TABLE
COMMERCIAL AIRCRAFT DIV.
5800 E. PAVNSEE
WICHITA, KANSAS

WIRING DIAGRAM
LIGHT-FLASHING BEACON

CODE IDENT: DWG NO
C 71379 - 1270625

SCALE: NONE 20G PAGE: 11.14.2

LET	DESCRIPTION	DATE	APPD
A	BY REV: ADD BLK(4), LB38, LB39, S-1695-2 & 1213319-4 REF (SR 7061)	10-25-72 LKW	NEW MEZ

NOTES:
 1 SER P20600603 & ON SER U20601445 & ON
 OXYGEN CONSOLE WIRING APPLICABLE ONLY WHEN OPTIONAL OXYGEN SYSTEM IS INSTALLED
 2 INSTALL S-391-1 TERMINAL ON VENDOR SUPPLIED WIRE
 3 STANDARD LENSES FOR EYEBROW LIGHTS ARE RED & CESSNA WHITE IS OPTIONAL

LET	DESCRIPTION	DATE	APPD
A	BY REV: ADD BLK(4), LB38, LB39, S-1695-2 & 1213319-4 REF (SR 7061)	10-25-72 LKW	NEW MEZ

NOTES:
 1 SER P20600603 & ON SER U20601445 & ON
 OXYGEN CONSOLE WIRING APPLICABLE ONLY WHEN OPTIONAL OXYGEN SYSTEM IS INSTALLED
 2 INSTALL S-391-1 TERMINAL ON VENDOR SUPPLIED WIRE
 3 STANDARD LENSES FOR EYEBROW LIGHTS ARE RED & CESSNA WHITE IS OPTIONAL

LB 39	18	SOLDER	SOLDER
LB 38	18	S-1829-1	SOLDER
BLK(4)	18	SOLDER	S-1341-1-8
RED/VEL	22	-22-2-4	SOLDER
RED/BLU	18	-18-2-6	SOLDER
BLK(3)	18	-18-0	SOLDER
BLK(2)	18	-18-0	SOLDER
OLK(1)	22	-22-0	SOLDER
APP/288	18	S-1370-2	S-1367-1-2
APP/283	20	SOLDER	S-1367-1-8
MF-189	18	S-391-2	S-1367-1-8
LB 32	18	S-1829-1	S-391-1
LB 31	18	SOLDER	S-1367-1-8
LB 30	18	S-1829-1	SOLDER
LB 29	18	S-1829-1	S-1370-1
LB 28	18	S-1829-1	S-391-1
LB 27	18	S-1829-1	SOLDER
LB 26	18	S-1829-1	S-1370-1
LB 25	18	S-1829-1	S-391-1

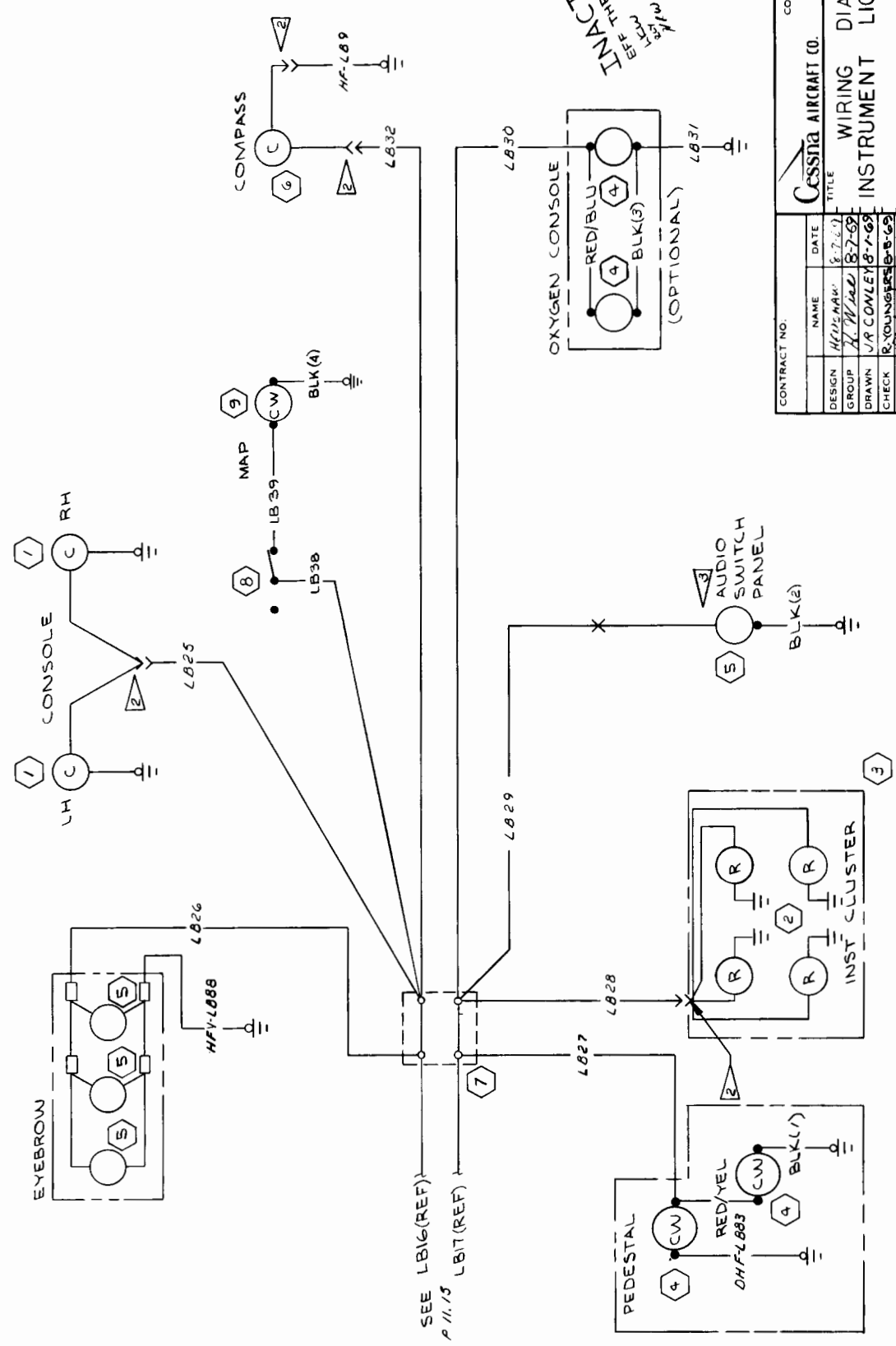
WIRE	MATERIAL	LG	TERMINALS	SERIALS
9	1213319-4	LIGHT ASSY		
8	S-1695-2	SWITCH		
7	39002-55	TERMINAL BOARD (ETWC)		
6	C660507-0101	COMPASS ASSY		
5	S-1899-1	LIGHT ASSY		
4	C660502-0202	LIGHT ASSY		
3	1270479-1	LIGHT ASSY		
2	1210012	CONSOLE ASSY		

CONTRACT NO:	COMMERCIAL AIRCRAFT DIV. 8800 E. PAWNEE WICHITA, KANSAS
DESIGN	HEW SHAW 8-7-69
GROUP	M/L/L 8-7-69
DRAWN	R CONLEY 8-7-69
CHECK	E. YOUNGERS 8-5-69
STRESS	W. ROSS 8-7-69
PROJ	W. ROSS 8-7-69
APPD	M. J. HANNEY 8-6-69
OTHER	

CONTRACT NO:	COMMERCIAL AIRCRAFT DIV. 8800 E. PAWNEE WICHITA, KANSAS
TITLE	WIRING DIAGRAM - INSTRUMENTS LIGHTS
SIZE	C
CODE IDENT.	1270625
SCALE	NONE
DWG NO	U206 P206
PAGE	11.16.0

REVISIONS		
LTR	DESCRIPTION	DATE
A	REFER TO PAGE 11.16.0 FOR REVISION	

SER P20600603 5 ON
SER U20601445 6 ON



INACTIVE
 (MAY BE USED FOR SERVICE)

CONTRACT NO.		COMMERCIAL AIRCRAFT DIV. SROO E. PAWNEE WICHITA, KANSAS	
NAME	DATE	TITLE	
H. W. M.	8-7-68	WIRING DIAGRAM - INSTRUMENT LIGHTS	
DESIGN	8-7-68	SIZE	CODE IDENT.
GROUP	J. R. CONLEY	C	71379
DRAWN	8-7-68	SCALE	NONE
CHECK	R. YOUNG	DWG NO.	1270625
STRESS	8-7-68	APP'D	
PROJECT	8-7-68	SUPERSEDES	
APP'D	8-6-68		
SUPERSEDES	11.16.4		
SUPERSEDED BY: P 11.16.4		U206	P206
		11.16.1	

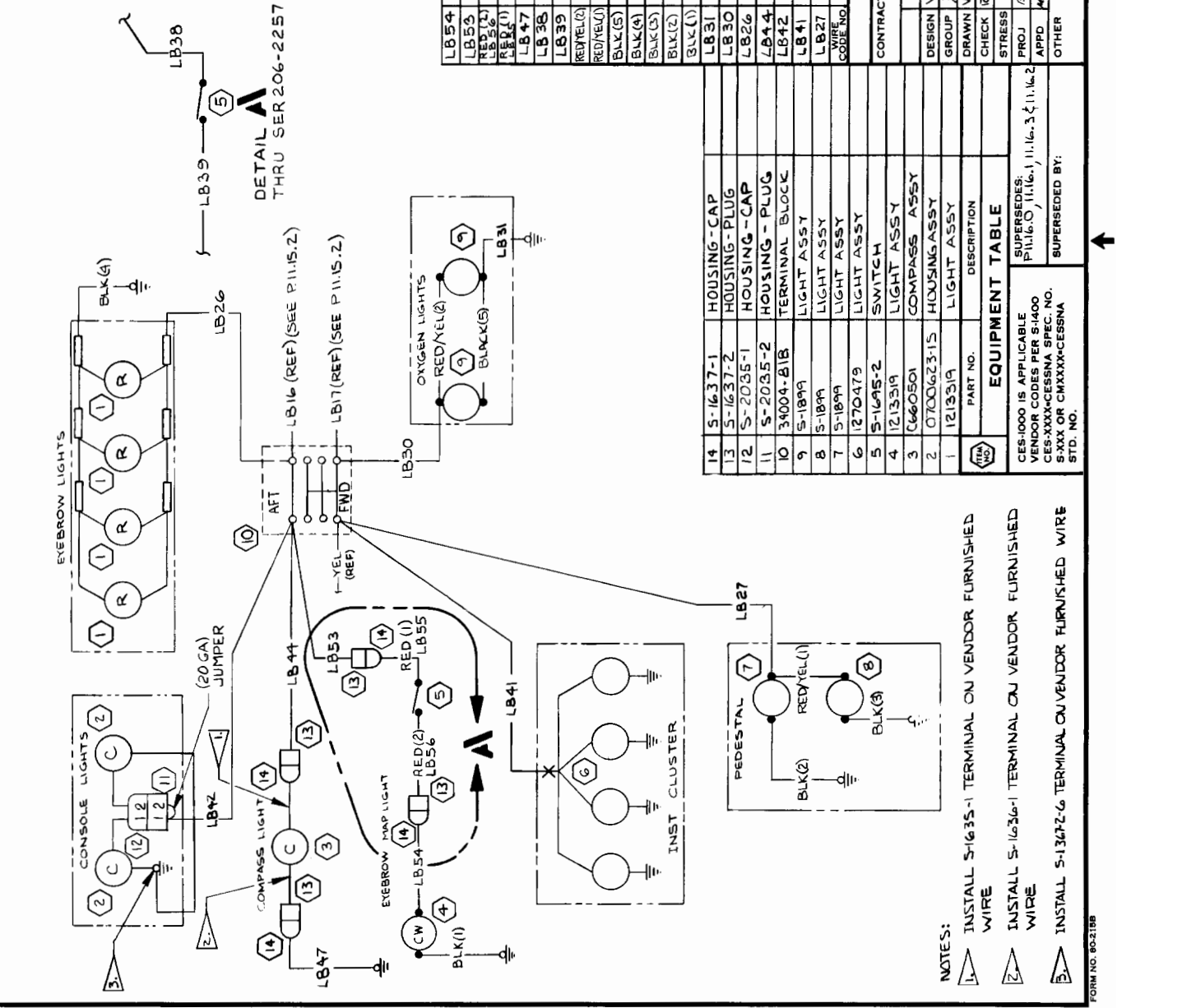
LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD DETAIL A; SER OUT LB38 & LB39; SER IN LB53, LB54 RED(1) & RED(2); S-2035-1 & S-2035-2 WAS S-1637-1 & S-1637-2 MEREDDIT & MER E0039 (SER 206-2258) (SER 7903)(REF)	2-8-74	WKB	
B	BY REV: S-1637-1 WAS S-2035-1/LB47, RED(1), LB54; S-1637-2 WAS S-2035-2/LB44, LB53, LB56 S-1637-2-G WAS S-1637-2-G/NOTE 3; DELETE DETAIL "B". (MER 206-E0038)	5-9-74	WKB	
C	BY REV: 34003-55-3410 WAS 34002-55 (SR7910)	3-6-75	WKB	
D	BY REV: 34004-81B WAS 34003-55-3410 (SR7910)	8-4-75	WKB	

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD DETAIL A; SER OUT LB38 & LB39; SER IN LB53, LB54 RED(1) & RED(2); S-2035-1 & S-2035-2 WAS S-1637-1 & S-1637-2 MEREDDIT & MER E0039 (SER 206-2258) (SER 7903)(REF)	2-8-74	WKB	
B	BY REV: S-1637-1 WAS S-2035-1/LB47, RED(1), LB54; S-1637-2 WAS S-2035-2/LB44, LB53, LB56 S-1637-2-G WAS S-1637-2-G/NOTE 3; DELETE DETAIL "B". (MER 206-E0038)	5-9-74	WKB	
C	BY REV: 34003-55-3410 WAS 34002-55 (SR7910)	3-6-75	WKB	
D	BY REV: 34004-81B WAS 34003-55-3410 (SR7910)	8-4-75	WKB	

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD DETAIL A; SER OUT LB38 & LB39; SER IN LB53, LB54 RED(1) & RED(2); S-2035-1 & S-2035-2 WAS S-1637-1 & S-1637-2 MEREDDIT & MER E0039 (SER 206-2258) (SER 7903)(REF)	2-8-74	WKB	
B	BY REV: S-1637-1 WAS S-2035-1/LB47, RED(1), LB54; S-1637-2 WAS S-2035-2/LB44, LB53, LB56 S-1637-2-G WAS S-1637-2-G/NOTE 3; DELETE DETAIL "B". (MER 206-E0038)	5-9-74	WKB	
C	BY REV: 34003-55-3410 WAS 34002-55 (SR7910)	3-6-75	WKB	
D	BY REV: 34004-81B WAS 34003-55-3410 (SR7910)	8-4-75	WKB	

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD DETAIL A; SER OUT LB38 & LB39; SER IN LB53, LB54 RED(1) & RED(2); S-2035-1 & S-2035-2 WAS S-1637-1 & S-1637-2 MEREDDIT & MER E0039 (SER 206-2258) (SER 7903)(REF)	2-8-74	WKB	
B	BY REV: S-1637-1 WAS S-2035-1/LB47, RED(1), LB54; S-1637-2 WAS S-2035-2/LB44, LB53, LB56 S-1637-2-G WAS S-1637-2-G/NOTE 3; DELETE DETAIL "B". (MER 206-E0038)	5-9-74	WKB	
C	BY REV: 34003-55-3410 WAS 34002-55 (SR7910)	3-6-75	WKB	
D	BY REV: 34004-81B WAS 34003-55-3410 (SR7910)	8-4-75	WKB	

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD DETAIL A; SER OUT LB38 & LB39; SER IN LB53, LB54 RED(1) & RED(2); S-2035-1 & S-2035-2 WAS S-1637-1 & S-1637-2 MEREDDIT & MER E0039 (SER 206-2258) (SER 7903)(REF)	2-8-74	WKB	
B	BY REV: S-1637-1 WAS S-2035-1/LB47, RED(1), LB54; S-1637-2 WAS S-2035-2/LB44, LB53, LB56 S-1637-2-G WAS S-1637-2-G/NOTE 3; DELETE DETAIL "B". (MER 206-E0038)	5-9-74	WKB	
C	BY REV: 34003-55-3410 WAS 34002-55 (SR7910)	3-6-75	WKB	
D	BY REV: 34004-81B WAS 34003-55-3410 (SR7910)	8-4-75	WKB	



WIRE NO.	DESCRIPTION
14	5-1637-1 HOUSING-CAP
13	5-1637-2 HOUSING-PLUG
12	S-2035-1 HOUSING-CAP
11	S-2035-2 HOUSING-PLUG
10	34004-81B TERMINAL BLOCK
9	S-1899 LIGHT ASSY
8	S-1899 LIGHT ASSY
7	S-1899 LIGHT ASSY
6	1270479 LIGHT ASSY
5	S-1645-2 SWITCH
4	1213319 LIGHT ASSY
3	0660501 COMPASS ASSY
2	0700623-15 HOUSING ASSY
1	1213319 LIGHT ASSY

WIRE NO.	DESCRIPTION
14	5-1637-1 HOUSING-CAP
13	5-1637-2 HOUSING-PLUG
12	S-2035-1 HOUSING-CAP
11	S-2035-2 HOUSING-PLUG
10	34004-81B TERMINAL BLOCK
9	S-1899 LIGHT ASSY
8	S-1899 LIGHT ASSY
7	S-1899 LIGHT ASSY
6	1270479 LIGHT ASSY
5	S-1645-2 SWITCH
4	1213319 LIGHT ASSY
3	0660501 COMPASS ASSY
2	0700623-15 HOUSING ASSY
1	1213319 LIGHT ASSY

- NOTES:
- 1. INSTALL 5-1637-1 TERMINAL ON VENDOR FURNISHED WIRE
 - 2. INSTALL 5-1637-2 TERMINAL ON VENDOR FURNISHED WIRE
 - 3. INSTALL 5-1637-6 TERMINAL ON VENDOR FURNISHED WIRE

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE
	WHITE	1-16-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	4-30-73
	STRESS	
	PROJ	5-2-73
	APPD	
	OTHER	

CONTRACT NO.	NAME	DATE

LET	DESCRIPTION	REVISION	DATE	APPD
A	BY REV: IN NOTE 2 S-1829-1 WAS S-1493-1, S-1493-1 WAS S-1829-1; ADD LB40, S-1695-2 & 1213319-4 REF (SR 7061)		10-24-72 LKW	HW MCE

SER P20600604 & ON
SER U20601445 & ON

NOTES:

1 TYPICAL 16 PLACES

2 WHEN OPTIONAL POST LIGHTS ARE INSTALLED S-1493-1 TERMINAL REPLACES S-1829-1 TERM.

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
22	RED WELLS	SOLDER S-341-2				
22	RED WELLS	SOLDER S-341-2				
22	RED WELLS	SOLDER SOLDER				
22	RED WELLS	SOLDER SOLDER				
22	BLK (9)	SOLDER S-341-2				
22	BLK (3)	SOLDER S-1829-1				
22	BLK (2)	SOLDER S-1829-1				
22	BLK (1)	SOLDER S-1829-1				
20	WHF-L83	SOLDER S-1829-1				
20	WHF-L881	S-341-2				
20	WHF-L880	S-1829-1				
20	LB40	SOLDER				
20	Z837	SOLDER				
20	Z836	S-341-2				
20	Z835	S-341-2				
18	Z834	S-1829-1				
18	Z833	S-1829-1				

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
22	RED WELLS	SOLDER S-341-2				
22	RED WELLS	SOLDER S-341-2				
22	RED WELLS	SOLDER SOLDER				
22	RED WELLS	SOLDER SOLDER				
22	BLK (9)	SOLDER S-341-2				
22	BLK (3)	SOLDER S-1829-1				
22	BLK (2)	SOLDER S-1829-1				
22	BLK (1)	SOLDER S-1829-1				
20	WHF-L83	SOLDER S-1829-1				
20	WHF-L881	S-341-2				
20	WHF-L880	S-1829-1				
20	LB40	SOLDER				
20	Z837	SOLDER				
20	Z836	S-341-2				
20	Z835	S-341-2				
18	Z834	S-1829-1				
18	Z833	S-1829-1				

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

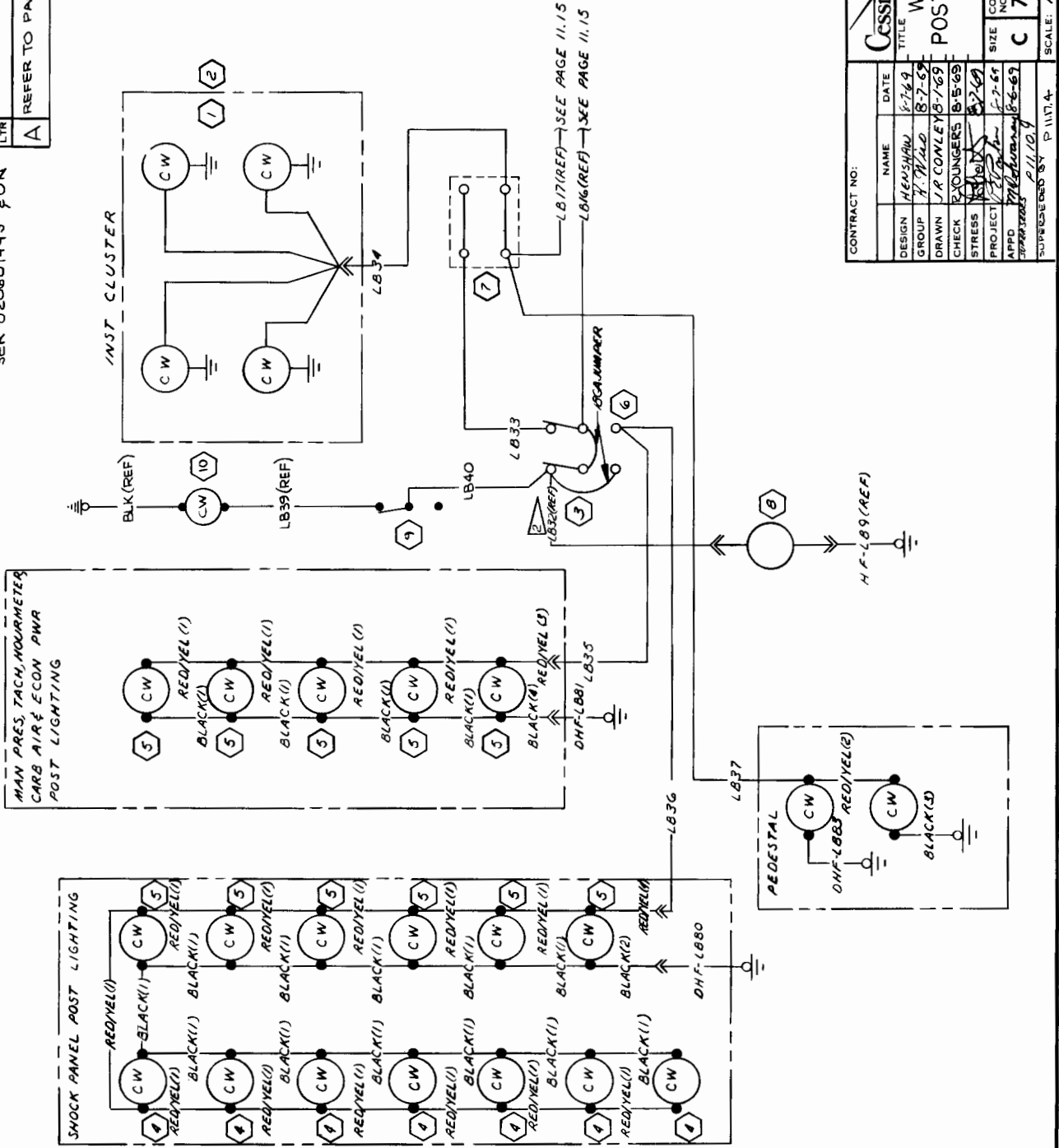
QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					
4	S-1899-1					
3	S-1847-2-2					
2	CGG9502-0202					
1	1270479-2					

QTY	DESCRIPTION	TERMINALS	LG	MATERIAL	GA	WIRE CODE NO.
10	1213319-4					
9	S-1695-2					
8	CGG0301-0101					
6	S-2023-1					
5	S-1899-2					

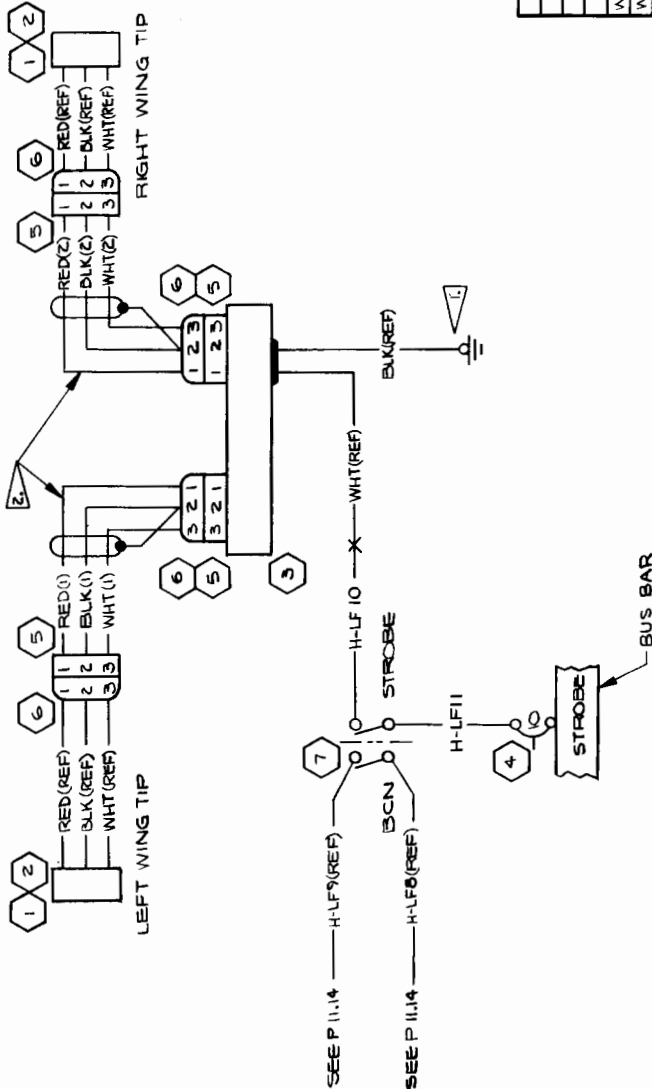
REVISIONS	DATE	APPROVED
DESCRIPTION		
REFER TO PAGE 11.17.0 FOR REVISION		
LTR		
A		

SER P20600604 FOR
SER U20601445 FOR



CONTRACT NO.		COMMERCIAL AIRCRAFT DIV.	
NAME		BISCOE PAVNEE	
DATE		WICHITA, KANSAS	
DESIGN	8-7-69	TITLE	WIRING DIAGRAM -
GROUP	8-7-69		POST LIGHTING (OPT)
DRAWN	J.A. COMLEY	SIZE	C
CHECK	EXCHANGERS	CODE IDENT.	DWG NO.
STRESS	8-5-69		1270625
PROJECT	8-7-69	SCALE	NONE
APPD	8-6-69		EDFAR 10528 (SR 6003) (AR 6006) IX
APPROVED	8-11-69		
P. 11.17.4		PAGE: 11.17.1	

LET	REVISION	DESCRIPTION	DATE	APPD
A		BY REV: C622003-4622004 WAS C22003-422004; SR6600 WAS SR6355 +SR6356 ED#R210991 (SR6600)	RLY 5-14-70	RLY H/W
B		BY REV: 18 GA WAS 20GA/H-LF10/H-LF11 ED#R210087	RLY 6-23-70	RLY H/W
C		BY REV: C622004-0103 WAS C622004-0101 ED#R21049 (NOW SHOP PRACTICE)	RLY 8-21-70	RLY H/W



- NOTES:
- 1 TERMINATE WITH S-1367-1-8 TERMINAL
 - 2 THREE CONDUCTOR CABLE, BELDEN (70303) PART NO. 8770 OR EQUIVALENT

WIRE CODE	NO	Gauge	MATERIAL	LG	TERMINALS	SERIALS
WHT(2)	18	-18-9				
WHT(1)	18	-18-9			S-1635-2	S-1636-2
BLK(2)	18	-18-0				
BLK(1)	18	-18-0				
RED(2)	18	-18-2				
RED(1)	18	-18-2			S-1635-2	S-1636-2
H-LF11	18				S-1367-1-6	S-1493-1
H-LF10	18				S-1570-1	S-1493-1

CONTRACT NO.		TITLE	
DESIGN	D.L. B... 12-21-69	COMMERCIAL AIRCRAFT DIV. 3800 E. PAWNEE WICHITA, KANSAS	
GROUP	H. H... 12-23-69	CESSNA AIRCRAFT CO.	
DRAWN	DAPE 12/23/69	WIRING DIAGRAM -	
CHECK	HARRIS 12/23/69	WING TIP STROBE LIGHTS	
STRESS		(OPT)	
PROJ	12-23-69	CODE IDENT.	DWG NO
APPD	R. YOUNG 12-23-69	NO.	C 71379
OTHER		SCALE:	NONE
		UZO6, P206	1270625
		EDRR 10821	(SR6600)
			PAGE: 11.18

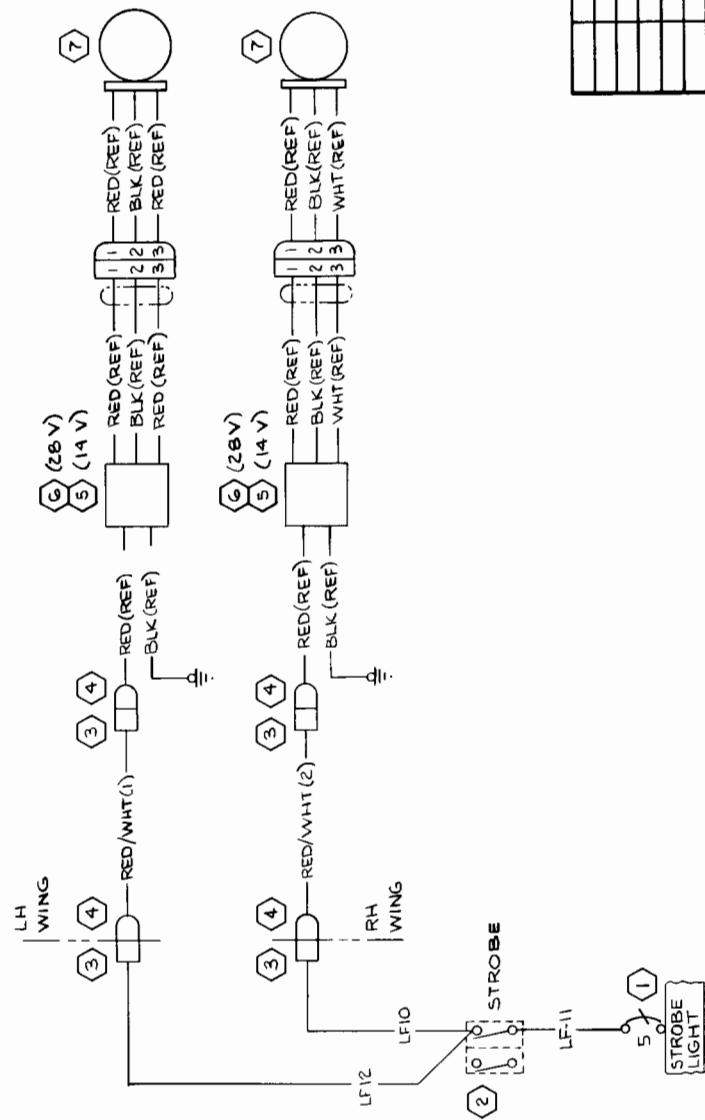
WIRE CODE	NO	Gauge	MATERIAL	LG	TERMINALS	SERIALS
7	S-1846-2-3		SWITCH			
6	S-1635-2		CAP			
5	S-1635-1		PLUG			
4	S-1360-1-0		CKT BKR			
3	C622004-0103		POWER SUPPLY			
2	C622003-0104		LENS			
1	C622003-0101		LIGHT			

EQUIPMENT TABLE

CEX-1000 IS APPLICABLE
VENDOR CODES PER S-1400
CES-XXXX-CESNA SPEC. NO.
S-XXX OR CMXXX-CESNA
STD. NO.

SUPERSEDED BY:
P 11.18.1

REV	DESCRIPTION	DATE	APPD



CONTRACT NO.		NAME		DATE	
C622006-0101		WHITE		1-6-73	
C622007-0101		W.H. WALKER		4-27-73	
S-1637-1		WHITE		4-29-73	
S-1637-2		E. YOUNGERS		4-21-73	

WIRE TABLE	LG	TERMINALS	SERIALS
RED/WHT(2)	18	S-1635-1	S-1636-1 (STD)
RED/WHT(1)	18	S-1635-1	S-1636-1 (STD)
LF12	18	LF12	S-1636-1
LF11	18	S-1637-1	S-1638-1
LF10	18	S-1637-2	S-1639-1

EQUIPMENT TABLE		PART NO.		DESCRIPTION	
7	C622006-0101	LIGHT ASST			
6	C622007-0101	POWER SUPPLY			
5	C622007-0101	POWER SUPPLY			
4	S-1637-1	HOUSING			
3	S-1637-2	HOUSING			
2	S-1846-2-3	SWITCH			
1	S-1360-5L	CKT BKR			

COMMERCIAL AIRCRAFT DIV.
8800 E. PAWNEE
WICHITA, KANSAS

CCESSNA AIRCRAFT CO.

TITLE
**WIRING DIAGRAM --
STROBE LIGHTS, WING TIP**

SIZE	CODE IDENT.	DWG NO
C	71379	1270625

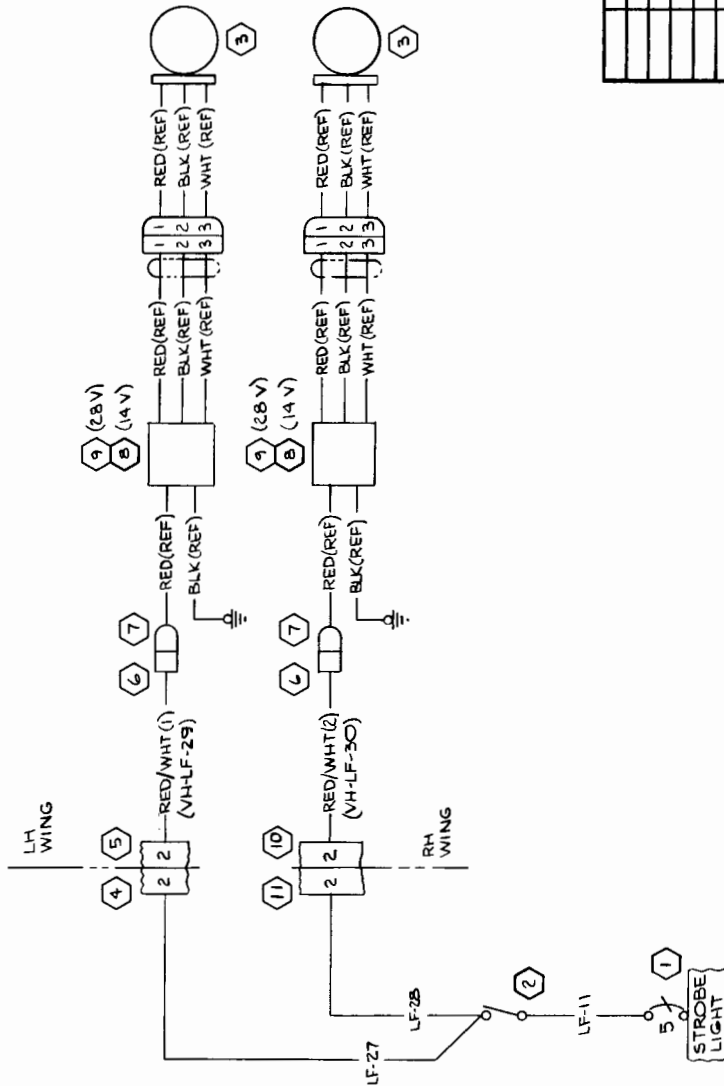
PROJ	APPD	CHKD	DATE

SCALE: NONE

PAGE: 11-18.1

SERU20601875 E ON

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: PIN 2 WAS PIN 4 LH WING: S-1641-4 & S-1640-6 WAS S-1640-9 & S-1641-9 S-1640-12 & S-1641-12 WAS S-1640-9 & S-1640-9; DRAWING BECOMES INACTIVE; (NOW SHOP PRACTICE) MERED 393 (SR 7910)		C J H 11-22-74	APR UB
B	BY REV: REACTIVATE DRAWING (SR 7910)		T M S 1-21-75	APR UB



ITEM NO	PART NO.	DESCRIPTION
11	S-1641-12	HOUSING - SOCKET
10	S-1640-6	HOUSING - PIN
9	C622007-0103	POWER SUPPLY
8	C622007-0101	POWER SUPPLY
7	S-1637-1	HOUSING
6	S-1637-2	HOUSING
5	S-1640-6	HOUSING - PIN
4	S-1641-6	HOUSING - SOCKET
3	C622006-0101	LAMP ASSY
2	S-2160-1	SWITCH
1	S-1360-5L	CKT BKR

EQUIPMENT TABLE	
CS-1000 IS APPLICABLE	SUPERSEDES: P 11.18.1
VENDOR CODES PER S-1600	
CS-XXXX-CESSNA SPEC. NO.	
S-XXX OR CMXXXX-CESSNA	
STD. NO.	

CONTRACT NO.	NAME	DATE
	WHITE	1-6-73
	GROUP	4-23-73
	DRAWN	4-23-73
	CHECK	4-23-73
	STRESS	4-23-73
	PROJ	4-28-73
	APPD	
	OTHER	

WIRE TABLE					
WIRE CODE NO.	G.A.	MATERIAL	LG	TERMINALS	SERIALS
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD
18				S-1636-1	S-1435-1 STD

DESIGN	DATE	DATE	DATE	DATE
WHITE	1-6-73	1-6-73	1-6-73	1-6-73
GROUP	4-23-73	4-23-73	4-23-73	4-23-73
DRAWN	4-23-73	4-23-73	4-23-73	4-23-73
CHECK	4-23-73	4-23-73	4-23-73	4-23-73
STRESS	4-23-73	4-23-73	4-23-73	4-23-73
PROJ	4-28-73	4-28-73	4-28-73	4-28-73
APPD				
OTHER				

COMMERCIAL AIRCRAFT DIV.
5800 E. PAWNEE
WICHITA, KANSAS

CS-1000 AIRCRAFT CO.

TITLE
WIRING DIAGRAM - STROBE LIGHTS, WING TIP (OPT)

CONTRACT NO. **SR 740316**

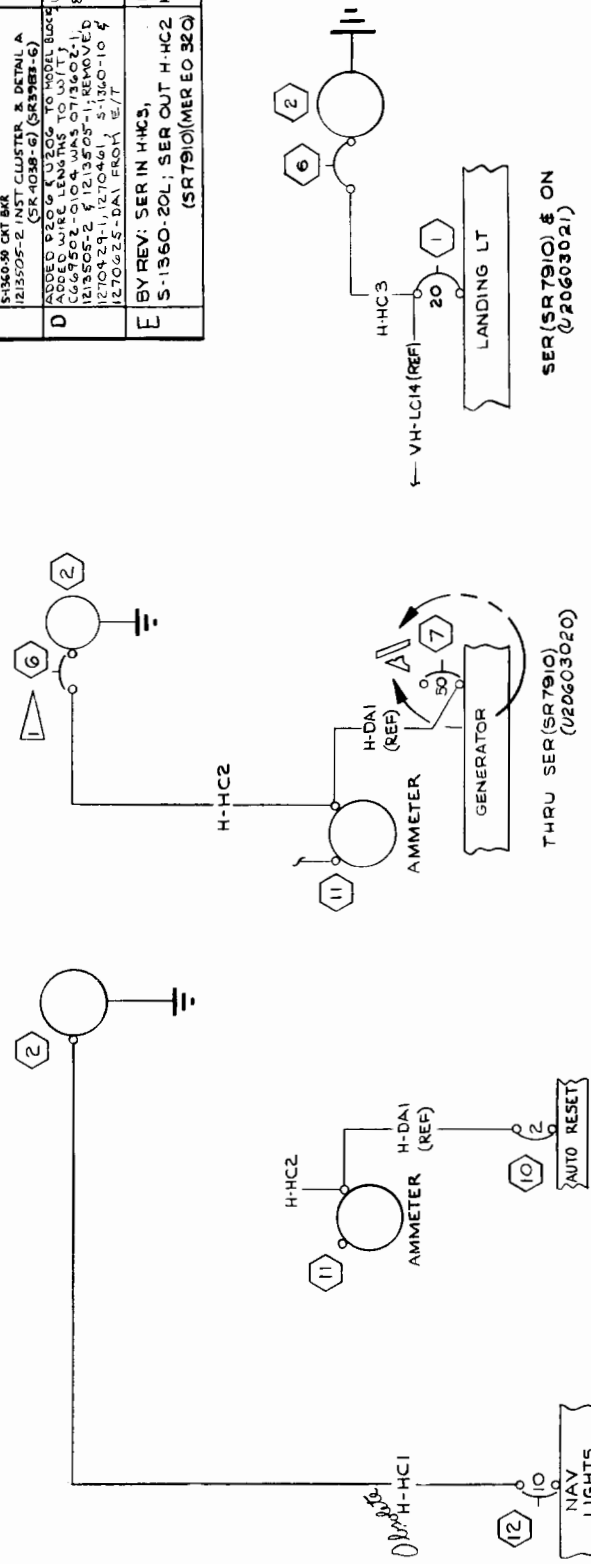
CODE IDENT: **C 71379** DNG NO: **1270625**

SCALE: NONE

PAGE: 11.18.2

CHK LET	REVISION	BY	CHK
A	REMOVED NVA FROM STD WIRES	GLW	245
B	ADD G0232-1 CKT BKR TO CIGAR LIGHTER AND H-HC2 WIRE. ADD NOTE TO CA-2 CKT BKR. H-HC1 WAS 18 GA 5-1367-2-8 ITEM WAS S-1367-18TERA (SR 4081)	GLW	245
C	ADD MODEL 206 S-1360-50 CKT BKR. S-1360-50 INST CLUSTER. S-1360-50 CKT BKR. S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6)	GLW	245
D	ADDED 220V & 220V TO MODEL 206. ADDED WIRE LENGTHS TO W/PT. S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6). S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6). S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6). S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6).	WJR	245
E	BY REV: SER IN H-HC3, S-1360-20L; SER OUT H-HC2 (SR7910)(MER EO 32Q)	BLA	245

SER 205-0001
THRU SER 205-0577
SER 206-0001 THRU
SER 206-0001 THRU
SER 206-0001 THRU
SER 206-0275



DETAIL A
EFFECTIVE 205-0320
THRU SER 205-0480

THRU SER 205-0319

NOTE: CIRCUIT BREAKER IS RESET BY INSERTING A PROBE INTO THE 3/8 DIA HOLE IN BREAKER FACE AND PUSHING LIGHTLY UNTIL A CLICK IS HEARD.

CHK LET	REVISION	BY	CHK
A	REMOVED NVA FROM STD WIRES	GLW	245
B	ADD G0232-1 CKT BKR TO CIGAR LIGHTER AND H-HC2 WIRE. ADD NOTE TO CA-2 CKT BKR. H-HC1 WAS 18 GA 5-1367-2-8 ITEM WAS S-1367-18TERA (SR 4081)	GLW	245
C	ADD MODEL 206 S-1360-50 CKT BKR. S-1360-50 INST CLUSTER. S-1360-50 CKT BKR. S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6)	GLW	245
D	ADDED 220V & 220V TO MODEL 206. ADDED WIRE LENGTHS TO W/PT. S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6). S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6). S-1360-50 INST CLUSTER & DETAIL A (SR 4038-6).	WJR	245
E	BY REV: SER IN H-HC3, S-1360-20L; SER OUT H-HC2 (SR7910)(MER EO 32Q)	BLA	245

NO	DESCRIPTION	QTY	UNIT
12	S-1360-10 CIRCUIT BREAKER	1	EA
11	G69502-0104 INST CLUSTER KIT	1	EA
10	CA-2 CKT BKR (MTC)	1	EA
9			
8			
7	S-1360-50 CIRCUIT BREAKER	1	EA
6	G0232-1 CKT BKR (CUE)	1	EA
5			
4			
3	O513039-7 CIGAR LIGHTER	1	EA
2	O513039-7 CIGAR LIGHTER	1	EA
1	S-1360-20L CKT BKR	1	EA

NO	DESCRIPTION	QTY	UNIT
12	S-1360-10 CIRCUIT BREAKER	1	EA
11	G69502-0104 INST CLUSTER KIT	1	EA
10	CA-2 CKT BKR (MTC)	1	EA
9			
8			
7	S-1360-50 CIRCUIT BREAKER	1	EA
6	G0232-1 CKT BKR (CUE)	1	EA
5			
4			
3	O513039-7 CIGAR LIGHTER	1	EA
2	O513039-7 CIGAR LIGHTER	1	EA
1	S-1360-20L CKT BKR	1	EA

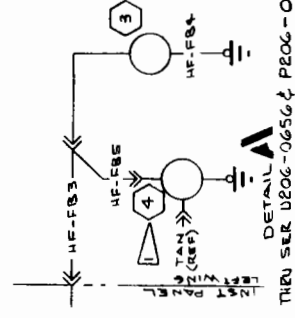
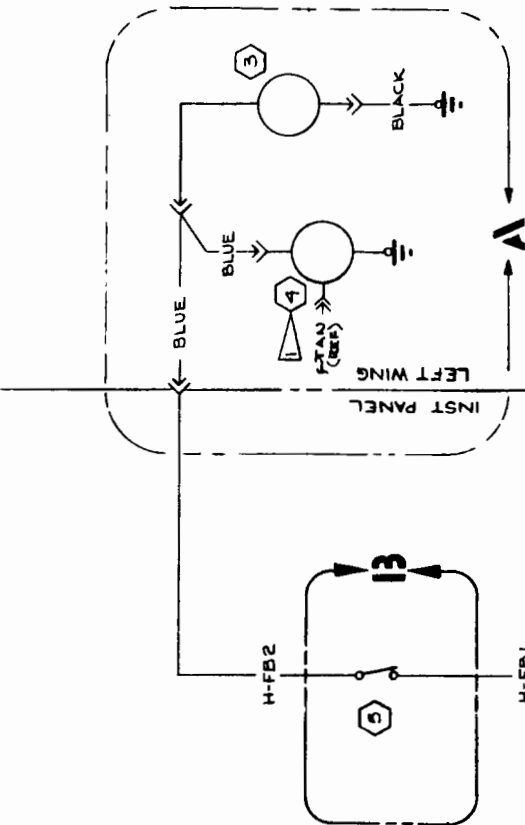
NO	DESCRIPTION	QTY	UNIT
12	S-1360-10 CIRCUIT BREAKER	1	EA
11	G69502-0104 INST CLUSTER KIT	1	EA
10	CA-2 CKT BKR (MTC)	1	EA
9			
8			
7	S-1360-50 CIRCUIT BREAKER	1	EA
6	G0232-1 CKT BKR (CUE)	1	EA
5			
4			
3	O513039-7 CIGAR LIGHTER	1	EA
2	O513039-7 CIGAR LIGHTER	1	EA
1	S-1360-20L CKT BKR	1	EA

NO	DESCRIPTION	QTY	UNIT
12	S-1360-10 CIRCUIT BREAKER	1	EA
11	G69502-0104 INST CLUSTER KIT	1	EA
10	CA-2 CKT BKR (MTC)	1	EA
9			
8			
7	S-1360-50 CIRCUIT BREAKER	1	EA
6	G0232-1 CKT BKR (CUE)	1	EA
5			
4			
3	O513039-7 CIGAR LIGHTER	1	EA
2	O513039-7 CIGAR LIGHTER	1	EA
1	S-1360-20L CKT BKR	1	EA

NO	DESCRIPTION	QTY	UNIT
12	S-1360-10 CIRCUIT BREAKER	1	EA
11	G69502-0104 INST CLUSTER KIT	1	EA
10	CA-2 CKT BKR (MTC)	1	EA
9			
8			
7	S-1360-50 CIRCUIT BREAKER	1	EA
6	G0232-1 CKT BKR (CUE)	1	EA
5			
4			
3	O513039-7 CIGAR LIGHTER	1	EA
2	O513039-7 CIGAR LIGHTER	1	EA
1	S-1360-20L CKT BKR	1	EA

CHK LET	REVISION	CHK BY	DATE
A	1200400 WAS 1270625 ADD DET ID TITLE (SR5401)	GLW	4-4-62
B	ADD MODEL 206 WAS 113210 1270401-H BUS BAR WAS 1270429-1 (SR 4038-B)(SR393-6)	GLW	6-21-62
C	ADDED 206 (1) 0206 TO MODEL 206 ADDED WIRE LENGTHS TO WIT REMOVED 1270401 FROM E/T HF-FB3 WAS H-FB3; HF-FB4 WAS H-FB4; HF-FB5 WAS F-FB5 (SR450)(SR457)	WJR	2-5-62
D	INACTIVE NOTES: HF-FB4 (SR450) AND HF-FB5 (SR457) WERE REMOVED BLUE WIRE AND DETAIL 2 0721105-15 WAS 0721105-2 (SR450)(SR490)	WJR	2-5-62
E	S-1360-1F WAS S-1360-10 (SR5144)	GLW	2-5-62
F	BY REV: ADDED DETAIL B, S-1845-1-1, NOTES 2 & 3, S-1493-2 & 3'S ADDRESS 03436 (SR540)(SR540)Z	EGY	8-14-62

NOTE: ONLY HEATER CIRCUIT SHOWN FOR STALL WARNING CIRCUIT. SEE PAGE 9.2. THRU SER(SR5401) & SER(SR5402) & EFFECTIVE SER(SR5401) & SER(SR5402) & ON



THRU SER 1206-0656 & PE06-0306

DETAIL B
THRU SER(SR 5401) & (SR 5402)
(1206-1234 & P206-0519)

INACTIVE: U206-1235 & U206-0520
THRU SER U206-0144 & P206-0603
U206-1235 & U206-0520
THRU SER U206-0144 & P206-0603

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-FB2	16				
H-FB1	16				
BLUE	16	S-1440-16-250			
BLACK	16	S-1340-16-250			
BLUE	16	S-1440-16-250			
HF-FB5	16				
HF-FB4	16				
HF-FB3	16				
H-FB2	16				
H-FB1	16				

WIRE TABLE

NO	DATE	TITLE
5	12-26-61	WIRING DIAGRAM - HEATED PITOT TUBE & HEATED STALL WARNING SYSTEM (OPT)
4	12-26-61	WIRING DIAGRAM - HEATED PITOT TUBE & HEATED STALL WARNING SYSTEM (OPT)
3	12-26-61	WIRING DIAGRAM - HEATED PITOT TUBE & HEATED STALL WARNING SYSTEM (OPT)
2	12-26-61	WIRING DIAGRAM - HEATED PITOT TUBE & HEATED STALL WARNING SYSTEM (OPT)
1	12-26-61	WIRING DIAGRAM - HEATED PITOT TUBE & HEATED STALL WARNING SYSTEM (OPT)

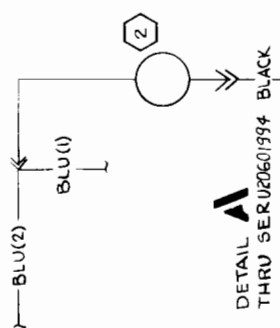
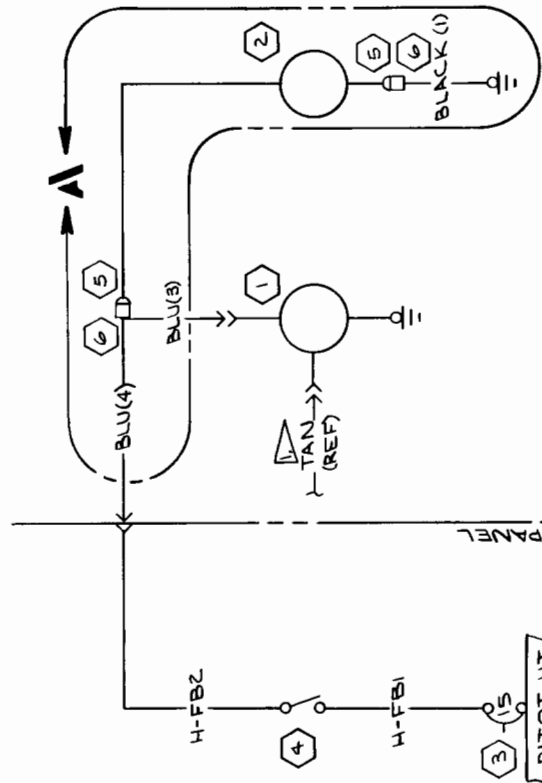
PART NO.	DESCRIPTION	INSTALLER
5-1845-1-1	SWITCH	
0511052-5	XMTR STALL WARN HT	
0721105-15	PITOT TUBE, HEATER	
5-1158-2-1	SWITCH	
5-1360-15	CIRCUIT BREAKER	

REV	DATE	BY
13	1270625	

FORM NO. 80-18

LET	DESCRIPTION	DATE	APPD
A	BY REV: SER OUT BLU(1), BLU(2) & BLACK(1); SER IN BLU(3), BLU(4) & BLK(1); ADD DET 'A' & SER (SR 7320)	JCY 11-6-72	1/1/72

SER P2060603 & ON
SER U20601445 & ON



NOTES:
 ▲ ONLY HEATER CIRCUIT SHOWN. FOR
 STALL WARNING CIRCUIT SEE PAGE 9/6

BLK (1)	18	B	S-1636-2	S-1867-1-B	SER U20601995 & ON
BLU (4)	16	92 <td>SEE BLU(3) <td>SEE BLU(3) <td>SER U20601995 & ON</td> </td></td>	SEE BLU(3) <td>SEE BLU(3) <td>SER U20601995 & ON</td> </td>	SEE BLU(3) <td>SER U20601995 & ON</td>	SER U20601995 & ON
BLU (3)	16	50 <td>S-341-1 <td>S-1636-2 <td>SER U20601995 & ON</td> </td></td>	S-341-1 <td>S-1636-2 <td>SER U20601995 & ON</td> </td>	S-1636-2 <td>SER U20601995 & ON</td>	SER U20601995 & ON
BLU (2)	16	B <td>S-1569-1 <td>S-1867-1-B <td>THRU SER U20601994</td> </td></td>	S-1569-1 <td>S-1867-1-B <td>THRU SER U20601994</td> </td>	S-1867-1-B <td>THRU SER U20601994</td>	THRU SER U20601994
BLU (1)	16	92 <td>SEE BLU(3) <td>SEE BLU(3) <td>THRU SER U20601994</td> </td></td>	SEE BLU(3) <td>SEE BLU(3) <td>THRU SER U20601994</td> </td>	SEE BLU(3) <td>THRU SER U20601994</td>	THRU SER U20601994
H-FBZ	16	50 <td>S-341-1 <td>S-1869-2 <td>THRU SER U20601994</td> </td></td>	S-341-1 <td>S-1869-2 <td>THRU SER U20601994</td> </td>	S-1869-2 <td>THRU SER U20601994</td>	THRU SER U20601994
H-FBI	16	4 <td>S-1867-2 <td>S-7483-2 <td></td> </td></td>	S-1867-2 <td>S-7483-2 <td></td> </td>	S-7483-2 <td></td>	

WIRE TABLE

CONTRACT NO.	NAME	DATE	DESIGN	GROUP	DRAWN	CHECK	STRESS	PROJ	APPD	OTHER
	HEICHAU	8-7-69								
	H. H. H.	8-7-69								
	DL BURKE	8-7-69								
	K. YOUNGERS	8-5-69								
	W. J. W.	8-7-69								
	M. J. M.	8-7-69								

CONTRACT NO.	NAME	DATE	DESIGN	GROUP	DRAWN	CHECK	STRESS	PROJ	APPD	OTHER
	HEICHAU	8-7-69								
	H. H. H.	8-7-69								
	DL BURKE	8-7-69								
	K. YOUNGERS	8-5-69								
	W. J. W.	8-7-69								
	M. J. M.	8-7-69								

CONTRACT NO.	NAME	DATE	DESIGN	GROUP	DRAWN	CHECK	STRESS	PROJ	APPD	OTHER
	HEICHAU	8-7-69								
	H. H. H.	8-7-69								
	DL BURKE	8-7-69								
	K. YOUNGERS	8-5-69								
	W. J. W.	8-7-69								
	M. J. M.	8-7-69								

WIRING DIAGRAM -
 HEATED PITOT TUBE & HEATED
 STALL WARNING SYSTEM (OPT)

COMMERCIAL AIRCRAFT DIV.
 8800 E. PAWNEE
 WICHITA, KANSAS

CSessna AIRCRAFT CO.

SCALE: NONE U206 & P206 PAGE: 13.3
 EDERR 10485 (SR6005)IX (SR6006)IX

SIZE: C 71379 DWG NO: 1270625

CODE IDENT: C 71379

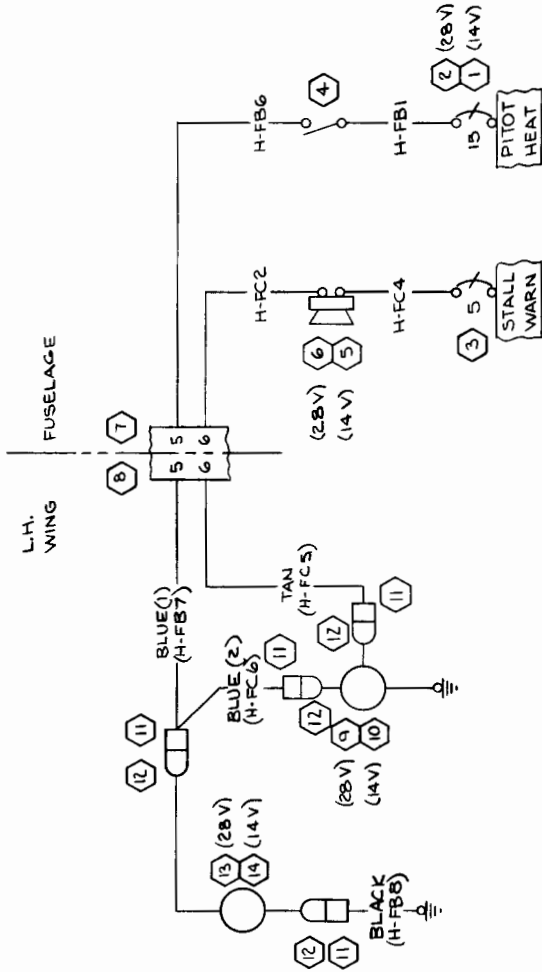
PROJ: P 13.2

APPD: P 13.3.2

OTHER: P 13.3.2

FORM NO. 80-2158

REVISION			
LET	DESCRIPTION	DATE	APPD
A	BY REV: ADDED H-FC5, H-FC6, H-FB7 H-FB8 (S-1640-9)	RAM 8-10-73	DLB 8/20/73
B	BY REV: S-1640-6 WAS S-1640-9; S-1641-6 WAS S-1641-9; ADD WIRE LENGTHS PER S-1640-9 (WORKSHOP PRACTICE)	BLA 12-10-74	SC1044 1/23/74 RAB



WIRE NO.	TERMINALS	MATERIAL	LG	SERIALS
1	100	S-1367-1-4	S-1636-2	
2	95	S-1493-2	S-1636-2	
3	6	S-1342-6	S-1493-2	
4				
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CONTRACT NO.		COMMERCIAL AIRCRAFT DIV. 8800 E. PAWNEE WICHITA, KANSAS	
DESIGN	DATE	TITLE	
WHITE	1-11-73	WIRING DIAGRAM -	
GROUP	2-1-11-73	HEATED PITOT TUBE & STALL	
DRAWN	WHITE	WARNING XMTR (OPT)	
CHECK	2-1-11-73		
STRESS			
PROJ	4-10-73		
APPD			
OTHER			

EQUIPMENT TABLE	
PART NO.	DESCRIPTION
14	0721105-15 PITOT TUBE
13	0721105-18 PITOT TUBE HOUSING
12	S-1637-1 HOUSING
11	S-1637-2 HOUSING
10	0511062-15 XMTR
9	0511062-16 XMTR
8	S-1640-6 HOUSING-PIN
7	S-1641-6 HOUSING-SOCKET
6	S-2077-8 STALL WARN HORN
5	S-2077-5 STALL WARN HORN
4	S-2160-1 SWITCH
3	S-1360-5L CKT BKR
2	S-1360-8L CKT BKR
1	S-1360-15L CKT BKR

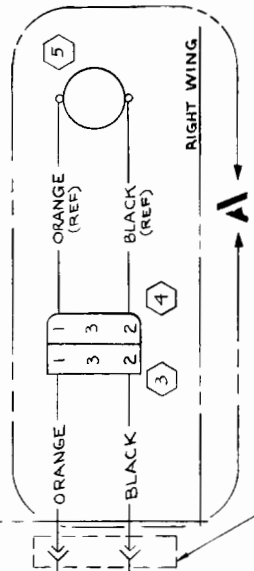
SIZE	CODE IDENT.	DWG NO
C	71379	1270625
SCALE: NONE		
		PAGE: 13.3.2

REV. NO.	REV. DATE	BY	CHK. DATE
A	10/26/65	WJM	11/1/65

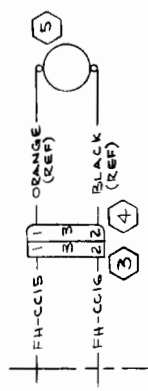
REV. NO.	REV. DATE	BY	CHK. DATE
A	10/26/65	WJM	11/1/65

(SR4946)

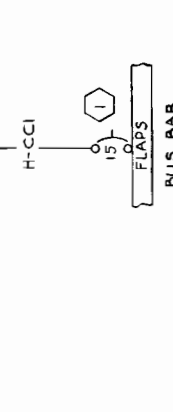
0760657-B WAS CND001-0101; S-LW; 12/5
 INACTIVATED FH-CC15, FH-CC16, FH-CC17, FH-CC18, FH-CC19, FH-CC20, FH-CC21; ADDED
 H-CC1B, H-CC1C, H-CC1D, H-CC1E, H-CC1F, H-CC1G, H-CC1H, H-CC1I, H-CC1J, H-CC1K, H-CC1L, H-CC1M, H-CC1N, H-CC1O, H-CC1P, H-CC1Q, H-CC1R, H-CC1S, H-CC1T, H-CC1U, H-CC1V, H-CC1W, H-CC1X, H-CC1Y, H-CC1Z; ADDED
 ORANGE, BLACK, BROWN, VIOLET & BLACK WIRES; ADD
 VIOLET & BLACK WIRES; ADD
 DETAILS (SR4946), (SR4902)
 WJM



CONNECTIONS MADE
 IN AREA OF FWD SIDE
 PANEL



DETAIL
 THRU SER P206-0306 & U206-0657



NOTE:
 1 SWITCH SHOWN IS A "MOMENTARY ON", "ON", "MOMENTARY ON" CONFIGURATION. THE MOTOR IS SHORTED WHEN THE SWITCH IS IN THE CENTER "ON" POSITION. SWITCH IS SHOWN IN CENTER "ON" POSITION. SWITCH TERMINALS SHOWN AS VIEWED FROM TOGGLE SIDE OF SWITCH.

WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
BLACK 16	16	S-1460-16-0	10 S-1367-26 S-1367-28	U206-0657 6ON
VIOLET 16	16	S-1460-16-7	149 S-1367-26 S-341-1	U206-0657 6ON
BROWN 16	16	S-1460-16-1	158 S-1367-26 S-341-1	U206-0657 6ON
BLACK 16	16	S-1460-16-0	142 S-341-1 S-1636-2	U206-0657 6ON
ORANGE 16	16	S-1460-16-3	142 S-341-1 S-1636-2	U206-0657 6ON
H-CC21 16	16	S-1367-26	S-1367-28	U206-0657 6ON
H-CC20 16	16	S-1367-26	S-341-1	U206-0657 6ON
H-CC19 16	16	S-1367-26	S-341-1	U206-0657 6ON
H-CC18 16	16	S-1367-26	S-341-1	U206-0657 6ON
H-CC17 16	16	S-1367-26	S-341-1	U206-0657 6ON
FH-CC16 16	16	S-341-1	S-1636-2	U206-0657 6ON
FH-CC15 16	16	S-341-1	S-1636-2	U206-0657 6ON
H-CC14 16	16	S-1493-2	S-341-1	U206-0657 6ON
H-CC13 16	16	S-1367-26	S-1367-26	U206-0657 6ON
H-CC12 16	16	S-1367-26	S-341-1	U206-0657 6ON
H-CC11 16	16	S-1367-26	S-1367-28	U206-0657 6ON

WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
7	BZ-7R2104	LIMIT SWITCH (MCS)		
6	E13-00M	SWITCH (CRYE)		
5	0760657-8	FLAP MOTOR ASSY		
4	S-1636-2	HOUSING-CAP		
3	S-1636-1	HOUSING-PLUG		
2	S-1661-1	SWITCH ASSY		
1	S-1660-15	CIRCUIT BREAKER		

WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
15				

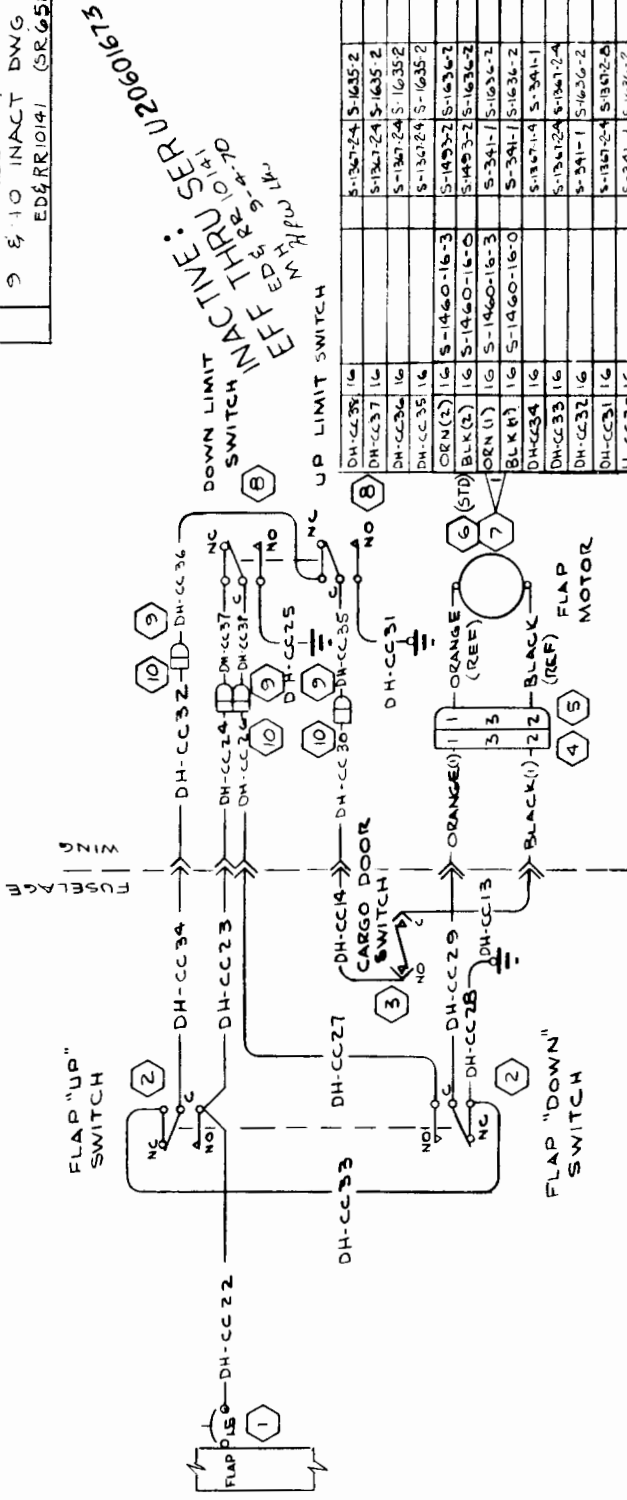
WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
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WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
15				

WIRE CODE NO.	GA.	MATERIAL	TERMINALS	SERIALS
15				

LET	REVISION	DATE	APPRO
A	BY REV: S-1367-2-4 WAS S-1367-1-4; S-1367-2-8 WAS S-1367-1-8; DELETE S-1637-1 & S-1367-2 FROM WIRE TABLE & ADD ITEM 9 & 10 INACT DWG ED&RR10141 (SR 6584)	MH 9-4-70	UKW



INACTIVE: SEE ATTACHED DRAWING FOR INACT DWG
 SER U206173
 Nuffell
 9-4-70

NOTES:
 [Symbol] OPTIONAL WITH RADIOS

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
DH-CC-36	16			S-1367-2-4 S-1635-2	
DH-CC-37	16			S-1367-2-4 S-1635-2	
DH-CC-34	16			S-1367-2-4 S-1635-2	
DH-CC-35	16			S-1367-2-4 S-1635-2	
ORN(2)	16			S-1460-16-3	
BLK(2)	16			S-1460-16-3	
ORN(1)	16			S-1460-16-3	
BLK(1)	16			S-1460-16-3	
DH-CC-34	16			S-341-1 S-1636-2	
DH-CC-33	16			S-341-1 S-1636-2	
DH-CC-32	16			S-341-1 S-1636-2	
H-CC-30	16			S-341-1 S-1636-2	
DH-CC-29	16			S-1367-2-4 S-1341-1	
DH-CC-28	16			S-1367-2-4 S-1341-1	
DH-CC-27	16			S-341-1 S-1636-2	
DH-CC-26	16			S-341-1 S-1636-2	
DH-CC-25	16			S-1367-2-4 S-1341-1	
DH-CC-24	16			S-341-1 S-1636-2	
DH-CC-23	16			S-1367-2-8 S-1367-2-4	
DH-CC-14	16			S-341-1 S-1493-2	
DH-CC-13	16			S-341-1 S-1493-2	

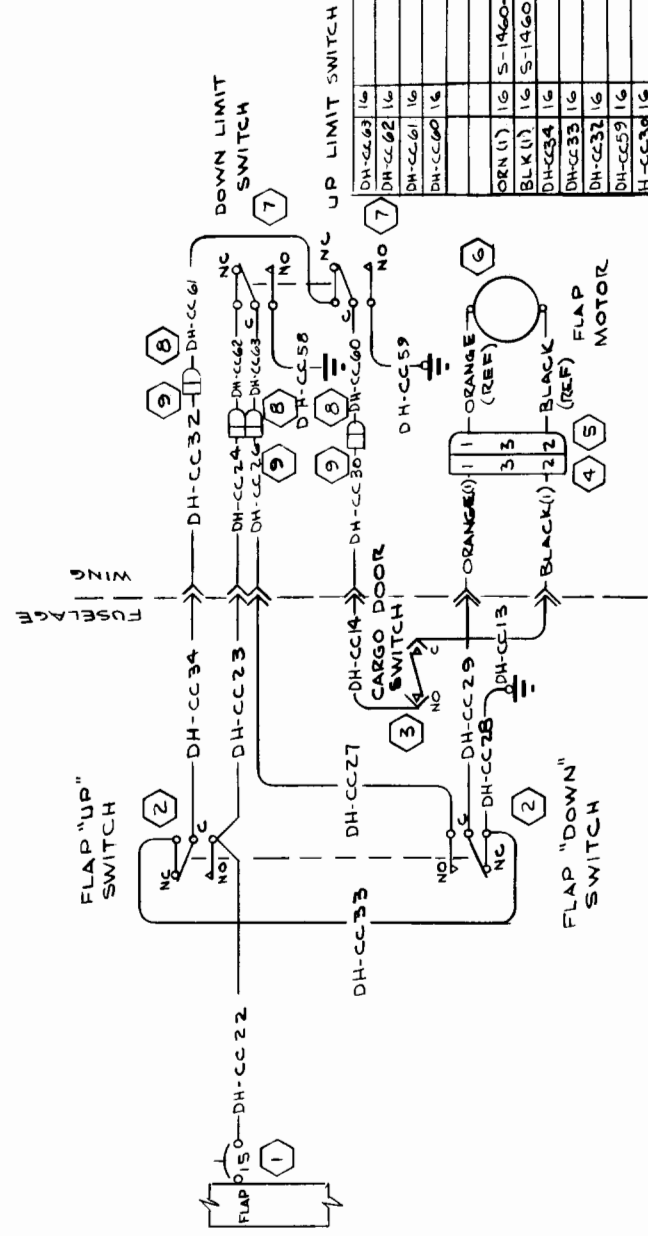
DESIGN	NAME	DATE
GROUP	H.W. Potts	9-13-69
DRAWN	R.G. Potts	9-26-69
CHECK	W. J. ...	9-26-69
STRESS	...	...
PROJECT	...	...
APPD	S. WANEY	9-5-69

ITEM NO.	PART NO.	DESCRIPTION	VENDOR
10	S-1637-2	HOUSING - PLUG	
9	S-1637-1	HOUSING - CAP	
8	MS 2525-1	SWITCH	
7	C301001-0701	ACTUATOR ASSY	
6	C301001-0501	ACTUATOR ASSY	
5	S-1638-2	HOUSING - CAP	
4	S-1638-1	HOUSING - PLUG	
3	E13-00M	SWITCH	(01963)
2	E33-10K	SWITCH	(01963)
1	S-1360-15	CIRCUIT BREAKER	

CONTRACT NO.	TITLE
COMMERCIAL AIRCRAFT CO.	WIRING DIAGRAM -- WING FLAPS

SIZE	CODE IDENT. NO.	DWG NO.
C	71379	1270625
SCALE	NONE	206'S
PAGE	14	31

LET	REVISION DESCRIPTION	DATE	APPD



NOTES:
 1 THESE SWITCHES PART OF C301002-0101 ACTUATOR ASSY

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
DH-CC-63	16				S-1493-2 S-1635-2
DH-CC-62	16				S-1493-2 S-1635-2
DH-CC-61	16				S-1493-2 S-1635-2
DH-CC-60	16				S-1493-2 S-1635-2
ORN (1)	16	S-1460-16-3			S-341-1 S-1636-2
BLK (1)	16	S-1460-16-0			S-341-1 S-1636-2
DH-CC-64	16				S-1847-24 S-341-1
DH-CC-63	16				S-1847-24 S-1847-24
DH-CC-62	16				S-341-1 S-1636-2
DH-CC-59	16				S-1493-2 S-1847-24
H-CC-38	16				S-341-1 S-1636-2
DH-CC-29	16				S-1847-24 S-341-1
DH-CC-28	16				S-1847-24 S-1847-24
DH-CC-27	16				S-341-1 S-1847-24
DH-CC-26	16				S-341-1 S-1636-2
DH-CC-58	16				S-1493-2 S-1847-24
DH-CC-24	16				S-341-1 S-1636-2
DH-CC-23	16				S-1847-24 S-341-1
DH-CC-22	16				S-1847-24 S-1847-24
DH-CC-14	16				S-341-1 S-1493-2
DH-CC-13	16				S-341-1 S-1493-2

CONTRACT NO:		NAME		DATE
DESIGN				
GROUP	A. Miller			10-15-70
DRAWN	M. HUNTER			9-4-70
CHECK	K. WHITE			10-15-70
STRESS				
PROJECT				
APPD				

SIZE	CODE IDENT.	OWG NO.
C	71379	1270625

SCALE	NONE	U206	PAGE: 14-3.3
			EDR (0141) (SR 6584)

CONTRACT NO:	DATE	NAME	DATE

DESIGN	DATE

GROUP	DATE

DRAWN	DATE

CHECK	DATE

STRESS	DATE

PROJECT	DATE

APPD	DATE

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
S-1637-2		HOUSING - PLUG			
S-1637-1		HOUSING - CAP			
V3-1-D9		SWITCH			
C301002-0101		ACTUATOR ASSY			
S-1638-2		HOUSING - CAP			
S-1638-1		HOUSING - PLUG			
E13-00M		SWITCH			
S-1906-1		SWITCH			
S-1360-15		CIRCUIT BREAKER			

PART NO.	DESCRIPTION	VENDOR

EQUIPMENT TABLE	

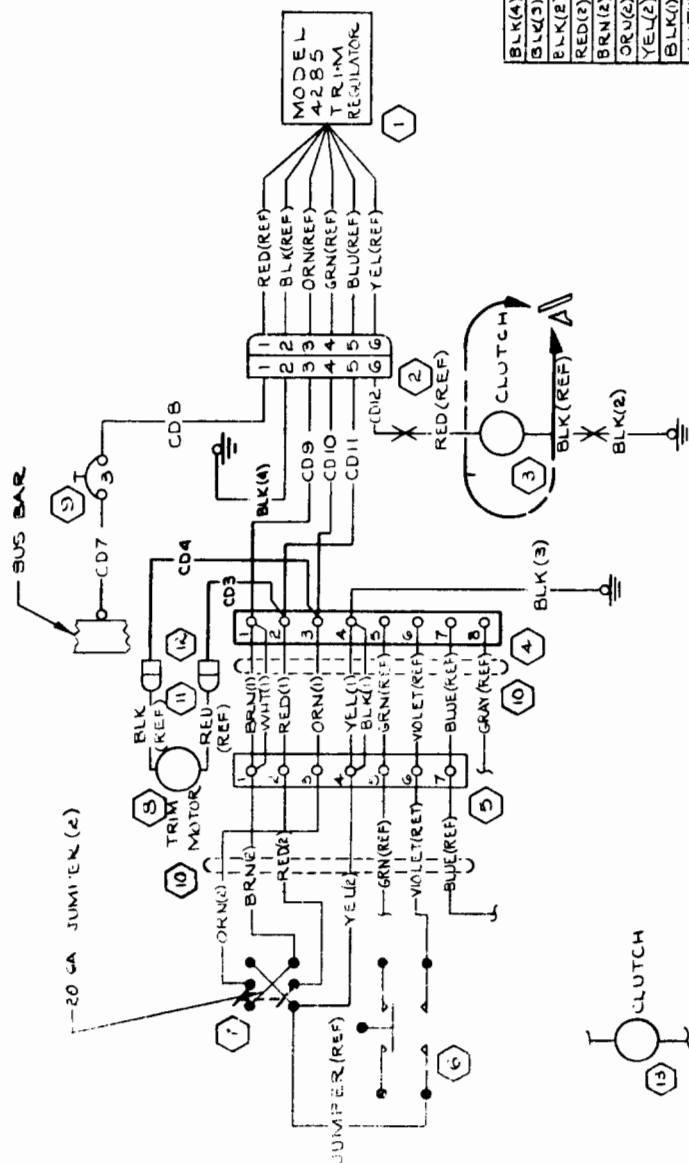
SUPERSEDES:	

SUPERSEDED BY:	

CESNA IS APPLICABLE
 VENDOR CODES PER MIL-STD-883C
 CESNA SPEC. NO. 100-100-0000
 S-XXX OR CHA-XXX-CESNA
 STD. NO.

LET	REVISION	DESCRIPTION	DATE	APPRO
A		BY REV: CD3/TERMINAL NO.2 WAS CD3/TERMINAL NO.1 & CD4/TERMINAL NO.3 WAS CD4/TERMINAL NO.2 ED4RR 10950	3-9-70	RLV
				W
				W
				W

INACTIVE: EFF THRUSTER U20601700
 ED4RR 10950 6-30-70
 W. Pawnee
 WICHITA, KANSAS



WIRE CODE NO	GA	MATERIAL	LG	TERMINALS	SERIALS
BLK(4)	20			5-1327-18 5-1636-1	
BLK(3)	20			5-1327-18	
BLK(2)	20			5-1327-18 5-1370-2	
RED(1)	20			SOLDER	
BRN(2)	20			SOLDER	
ORNG(2)	20			SOLDER	
YEL(2)	20			SOLDER	
BLK(1)	20				
YEL(1)	20				
RED(1)	20				
BRN(1)	20				
ORN(1)	20				
CD12	20			5-1370-2 5-1636-1	
CD11	20				
CD10	20				
CD9	20				
CD8	20			5-1327-18 5-1636-1	
CD7	20			5-1327-18 5-1636-1	
CD4	20			5-1636-1	
CD3	20			5-1636-1	

WIRE TABLE		EQUIPMENT TABLE	
NAME	DATE	DESCRIPTION	TERMINALS
SIPES VR	6-5-69		
H. Waid	8-8-69		
M. Waid	8-4-69		
M. Waid	8-5-69		
M. Waid	8-8-69		
M. Waid	8-9-69		
M. Waid	8-7-69		

CONTRACT NO. _____
 COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS
Cessna AIRCRAFT CO.
 TITLE
WIRING DIAGRAM —
ELECTRIC ELEVATOR TRIM
 (OPT)

- NOTES:
- 1 BLK, WHIT (GRY WIRE TO BE REMOVED FROM SF 1030-BX CABLE ON INSTL IN CONTROL WHEEL
 - 2 3-29636 TERMINAL VENDOR (00779)
 - 3 PART OF SF-1030-BX CABLE (082G1)

ITEM NO	DESCRIPTION	QUANTITY
13	15G0321-1	CLUTCH - 24V
12	5-1637-2	HOUSING - PLUG
11	5-1637-1	HOUSING - CAP
10	SF-1030-BX	CABLE (082G1)
9	7271-8-3	CIRCUIT BREAKER
8	15G0322-2G	TRIM MOTOR ASSY
7	305-4304	PITCH TRIM SW
6	5-1985-1	SWITCH-KEYING (71785)
5	351-11-07-001	TERMINAL BLK (71785)
4	351-11-08-001	TERMINAL BLK (71785)
3	15G0321-12	CLUTCH-12V
2	5-1641-G	HOUSING
1	MODEL-4285	TRIM REGULATOR

SUPERSEDES: _____
 PAGE 14.4
 SUPERSEDED BY: _____
 P 14.14.2

LET	REVISION	DESCRIPTION	DATE	APPRO
C		BY REV: REVISED & REORAN. ADD P 14, 17, CD 25 THRU CD 35, BLK (4), RED (2), YEL (2) ORN (2), BRN (2), 1570308-1, 1570307-1, 1570300-1, 1570303-0101 WPS, MODEL 42, 85R, ADD WIRE COLORS CD 26 GRN & CD 25 BLU SER (SIC 7477) (SR 7403) (REF)	1-12-74	JCY DMM JCS 1/15/74
D		BY REV: ADD 1570307-2 & 1570-51, 51963-2 WAS SOLDER (CD 27, CD 28, CD 29, & BLK (4) (SR 1677), (SR 1670) (SR 1671))	MEM 5-14-74	JCY JCS 5/15/74
E		BY REV: S-1360-5L WAS 51370-5L (NOW SHOP PRACTICE)	JEG 7/15/74	JCS 7/15/74
F		BY REV: S-1636-1 WAS S-1370-2/CD-12 (MER 206-6036) (NOW SHOP PRACTICE)	RTP 1-23-75	JCS 1/23/75

1060-111-0901

LET	REVISION	DESCRIPTION	DATE	APPRO	
BLK (4)	20	-20-0	5-1361+8	5-1963-2	SER U206024074 ON
ORN (2)		-20-3			
YEL (2)		-20-4			
BRN (2)		-20-1			
ORN (2)		-20-2			SER U206024074 ON
YEL (4)					
BRN (1)					
RED (1)					
BLK (3)	20	-20-0	SOLDER	SOLDER	THRU SER U20602406
BLK (2)		-20-0	S-1361+8	5-1370-2	
BLK (2)		-20-0	34	5-1635-1	5-1636-1
BLK (2)		-20-0	34		
BLK (2)		-20-0	34		
CD 29		-20-0	34	5-1635-1	
CD 28		-20-0	34	5-1963-2	
CD 27		-20-0	34	5-1963-2	
CD 26		-20-0	34	5-1635-1	
CD 25		-20-0	34	5-1635-1	
CD 24		-20-0	34	5-1635-1	
CD 23		-20-0	34	5-1635-1	
CD 22		-20-0	34	5-1635-1	
CD 21		-20-0	34	5-1635-1	
CD 20		-20-0	34	5-1635-1	
CD 19		-20-0	34	5-1635-1	
CD 18		-20-0	34	5-1635-1	
CD 17		-20-0	34	5-1635-1	
CD 16		-20-0	34	5-1635-1	
CD 15		-20-0	34	5-1635-1	
CD 14		-20-0	34	5-1635-1	
CD 13		-20-0	34	5-1635-1	
CD 12		-20-0	34	5-1635-1	
CD 11		-20-0	34	5-1635-1	
CD 10		-20-0	34	5-1635-1	
CD 9		-20-0	34	5-1635-1	
CD 8		-20-0	34	5-1635-1	
CD 7		-20-0	34	5-1635-1	
CD 6		-20-0	34	5-1635-1	
CD 5		-20-0	34	5-1635-1	
CD 4		-20-0	34	5-1635-1	
CD 3		-20-0	34	5-1635-1	
CD 2		-20-0	34	5-1635-1	
CD 1		-20-0	34	5-1635-1	

DESIGN	NAME	DATE	WIRE CODE NO	MATERIAL	LG	TERMINALS	SERIALS
H	WISE	3-2-73					
J	YOUJEL	2-28-74					
R	YOUNGER	3-2-73					
B	BERGMAN	3-3-73					
J	MGR						

DESIGN	NAME	DATE	WIRE CODE NO	MATERIAL	LG	TERMINALS	SERIALS
H	WISE	3-2-73					
J	YOUJEL	2-28-74					
R	YOUNGER	3-2-73					
B	BERGMAN	3-3-73					
J	MGR						

DESIGN	NAME	DATE	WIRE CODE NO	MATERIAL	LG	TERMINALS	SERIALS
H	WISE	3-2-73					
J	YOUJEL	2-28-74					
R	YOUNGER	3-2-73					
B	BERGMAN	3-3-73					
J	MGR						

ITEM NO	PART NO.	DESCRIPTION	REVISION	DATE	APPRO
26	5-1360-5L	CIRCUIT BREAKER			
25	5-1960-2-0	HOUSING			
24	5-1960-1-0	HOUSING			
23	5-1962-2-0	HOUSING			
22	5-1962-1-0	HOUSING			
21	1570307-2	CABLE ASSY			
20	582384-9	SOCKET			
19	1270062-1	CKT BOARD			
18	1270060-1	CABLE ASSY			
17	1270061-1	CKT BOARD			
16	2551030-190	CONNECTOR			
15	SF-1030-8X	CABLE			
14	5-1965-1	SWITCH-KEYING			
13	3421-0000	SOCKET			
12	1570307-1	CONNECTOR ASSY			
11	1570308-1	CABLE ASSY			
10	7271-8-3	CIRCUIT BREAKER			
9	305-4304	PITCH TRIM SW			
8	5-1695-2	SWITCH (TRIM DE ENGAGE)			
7	6A1502-0101	TRIM MOTOR			
6	5-1637-1	HOUSING PIN			
5	5-1637-2	HOUSING PLUG			
4	1CS-20B	CLUTCH			
3	5-1640-6	HOUSING			
2	5-1641-6	HOUSING			
1	6A1003-0101	TRIM REGULATOR			

ITEM NO	PART NO.	DESCRIPTION	REVISION	DATE	APPRO
26	5-1360-5L	CIRCUIT BREAKER			
25	5-1960-2-0	HOUSING			
24	5-1960-1-0	HOUSING			
23	5-1962-2-0	HOUSING			
22	5-1962-1-0	HOUSING			
21	1570307-2	CABLE ASSY			
20	582384-9	SOCKET			
19	1270062-1	CKT BOARD			
18	1270060-1	CABLE ASSY			
17	1270061-1	CKT BOARD			
16	2551030-190	CONNECTOR			
15	SF-1030-8X	CABLE			
14	5-1965-1	SWITCH-KEYING			
13	3421-0000	SOCKET			
12	1570307-1	CONNECTOR ASSY			
11	1570308-1	CABLE ASSY			
10	7271-8-3	CIRCUIT BREAKER			
9	305-4304	PITCH TRIM SW			
8	5-1695-2	SWITCH (TRIM DE ENGAGE)			
7	6A1502-0101	TRIM MOTOR			
6	5-1637-1	HOUSING PIN			
5	5-1637-2	HOUSING PLUG			
4	1CS-20B	CLUTCH			
3	5-1640-6	HOUSING			
2	5-1641-6	HOUSING			
1	6A1003-0101	TRIM REGULATOR			

ITEM NO	PART NO.	DESCRIPTION	REVISION	DATE	APPRO
26	5-1360-5L	CIRCUIT BREAKER			
25	5-1960-2-0	HOUSING			
24	5-1960-1-0	HOUSING			
23	5-1962-2-0	HOUSING			
22	5-1962-1-0	HOUSING			
21	1570307-2	CABLE ASSY			
20	582384-9	SOCKET			
19	1270062-1	CKT BOARD			
18	1270060-1	CABLE ASSY			
17	1270061-1	CKT BOARD			
16	2551030-190	CONNECTOR			
15	SF-1030-8X	CABLE			
14	5-1965-1	SWITCH-KEYING			
13	3421-0000	SOCKET			
12	1570307-1	CONNECTOR ASSY			
11	1570308-1	CABLE ASSY			
10	7271-8-3	CIRCUIT BREAKER			
9	305-4304	PITCH TRIM SW			
8	5-1695-2	SWITCH (TRIM DE ENGAGE)			
7	6A1502-0101	TRIM MOTOR			
6	5-1637-1	HOUSING PIN			
5	5-1637-2	HOUSING PLUG			
4	1CS-20B	CLUTCH			
3	5-1640-6	HOUSING			
2	5-1641-6	HOUSING			
1	6A1003-0101	TRIM REGULATOR			

ITEM NO	PART NO.	DESCRIPTION	REVISION	DATE	APPRO
26	5-1360-5L	CIRCUIT BREAKER			
25	5-1960-2-0	HOUSING			
24	5-1960-1-0	HOUSING			
23	5-1962-2-0	HOUSING			
22	5-1962-1-0	HOUSING			
21	1570307-2	CABLE ASSY			
20	582384-9	SOCKET			
19	1270062-1	CKT BOARD			
18	1270060-1	CABLE ASSY			
17	1270061-1	CKT BOARD			
16	2551030-190	CONNECTOR			
15	SF-1030-8X	CABLE			
14	5-1965-1	SWITCH-KEYING			
13	3421-0000	SOCKET			
12	1570307-1	CONNECTOR ASSY			
11	1570308-1	CABLE ASSY			
10	7271-8-3	CIRCUIT BREAKER			
9	305-4304	PITCH TRIM SW			
8	5-1695-2	SWITCH (TRIM DE ENGAGE)			
7	6A1502-0101	TRIM MOTOR			
6	5-1637-1	HOUSING PIN			
5	5-1637-2	HOUSING PLUG			
4	1CS-20B	CLUTCH			
3	5-1640-6	HOUSING			
2	5-1641-6	HOUSING			
1	6A1003-0101	TRIM REGULATOR			

FORM NO. 80218

CONTRACT NO. COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS

TITLE WIRING DIAGRAM - ELECTRIC ELEVATOR TRIM (OPT)

DESIGN H WISE 3-2-73

DRAWN J YOUJEL 2-28-74

CHECK R. YOUNGER 3-2-73

STRESS

PROJ BERGMAN 3-3-73

APPD J MGR

OTHER

SCALE: NONE U206

PAGE: 14.7.0

CSSTRA AIRCRAFT CO.

WIRING DIAGRAM - ELECTRIC ELEVATOR TRIM (OPT)

DESIGN H WISE 3-2-73

DRAWN J YOUJEL 2-28-74

CHECK R. YOUNGER 3-2-73

STRESS

PROJ BERGMAN 3-3-73

APPD J MGR

OTHER

SCALE: NONE U206

PAGE: 14.7.0

CSSTRA AIRCRAFT CO.

WIRING DIAGRAM - ELECTRIC ELEVATOR TRIM (OPT)

DESIGN H WISE 3-2-73

DRAWN J YOUJEL 2-28-74

CHECK R. YOUNGER 3-2-73

STRESS

PROJ BERGMAN 3-3-73

APPD J MGR

OTHER

SCALE: NONE U206

PAGE: 14.7.0

CSSTRA AIRCRAFT CO.

WIRING DIAGRAM - ELECTRIC ELEVATOR TRIM (OPT)

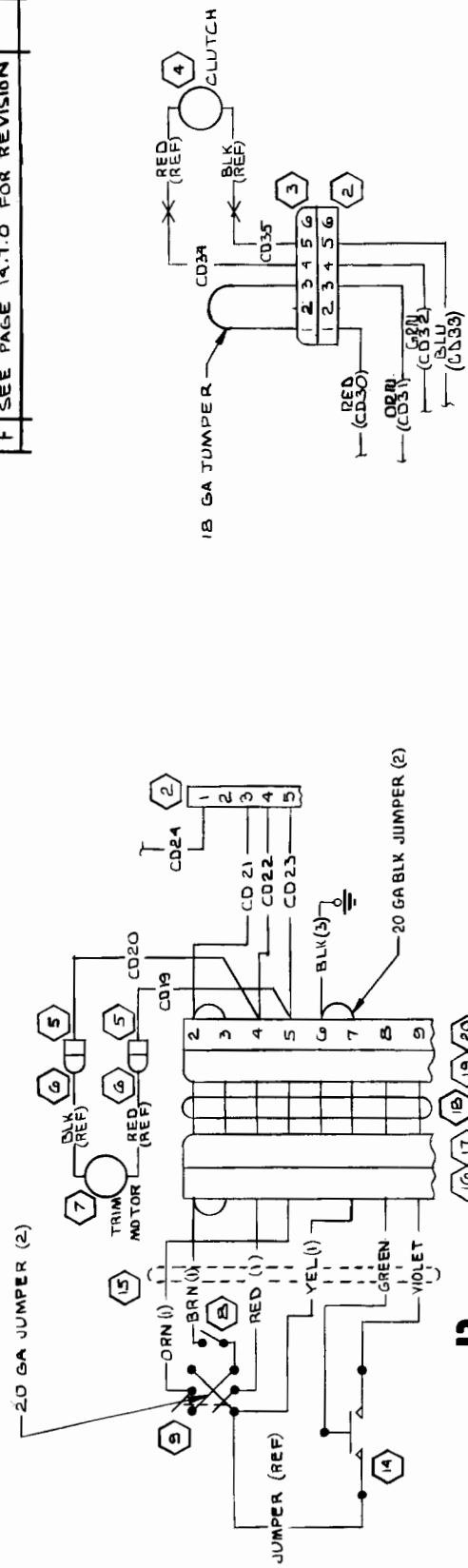
DESIGN H WISE 3-2-73

DRAWN J YOUJEL 2-28-74

CHECK R. YOUNGER 3-2-73

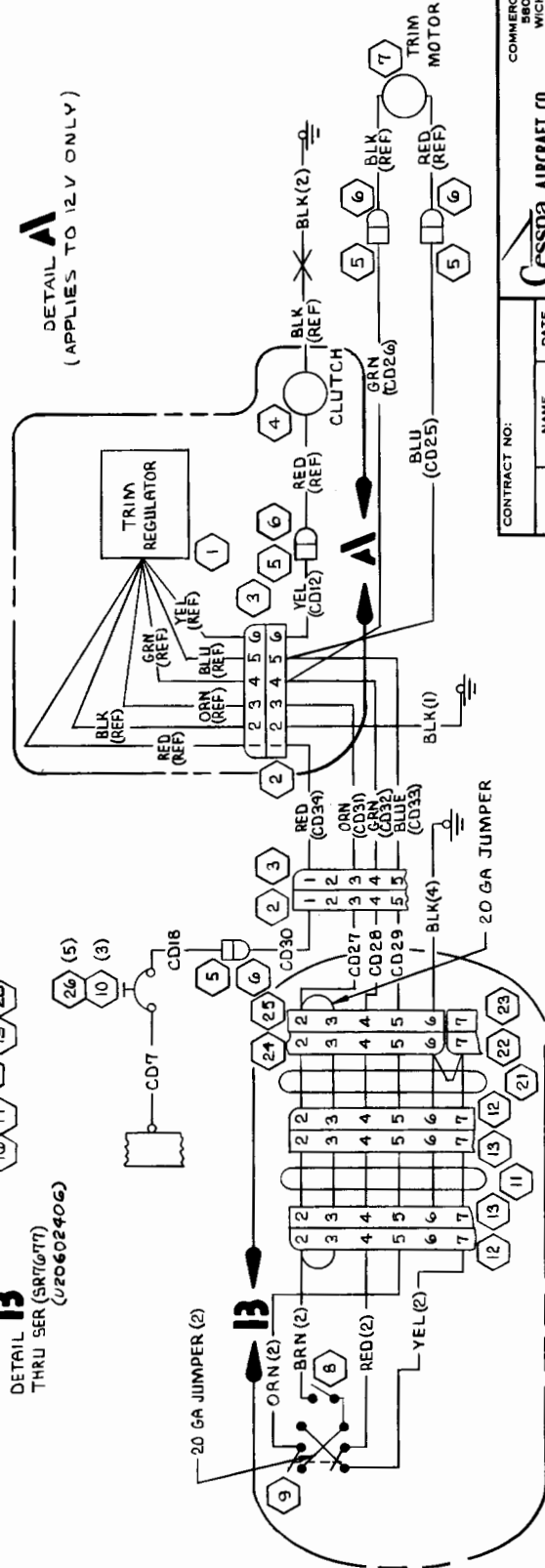
STRESS

REVISIONS		DATE	APPROVED
LTR	DESCRIPTION		
F	SEE PAGE 14.T.O FOR REVISION		



IB
 DETAIL
 THRU SER (SR7(077))
 (020602406)

AI
 DETAIL
 (APPLIES TO 12V ONLY)

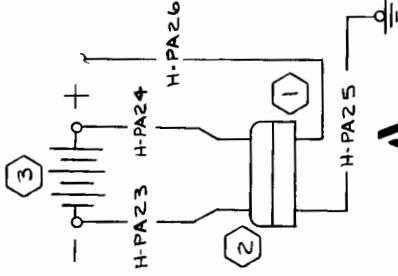
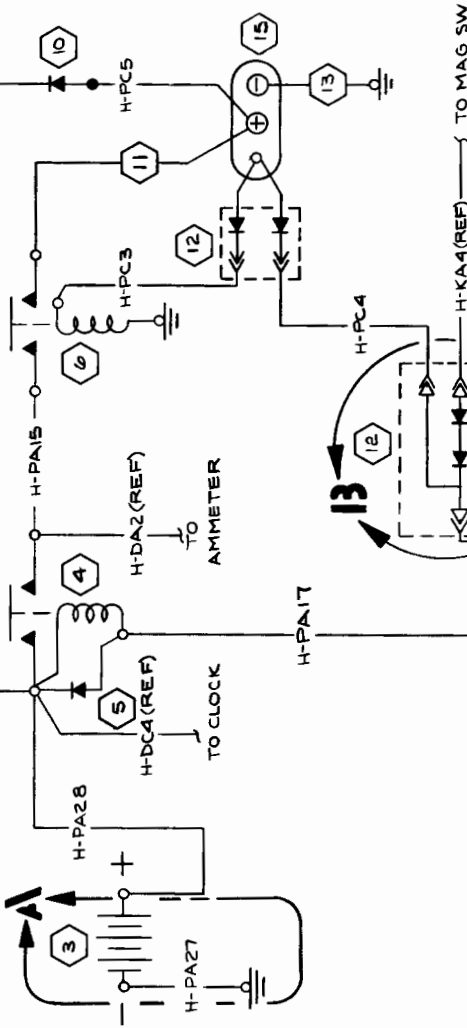


CONTRACT NO:		NAME	DATE
DESIGN		GROUP	11-29-73
DRAWN		SWANSON	11-20-73
CHECK		J. JOUDEL	11-20-73
STRESS			
PROJECT			11-19-73
APPD			
TITLE		WIRING DIAGRAM	
ELECTRIC ELEVATOR TRIM		(OPT)	
SIZE	CODE IDENT.	DWG NO.	
C	71379	1270625	
SCALE:	NONE	U.Z.O.G	PAGE: 14.7.1

CASSINA AIRCRAFT CO.
 COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS

FORM NO. 80-218

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD DETAIL A', PAZ7, PAZ8 SER; SER OUT PAZ3, PAZ4, PAZ5, PAZ6, MS25182-2 & 0570052-2 SER U20601701		RAM 6-10-73	DLP 7/10 AGC 10.9
B	BY REV: ADD DETAIL "B" & SER (SRB259)		RS 6-12-75	CSY/BJB 1/18 10.9

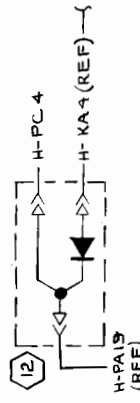


DETAIL A
THRU SER U20601700

WIRE CODE NO.	MATERIAL	LG	TERMINALS	SERIALS
H-PA28 2	S-13677B S-13677A	2		SER U20601701 ON
H-PA27 2	S-13677B S-13677A	2		SER U20601701 ON
H-PC7 18	SOLDER S-13677B	18		
H-PC5 18	S-13677B SOLDER	18		
H-PC4 18	S-1493-1 S-1493-1	18		
H-PC3 18	S-13677B S-1493-1	18		
H-PA15 2	S-1606-1 S-13677B	2		THRU SER U20601700
H-PA26 2	S-13677B S-13677B	2		
H-PA25 2	S-13677B S-13677B	2		
H-PA24 2	S-13677B S-13677B	2		
H-PA23 2	S-13677B S-13677B	2		THRU SER U20601700
H-PA11 18	S-1493-1 S-1493-1	18		
H-PA10 18	S-13677B S-13677B	18		

CONTRACT NO.	NAME	DATE	TITLE
	CSSSNA AIRCRAFT CO.	3-11-70	WIRING DIAGRAM -- BATTERY & EXTERNAL POWER SYSTEMS, OPT 24 VOLT
DESIGN	SHERRILL	3-11-70	
GROUP	R. YOUNGERS	3-10-70	
DRAWN	R. YOUNGERS	2-4-70	
CHECK	HARRIS	2-6-70	
STRESS			
PROJECT			
APPD	R. YOUNGERS	2-12-70	

VENDOR	PART NO.	DESCRIPTION
		EQUIPMENT TABLE
		SUPERSEDES: 12205-1000
		SUPERSEDED BY: S-XXX OR CXXXX-CESSNA

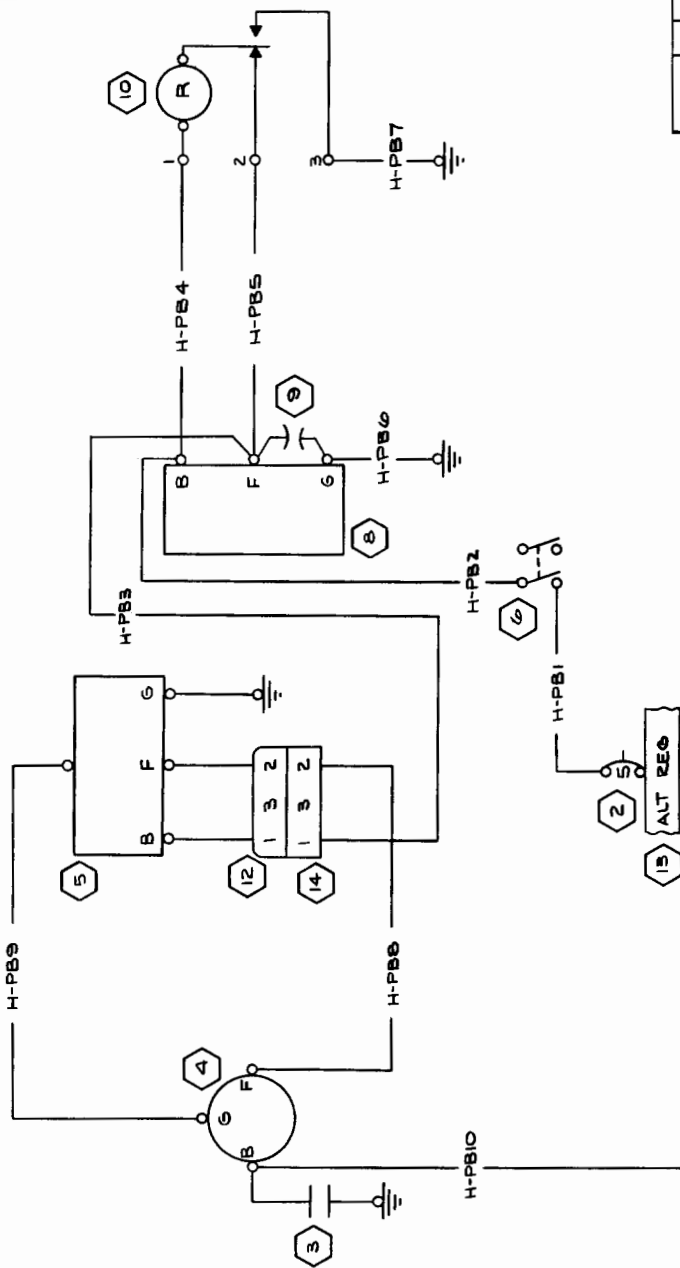


DETAIL B
THRU SER (SRB259)
(U20603020)

FORM NO. 80-101A
SCALE: NONE U206
ED APR 10 1967 (SR6546)
PAGE: 4/13

LET	REVISION	DATE	APPRO
	DESCRIPTION		

INACTIVE
 SEE THE SERIAL 2060219
 4-23-75
 W. H. H.



WIRE CODE NO.	MATERIAL	GA	TERMINALS	SERIALS
H-PB10	S-1367-4	12	S-1367-4-12	
H-PB9	S-1367-3	10	S-1367-3-10	
H-PB8	S-1367-1	10	S-1367-1-10	
H-PB7	S-1367-6	18	S-1367-6-18	
H-PB6	S-1367-6	18	S-1367-6-18	
H-PB5	S-1367-6	18	S-1367-6-18	
H-PB4	S-1367-6	18	S-1367-6-18	
H-PB3	S-1367-6	18	S-1367-6-18	
H-PB2	S-1493-1	18	S-1493-1-18	
H-PB1	S-1367-10	18	S-1367-10-18	
ZG				

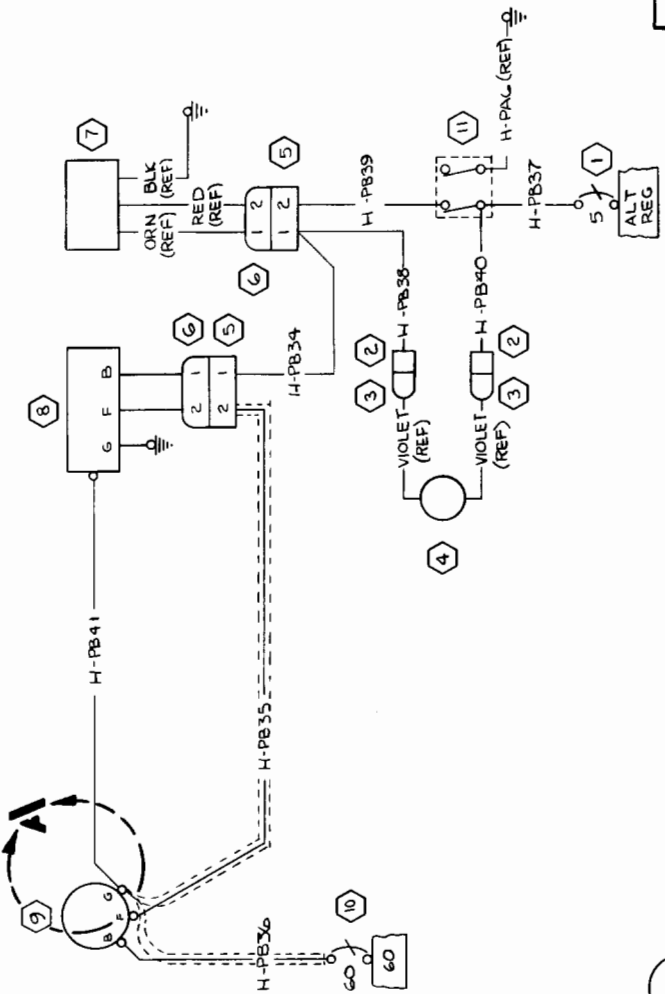
CONTRACT NO.		NAME		DATE	
Cessna Aircraft Co.		R. Youngers		3-12-70	
DESIGN		GROUP		DRAWN	
ALTERNATOR SYSTEM 60 AMP, OPT 24 VOLT		HARRIS		2-4-70	
CHECK		HARRIS		1-6-70	
STRESS					
PROJECT		APPRO		SIZE	
1270625		C		71379	
SCALE: NONE		U206		PAGE: 4.8.1	

PART NO.	DESCRIPTION	VENDOR
14	S-1638-2	PLUG
13	0713854-3	BUS BAR
12	S-1638-2	CAP
11	0713854-2	BUS BAR
10	VMS11M-GPS	OVERVOLT LIGHT (B7034)
9	TVA-1315	FILTER CAP (54289)
8	RBM138-3	OVERVOLT RELAY (RBM)
7	S-1994-1-1	SWITCH
6	G61002-0108	REGULATOR ASSY
5	G6115003-0102	ALTERNATOR ASSY
4	S-1915-1	CAPACITOR
3	S-1360-5	CIRCUIT BREAKER
2	S-1596-60	CIRCUIT BREAKER

EQUIPMENT TABLE	
CES-1000	IS APPLICABLE
VENDOR CODES PER S-1400	12705-406
CES-XXXX-CESNA SPEC. NO.	
S-XXX OR CMXXXX-CESNA	
STD. NO.	P 4.8.4

COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS
 WIRING DIAGRAM -
 ALTERNATOR SYSTEM 60 AMP,
 OPT 24 VOLT
 DWG NO. 1270625
 C 71379
 NONE U206
 ED 4 R 10367 (SR6546)
 SCALE: 4.8.1

LET	DESCRIPTION	DATE	APPRO
A	BY REV: ADD DETAIL "A", PB41 SER: (SR7639) SER OUT PB33 (SR7639)	RAM 7-31-73	D. L. ... 7/31/73



DETAIL A
THRU SER (SR7639)

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-PB41	Ø	S-1562-B-9		S-1943-3	S-1367-4-12
H-PB40	20			S-1636-1	S-1493-1
H-PB39	20			S-1636-1	PB33
H-PB36	20			S-1943-1	S-1367-4-10
H-PB37	20			S-1636-1	S-1493-1
H-PB34	20			S-1636-1	S-1367-4-10
H-PB33	10			S-1943-3	S-1367-4-10
THRU SER (SR7639)					

WIRE TABLE		CONTRACT NO.		TITLE	
NAME	DATE	NAME	DATE	NAME	DATE
DESIGN WHITE	1-17-73	Cessna, AIRCRAFT CO.		WIRING DIAGRAM -	
DRAWN WHITE	4-27-73			ALTERNATOR SYSTEM,	
CHECK R. NOVAK/GEES	4-27-73			60 AMP, 24 V	
STRESS C. Payne	10 Aug 73				
PROJ B. Payne	4-18-73				
APPRO Payne					
OTHER					

PART NO.	DESCRIPTION
11	S-1944-1-1 SWITCH
10	S-1596-60L CKT BKR
9	CG11903-0102 ALTERNATOR ASSY
8	CG11002-0105 REGULATOR ASSY
7	0353 OVERVOLT UNIT
6	S-1638-2 HOUSING
5	S-1638-1 HOUSING
4	S-2135-2 LIGHT ASSY
3	S-1637-1 HOUSING
2	S-1637-2 HOUSING
1	S-1360-5L CKT BKR

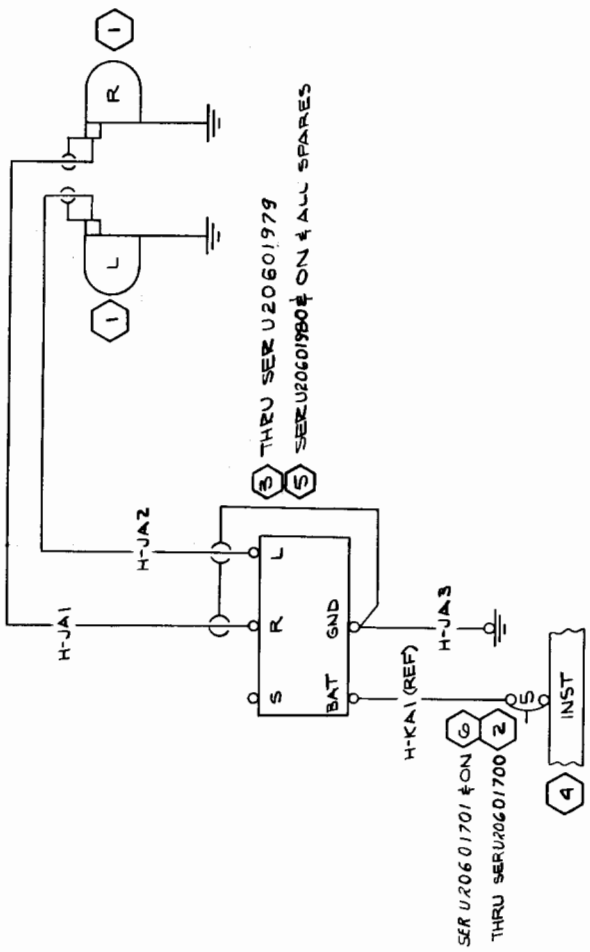
EQUIPMENT TABLE
 SUPERSEDES:
 P 4, B, 1
 SUPERSEDED BY:
 CES-1000 IS APPLICABLE
 VENDOR CODES PER S-1400
 CES-XXXX-CCESSNA
 S-XXX OR CXXXX-CCESSNA
 STD. NO.

COMMERCIAL AIRCRAFT DIV.
 9800 E. PAWNEE
 WICHITA, KANSAS

SCALE: NONE (SR7639) PAGE: 4, B, 4

SIZE CODE IDENT. DWG NO
 C 71379 -1270625

LET	REVISION	DATE	APPD
A	REV: SER OUT C292501-0101; SER IN C292501-0105; SER OUT S-1360-10, SER IN S-1360-10L (SRT176), (SRT616) II (REF)	REV LW 3-1-72 M/W	OPD



NOTES:

1 TERMINATE SHIELDS ON JAI & JAZ WIRES AT THE SWITCH WITH S-1367-2-G TERMINALS & CONNECT TO GND TERMINAL ON SWITCH

2 USE S-1367-1-10 ON HOT LEAD & S-1367-3-10 ON SHIELD

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-JAZ 1B				S-1367-1-6 S-1367-1-8	
H-JAZ 1B				S-1367-1-4	
H-JAZ 1B				S-1367-1-6	

CONTRACT NO.	NAME	DATE
	HENSHAW	3-11-70
	YOUNGERS	3-10-70
	YOUNGERS	2-4-70
	HARRIS	2-6-70

DESIGN	GROUP	DRAWN	CHECK	STRESS
(09033)				
VENDOR				

PART NO.	DESCRIPTION
	EQUIPMENT TABLE

WIRE CODE NO.	DESCRIPTION
6	S-1360-5L CIRCUIT BREAKER
5	C292501-0105 IGNITION SWITCH
4	0113554-2 BUS BAR
3	C292501-0101 MAGNETO SW
2	S-1360-5 CIRCUIT BREAKER
1	SLICK #662 MAGNETO

PROJECT	DATE
12205-406	3-17-70

APPROVED BY	DATE
YOUNGERS	3-17-70

SIZE	CODE IDENT. NO.	DWG NO.
C	71379	1270625

SCALE	PAGE NO.
NONE	U206

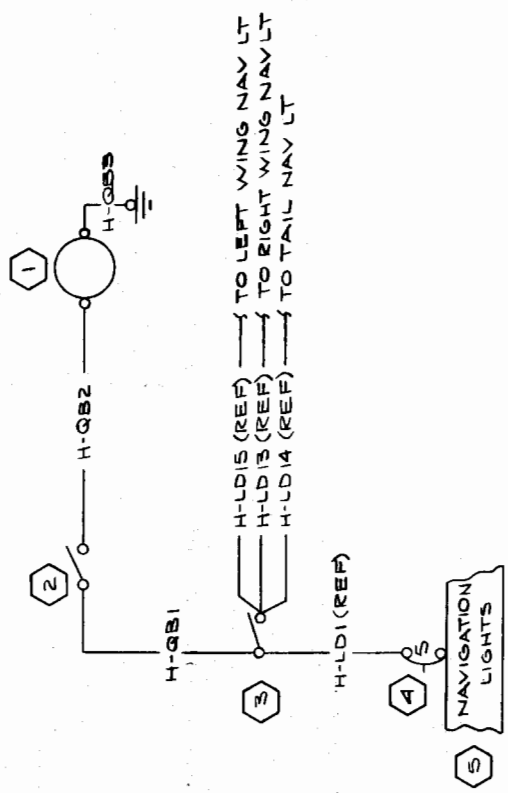
COMMERCIAL AIRCRAFT DIV.
5800 E. PAWNEE
WICHITA, KANSAS

Cessna AIRCRAFT CO.

WIRING DIAGRAM -
IGNITION SYSTEM, OPT 24 VOLT

ED#R10367 (SR6546)

REVISION	DESCRIPTION	DATE	APPD
LET			



H-LD15 (REF) → TO LEFT WING NAV LT
 H-LD13 (REF) → TO RIGHT WING NAV LT
 H-LD14 (REF) → TO TAIL NAV LT

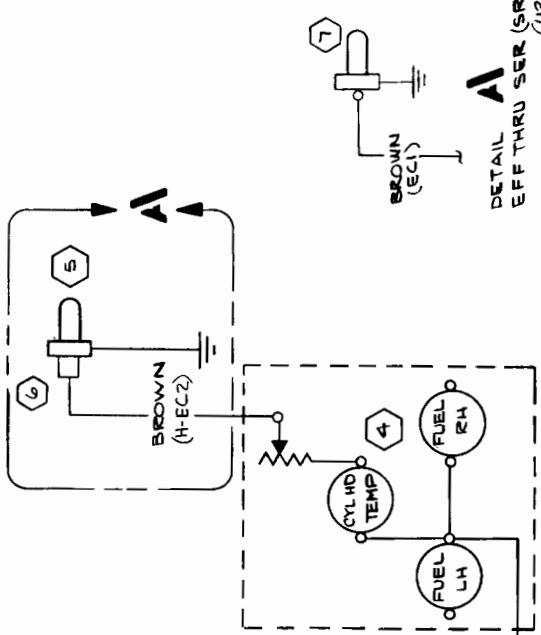
WIRE TABLE	CONTRACT NO.	NAME	DATE	DESIGN	DRAWN	CHECK	STRESS	PROJECT	APPD
H-QB3 1B		J. HENSINAW	3-11-70						
H-QB2 1B									
H-QB1 1B									
CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS				

WIRE TABLE		CONTRACT NO.		NAME		DATE		DESIGN		DRAWN		CHECK		STRESS		PROJECT		APPD	
		COMMERCIAL AIRCRAFT DIV.		CESSNA AIRCRAFT CO.		3-11-70		HENSINAW		RYOUNGERS		HARRIS		RYOUNGERS		RYOUNGERS		RYOUNGERS	
		9800 E. PAWNEE		WICHITA, KANSAS		3-10-70		2-4-70		2-6-70		2-6-70		2-6-70		2-6-70		2-6-70	
		TITLE		WIRING DIAGRAM -		OIL DILUTION SYSTEM, OPT		24 VOLT											
		SIZE		CODE IDENT.		DWG NO.		C		71379		1270625							
		SCALE: NONE		U206		PAGE: 7, 9, 1													

PART NO.	DESCRIPTION	EQUIPMENT TABLE
5 071354-2	BUS BAR	
4 S-1360-5	CIRCUIT BREAKER	
3 S-1B45-1-2	SWITCH	
2 S-1B45-2-2	SWITCH	
1 ANA07B-1	OIL DIL VALVE	

SUPERSEDES:
 CES-1000 IS APPLICABLE
 VENDOR CODES PER S-1400
 CES-XXXX-CESNA SPEC. NO.
 S-XXX OR CMXXXX-CESNA
 STD. NO.

LET	REVISION DESCRIPTION	DATE	APPD
A	BY REV: ADDED H-EC1 (SR74-03) IS	RAM 8-10-72	RAM
B	BY REV: SER OUT EC1 & S-1372-1, SER IN EC2 & S-1372-2, ADD DETAIL A, NOTE 2 (SR8085)	RAM 11-12-74	RAM



DETAIL A
EFF THRU SER (SR8085)
(U20602724)

- NOTES:**
- ① PART NO. 110691, (12984)
 - ② CRIMP S-1636-5 TERMINAL AROUND WIRE INSULATION, BEND .25 OF STRIPPED WIRE BACK OVER CRIMP & SOLDER PER CES 1040. USE MOLEX HT-1719-C CRIMPING TOOL ONLY

WIRE NO.	TERMINALS	LG	MATERIAL	SERIALS
1	18-18-4	18	S-1372-1-B	SER (SR8085) THRU SER (SR8085)
2	19	19	S-1372-1-B	SER (SR8085) THRU SER (SR8085)
3				
4				
5				
6				
7				

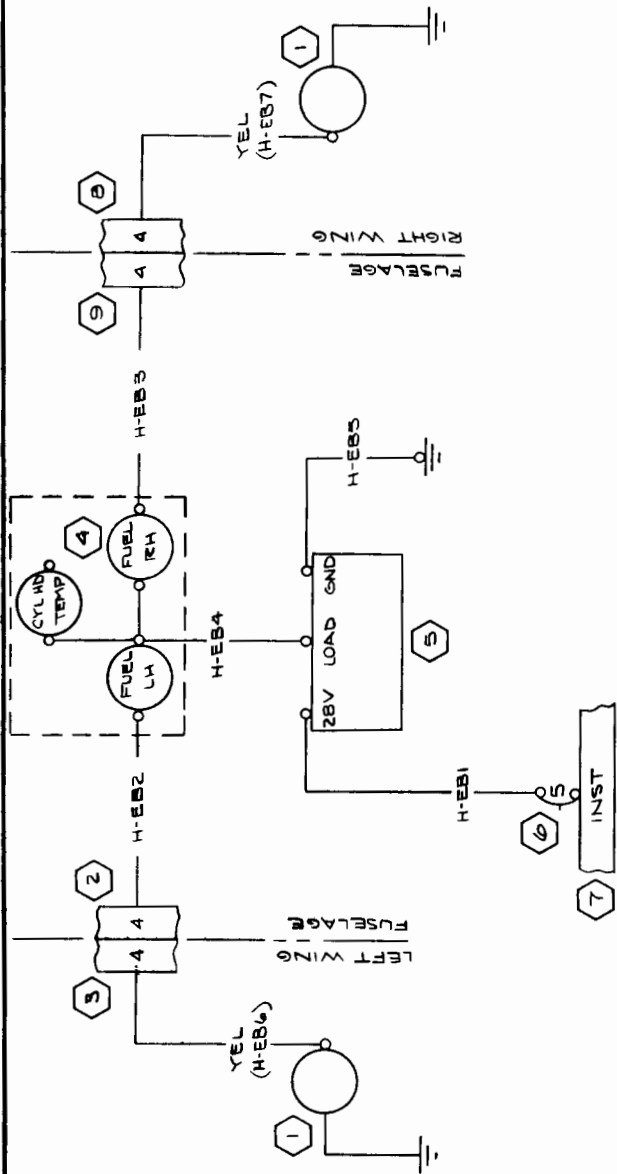
CONTRACT NO.	NAME	DATE
	J. HENSHAW	3-11-70
	R. YOUNGERS	3-10-70

DESIGN	GROUP	DRAWN	CHECK	STRESS
0713854-2	S-1372-2	R. YOUNGERS		
0510409-1	S-1372-2	R. YOUNGERS		

PROJECT	APPD	SIZE	CODE IDENT	DWG NO.
12205-406	R. YOUNGERS	C	71379	1270625

SCALE	PAGE
NONE	1206

LET	REVISION	DATE	APPD
A	BY REV: H-EB3 WAS H-EB2 & H-EB2 WAS H-EB3 IN FIELD ED & ER 10040 (SR6546)	5-11-70	LWJ
B	BY REV: ADDED H-EB6 & H-EB7 (SR7403) II	RAM 8-10-73	WJW
C	BY REV: ADD 5-1640-12, 5-1641-12, 5-1640-6 & 5-1641-6 & WIRE LENGTHS; PIN 4 WAS PIN 6/LH & PIN 2/RH; 5-1367-1-10 WAS 5-1367-1-6/EB2 MER ED 393 (NOW SHOP PRACTICE)	5-10-74	WJW



WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
YELLOW (H-EB7)	18	-18-4	5-1635-1	5-1367-10	
YELLOW (H-EB6)	18	-18-4	5-1635-1	5-1367-10	
H-EB5	18		50	5-1493-1	5-1367-1-8
H-EB4	18		50	5-1493-1	5-1367-1-6
H-EB3	18		60	5-1371-6	5-1634-1
H-EB2	18		152	5-1367-10	5-1634-1
H-EB1	18		6	5-1367-1-6	5-1493-1

CONTRACT NO.		TITLE	
NAME	DATE	DESIGN	DATE
J. HENSING	3-11-70	7-11-66	3-10-70
R. YOUNGERS	2-4-70		
HAREIS	2-6-70		
	2-12-70		
	3-1-70		

EQUIPMENT TABLE	
PART NO.	DESCRIPTION
9	5-1641-12 HOUSING-SOCKET
8	5-1640-12 HOUSING-PIN
7	0713854-2 BUS BAR
6	5-1360-5 CIRCUIT BREAKER
5	0570409-1 HEAT SINK ASSY
4	669502-002 INST CLUSTER
3	5-1640-6 HOUSING-PIN
2	5-1641-6 HOUSING-SOCKET
1	0726110-1 XMTR-FUEL LEVEL

SIZE	CODE IDENT.	OWG NO.
C	71379	1270625
SCALE: NONE 1:200		

COMMERCIAL AIRCRAFT DIV.
5800 E. PAWNEE
MICHITA, KANSAS

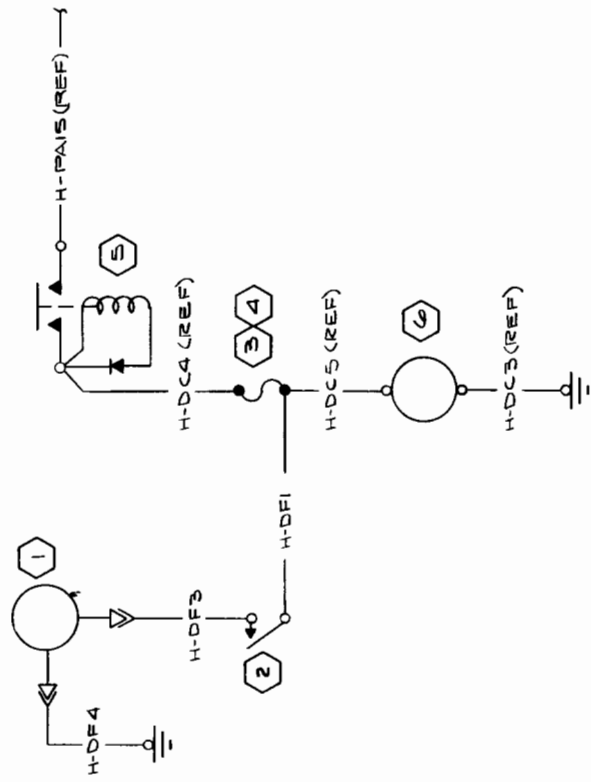
Cessna AIRCRAFT CO.

WIRING DIAGRAM -
FUEL QUANTITY INDICATOR,
OPT 24 VOLT

FORM NO. 80-511A

ED & RR 10367 (SR6546) PAGE: 8-2-1

REV	DESCRIPTION	DATE	APPD

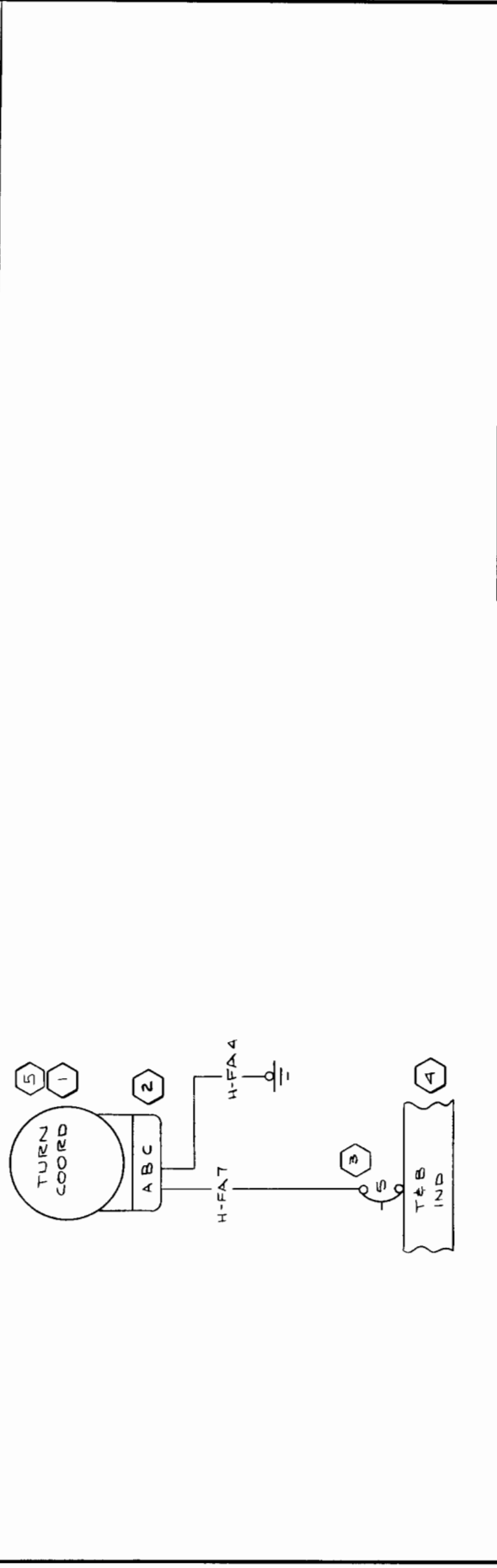


CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-DF4	1B	S-1361-1-1361-1-4			
H-DF3	1B	S-1361-1-6S-1361-1-4			
H-DF1	1B	S-1361-1-4SOLDER			

CONTRACT NO.		COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS	
DESIGN	NAME	DATE	TITLE
GROUP	J. HENSHAW	3-11-79	WIRING DIAGRAM -
DRAWN	R. YOUNGERS	2-4-70	HOURLY METER, OPT 24 VOLT
CHECK	HARRIS	2-10-70	
STRESS			
PROJECT	75-1	2-11-79	SIZE
APPD	R. YOUNGERS	2-10	CODE IDENT. NO.
			C 71379
			DWG NO.
			1270625
			SCALE NONE
			1:200
			PAGE 5-3-1

6	S-1317N2	CLOCK
5	S-1580-1	BAT. CONTACTOR
4	S-1090-22	FUSEHOLDER
3	S-1091-1	FUSE
2	S-1711-1	OIL PRESS. SW
1	C664501-001	HOURLY METER
EQUIPMENT TABLE		
SUPERSEDES:		
12205-406		
SUPERSEDED BY:		
CES-1000 IS APPLICABLE		
VENDOR CODES PER S1400		
CES-XXXX-CESNA SPEC. NO.		
S-XXX OR CXXXX-CESNA		
STD. NO.		

REVISION			
LET	DESCRIPTION	DATE	APPD
A	BYREV: ADD 5-1303-2 TURN & BANK TO TITLE; C661003-0502 WAS C661003-0502 (SR 7403)(REF) (MER 206-E0103)	MEM 2-7 1954	DMW



WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-FAA	1B	S-1367-1-14 SOLDER			
H-FAT	1B	S-1367-1-8 SOLDER			

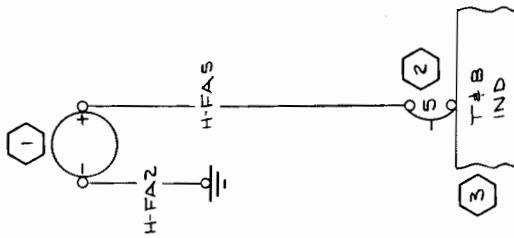
CONTRACT NO.		COMMERCIAL AIRCRAFT DIV. 5600 E. PAWNEE WICHITA, KANSAS	
DESIGN	NAME	DATE	TITLE
J. HENSINUM	J. HENSINUM	5-11-50	WIRING DIAGRAM - TURN COORDINATOR, TURN & BANK, OPT 24 VOLT
GROUP	R. YOUNGERS	2-4-70	
DRAWN	V. WEELS	2-6-70	
CHECK			
STRESS			
PROJECT			
APPD	R. YOUNGERS	2-11-50	
SIZE	CODE IDENT.	DWG NO.	
C	C	71379	1270625
SCALE: NONE		U206	PAGE: 3.4.1

5-1303-2	INDICATOR-T4B
4	BUS BAR
3	CKT BKR
2	CONNECTOR
1	TURN COORDINATOR
EQUIPMENT TABLE	
SUPERSEDES: 12205-406	
SUPERSEDED BY:	

FORM NO. 80-110A

ED 4 R 10367 (SR 6546)

LET	REVISION DESCRIPTION	DATE	APPD



VFA

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-FAZ 1B				S-1367-185-1367-18	
H-FAS 1B				S-1367-185-1367-18	

WIRE TABLE

CONTRACT NO. _____

NAME DATE
 J HENSHAW 3-11-70
 R. YOUNGERS 2-4-70

DESIGN TITLE
 HENSHAW WIRING DIAGRAM -
 R. YOUNGERS TURN# BANK, OPT 24 VOLT

DRAWN CHECK
 R. YOUNGERS HARRIS 1-6-70

PROJECT STRESS
 R. YOUNGERS 3-12-70

APPD DWG NO.
 R. YOUNGERS 1270625

CESSNA AIRCRAFT CO.
 COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS

WIRING DIAGRAM -
 TURN# BANK, OPT 24 VOLT

SCALE: NONE U206
 PAGE: 9.5.1

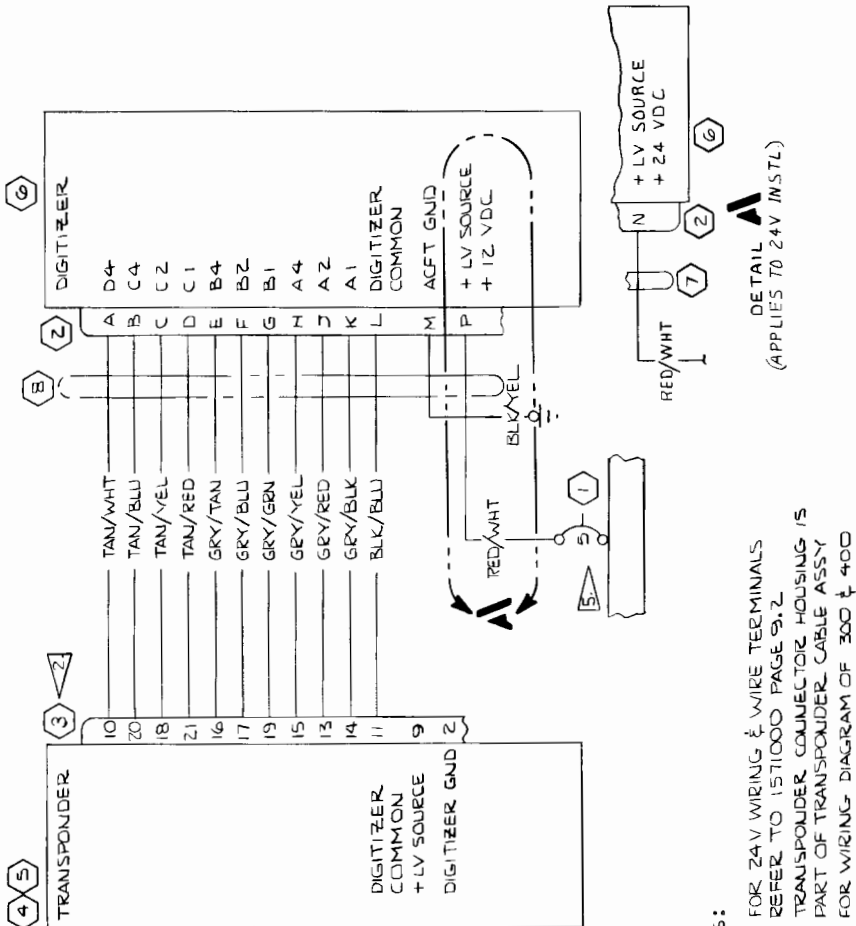
PART NO.	DESCRIPTION	VENDOR
07138-54-3	BUS BAR	
S-1360-5	CIRCUIT BREAKER	
S-1303N1	INDICATOR-T#B	

EQUIPMENT TABLE

CES-1000 IS APPLICABLE
 VENDOR CODES PER S-1400
 CES-XXXX-CESSNA SPEC. NO.
 S-XXX OR CMXXXX-CESSNA
 STD. NO.

SUPERSEDED BY:
 12205-406

REVISION			
LET	DESCRIPTION	DATE	APPD
A	BY REV: ADD NOTE NO. 5; DELETE TURN COORDINATOR FROM BUS BAR; ADD (SR 7922) (SR 7922)	MEM 3-5-74	WLD BVM



- NOTES:
1. FOR 24V WIRING & WIRE TERMINALS REFER TO 151000 PAGE 9.2
 2. TRANSPONDER CONNECTOR HOUSING IS PART OF TRANSPONDER CABLE ASSY
 3. FOR WIRING DIAGRAM OF 300 & 400 TRANSPONDER REFER TO 3920143
 4. PINS ARE CRIMP TYPE & VENDOR FURNISHED WITH CONNECTOR
 5. ATTACH BOTH TRANSPONDER AND ENCODING ALTIMETER TO NO 4 RADIO CIRCUIT BREAKER.

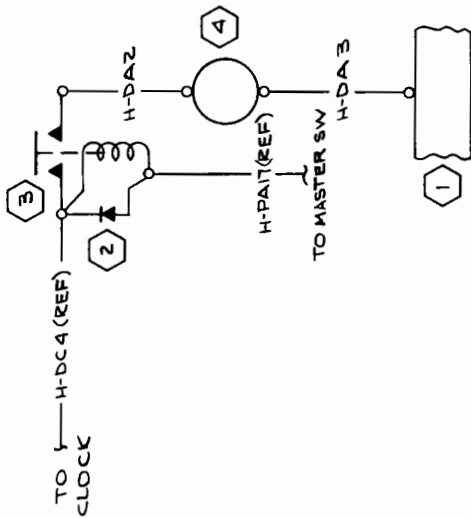
WIRE NO.	WIRE CODE	NO.	MATERIAL	LG	TERMINALS	SERIALS
RED/WHT	20	-20-2-9			5-1367-1-B	4
BLK/YEL	22	-22-0-4			5-1367-1-B	
BLK/BLU	22	-22-0-6			5-2190-1	
GRY/BLK		-22-B-0				
GRY/RED		-22-B-2				
GRY/YEL		-22-B-4				
GRY/GRN		-22-B-5				
GRY/BLU		-22-B-6				
GRY/TAN		-22-B-10				
TAN/YEL		-22-10-4				
TAN/RED		-22-10-2				
TAN/BLU		-22-10-6				
TAN/WHT	22	-22-10-9			5-2190-1	4
WIRE NO.	8A					

CONTRACT NO.		NAME		DATE	
CCSSNA AIRCRAFT CO.		J. YOUEL		11-9-73	
DESIGN	GROUP	DRAWN	CHECK	STRESS	APPROV
	DL COLLER	J. YOUEL			
TITLE					
WIRING DIAGRAM - ENCODING ALTIMETER (12 & 24 VOLT)					
SIZE	CODE IDENT.	DWG NO			
C	71379	1270625			
SCALE: NONE		PAGE: 9-7			

PART NO.	DESCRIPTION
1570312-3	CABLE ASSY
1570312-1	CABLE ASSY
EA-401A	ALT DIGITIZER
RT-359A	TRANSPONDER
RT-459A	TRANSPONDER
S-2189-1	CONNECTOR
42816	CIRCUIT BREAKER
S-1360-5L	CIRCUIT BREAKER

EQUIPMENT TABLE	
CES-1000 IS APPLICABLE	SUPERSEDED BY:
VENDOR CODES PER S-1000	
CES-XXXX-CESNA SPEC. NO.	
S-XXX OR CMXXXX-CESNA	
STD. NO.	

REVISION		DATE	APPD
LET	DESCRIPTION		



WIRE	LG	TERMINALS	SERIALS
H-DA3 B		S-1367-4-10S:1361-4-10	
H-DAZ B		S-1367-4-10S:1361-4-10	

CONTRACT NO.		NAME		DATE
		J. HENSHAW		1-11-70
DESIGN		H. W. YOUNGER		3-10-70
GROUP		HARRIS		2-4-70
DRAWN		HARRIS		2-9-70
CHECK		HARRIS		2-9-70
STRESS		HARRIS		2-12-70
PROJECT		HARRIS		3-2-70
APPD		HARRIS		3-2-70

PART NO.	DESCRIPTION	VENDOR
4	C66502-0202 INST CLUSTER	
3	S-1580-1 BAT. CONTACTOR	
2	0710728-1 DIODE ASSY	
1	0713554-2 BUS BAR	

EQUIPMENT TABLE	
CES-1000	IS APPLICABLE
VENDOR CODES PER S-1400	12205-406
CES-XXXX=CESNA SPEC. NO.	
S-XXX OR CMXXX=CESNA	
STD. NO.	

COMMERCIAL AIRCRAFT DIV.
5900 E. PAWNEE
WICHITA, KANSAS

Cessna AIRCRAFT CO.

TITLE
WIRING DIAGRAM -
AMMETER, OPT 24 VOLT

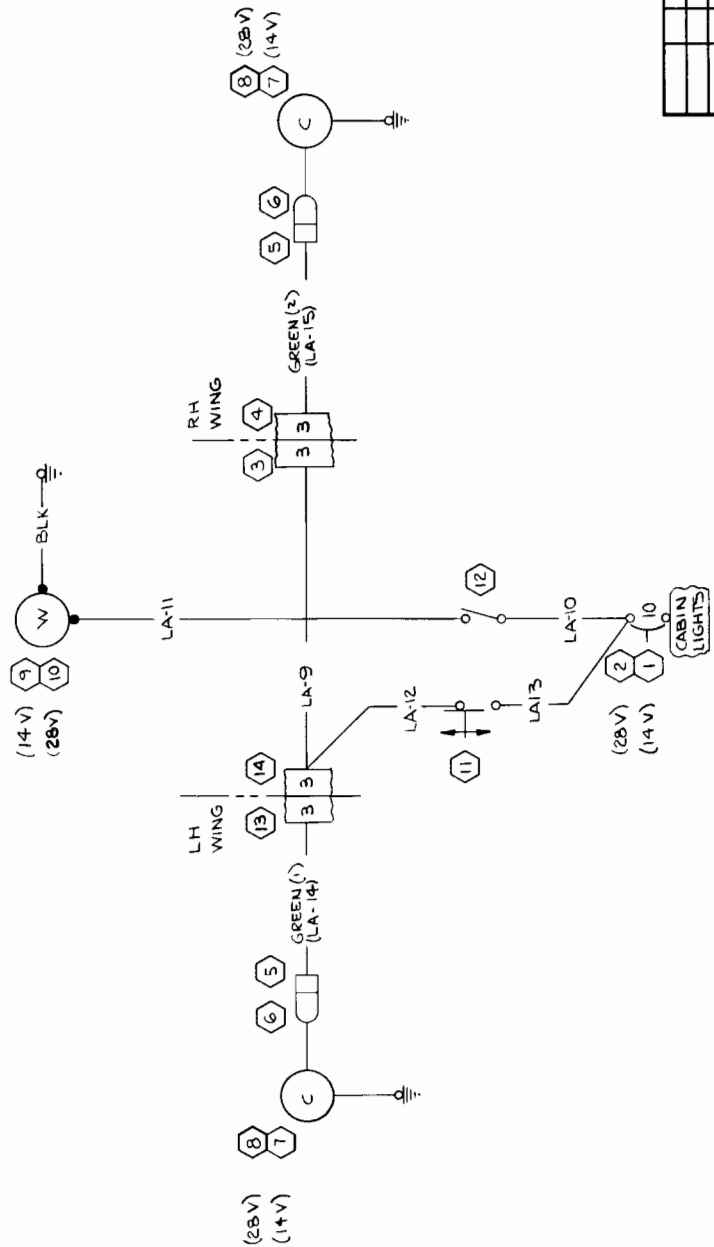
SCALE: NONE U206

SIZE CODE IDENT. DWG NO.
C 71379 1270625

PAGE: 10-11,2

EDARR 10367 (SR6546)

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV :	ADDED LA-14 & LA-15, LA-9 WAS LA13, LA13 WAS LA1 & S-1831-1 WAS 0713029-0 (SR 7402) IS	7-24-73	WLO MAG MAY 1973
B	BY REV :	ADD S-1640-6 & S-1641-6; PIN 3 WAS 7; S-1640-12 & S-1641-12 WAS S-1640-9 & S-1641-9 MER EO 593 (NOW SHOP PRACTICE)	12-10-74	WLO MAG MAY 1974



ITEM NO.	DESCRIPTION	QUANTITY	UNIT	WIRE NO.	TERMINALS	SERIALS
14	S-1641-6 HOUSING-SOCKET			BLK 18	-18-0	S-1327-8 SOLDER
13	S-1640-6 HOUSING-PIN			GREEN(2) 18	-18-5	S-1435-1 S-1636-1
12	S-2160-1 SWITCH			GREEN(1) 18	-18-5	S-1435-1 S-1636-1
11	S-1831-1 SWITCH			LA13		126 S-1367-14 S-1830-1
10	121010-2 LIGHT INSTL			LA12		54 S-1493-1 S-1830-1
9	121010-1 LIGHT INSTL			LA10		10 S-1493-1 SOLDER
8	GE 30B LAMP			LA9	18	126 S-1367-14 S-1493-1
7	MJ5584-2 LAMP			WIRE 18		72 S-1636-3 S-1636-2
6	S-1637-1 HOUSING			GREEN(1) 18		
5	S-1637-2 HOUSING					
4	S-1640-12 HOUSING-PIN					
3	S-1641-12 HOUSING-SOCKET					
2	S-1360-5L CKT BKR					
1	S-1360-10L CKT BKR					

WIRE TABLE

CONTRACT NO. _____

COMMERCIAL AIRCRAFT DIV.
5800-E, PAWNEE
WICHITA, KANSAS

Cessna AIRCRAFT CO.

TITLE: **WIRING DIAGRAM - DOME & COURTESY LIGHTS (14V & 28V)**

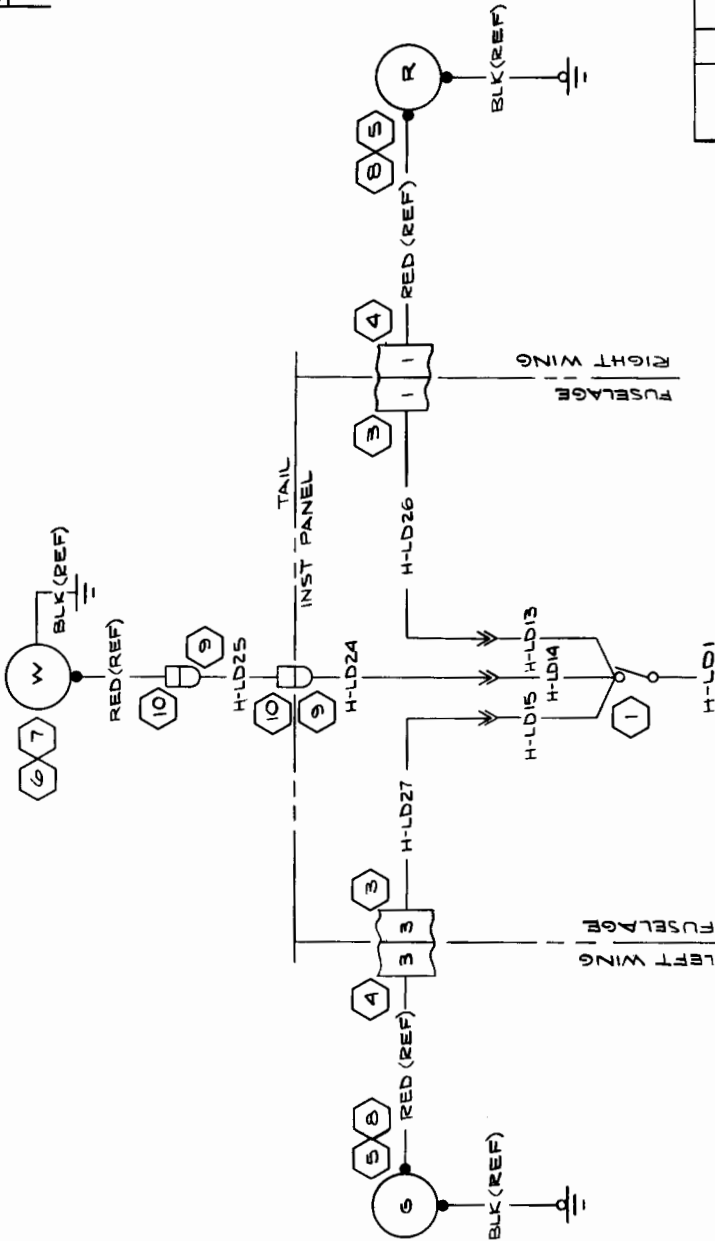
DESIGN: WHITE 1-4-73
 GROUP: H. W. W. 4-27-73
 DRAWN: WHITE 4-23-73
 CHECK: E. JOHNSON 4-21-73
 STRESS: C. B. H. 8/10/73

PROJ: 11.1 & 11.1
 APPD: WLO
 OTHER: _____

SIZE: C
 CODE IDENT: DWG NO. 71379
 PART NO. 1270625

SCALE: NONE SR 7403 IS PAGE: 11.2

REVISION	DESCRIPTION	DATE	APPD
LET			



WIRE	LG	MATERIAL	TERMINALS	SERIALS
H-LD25	18	S-1636-2	S-1635-1	
H-LD24	18	S-341-2	S-1635-1	
H-LD27	18	S-341-2	S-1636-2	
H-LD26	18	S-341-2	S-1636-2	
H-LD15	18	S-1493-1	S-341-2	
H-LD14	18	S-1493-1	S-341-2	
H-LD13	18	S-1493-1	S-341-2	
H-LD1	18	S-1367-1	S-1493-1	

CONTRACT NO.		COMMERCIAL AIRCRAFT DIV. 5800 E. PAVNREE WICHITA, KANSAS	
DESIGN	J. HELSHAM	DATE	3-11-70
GROUP	R. YOUNGERS	DATE	3-10-70
DRAWN	R. YOUNGERS	DATE	2-4-70
CHECK	HARELS	DATE	2-5-70
STRESS			
PROJECT		DATE	1-17-70
APPD	R. YOUNGERS	DATE	1-17-70

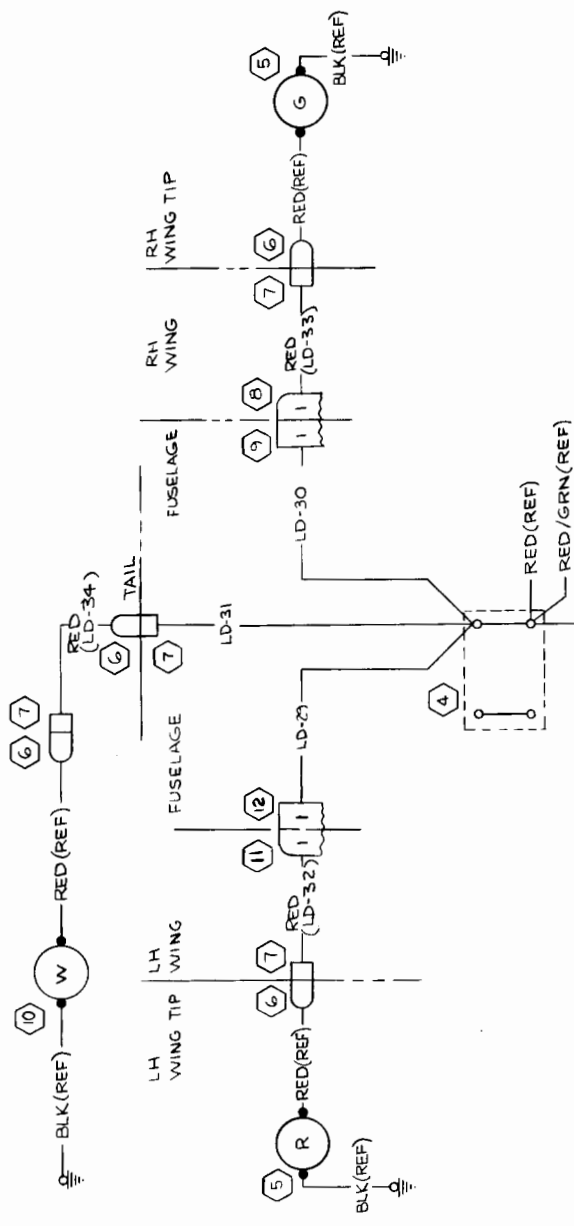
TITLE	
CESSNA AIRCRAFT CO.	
WIRING DIAGRAM - NAVIGATION LIGHTS, OPT 24 VOLT	
SIZE	C
CODE IDENT. NO.	71379
DWG NO.	1270625
SCALE	NONE
U206	
PAGE	11-4-2

EQUIPMENT TABLE	
11	0713854-2 BUS BAR (2444)
10	S-1637-2 HOUSING-PLUG
9	S-1637-1 HOUSING-CAP
8	AN3122-1524 LAMP
7	C622001-0102 LIGHT ASSY
6	307 LAMP
5	C622001-0201 LIGHT ASSY
4	S-1640-9 HOUSING-PIN
3	S-1641-9 HOUSING-SOCKET
2	S-1360-5 CIRCUIT BREAKER
1	S-1844-1-2 SWITCH

FORM NO. 80-318A

ED 4 RR 10367 (SR 6546)

REVISION		DATE	APPD
A	BY REV: ADDED LD-32, LD-33 (SR7403) II LD-33	RAN 8-10-73	<i>[Signature]</i>
B	BY REV: ADD WIRE LENGTHS ; S-1640-12 & S-1641-12 WAS S-1640-9 & S-1641-9, S-1640-6 & S-1641-6 WAS S-1640-9 & S-1641-9 ; MER EO 393 (NOW SHOP PRACTICE)	BLA 12-10-74	<i>[Signature]</i>



WIRE NO	WIRE LG	MATERIAL	TERMINALS	SERIALS
18	-18-2	S-1636-1	S-1635-1	
19	-18-2	S-1636-1	S-1635-1	
20	-18-2	S-1636-1	S-1635-1	
21	75	S-1636-1	S-1636-1	
22	27	S-1636-1	S-1636-1	
23	7	S-1637-1	S-1637-1	
24	6	S-1637-1	S-1637-1	

WIRE TABLE		EQUIPMENT TABLE	
13	HOUSING - SOCKET	1	NAV LIGHT
12	HOUSING - PIN	2	NAV LIGHT
11	HOUSING - PIN	3	NAV LIGHT
10	HOUSING - PIN	4	NAV LIGHT
9	HOUSING - PIN	5	NAV LIGHT
8	HOUSING - PIN	6	NAV LIGHT
7	HOUSING - PIN	7	NAV LIGHT
6	HOUSING - PIN	8	NAV LIGHT
5	HOUSING - PIN	9	NAV LIGHT
4	HOUSING - PIN	10	NAV LIGHT
3	HOUSING - PIN	11	NAV LIGHT
2	HOUSING - PIN	12	NAV LIGHT
1	HOUSING - PIN	13	NAV LIGHT

CONTRACT NO.	NAME	DATE
	WHITE	1-4-73
	WHITE	4-27-73
	WHITE	4-23-73
	WHITE	4-27-73

DESIGN	DATE	GROUP	DRAWN	CHECK	STRESS	PROJ	APPD	OTHER
WHITE	1-4-73	H. Miller						
WHITE	4-27-73							
WHITE	4-23-73							
WHITE	4-27-73							

COMMERCIAL AIRCRAFT DIV.
CESSNA AIRCRAFT CO.
WICHITA, KANSAS

TITLE
**WIRING DIAGRAM -
NAVIGATION LIGHTS**

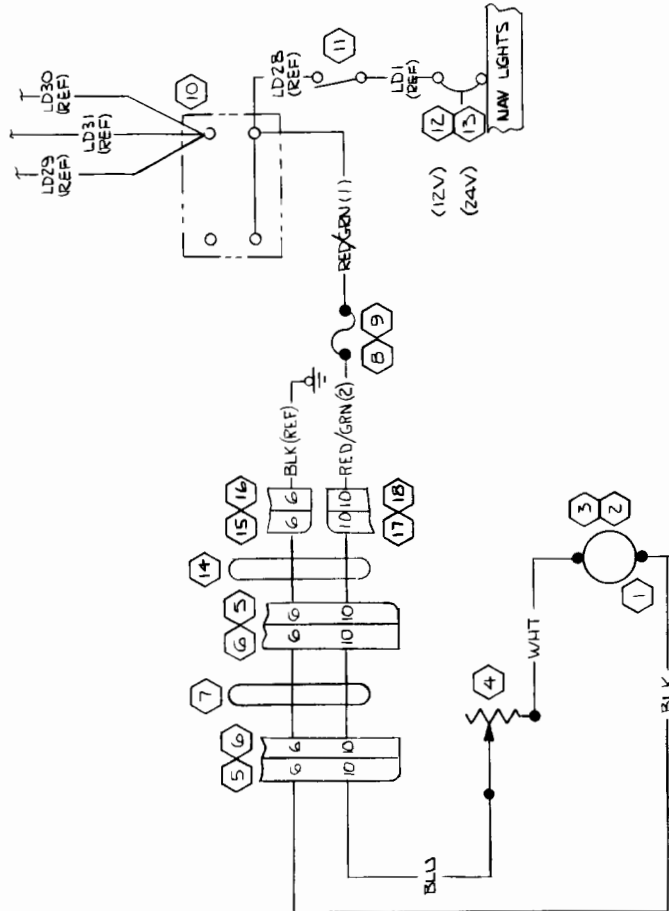
CODE IDENT. NO.
C 71379

SCALE: NONE

DWG NO
1270625

PAGE: 11.4.3

REVISION		DATE	APPD
LET	DESCRIPTION	DATE	APPD
A	BY REV: ADD 1570307-2; S-1963-2 WAS SOLDER/RED/GRN(2) (SR7677) (SR7670)IX	MEM 5-14-74 JCS DS	



CONTRACT NO.	NAME	DATE
18	S-1962-2-0	HOUSING
17	S-1962-1-0	HOUSING
16	S-1960-2-0	HOUSING
15	S-1960-1-0	HOUSING
14	1570307-2	CABLE ASSY
13	S-1360-10L	CKT BKR
12	S-1360-5L	CKT BKR
11	S-2160-1	SWITCH
10	34002-55	TERM BLOCK
9	AGC-1/2	FUSE
8	4HJ0-A	FUSE HOLDER
7	1570308-1	CABLE ASSY
6	3421-0000	SOCKET
5	1570307-1	CONJECTOR ASSY
4	3859A161-152A	RHEOSTAT
3	24 RB	LAMP (24V)
2	12 RB	LAMP (12V)
1	4157-001	SOCKET

EQUIPMENT TABLE	
PART NO.	DESCRIPTION
1010	1010-RED/GRN(2)
1010	1010-RED/GRN(1)

SUPERSEDES:
CES-1000 IS APPLICABLE
VENDOR CODES PER S-1400
P 11,11, 3
CES-XXXX-CESNA SPEC. NO.
S-XXX OR CMXXXX-CESNA
STD. NO.

SUPERSEDED BY:

WIRE TABLE	LG	MATERIAL	TERMINALS	SERIALS
BLU 22	-22-6		SOLDER	
BLK 22	-22-0		SOLDER	
WHT 22	-22-9		SOLDER	
RED/GRN 22	-22-2-5		SOLDER	
RED/GRN 22	-22-2-5		SOLDER	

CONTRACT NO.		NAME	DATE
18		W. J. ...	11-18-73
17		W. J. ...	11-18-73
16		W. J. ...	11-18-73
15		W. J. ...	11-18-73
14		W. J. ...	11-18-73
13		W. J. ...	11-18-73
12		W. J. ...	11-18-73
11		W. J. ...	11-18-73
10		W. J. ...	11-18-73
9		W. J. ...	11-18-73
8		W. J. ...	11-18-73
7		W. J. ...	11-18-73
6		W. J. ...	11-18-73
5		W. J. ...	11-18-73
4		W. J. ...	11-18-73
3		W. J. ...	11-18-73
2		W. J. ...	11-18-73
1		W. J. ...	11-18-73

CONTRACT NO.		NAME	DATE
18		W. J. ...	11-18-73
17		W. J. ...	11-18-73
16		W. J. ...	11-18-73
15		W. J. ...	11-18-73
14		W. J. ...	11-18-73
13		W. J. ...	11-18-73
12		W. J. ...	11-18-73
11		W. J. ...	11-18-73
10		W. J. ...	11-18-73
9		W. J. ...	11-18-73
8		W. J. ...	11-18-73
7		W. J. ...	11-18-73
6		W. J. ...	11-18-73
5		W. J. ...	11-18-73
4		W. J. ...	11-18-73
3		W. J. ...	11-18-73
2		W. J. ...	11-18-73
1		W. J. ...	11-18-73

COMMERCIAL AIRCRAFT DIV.
8800 E. PAWNEE
WICHITA, KANSAS

CESNA AIRCRAFT CO.

TITLE
WIRING DIAGRAM -
MAP LIGHT, CONTROL WHEEL

SIZE
C

CODE IDENT.
71379

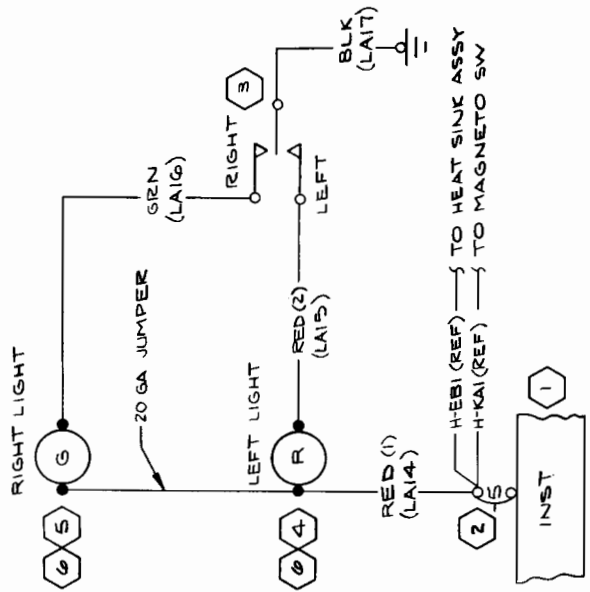
DWG NO
1270625

SCALE: NONE

SR7677

PAGE: 11,11,4

REVISION		
LET	DESCRIPTION	DATE
A	BY REV: ADD CES1100 CODE TO WIRES NOW SHOP PRAC	6-25-73 GKG MJC



WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
18	-18-0	S-136TH-6	S-136TH-8		
20	-20-5	SOLDERS-136TH-6			
20	-20-2	SOLDERS-136TH-6			
20	-20-2	S-136TH-6	SOLDER		

CONTRACT NO.		TITLE	
NAME	DATE	DESIGN	DATE
J. HENSHAW	3-11-70		
R. YOUNGERS	3-10-70		
R. YOUNGERS	2-4-70		
HARRIS	2-5-70		

EQUIPMENT TABLE	
PART NO.	DESCRIPTION
2444G	LAMP
8703A	LIGHT ASSY
8703A	LIGHT ASSY
	SWITCH
	CIRCUIT BREAKER
	BUS BAR

COMMERCIAL AIRCRAFT DIV.
BROOK PARK, OHIO
WICHITA, KANSAS

Cessna AIRCRAFT CO.

WIRING DIAGRAM -
SKYDIVING SIGNAL LIGHT,
100T 24 VOLT

SIZE: C
CODE IDENT: 71379
DWG NO: 1270625

SCALE: NONE U206
PAGE: 11.12.1

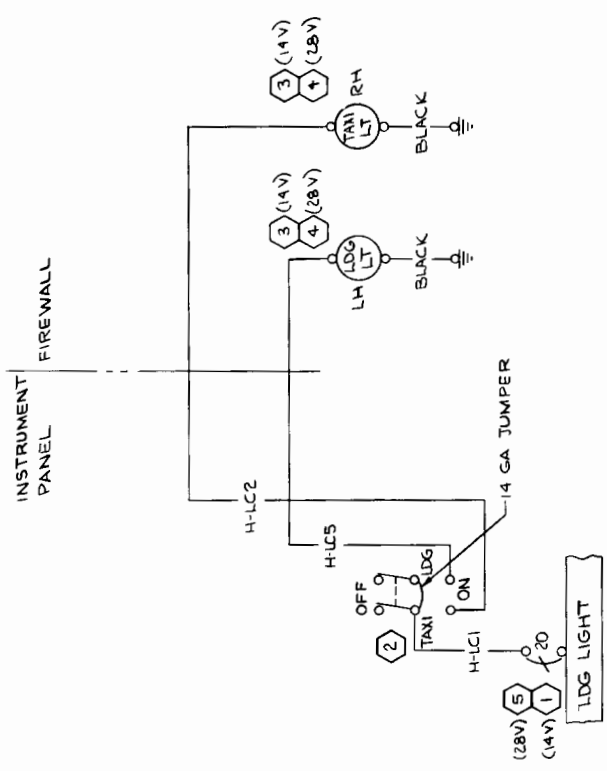
PROJECT: Skydiving
APPROVED: R. YOUNGERS
DATE: 3-12-70

SUPERSEDED BY:

FORM NO. 80211A

CES-1000 IS APPLICABLE
VENDOR CODES PER S-1400
EES-XXXX: CESSNA SPEC. NO.
S-XXX OR CMXXXX: CESSNA
STD. NO.

LET	REVISION	DESCRIPTION	DATE	APPD



WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
BLACK 14	-14-0	S-1347-2-B	S-1347-2-B	S-1493-2	
LCS 1		S-1347-2-B	S-1493-2		
LC2		S-1347-2-B			
LC1 14		S-1347-2-6	S-1493-2		

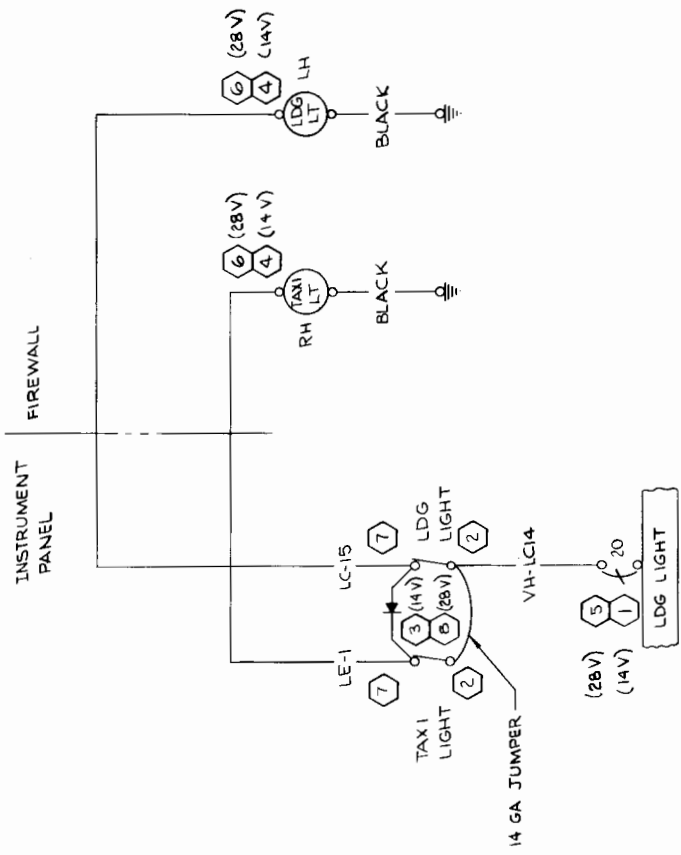
CONTRACT NO:		DATE		TITLE	
COMMERCIAL AIRCRAFT DIV.		12-29-72		WIRING DIAGRAM -	
CESSNA AIRCRAFT CO.		1-12-73		LANDING LIGHT & TAXI	
9800 E. PAWNEE		1-15-73		LIGHT	
WICHITA, KANSAS					
DESIGN	NAME	DATE	SIZE	CODE IDENT.	DWG NO
GROUP	WHITE	12-29-72	C	NO.	1270625
DRAWN	WHITE	1-12-73	SCALE: NONE		
CHECK	2-YOUNGERS	1-15-73			
STRESS					
PROJ					
APPD					
OTHER					

PART NO.	DESCRIPTION
5	S-1340-15L CIRCUIT BREAKER
4	4591 PAR-36,100W LAMP (Q24446)
3	4509 PAR-36,100W LAMP (Q24446)
2	S-1846-1-3 SWITCH
1	S-1360-20L CIRCUIT BREAKER

EQUIPMENT TABLE	
CES-1000 IS APPLICABLE	
VENDOR CODES PER S-1400	
CES-XXXX-CESNA, SPEC. NO.	
S-XXX OR CMXXX-CESNA	
STD. NO.	
SUPERSEDED BY:	
P 11.13 E, P 11.13.1	
SUPERSEDED BY:	
P 11.13.3	

FORM NO. 80215B

LET	REVISION	DESCRIPTION	DATE	APPD



QTY	PART NO.	DESCRIPTION
1	1270082-1	DIODE ASSY
1	5-2023-1	ADAPTER
1	4591	PAR-36, 100 W LAMP (24446)
1	51360-15L	CKT BREAKER
1	4509	PAR-36, 100 W LAMP (24446)
1	1270082-2	DIODE ASSY
1	5-2160-1	SWITCH
1	5-1360-20L	CKT BREAKER

WIRE CODE NO.	GA.	MATERIAL	LG.	TERMINALS	SERIALS
BLACK	14	-	14-0	5-1367-2-B	
LE-1	14			5-1493-2	5-1367-2-B
LC-15	14			5-1493-2	5-1367-2-B
LC-14	14			5-1367-2-B	5-1493-2

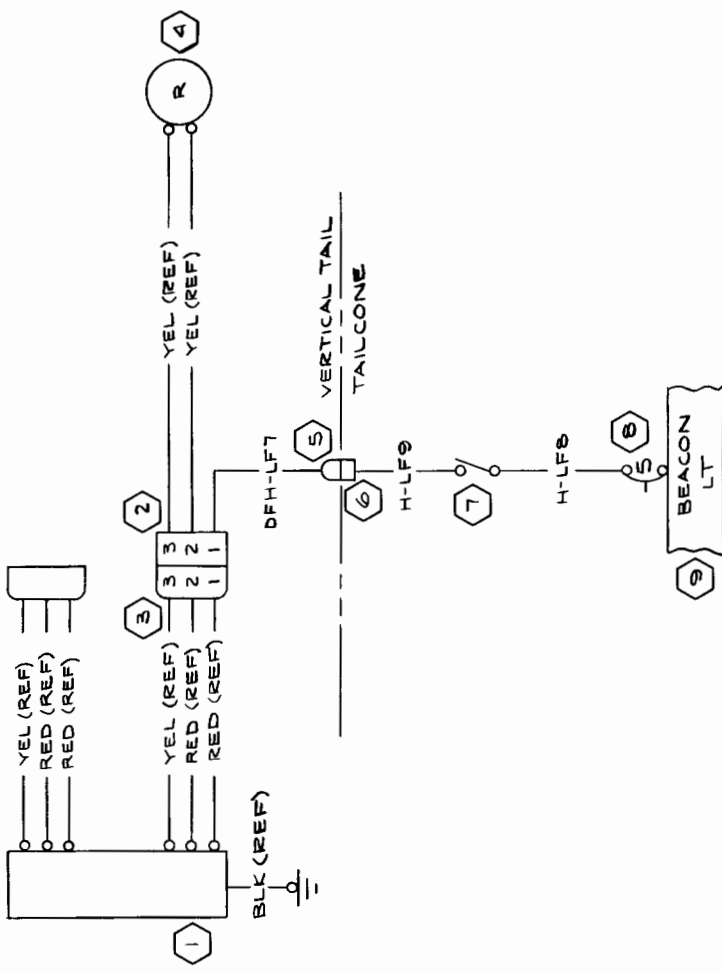
CONTRACT NO.	NAME	DATE	TITLE
	WHITE	1-3-73	
	H. W. Zed	1-17-73	
	YOUNGERS	1-15-73	

WIRING DIAGRAM
LANDING LIGHT; TAXI LIGHT

STRESS	
PROJ	11-13-2
APPD	
OTHER	

WIRE TABLE
 COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS
CESNA AIRCRAFT CO.
 SCALE: NONE
 CODE IDENT. NO. **71379**
 DWG NO. **1270625**
 PAGE: 11.13.3
 SER (5R7403) 3

REVISION	DESCRIPTION	DATE	APPD
LET			



WIRE	LG	TERMINALS	SERIALS
H-LF9	16		S-1493-25-16362
H-LF8	16		S-1637-25-16362
DFH-LF7	16		S-1635-25-16362

CONTRACT NO.		TITLE	
DESIGN	J. HENSHAW	DATE	5-11-70
GROUP	A. J. L. L.	DATE	3-10-70
DRAWN	R. YOUNGERS	DATE	2-4-70
CHECK	H. BERRY	DATE	2-5-70
STRESS			
PROJECT		SIZE	C
APPD	R. YOUNGERS	CODE IDENT. NO.	71379
		DWG NO.	1270625
		SCALE:	NONE U206
			PAGE: 11.14.1

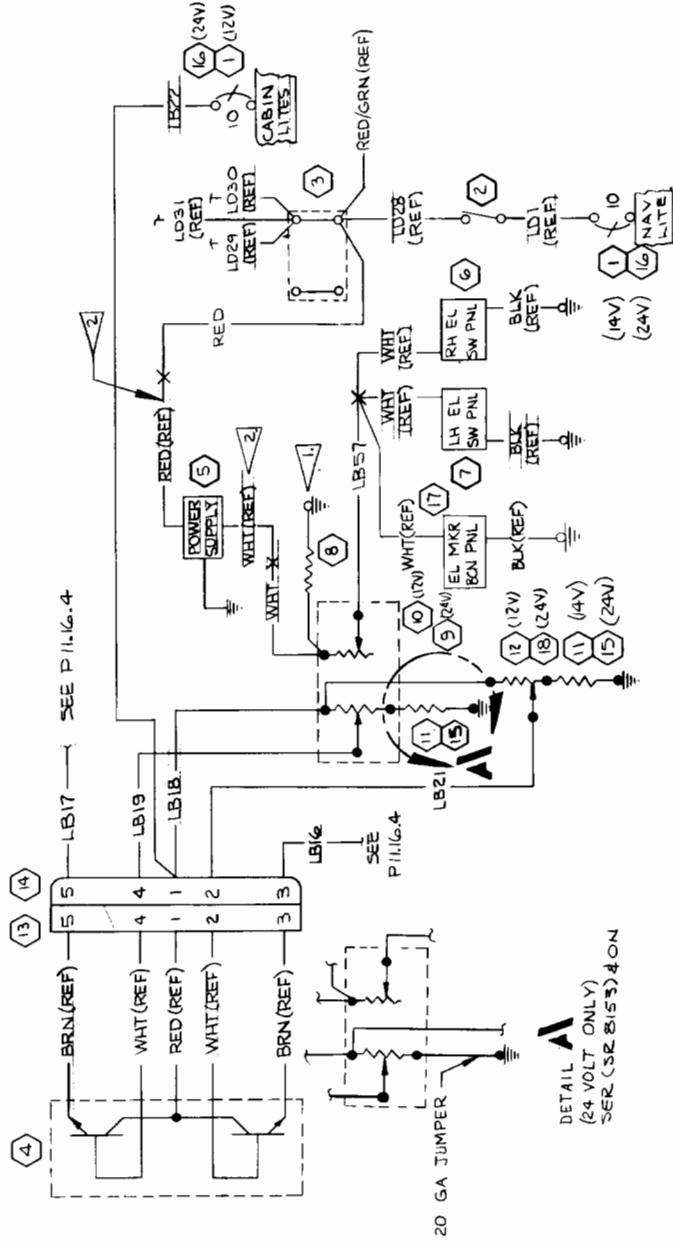
PART NO.	DESCRIPTION	EQUIPMENT TABLE
9	0T13854-1	BUS BAR
8	S-1360-5	CKT BKR
7	S-1845-1-2	SWITCH
6	S-1637-2	HOUSING-PLUG
5	S-1637-1	HOUSING-CAP
4	C621001-0102	LIGHT ASSY
3	S-1638-2	HOUSING-CAP
2	S-1638-1	HOUSING-PLUG
1	C594501-0204	FLASHER ASSY

SUPERSEDES:
 12205-406
 SUPERSEDED BY:
 P 11.14.2

COMMERCIAL AIRCRAFT DIV.
 WICHITA, KANSAS
 CESSNA AIRCRAFT CO.

WIRING DIAGRAM -
 FLASHING BEACON LIGHT,
 OPT 24 VOLT

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD LB57: DELETE LB20 5.16K, 2W, 10% (NON SHOP PRACTICE)	RAM	9-25-74	RAM
B	BY REV: VAL 3-200 UNS VAL 3-2000. ADD DETAIL N. TO DELETE VAL 3-200 RESISTOR ON 24 VOLT SYSTEM (SEE 6153)		C J H 1-4-75	
C	BY REV: ADD WIRING FOR IZ15757		BAH 2-28-75	
D	BY REV: ADD 5-2091-4 & 5-1904-2; 5-2091-2 WMS 5-2091, 5-1904-3 WAS 5-1904 (NOW SHOP PRACTICE)		GW 7-31-75	



DETAIL
(24 VOLT ONLY)
SER (SR 815) 4 ON

- NOTES:
- 1. THIS END OF RESISTOR TERMINATED WITH 5-1367-1-14 TERMINAL & INSTALLED ON SHAFT OF TANDOM POT ASSY. DUE TO HEAT DISSIPATION, RESISTOR MUST BE KEPT FROM WIRE BUNDLE
 - 2. TO BE RETAINED IN TERMINAL, WIRE MUST BE STRIPED, DOUBLED & TWISTED

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADD LB57: DELETE LB20 5.16K, 2W, 10% (NON SHOP PRACTICE)	RAM	9-25-74	RAM
B	BY REV: VAL 3-200 UNS VAL 3-2000. ADD DETAIL N. TO DELETE VAL 3-200 RESISTOR ON 24 VOLT SYSTEM (SEE 6153)		C J H 1-4-75	
C	BY REV: ADD WIRING FOR IZ15757		BAH 2-28-75	
D	BY REV: ADD 5-2091-4 & 5-1904-2; 5-2091-2 WMS 5-2091, 5-1904-3 WAS 5-1904 (NOW SHOP PRACTICE)		GW 7-31-75	

ITEM	DESCRIPTION	QUANTITY	UNIT
18	5-1904-2 POT ASSY (24V)	1	
17	IZ15757 EL PNL	1	
16	5-1360-5L CKT BKR	1	
15	VAL 3-200 RESISTOR	1	
14	5-1640-6 HOUSING	1	
13	5-1641-6 HOUSING	1	
12	5-1904-3 POT ASSY (12V)	1	
11	27R, SW 1074 RESISTOR	1	
10	5-2091-2 POT ASSY (12V)	1	
9	5-2091-4 POT ASSY (24V)	1	
8	VAL 5-6000 RESISTOR	1	
7	IZ15342 EL PNL	1	
6	IZ13363 POWER SUPPLY	1	
5	CG15001 DIMMING ASSY	1	
4	1570166 TERMINAL BLOCK	1	
3	34002-5D SWITCH	1	
2	5-2160-1 CKT BKR	1	
1	5-1360-10L	1	

WIRE CODE NO	Gauge	MATERIAL	LG	TERMINALS
LB57	18	SOLDER	5-1370-2	
RED	18	5-1370-1	5-1829-1	
WHT	18	5-1370-1	5-1829-1	
LB22	18	5-1342-6	5-1342-6	
LB21	18	5-1345-1	SOLDER	
LB19	18	5-1635-1	SOLDER	
LB18	18	5-1635-2	SOLDER	
LB17	18	5-1635-1	5-1829-1	
LB16	18	5-1635-1	5-1829-1	

CONTRACT NO:	NAME	DATE
	WHITE	1-5-72
	GROUP	7-11-73
	DRAWN	4-23-73
	CHECK	8-21-73
	STRESS	
	PROJ	4-27-73
	APPD	Page 3/4
	OTHER	

DESIGN	DATE
WHITE	1-5-72
GROUP	7-11-73
DRAWN	4-23-73
CHECK	8-21-73
STRESS	
PROJ	4-27-73
APPD	Page 3/4
OTHER	

CONTRACT NO:	NAME	DATE
	WHITE	1-5-72
	GROUP	7-11-73
	DRAWN	4-23-73
	CHECK	8-21-73
	STRESS	
	PROJ	4-27-73
	APPD	Page 3/4
	OTHER	

SIZE	CODE IDENT.	DWG NO
C	71379	1270625

SCALE:	NONE	(SR 7403) 1/2	PAGE:	11.15.2
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LET	REVISION	DESCRIPTION	DATE	APPD
A	1	BY REV: ADD BLK(4), LB38, LB39, S-1695-2 & 1213319-13 REF (SR 7061)	11-25-72 LKW	BY HAW LKW

- NOTES:**
- OXYGEN CONSOLE WIRING APPLICABLE ONLY WHEN OPTIONAL OXYGEN SYSTEM IS INSTALLED
 - INSTALL S-341-1 TERMINAL ON VENDOR SUPPLIED WIRE
 - STANDARD LENSES FOR EYEBROW LIGHTS ARE RED. CESSNA WHITE IS OPTIONAL
 - MUST BE WIRED IN SERIES-PARALLEL AS SHOWN

INACTIVE
 REF THRU SERVICE 661919
 4-23-73
 M. J. K.
 W. J. K.

LG	TERMINALS	MATERIAL	GA	WIRE	CODE NO.	DESCRIPTION	LG	TERMINALS	SERIALS
LB 39	18	SOLDER							
LB 38	18	S-1891-1							
BLK(4)	18	S-1361-8							
RED/YEL	22	-22-2-4							
RED/BLU	18	-18-2-6							
BLK(3)	18	-18-0							
BLK(2)	18	-18-0							
BLK(1)	22	-22-0							
DHF-LB83	20	SOLDER							
HF-LB9	18	S-341-2							
LB 32	18	S-1829-1							
LB 31	18	SOLDER							
LB 30	18	S-1829-1							
LB 28	18	S-1829-1							
LB 27	18	S-1829-1							
LB 26	18	S-1829-1							
LB 25	18	S-1829-1							

CONTRACT NO.	NAME	DATE	TITLE
	J. HENSHAW	3-11-70	WIRING DIAGRAM - INSTRUMENT LIGHTS, OPT 24 VOLT
	H. W. L. L.	3-10-70	
	PAPE	2-4-70	
	HARELS	2-6-70	

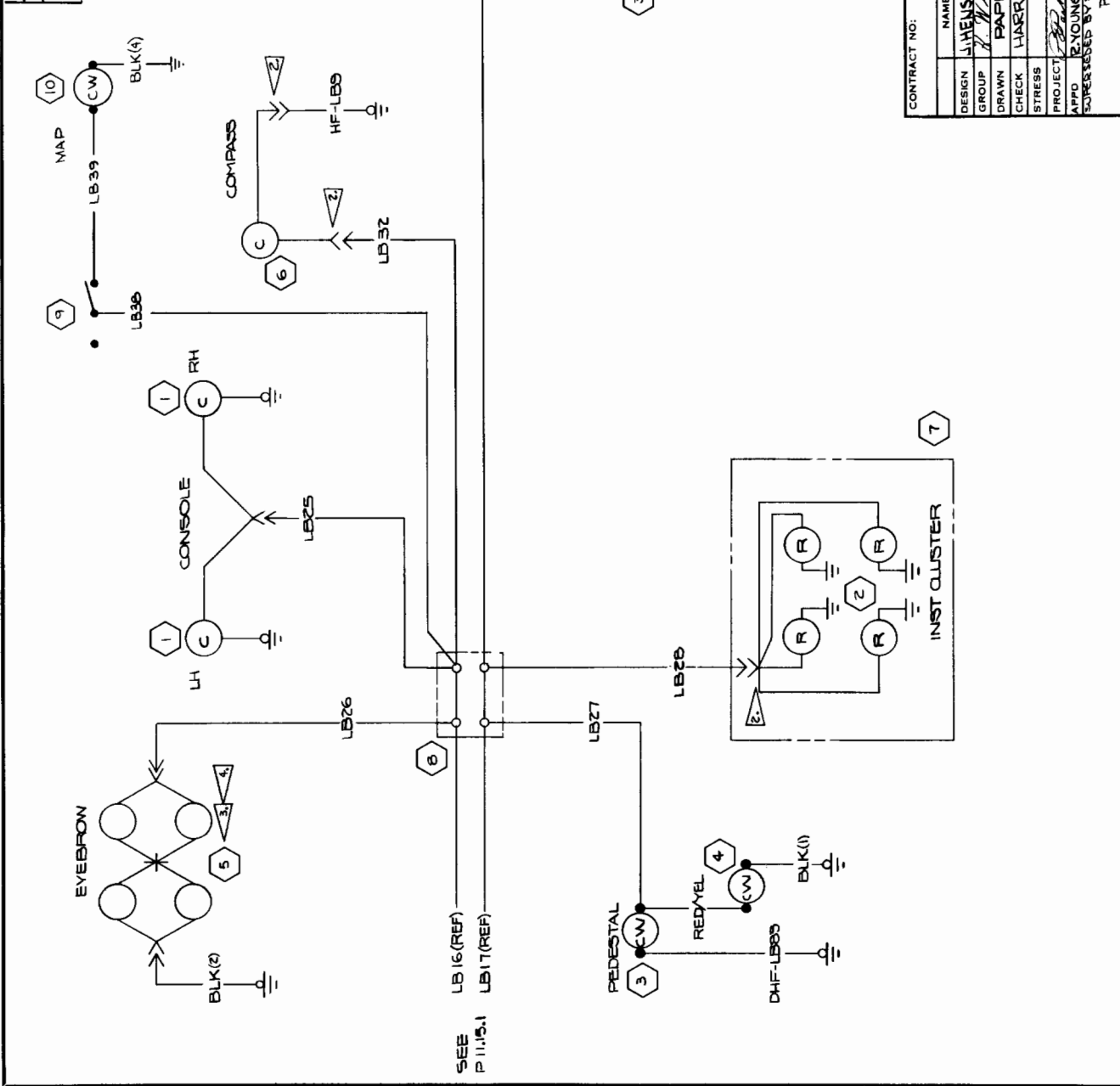
DESIGN	DATE	STRESS
J. HENSHAW	3-11-70	
H. W. L. L.	3-10-70	
PAPE	2-4-70	
HARELS	2-6-70	

PROJECT	APPD	DATE	BY
J. HENSHAW		3-11-70	
H. W. L. L.		3-10-70	
PAPE		2-4-70	
HARELS		2-6-70	

COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS
 CESSNA AIRCRAFT CO.

SCALE	CODE IDENT.	DWG NO.
NONE	U206	1270625

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REFER TO PAGE 11.16.2 FOR REV.		



INACTIVE
 EFF THRU SER 0200195
 4-23-72
 LKW MKC
 JWB

CONTRACT NO:		COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS	
DESIGN	NAME	DATE	TITLE
GROUP	J. HENSHAW	3-11-70	WIRING DIAGRAM - INSTRUMENT LIGHTS, OPT
DRAWN	PAPE	2-4-70	24 VOLT
CHECK	HARRIS	2-5-70	
STRESS			
PROJECT		3-12-70	
APPRO	R. YOUNG	3-2-70	
SUPPRESSED BY:			
SIZE	CODE IDENT.	DWG NO.	
C	71379	1270625	
SCALE:	NONE	UZOXG	PAGE: 11.16.3



LET	REVISION	DESCRIPTION	DATE	APPD
A		BY REV: IN NOTE 2 S-1829-1 WAS S-1493-1, S-1493-1 WAS S-1829-1; ADD LB40, S-1695-2 & 1213319-13 REF (SR 7061)	10-24-72 LKW	10/24/72 MGR LKB

NOTES:

① TYPICAL 16 PLACES

② WHEN OPTIONAL POST LIGHTS ARE INSTALLED S-1493-1 TERMINAL REPLACES S-1829-1 TERMINAL

INACTIVE
EFF THRU SER 02062192
4-23-73
LKW
MGR

ITEM NO	PART NO.	DESCRIPTION	VENDOR
10	1213319-13	LIGHT ASSY	
9	S-1695-2	SWITCH	
8	660501-002	COMPASS ASSY	
7	34002-55	TERMINAL BLOCK	ETNC
6	S-2023-1	TERMINAL ADAPTER	
5	S-1899-4	LIGHT ASSY	
4	S-1899-3	LIGHT ASSY	
3	S-1847-2-1	SWITCH	
2	660502-002	INST CLUSTER	
1	1270479-5	LIGHT ASSY	

LB40	20	WIRE CODE NO	MATERIAL	LG	TERMINALS	SERIALS
REB/YEL(4)	22				S-1493-1	SOLDER
REB/YEL(3)	22				S-341-2	SOLDER
REB/YEL(2)	22				S-341-2	SOLDER
REB/YEL(1)	22				S-341-2	SOLDER
BLK(4)	22				S-341-2	SOLDER
BLK(3)	22				S-1361-8	SOLDER
BLK(2)	22				S-341-2	SOLDER
BLK(1)	22				S-341-2	SOLDER
DNF-LB3	20				S-1767-0	SOLDER
DNF-LB6	20				S-341-1	S-1361-8
DNF-LB8	20				S-341-1	S-1361-8
LB37	20				S-1829-1	SOLDER
LB36	20				S-1695-1	S-341-2
LB35	20				S-1493-1	S-341-2
LB34	18				S-1829-1	S-341-1
LB33	18				S-1493-1	S-1829-1

WIRE TABLE

CONTRACT NO. _____

DESIGN J. HELSHAW 3-11-70

GROUP H. WILCOX 3-10-70

DRAWN PAPE 2-4-70

CHECK HARRIS 2-6-70

STRESS _____

PROJ _____

APPD _____

OTHER _____

CONTRACT NO. _____

CESNA AIRCRAFT CO. COMMERCIAL AIRCRAFT DIV.
8800 E. PAWNEE WICHITA, KANSAS

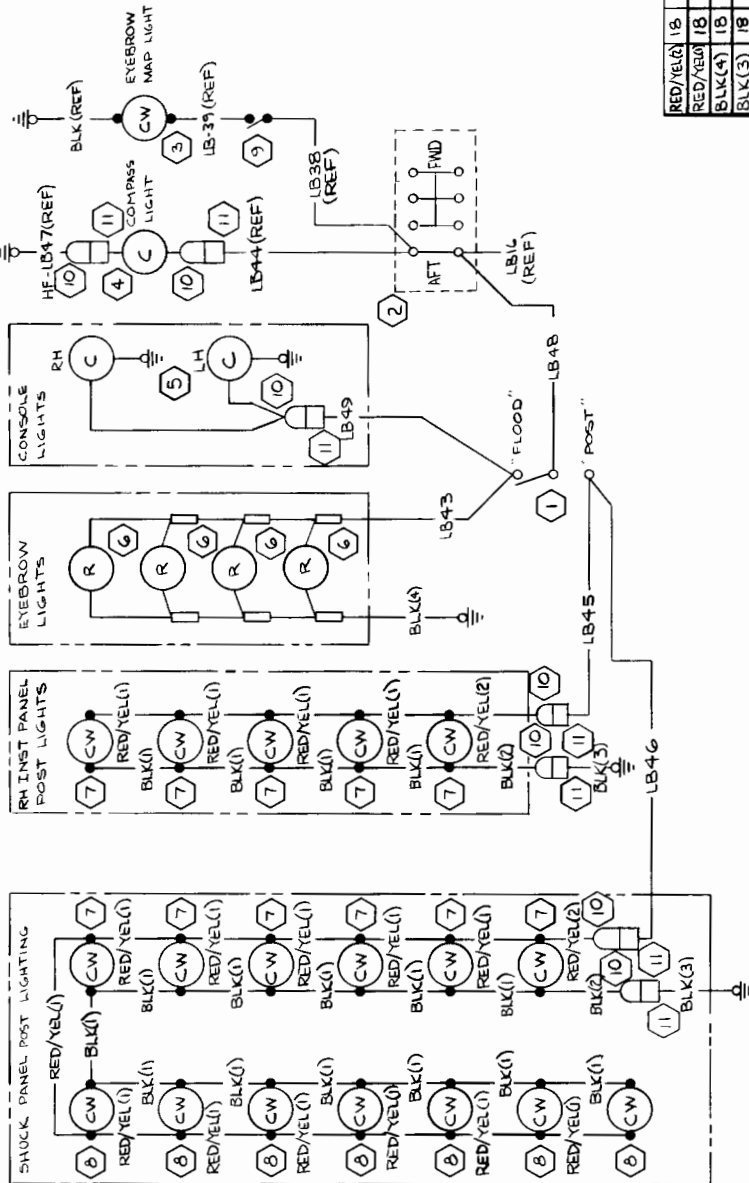
TITLE
WIRING DIAGRAM -
POST LIGHTING, OPT 24 VOLT

SIZE CODE IDENT. DWG NO
C 71379 1270625

SCALE: NONE U206

PAGE: 11.17.2

LET	DESCRIPTION	REVISION	DATE	APPD
A	BY REV: 34004-81B WAS 34002-55 (SR7910)		8-4-75	GW SRM MB



10-288-0905

RED/YEL	18	SOLDER	S-1635-2
RED/YEL	18	SOLDER	SOLDER
BLK(4)	18	S-1370-1	S-1367-1-B
BLK(3)	18	S-1367-1-B	S-1367-1-B
BLK(2)	18	SOLDER	S-1635-2
BLK(1)	18	SOLDER	SOLDER
LB48	18	S-1493-1	S-1829-1
LB46	18	S-1493-1	S-1636-2
LB45	18	S-1493-1	S-1636-2
LB43	18	LB25	S-1370-1
LB49	18	S-1493-1	S-1636-1
GA		TERMINALS	SERIALS

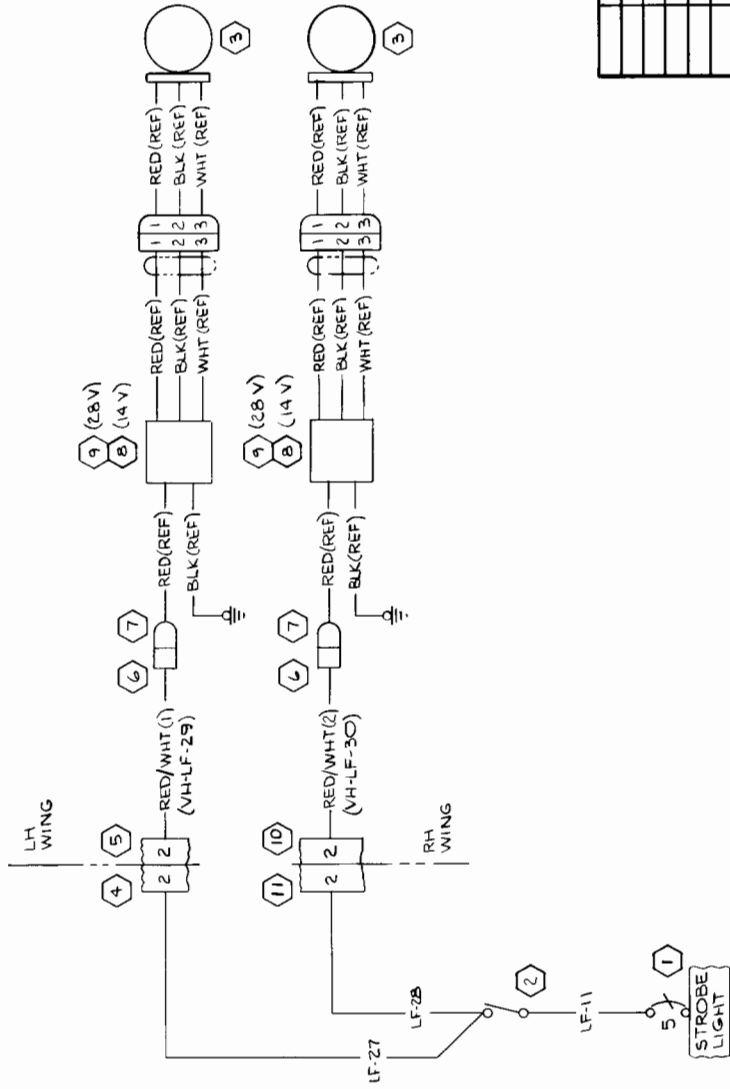
WIRE TABLE	
WIRE CODE NO.	MATERIAL
GA	TERMINALS

CONTRACT NO.	NAME	DATE
	WHITE	1-10-73
	GROUP	5-1-73
	DRAWN	4-23-73
	CHECK	5-1-73
	STRESS	
	PROJ	5-2-73
	APPD	4/6C
	OTHER	

EQUIPMENT TABLE	
PART NO.	DESCRIPTION
11	S-1637-Z HOUSING
10	S-1637-1 HOUSING
9	S-1695-2 SWITCH
8	S-1899 LIGHT ASSY
7	S-1899 LIGHT ASSY
6	1213319 LIGHT ASSY
5	0700623-15 HOUSING ASSY
4	CG60501 COMPASS ASSY
3	1213319 LIGHT ASSY
2	34004-81B TERMINAL BLOCK
1	S-2160-2 SWITCH

COMMERCIAL AIRCRAFT DIV.	3800 E. FAHNEE
CESSNA AIRCRAFT CO.	WICHITA, KANSAS
TITLE	
WIRING DIAGRAM -	
POST LIGHTS, 14V & 28V	
(OPTIONAL)	
SIZE	CODE IDENT. DWG NO.
C	71379 - 1270625
SCALE: NONE	PAGE: 11,17,4

LET	REVISION	DESCRIPTION	DATE	APPD
A		BY REV: PIN 2 WAS PIN 4 LH WING; S-1641-4 & S-1640-6 WAS S-1640-9 & S-1641-9, S-1640-12 & S-1641-12 WAS S-1640-9 & S-1640-9; DRAWING BECOMES INACTIVE; (NOW SHOP PRACTICE) MERED393 (SR7910)	C J H 11-22-74	SCY JRS WBS
B		BY REV: REACTIVATE DRAWING (SR7910)	T M S 1-21-75	SCY GHD JRS WBS



10 288 0905

ITEM NO.	DESCRIPTION	PART NO.
11	S-1641-12 HOUSING - SOCKET	
10	S-1640-12 HOUSING - PIN	
9	C622007-0103 POWER SUPPLY	
8	C622007-0101 POWER SUPPLY	
7	S-1637-1 HOUSING	
6	S-1637-2 HOUSING	
5	S-1640-6 HOUSING - PIN	
4	S-1641-6 HOUSING - SOCKET	
3	C622006-0101 LAMP ASSY	
2	S-2160-1 SWITCH	
1	S-1360-5L CKT BKR	

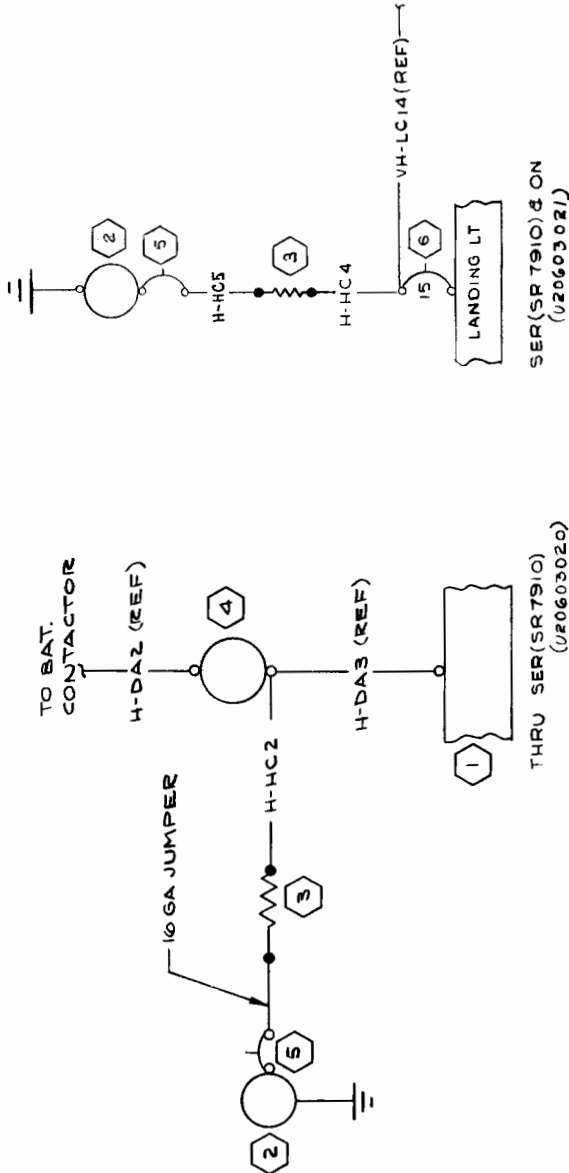
EQUIPMENT TABLE	
PART NO.	DESCRIPTION
	STROBE LIGHT

WIRE NO.	TERMINALS	LG	MATERIAL
18	S-1636-1 S-1635-1	STD	
17	S-1636-1 S-1635-1	STD	
16	S-1636-1 S-1636-1		
15	S-1637-2 S-1636-1		
14	S-1637-1 S-1635-1		

WIRE TABLE	
NAME	DATE
WHITE	1-6-73
GROUP	4-27-73
DRAWN	4-23-73
CHECK	4-21-73

CONTRACT NO: COMMERCIAL AIRCRAFT DIV. 5800 E. PAWNEE WICHITA, KANSAS
 TITLE: STROBE LIGHTS, WING TIP (OPT)
 SIZE: C
 CODE IDENT: DWG NO 71379
 SCALE: NONE (SR 7403) PAGE: 11.18.2

LET	REVISION DESCRIPTION	DATE	APPD
A	BY REV: SER IN H-HC4, S-1367-15 L SER OUT H-HC2 (SR7910)(MERO 300)	BLA 0-307	BLA 0-307
B	BY REV: H-HC5 WAS 16 GA JUMPER (SR7910)	RTP 8-4-75	RTP 8-4-75



1060-002-01

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
H-HC5	16	SOLDER	5-1347-2-10		SER(SR7910) & ON
H-HC4	16	SOLDER	5-1347-2-8		SER(SR7910) & ON
H-HC2	16	SOLDER	5-1347-2-10		THRU SER(SR7910)

CONTRACT NO.		NAME		DATE	
CESNA AIRCRAFT CO.		J. HENSHAW		3-11-70	
DESIGN		R. YOUNGERS		3-10-70	
GROUP		HARRIS		2-6-70	
DRAWN		HARRIS		2-6-70	
CHECK					
STRESS					
PROJECT		R. YOUNGERS		3-12-70	
APPD		R. YOUNGERS		3-2-70	

WIRE TABLE	
6	S-1360-15L CIRCUIT BREAKER
5	60232-1 CIRCUIT BREAKER
4	0665502-0202 INST CLUSTER
3	S-2041-50-16 RESISTOR
2	0513039-7 CIGAR LIGHTER
1	071854-2 BUS BAR

EQUIPMENT TABLE	
CES-1000 IS APPLICABLE	
VENDOR CODES PER S-1400	
CES-XXXX=CESSNA SPEC. NO.	
S-XXX OR CMXXX=CESSNA	
STD. NO.	
SUPERSEDES:	
12205-400	
SUPERSEDED BY:	

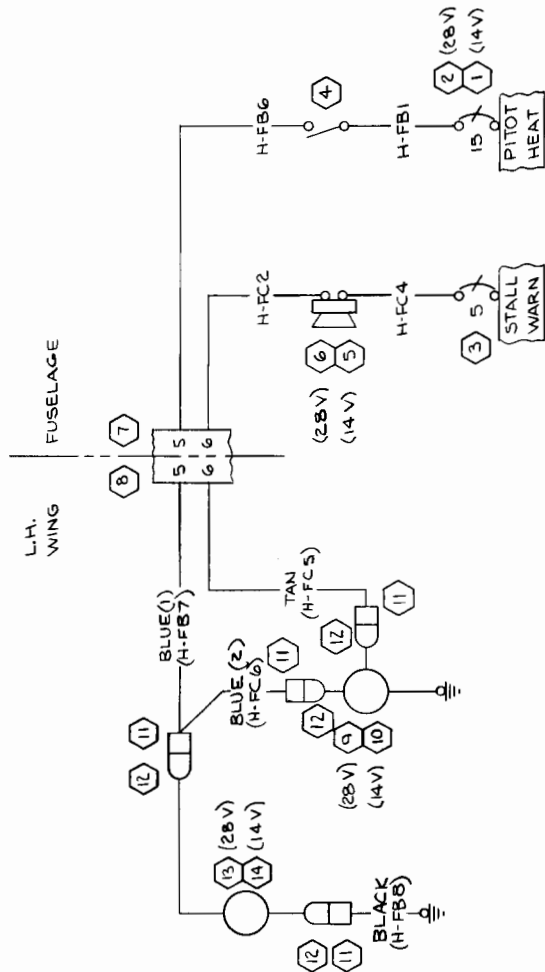
COMMERCIAL AIRCRAFT DIV.
MOORE, KANSAS
WICHITA, KANSAS

TITLE
WIRING DIAGRAM -
CIGAR LIGHTER, OPT 24 VOLT

SIZE
C
CODE IDENT. NO.
71379
DWG NO.
1270625
SCALE: NONE U206
PAGE: 13.1.1

ED: R 10367 (SR6546)

LET	REVISION	DESCRIPTION	DATE	APPD
A	BY REV: ADDED H-FCS, H-FC6, H-FB7 H-FB8 S-10-73		RAM 8-10-73	BY <i>[Signature]</i> 10/8
B	BY REV: S-1640-6 WAS S-1640-9; S-1641-6 WAS S-1641-9; ADD WIRE LENGTHS PER EC 999 (NOW SHOP PRACTICE)		BLA 12-10-74	BY <i>[Signature]</i> 10/8 WAB



ITEM NO.	DESCRIPTION	QUANTITY
14	072105-15 PITOT TUBE	
13	072105-18 PITOT TUBE	
12	S-1637-1 HOUSING	
11	S-1637-2 HOUSING	
10	0511062-15 XMTR	
9	0511062-16 XMTR	
8	S-1640-6 HOUSING-PIN	
7	S-1641-6 HOUSING-SOCKET	
6	S-2077-8 STALL WARN HORN	
5	S-2077-5 STALL WARN HORN	
4	S-2160-1 SWITCH	
3	S-1360-5L CKT BKR	
2	S-1360-8L CKT BKR	
1	S-1360-15L CKT BKR	

WIRE CODE NO.	MATERIAL	LG.	TERMINALS	SERIALS
H-FB7	16	-18-10	S-1435-2	S-1636-7
H-FB6	16	-16-0	S-1436-2	S-1372-8
H-FB5	16	-16-6	S-1437-1	S-1636-2
H-FB4	16	-16-6	S-1435-2	S-1636-3
H-FB3	16	-16-6	S-1507-1-6	S-1636-6
H-FB2	18	100	S-1367-1-4	S-1636-2
H-FB1	16	95	S-1493-2	S-1636-2
H-FB1	16	6	S-1372-6	S-1493-2

WIRE TABLE

CONTRACT NO. _____

COMMERCIAL AIRCRAFT DIV.
8800 E. PAWNEE
WICHITA, KANSAS

Cessna AIRCRAFT CO.

DESIGN NAME DATE
WHITE 1-11-73

GROUP *[Signature]* 4-27-73

DRAWN WHITE 4-23-73

CHECK *[Signature]* 4-27-73

STRESS _____

PROJ *[Signature]* 4-30-73

APPD *[Signature]*

OTHER _____

TITLE
WIRING DIAGRAM -
HEATED PITOT TUBE & STALL
WARNING XMTR (OPT)

SIZE CODE IDENT. DWG NO
C 71379 1270625

SCALE: NONE 08.7403 I PAGE: 13.3.2

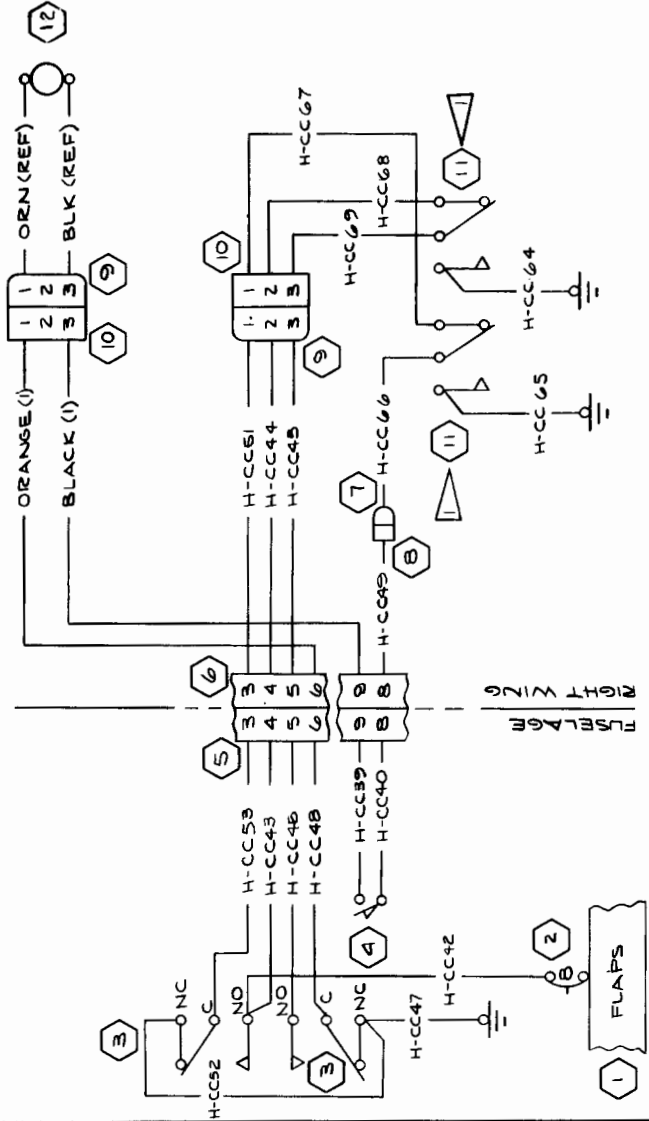
EQUIPMENT TABLE

CES-1000 IS APPLICABLE
VENDOR CODES PER 8-1400
CES-XXX-CESNA SPEC. NO.
S-XXX OR CMXXX-CESNA
STD. NO.

SUPERSEDED BY:
P 13.3, 13.3.1

REV	DESCRIPTION	DATE	APPD

INACTIVE: EFF TRHU SERVO219 TR
 MIM 1-7-78
 M. K. FINE



WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
BLK(1)	16	-16-0			
ORN(1)	16	-16-3			
H-CC69	16				
H-CC68	16				
H-CC67	16				
H-CC66	16				
H-CC65	16				
H-CC64	16				
H-CC63	16				
H-CC62	16				
H-CC61	16				
H-CC60	16				
H-CC59	16				
H-CC58	16				
H-CC57	16				
H-CC56	16				
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H-CC48	16				
H-CC47	16				
H-CC46	16				
H-CC45	16				
H-CC44	16				
H-CC43	16				
H-CC42	16				
H-CC41	16				
H-CC40	16				
H-CC39	16				
H-CC38	16				
H-CC37	16				
H-CC36	16				
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H-CC12	16				
H-CC11	16				
H-CC10	16				
H-CC9	16				
H-CC8	16				
H-CC7	16				
H-CC6	16				
H-CC5	16				
H-CC4	16				
H-CC3	16				
H-CC2	16				
H-CC1	16				

CONTRACT NO.		TITLE	
NAME	DATE	DESIGN	DATE
Cessna Aircraft Co. <td> <td>H-1100 <td>10-15-70 </td></td></td>	<td>H-1100 <td>10-15-70 </td></td>	H-1100 <td>10-15-70 </td>	10-15-70
M. Hunter <td> <td>M. Hunter <td>9-4-70 </td></td></td>	<td>M. Hunter <td>9-4-70 </td></td>	M. Hunter <td>9-4-70 </td>	9-4-70
W. White <td> <td>W. White <td>10-15-70 </td></td></td>	<td>W. White <td>10-15-70 </td></td>	W. White <td>10-15-70 </td>	10-15-70

SCALE	NONE	U206	U206
ED & R 10/41	(SR6584)		

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
12	C301002-0102 ACTUATOR ASSY		
11	Y3-1-D9 SWITCH		
10	S-1638-1 HOUSING-PLUG		
9	S-1638-2 HOUSING-PLUG		
8	S-1637-2 HOUSING-PLUG		
7	S-1637-1 HOUSING-CAP		
6	S-1640-9 HOUSING-PIN		
5	S-1641-9 HOUSING-SOCKET		
4	E13-00M SWITCH		
3	S-1952-1 SWITCH		
2	S-1360-8 CIRCUIT BREAKER		
1	OT1385A-2 BUS BAR		

NOTES:
 THESE SWITCHES ARE PART OF
 C301002-0102 ACTUATOR ASSY

SUPERSEDES: PAGE 14.3.2
 SUPERSEDED BY: PAGE 14.5

COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWNEE
 WICHITA, KANSAS

WIRING DIAGRAM -
 WING FLAPS, OPT 24 VOLT

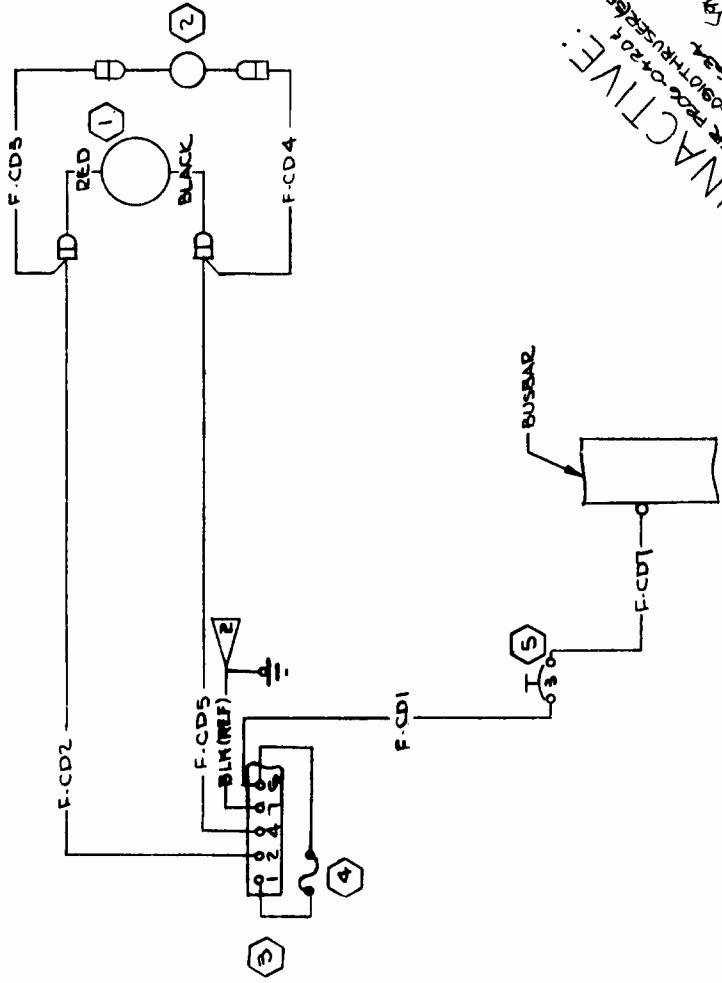
CODE IDENT. DWG NO. 1270625
 SCALE NONE U206 U206 PAGE 14.3-4

CESSNA AIRCRAFT CO.

FORM NO. 80-118A

(SER P206-0420 (ON))
(SER U206-0910 (ON))

REV	DESCRIPTION	DATE	APPD
A	BY REV: ADD NOTE 3 & 32'S. (965158)(525159) IS	8-30-60	WAK
B	BY REV: ISR (444) WAS (SR (2233)) ED (RR 00816)	1-31-70	WAK



NOTES:
1 WITH RED MOTOR LEAD NEGATIVE & BLACK LEAD POSITIVE, MOTOR WILL ROTATE IN A CLOCKWISE DIRECTION (LOOKING INTO SHAFT).
2 BLK GND WIRE IS DESCRIBED ON 1270575, PG 2, 48.0
3 PART NO. IS 329636, VENDOR CODE IS 00709.

WIRE CODE NO.	GA	MATERIAL	LG	TERMINALS	SERIALS
F-CD1 18					
F-CD5 20					
4					
3					
2					
F-CD1 20					

CONTRACT NO.		DATE	
(82647)		7-23-57	
(71785)		7-23-57	
DESIGN WARDEN		7-23-57	
DRAWN WARDEN		7-23-57	
CHECK WALKSHAW		7-23-57	
STRESS		7-23-57	
PROJECT		7-23-57	
APPRO		7-23-57	

ITEM NO.	DESCRIPTION	VENDOR
5	SKI BKR	(82647)
4	FUSE ASSY	(71785)
3	TERM BLOCK	
2	CLUTCH	
1	MOTOR ASSY	

EQUIPMENT TABLE	
SER-1000 IS APPLICABLE	
VENDOR CODES PER 8-1000	
SER-1000-CERMA SPEC. NO.	
9-1000 OR CHILIKI-CERMA	
STD. NO.	

COMMERCIAL AIRCRAFT DIV.
8800 E. PAWNEE
WICHITA, KANSAS

WIRING DIAGRAM -
ELECTRIC ELEVATOR TRIM
(OPTIONAL)

SCALE: NONE
DWG NO. 1270625
C 71379
SER P206-0420 (ON)
PAGE 14.4

LET	REVISION	DESCRIPTION	DATE	APPD
C		BY REV: REVISED & REDRAWN. ADD P19A-1A, CD 25 THRU CD35, BLK(4), RED(2), YEL(2), ORN(2), BRN(2), 1570307-1, 1570307-1, 940-0000 C&I1003-0101 WRS MODEL 4285R. ADD WIRE COLORS CN26 GRN & CD25 BLU SER (SR 7677) (SR 7403) (REF)	DEF. JCY 1-12-74	JCY DMM
D		BY REV: ADD 1570307-2 & 1570-5; S1963-2 WAS SOLDER. CD 27, CD 28, CD 29, & BLK(4) (SR 1611), (SR 1610) II	MEM 5-14-74	JCY
E		BY REV: S-1360-5L WAS S-1370-5L (NOW SHOP PRACTICE)	JEG 7/15/74	JCY
F		BY REV: S-1636-1 WAS S-1370-2/CD-12 (WER 206-EG36) (NOW SHOP PRACTICE)	RTP 1-23-75	JCY

1060-111-04

ITEM NO	DESCRIPTION	PART NO.	QUANTITY	UNIT	WIRE CODE	WIRE GA	TERMINALS	SERIALS
26	5-1360-5L CIRCUIT BREAKER				BLK(4) 20	-20-0		
25	5-1960-2-0 HOUSING				ORN(2)	-20-3		
24	5-1960-1-0 HOUSING				YEL(2)	-20-4		
23	5-1962-2-0 HOUSING				BRN(2)	-20-1		
22	5-1962-1-0 HOUSING				RED(2) 20	-20-2		
21	1570307-2 CABLE ASSY				ORN(0)			
20	582384-9 SOCKET				YEL(0)			
19	1270062-1 CKT BOARD				BRN(1)			
18	1270060-1 CABLE ASSY				RED(1)			
17	1270061-1 CKT BOARD				BLK(3) 20	-20-0		
16	2571030-190 CONNECTOR				BLK(2)	-20-0		
15	SF-1030-8X CABLE				BLK(2)	-20-0		
14	5-1985-1 SWITCH-KEYING				YEL(0)			
13	3421-0000 SOCKET				BRN(1)			
12	1570307-1 CONNECTOR ASSY				RED(1)			
11	1570308-1 CABLE ASSY				BLK(3) 20	-20-0		
10	7271-8-3 CIRCUIT BREAKER				BLK(2)	-20-0		
9	305-4304 PITCH TRIM SW				BLK(2)	-20-0		
8	5-1695-2 SWITCH (TRIM DEENGAGE)				BLK(2)	-20-0		
7	CA0502-0101 TRIM MOTOR				CD 29			
6	5-1637-1 HOUSING PIN				CD 28			
5	5-1637-2 HOUSING PLUG				CD 27			
4	TC5-2015 CLUTCH				CD 26			
3	5-1640-6 HOUSING				CD 25			
2	5-1641-6 TRIM REGULATOR 24 V				CD 24			
1	C&I1003-0101 TRIM REGULATOR				CD 23			

NOTES:
 1. BLK WHT & GRY WIRE TO BE REMOVED FROM SF-1030-BX CABLE ON INSTL IN CONTROL WHEEL
 2. 60215-4LP TERMINAL, VENDOR (00779)
 3. PART OF SF-1030-BX CABLE (08264)

ITEM NO	DESCRIPTION	PART NO.	QUANTITY	UNIT	WIRE CODE	WIRE GA	TERMINALS	SERIALS
CD23	20				BLK(1) 20	-20-0		
CD22	20				CD 21			
CD21	20				CD 20			
CD20	20				CD 19			
CD19	20				BLK(1) 20	-20-0		
JUMPER	18				S-1635-1	S-1636-1		
CD35	20				S-1635-1	S-1370-2		
CD34	20				S-1635-1	S-1370-2		
WIRE CODE	GA	MATERIAL	LG	TERMINALS				

WIRE TABLE

CONTRACT NO.	NAME	DATE
	H WISE	3-2-73
	J YOUEL	2-28-74
	R. YOUNGERS	3-2-75
	BERGMAN	3-3-73
	MGR	
	OTHER	

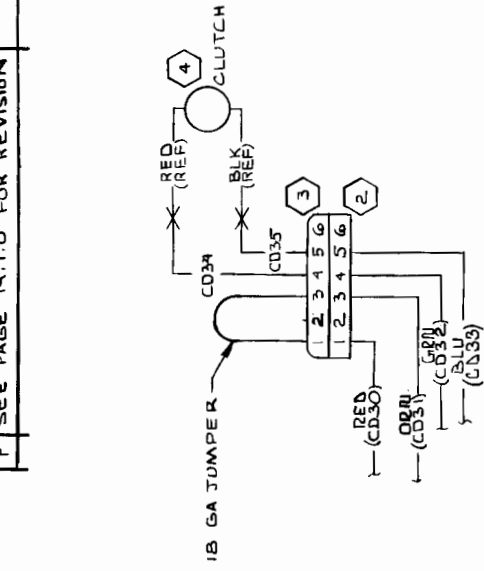
CESSNA AIRCRAFT CO.
 COMMERCIAL AIRCRAFT DIV.
 5800 E. PAWSEE
 WICHITA, KANSAS

TITLE
**WIRING DIAGRAM -
 ELECTRIC ELEVATOR TRIM
 (OPT)**

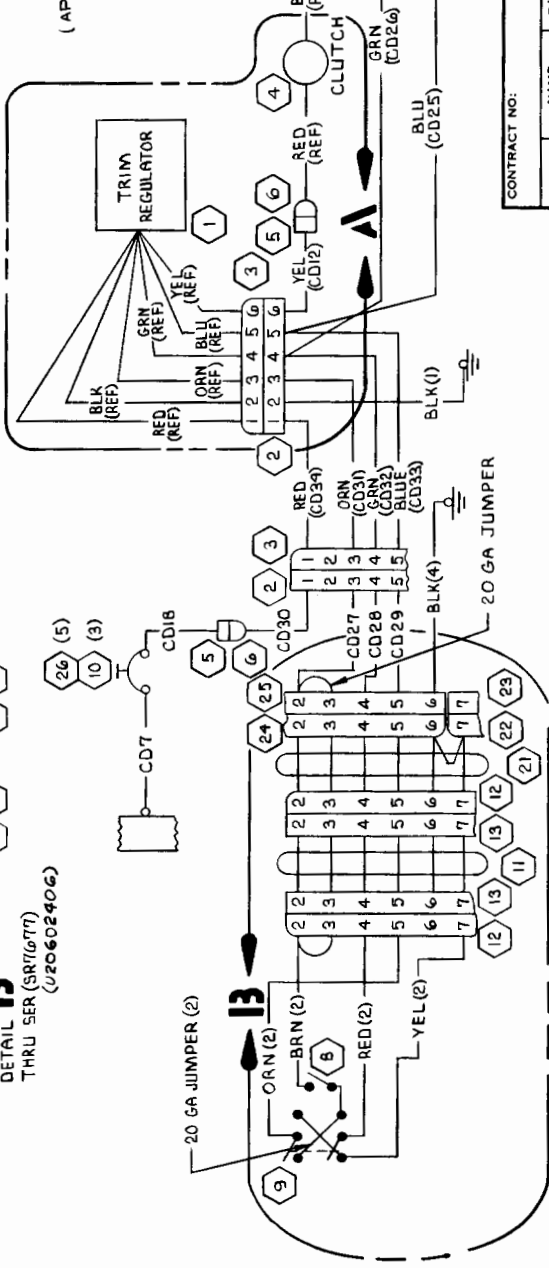
SIZE
C 71379
 DWG NO
1270625

SCALE: NONE U206
 PAGE: 14.7.0

REVISIONS		DATE	APPROVED
LTR	DESCRIPTION		
F	SEE PAGE 14.1.0 FOR REVISION		



DETAIL A
(APPLIES TO 12.V ONLY)



DETAIL B
THRU SER (SR7677)
(U20602406)

CONTRACT NO:		NAME	DATE
COMMERCIAL AIRCRAFT DIV. 5800 E. PAMNEE WICHITA, KANSAS		W.H. Swanson	11-20-73
DESIGN	GROUP	DRAWN	CHECK
		S. YOUNG	
		STRICK	
		APPD	
TITLE		SIZE	DWG NO.
WIRING DIAGRAM		C	71379
ELECTRIC ELEVATOR TRIM		SCALE:	NONE
(OPT)			U206
			1270625
			PAGE: 14.7.1